

# ***In situ* conservation and protected areas in Kenya**

Joseph Mburugu

*Kenya Wildlife Service, P.O. Box 40241, Nairobi, Kenya*

## **Summary**

Protected areas are crucial in managing the world's natural resources. The concept of a protected area was first put into practice in the USA when the world's first national park, Yellowstone, was established in 1872. This was a milestone for conservation and since then, *in situ* conservation has been recognised by many countries throughout the world. Protected areas are vital in safeguarding the living diversity and maintaining the life-support systems of the earth. Such areas contribute to the economic, cultural and spiritual wealth of nations.

The 1992 Convention on Biological Diversity calls on nations to establish protected areas in locations rich in biodiversity, particularly those requiring special conservation measures.

At independence in 1963, the Government of Kenya pledged itself to support the conservation of Kenya's natural resources and its wildlife. Currently 8% of Kenya's land area has been set aside for conservation of the major ecosystems.

## **Introduction**

*In situ* conservation safeguards biodiversity in areas that include the most representative or unique ecosystems. The protected areas should contain substantial biodiversity, including endemic, rare or endangered species, and wild relatives of domesticated species.

The Convention on Biological Diversity calls upon nations to establish within their boundaries a system of protected areas where special measures are taken to conserve biodiversity. National parks and other protected areas are therefore the key to achieving sustainable management of the world's natural resources. This was initially recognised in the USA when the first national park, Yellowstone, was established in 1872. Since then, *in situ* conservation has been recognised by many countries throughout the world and by 1986 more than 2,600 protected areas had been established, covering nearly 4 million km<sup>2</sup> in 124 countries. This number is still growing. The idea of a national park was, however, not recognised in Kenya until the early 1940s. In 1946 Nairobi National Park was established as the first national park in East Africa, under the management of the Kenya National Park Trustees.

To date, Kenya has 26 national parks and 30 national reserves (including one game sanctuary); thus 8% of Kenya's land is under some form of protection (Fig. 1). In addition, there are several private game sanctuaries, primarily set aside for the protection of the endangered Black Rhinoceros *Diceros bicornis*.

On attainment of independence in 1963, the Government of Kenya pledged itself to support the conservation of Kenya's natural resources and its wildlife. In accordance with this policy, Kenya became a signatory to the Convention on Biological Diversity during the Earth Summit held in Rio de Janeiro in June 1992. The general obligations of the Convention call for each contracting party to take all measures at its disposal, including national plans, policies and legislation, both individually and cooperatively, to conserve the maximum possible biodiversity within its national jurisdiction. Kenya's protected areas include marine, mountain, savannah and wetland ecosystems.

### **Modern concepts of *in situ* conservation**

The Kenya Wildlife Service (KWS), established in 1990, has adopted the modern concept of *in situ* conservation. This involves the wise maintenance and utilisation of the country's resources. To achieve this objective, KWS has compiled a comprehensive policy framework and development programme, popularly known as the 'Zebra Book' (KWS 1990), which gives the guidelines for effective and efficient management of wildlife resources, both outside and inside the protected areas. The establishment and management of protected areas is one of the most important ways of ensuring that representatives of our fauna and flora are conserved for the benefit and enjoyment of present and future generations.

The World Conservation Strategy, which was launched in 1981 (IUCN/UNEP/WWF 1980), demonstrates how the conservation of living resources is essential for sustainable development by:

- maintaining the essential ecological processes and life-support systems on which human survival and development depend;
- preserving genetic diversity;
- ensuring that man's utilisation of species and ecosystems is sustainable.

### **Challenges of managing national parks and reserves**

National parks are administered by KWS, whereas national reserves (except Marsabit, Shimba Hills and Kakamega) are managed by local authorities. Management approaches differ considerably since most of the local authorities do not have the funds and personnel for effective management of their protected areas. The common challenges to managing Kenya's protected areas can be summarised as follows:

