INTRODUCTION

1.1 The Relevance of Management Plans

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The conservation and management of protected areas for both sustainable exploitation of natural resources and conservation of biodiversity is nowadays largely accepted as a relevant economic and development value. Nonetheless, the lack of well-designed strategies for approaching a long-term management of protected areas (National Parks, Natural Reserves and other conservation areas) produced, during the last decades, significant failures for most of these areas in the expected results, especially in Sub-Saharan African countries.

The Management Plan, designed for institutional authorities, local populations and private investors, is a document that guides and controls the management of the protected area's resources, the rational use of land and the infrastructure development needed to support the management. Central to such a plan is a review of goals and objectives to guide the management of a protected area. A management plan is a valuable tool for identifying management needs, setting priorities and organising a correct approach to the future development.

The Forestry and Wildlife Act N° 10 of 1999 defines, within the Article 36, the importance of management plans as law enforcement instruments to manage and regulate forestry and wildlife resources in Mozambique.

The specific aim of this Management Plan is to give the essential guidelines for the sustainable exploitation of natural resources as well as the conservation of biodiversity in the GRG for at least the five years period between 2003 and 2007. More specifically it seeks to:

- Identify the key elements of the GRG that make it a site of national and international significance
- Identify threats to the bioresources as well as other issues relating to management
- Outline strategies to minimize these threats
- Provide a framework for working in partnership with the local communities to identify and develop sustainable resource-use
- Provide a framework for working with the Government authorities and private investors to ensure that environmental guidelines are observed and to minimize negative environmental impacts
- Provide the basis for the development of day-to-day management decisions

1.2 Target Audience of the Present Management Plan

The Game Reserve of Gilé Management Plan (GRGMP) is intended as a generally accessible document to inform all the interested parties on the concepts and strategies behind the management of the GRG. Hence, the Management Plan is designed to be consulted by:

- The staff of the Game Reserve of Gilé
- Other Governmental staff involved in the management of protected areas in Mozambique
- All the Governmental authorities involved in the natural resource management
- Local communities
- Investors in the area, including tourist and other commercial operators
- Researchers, scientists and other technical experts working in related fields
- People involved in protected areas management around the world
- Visitors to Mozambique, and to Zambézia Province in particular, with a particular interest in conservation and development issues

1.3 Background to the Project and origin of the present Management Plan

In 1999 the Government of Mozambique signed an agreement (contract B7-6200 99-15/DEV/ENV) with the European Commission (EC) and the Italian NGO Movimondo for an \in 1.2 million project entitled "Project of Rehabilitation of the Partial Game Reserve of Gilé, Zambézia Province-Mozambique" (PRPGRG) to be founded under chapter B7-6200 "Tropical Forests" by the EU. The Project was last approved on 30th of December 1999 and Project's field operations started in June 2000 with an intended implementation-period of three years.

The general objective of the Project was:

"To contribute to the conservation of biodiversity and to the sustainable exploitation of the natural resources in the Partial Game Reserve of Gilé and in its boundary areas"

Four specific aims were identified both during the elaboration and the implementation of the PRPGRG:

1) Elaboration of a formal Management Plan for the Game Reserve of Gilé

The elaboration of the present Management Plan has been focused as one of the Project's tasks. The procedure followed in its preparation relied on a number of studies on key management and conservation issues carried out by several specialist consultants, on several field surveys conducted by the Movimondo staff and on participatory meetings with the local communities. Subsequently, the whole information set has been discussed and reviewed by the Movimondo staff and the specialists from both the Provincial Bureau of Tourism (*Direção Provincial de Turismo*-DPT) and the Provincial Bureau of Agriculture and Rural Development (*Direção Provincial de Agricultura e Desenvolvimento Rural*-DPADR). The following consultants carried out field researches in the GRG and collaborated with the elaboration of the present Management Plan:

Dr. Angelina Martins, botanic (University of Maputo, Mozambique);

Dr. Cornelio P. Ntumi, zoologist (University of Maputo, Mozambique);

Prof. Giuseppe M. Carpaneto, ecologist (University of Roma3, Italy);

Dr. Jorge G. Lizzon, socio-economist (Freelance consultant);

Prof. Rudi J. van Aarde, zoologist (University of Pretoria, South Africa);

Prof. Winston S. W. Trollope, fire ecologist (University of Fort Hare, South Africa).

