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## 9. FUNCTIONAL RELATIONSHIPS BETWEEN PROTECTED AND AGRICULTURAL AREAS IN SOUTH AFRICA AND NAMIBIA

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### SUMMARY

The history of the establishment of protected areas in South Africa and Namibia is outlined. Interactions between selected examples of protected areas and their neighbours are described. While there are cases of conflict because of wildlife damage to crops or predation on livestock, the majority of protected areas have been wholly or partially isolated by fencing. They have little influence on the substantial wildlife resources on private land. For the most part these supplement conventional livestock production and provide opportunities to develop high value multiple-use systems. Significant economic benefits are dependent on the development of high quality facilities in relatively large areas which offer scenic attractions and a variety of wildlife which includes at least some of the "big five". To derive these benefits, individual landowners need to collaborate with neighbours to form conservancies. Examples of formal systems of collaboration between statutory conservation bodies and private landowners are given. Most communally held land in South Africa is densely populated and has little or no wildlife. Examples are given of reserves which have been established and stocked to assist in the economic development of poor rural communities. Only in Namibia are major opportunities for rural communities to develop industries based on existing wildlife resources.

Proposals are made for the application of Southern African experience to East Africa to ensure the survival of wildlife beyond the boundaries of protected areas.

## INTRODUCTION

Puzo (1978) reviews patterns of man-land relations in southern Africa which he takes to include Angola, Zambia and Moçambique. The region contains large areas with low population densities and few areas outside of the urban complexes with high man-land ratios. This is due mainly to the lack of a good environmental base for relatively intensive land-use systems. Important limiting factors are aridity, lack of surface water, poor sandy soils and, in some regions, the presence of tsetse fly. Although most income is generated by non-agricultural pursuits, the great majority of people *"still occupy themselves with some form or combination of agriculture and pastoralism. South Africa is the only country in the region with less than a majority of its population economically active in agriculture"* (Puzo, 1978).

South Africa and Namibia have been selected as focal points for this chapter because interactions between protected areas and surrounding land under agriculture and pastoralism differ in many ways from those in the rest of Africa. Furthermore, there is a substantial wildlife resource outside protected areas. This results partly from patterns of land distribution, with a predominance of privately owned commercial farms and ranches, and partly from the fact that many protected areas are long-established and have evolved systems of management to reduce conflict with neighbours.

Land utilisation in South Africa and Namibia is summarised in Tables 1 and 2. The fact that 83% of South African farmland is used for livestock grazing is a consequence of the aridity of most of the country. Sixty five per cent of the land area receives <500 mm of rain per annum and 21.5% of that portion with >500 mm is non-arable for other reasons (Huntley et al., 1989). In Namibia, commercial farms are concentrated in the semi-arid and arid centre and south of the country, and are similarly used for extensive livestock production. These large private holdings of grazing land have become significant wildlife reservoirs.

## ESTABLISHMENT OF PROTECTED AREAS

### Forest Reserves

Concern over the over-exploitation and clearance of the limited areas of indigenous forest existing in the Knysna area of the Cape Colony led to the passage of the Cape Forest and Herbage Act in 1859. This far-reaching legislation, later

**Table 1.** Land use in South Africa

	millions of ha	% of total
Total	122	100
Farmland*	101	83
Arable	16.6	14
Livestock production	84	69
Protected areas	7.2	6
Undefined (incl. urban)	13.8	11

\* Farmland: commercial farms 70%, communal areas 13%, other 17% (after Huntley et al., 1989).