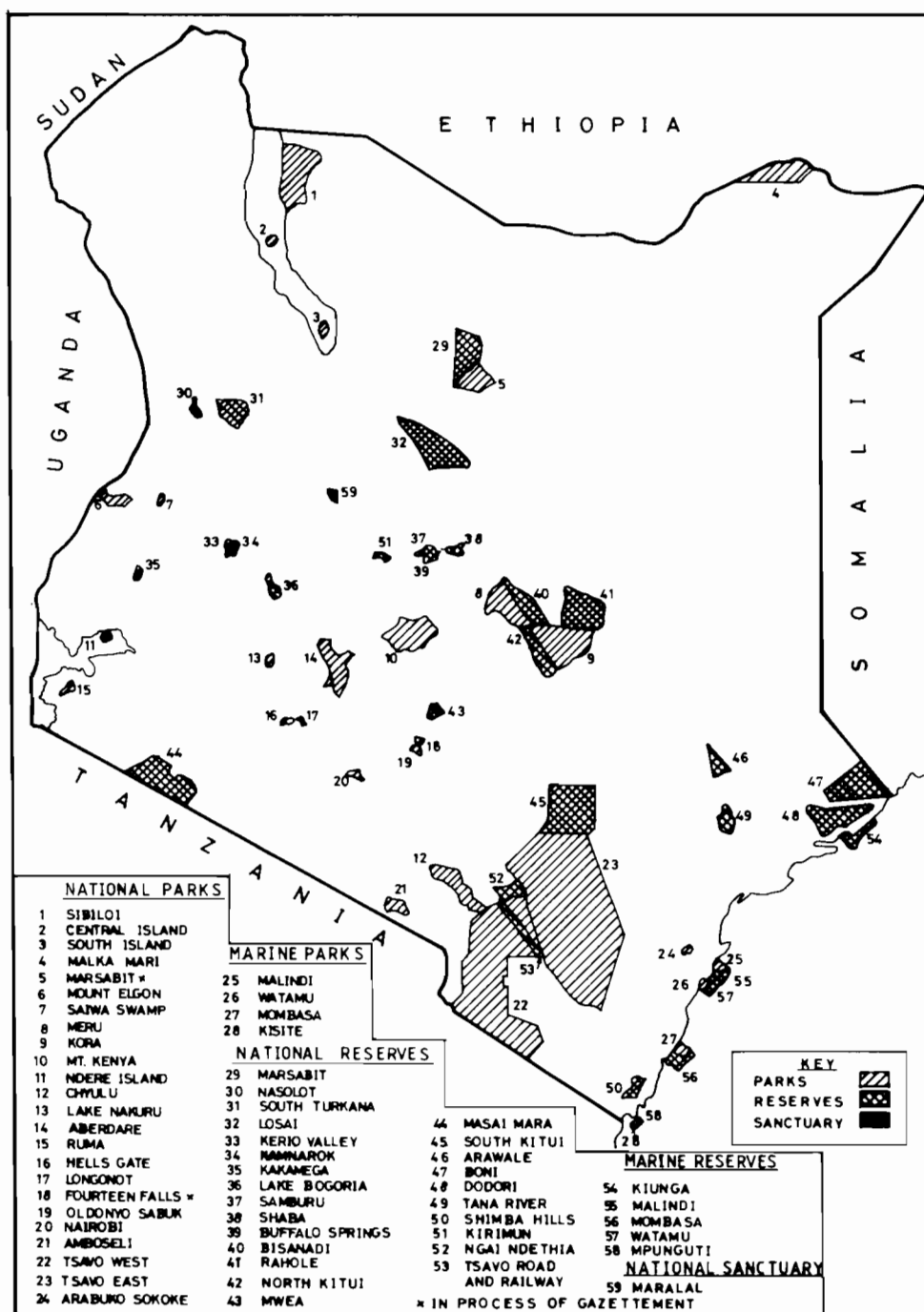


Figure 1 Kenya's national parks and reserves

- Visitor management, which involves the control of environmental damage and wildlife disturbance by tourists (for instance through off-road driving).
- Declining visitor satisfaction due to overcrowding in popular parks, bad roads and reduced numbers of some key species.
- Environmental damage by lodges, especially pollution and unsightliness.
- Human encroachment on some protected areas.
- Poaching, which is currently controlled except in some isolated cases.