2) Training of rangers for patrolling the Partial Game Reserve of Gilé area

During the Project implementation two training course have been organized in collaboration with the National Training Centre for rangers in the Gorongosa National Park. Twenty new rangers have been trained and equipped. Ten of them have been integrated in the staff of the DPADR and located in several districts of Zambézia Province mainly to combat the illegal timber exploitation; the other ten have been integrated in the DPT and assigned to the GRG to support the former four rangers still operating in the area.

3) Rehabilitation of the existent infrastructures within the Partial Game Reserve of Gilé

During three years of its implementation the PRPGRG rehabilitated the six campfires within the GRG. All of them have been partially or completely destroyed during the civil conflict. The main road of the GRG, which suffered of twenty years of lack of maintenance, has been made accessible and three small bridges rehabilitated.

4) Support to the population living outskirt the Partial Game Reserve of Gilé and its involvement in the management of the protected area and in the sustainable use of indigenous resources

The intended support to local populations has been focused on the introduction of profitgenerating crops and on incentives for small species husbandry, in order to improve the food-production capacity of local populations, allowing a decrease of the human impact on the indigenous resources both inside and outside the protected area. These activities have been implemented in strict collaboration and synergy with the EC financed "Food Security Project in the IIe and Gilé Districts" (FSPIGD) implemented by Movimondo.

The intended involvement of the local population have been focused, in strict collaboration with the local institutional and traditional authorities, on the following activities: 1) forest control through community-guards and reporting of law violations; 2) identification of animals with traditional and nutritional value; 3) evaluation of the importance of the subsistence hunting as well as the hunting techniques; 4) identification of the forest products, both timber and non-timber, exploited; 5) participation in preventing uncontrolled forest burning. An education campaign on the problems correlated with the utilization of unsustainable hunting techniques was started in October 2001, reaching all the major localities outskirt the GRG. The aim of this campaign was to encourage the dwelling people to abandon some hunting techniques, mainly gin traps (iron-made traps), which appear totally incompatible with a correct game exploitation.

1.4 History of Establishment of the Game Reserve of Gilé

The Central Commission of Wildlife (*Commisão Central de Caça*) first proclaimed the Partial Game Reserve of Gilé (*Reserva Partial de Caça do Gilé*) on April 23, 1932. The partial protection status conferred to the GRG was intended to give protection both to the back rhino and elephant, allowing, at the same time, hunting other mammals such as large antelopes. At the establishment time, the Game Reserve of Gilé covered a surface of 5,000 km² (*Diploma Legislativo N°4183*). The existing limits were defined on July 23, 1960 reducing the Reserve's area to 2,100 km² (*Diploma Legislativo N°1996*) and establishing a buffer zone of approximately 1,800 km² (*Área de Vigilância Especial*) all along the Northern border (Farinha, 1972). In the early '80 an operation of people relocation in the Namahipe, Txalalane and Muligudji localities (south-eastern sector of the Reserve) was undertaken in prevision of a 600-km² Reserve enlargement to create a population-free passage for large animals' movement, mainly elephants and large antelopes, between the Molocué river (eastern limit of the GRG) and the Ligonha river (the border between Zambézia and Nampula Provinces). This operation was early interrupted due to the extension of the civil war in the region.

During the colonialism time, the Portuguese exploited a large amount of game and installed a small sawmill inside the Reserve nearby the Nakololo watercourse. Apart from these activities, the Reserve was practically unexploited, in spite of its considerable timber value and the presence in the ground of precious and semi-precious stones, such as tantalite, tourmaline and aquamarine.

Since the civil war phase and until the PRPGRG started its field activities in June 2000 no management activities were undertaken or funds allocated for the GRG by the governmental institutions or private investors. This situation resulted in a 20 years period of lack of administration and care of environmental and management issues. During the guerrilla period, the main infrastructures of the Reserve were destroyed or heavily damaged, including the main campfire of Musseia and the campfires of Namurrua, Nakololo, Etaga, Lice and Mulela.

In 2000 a new law of Forestry and Wildlife prepared by the National Department of Forestry and Wildlife came into force according to the Game Reserve of Gilé the regime of total protection. The GRG has been classified in the "Management Category II" of the IUCN, which comprises Natural Reserve and National Parks (IUCN, 1994).