The underlying causes of these problems include:

- Lack of discipline amongst tour drivers and tourists.
- Inadequate road networks.
- Equation of tourism satisfaction with proximity to key species. This is especially so in cases where drivers lack the training to provide tourists with a more diverse and educational experience.
- Concentration of many tourists into a few small areas such as Amboseli National Park, Masai Mara Game Reserve and Nairobi National Park.
- The very limited range of activities available for tourists, who are forced to spend the majority of their game viewing time inside a vehicle.
- Failure to plan and control lodge development.

Most of the problems are relatively amenable to solutions. Trained park interpreters can improve discipline and thus tourist satisfaction. Their presence would give tourists a deeper experience of the protected area and the follow-on effect of this would be to increase the prestige and earnings of drivers and guides. Diversification of both areas visited and tourist activities can also help both tourism and the environment.

### **Categories of protected areas**

The Commission on National Parks and Protected areas of IUCN—The World Conservation Union is specifically responsible for promoting the establishment of a world-wide network of effectively managed terrestrial and marine protected areas. Out of their ten recognised categories of protected areas, Kenya has the following six.

#### **National parks**

National parks are set aside to protect outstanding natural and scenic areas of national or international significance for scientific, educational and recreational use. They are relatively large, natural areas not materially altered by human activity, where extractive resource use is not allowed. At present we have 22 terrestrial national parks, which cover 5% of Kenya's land area, and four marine national parks.

### **National reserves and wildlife sanctuaries**

National reserves are areas set aside for conservation purposes where some human activities may be allowed, for instance water collection in case of drought. They are under the administration of local county councils. At present there are 30 national reserves including one game sanctuary, covering approximately 3% of Kenya's land area.

### **National monuments**

These are established to protect and preserve nationally significant natural features because of their special interest or unique characteristics. These are relatively small areas, currently administered by the Ministry of Home Affairs, and focused on protection of specific features, such as the 22 'Kaya' forests at the coast that were gazetted in early 1992.

### **Biosphere reserves**

Biosphere reserves conserve the diversity and integrity of biotic communities of plants and animals within natural ecosystems and safeguard the genetic diversity of species. Although these are internationally designated sites managed for research, education and training, three of Kenya's national parks, one forest reserve and one national reserve fall under this category. These are: Amboseli Biosphere Reserve, Kiunga Marine Biosphere Reserve, Mt Kenya Biosphere Reserve, Malindi/Watamu Marine Biosphere Reserve and Mt Kulal Biosphere Reserve.

### **World Heritage Site**

In 1991, the Kenya Government ratified and took its membership as a signatory to the World Heritage Convention, which was adopted by the 17th Session of the UNESCO General Conference in 1972. World heritage sites are designated to protect natural features of outstanding universal significance. This is a select list of the world's unique natural and cultural sites, nominated by countries that are party to the Convention.

Sibiloi National Park was nominated in 1991 for inclusion on the World Heritage List because of the outstanding universal significance of its petrified forests and its role as the cradle of mankind.

### **Ramsar sites**

Kenya became a signatory to the Ramsar Convention in 1990. This Convention is responsible for the wise use of wetlands of international importance. At present Lake Nakuru National Park is the only Kenyan wetland on the Ramsar list of designated wetlands. The second site will be the Tana River Delta, which will be listed once its status is established by the relevant authorities.

## **Selection of protected areas**

It is important for each nation to develop a system for the selection of conservation areas, which ensures that its major biotic communities are protected. In Kenya, the Wildlife Planning Unit of the Wildlife Conservation and Management Department developed a system of identifying all the major biotic communities (Wildlife Conservation and Management Department 1983). At present 19 major biotic communities are represented in the protected areas system. The three biotic communities currently not represented are: highland grassland, coastal palm stands, and marine beaches and dunes.

## **Considerations in selection of protected areas**

Various factors are taken into account when selecting a conservation area, including the following:

- inventory of the resources,
- suitability of the habitat,
- communication,
- tourism potential,
- uniqueness of appeal,
- distinctive features of interest,
- scenic beauty or intrinsic interest.

Each of our protected areas has its own unique attractions. For instance, the Saiwa Swamp National Park is the only place in Kenya where visitors can see Sitatunga. Shimba Hills National Reserve is the only place where Sable Antelopes occur in Kenya. Masai Mara National Reserve offers a spectacular sight of the great annual Wildebeest migration to and from the Serengeti National Park in Tanzania.

## **Policy, law and administration for managing protected areas**

Wildlife conservation in Kenya has a long history, with the earliest wildlife regulation enacted in 1898 to control indiscriminate hunting. In 1907, the Game Department was established, essentially to control hunting. In 1945, Ordinance No. 9 provided for the establishment of national parks and for the preservation of indigenous flora and fauna, and objects of aesthetic, geological, prehistoric, archaeological, historical or other scientific interest. The National Parks and Game Departments grew and expanded as separate entities until 1976 when they amalgamated to form the Wildlife Conservation and Management Department, which was subsequently replaced by the Kenya Wildlife Service in 1990.

Armed with the necessary legislative authority, and empowered to retain revenue from gate fees and lodge rents, KWS has taken several measures over the last two years to arrest the degradation of the wildlife sector. Poaching is now largely controlled and tourist confidence has been restored by reversing infrastructure deterioration and improving tourist security in the national parks.

Protected areas policy, law and administration are important interconnected aspects affecting the successful long-term management of protected areas. Policy, law and administration involve many interdisciplinary facets merging to achieve clear objectives, effective planning, competent execution, and above all, public support and participation.

### **Management plans**

Each of the protected areas must have a well-designed, carefully-implemented management plan. The warden is guided in the management of the park by both the areas' legal status and stated management objectives of the park's management plan. All the boundaries of our protected areas are gazetted and the Planning Unit of KWS is responsible for producing management plans for each park and reserve in consultation with field officers.

### **Public participation in conservation**

The old concept of the warden concentrating on the protection of the gazetted areas is unlikely to win public support, and without public support no park or reserve is secure in the long term. KWS now recognises that the survival of Kenya's protected areas depends heavily on positive attitudes of the local people. Public support, at both the local and national level, is a critical component of management. The stated KWS policy of sharing park revenues with the people living adjacent to the parks and reserves is the correct approach to encourage the public to support our conservation efforts.

### **Kenya's biodiversity**

Kenya's diverse habitats range from the fragile coral reefs of the Indian Ocean to the snowy peak of Mt Kenya. This natural spectrum includes glacial systems, montane forests, dry and moist forests and woodlands, savanna grasslands, lakes, wetlands and mangrove forests. Most of these ecosystems are represented in our protected areas, which not only support wildlife but also safeguard watersheds. The reef systems and mangroves along the coast provide protection from erosion while supporting marine life important to the fisheries industry.

We live in a rich natural heritage that must be protected in all its variety. Kenya has recorded the second largest number of bird species in Africa. The International Council for Bird Preservation has listed the Kakamega, Nandi, Lower Tana Riverine, Taita Hills and Sokoke Forests among the 75 forests in Africa and Madagascar that are most important for conservation of threatened birds. In terms of mammals, Kenya has 314 species of mammals; in Africa she is second only to Zaire which has 409 species.

The KWS policy document (KWS 1990) outlines the necessary measures to be undertaken over the next decade to prevent further deterioration of environmentally and economically critical parks and reserves, to strengthen KWS management capacity, and to mobilise community support for the sustenance and protection of wildlife outside protected areas.

The decline of the elephant population prompted Kenya to spearhead the movement for the ban on ivory trade in the context of the Convention on International Trade in Endangered Species. Kenya recognises that the long-term solution to protecting endangered species is critically dependent on establishing a sustainable community wildlife programme, which provides local communities with incentives to protect animals rather than poaching them.

Our conservation efforts require adequate funds and manpower. The financial support KWS receives from both the local and international community is therefore highly appreciated and enables KWS to play a leading role in wildlife conservation in the African region.

## References

- IUCN/UNEP/WWF. 1980.** *World conservation strategy: Living resource conservation for sustainable development*. Gland: IUCN, UNEP & WWF.
- KWS. 1990.** A policy framework and development programme 1991–1996. Unpublished report of KWS. Nairobi.
- Wildlife Conservation and Management Department. 1983.** The biotic communities and natural regions of Kenya. Unpublished report of Wildlife Conservation and Management Department & Canadian International Development Agency. Nairobi.