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**Pastoralism, Conservation  
and Development in the  
Greater Serengeti Region**

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**M.S. Parkipuny**

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## **PASTORALISM, CONSERVATION AND DEVELOPMENT IN THE GREATER SERENGETI REGION**

### **1 INTRODUCTION**

In December 1985, the Tanzanian Ministry of Lands, Natural Resources and Tourism and the IUCN Regional Office for Eastern Africa organised a workshop to discuss past, current and future land use trends in and around Serengeti National Park, the Ngorongoro Conservation Area (NCA) and Maasai Mara National Reserve (see map at Figure 1). When I read through the workshop papers and proceedings, I was struck by the obvious bias in the list of participants and the evidently one-sided thrust of individual contributions, which leaned too heavily on the conventional preservation approach to wildlife conservation (albeit with a pronounced recognition of the necessity to appease the local communities, in order to enlist their cooperation).

Considering the fact that I was born and raised in this region, I could not but be a product of the milieu of this land. And, having served eight years as the elected representative of the Ngorongoro constituency in Parliament, I am all the more deeply involved with this region's issues. The Ngorongoro Conservation and Development Project (NCDP) has provided a new forum for discussion and deliberation on the long-term future of the Conservation Area, and this paper is a contribution to that forum.

For some time now, I have been interested in the land use issues in and around Amboseli National Park and the Maasai Mara National Reserve - two important protected areas in the Kenyan portion of Maasailand. In many respects, these land use issues appeared to be similar to issues being confronted in the Ngorongoro, Serengeti and Loliondo areas of Tanzania. To enable me to explore these similarities further, and to investigate the approaches being taken to resolve land use conflicts around Amboseli and Maasai Mara, a study tour was arranged in 1988, under the auspices of the NCDP. This report represents a summary of my findings and conclusions.

### **2 BACKGROUND**

The names Ngorongoro Crater, Serengeti, and Maasai Mara evoke images of paradise in the world of tourism. These destinations are renowned worldwide as natural attractions which have the potential to guarantee memorable experiences to their visitors. The tourism value of these lands has been advertised within east Africa and overseas. Serengeti and Mara owe their fame to the spectacle of the largest concentration of wild ungulates in the world.



Yet the Serengeti region is clearly much more than a wildlife area; it is also the home of tens of thousands of indigenous peoples - the fate of whom has largely been ignored in the face of wildlife conservation efforts. To understand how this has come about, it is necessary to take an historical perspective.

## **2.1 Conventional Wildlife Protection**

Hunting has been a popular pastime of privileged sections of human populations and a source of essential protein to the poor in many parts of the world. In Europe, as wildlife populations declined drastically in the wake of the industrial revolution, royal courts declared specific areas as reserved hunting domains. In these domains, hunting by peasants was prohibited and was proclaimed poaching.

When colonisers from Europe arrived in North America, they encountered indigenous communities living in a great continent endowed with an extraordinary wealth of biological resources. In their conquest of the land, the settlers massacred the Indians and plundered this biological heritage. They constructed railroads from the Atlantic coast westwards across the continent to open up the country to enterprise and settlements. Squads of sharpshooters gunned down both Indians and entire herds of wild animals.

The dimension of wildlife carnage in that era of American history has had no equal anywhere since. However, a similar pattern was enacted during the colonisation of Australia, New Zealand, and many other nations. The loss of biological resources raised the concern of a few far-sighted members of the settler communities. These people of vision carried on systematic campaigns to awaken public and government awareness of the disastrous consequences of the ongoing destruction.

## **2.2 Protected Areas in East Africa**

When Europeans penetrated the interior of east Africa, they were overwhelmed by the immense wealth of wild animals that they found. Their initial reaction to this extraordinary discovery was a hunting spree which was sustained for decades. In time, the continuous killing brought several species of wild animals to the verge of extinction. Here, as in America, it was the realisation by a few far-sighted members of the ruling community which led to public campaigns for the preservation of the rich wildlife heritage of the region. This prompted the British Colonial Administration to enact the first game protection legislation in east Africa in the 1920s (Saibull, 1978). But fully protected areas were not set up until the 1940s. Serengeti was upgraded in 1940 from a closed reserve to become the pioneer national park in the region (Hayes, 1977). The first park to be established in Kenya was Nairobi National Park, gazetted in 1947.

In 1975, the Kenya Government released a new wildlife policy, followed up in the next year with the Wildlife Conservation Management Act. The new policy led to the amalgamation of National Parks with the Game Department to form the Wildlife Conservation and Management Department (WCMD). WCMD was given the mandate to integrate wildlife conservation with the welfare of local human communities. These changes were followed by a comprehensive plan for the development of wildlife conservation and tourism. The Wildlife Planning Unit was also set up to provide the relevant planning support to protected areas (Western, 1982).

In Kenya, a distinction is made between national parks and national reserves. The former are managed directly by the Wildlife Conservation and Management Department on behalf of the central government. National reserves, on the other hand, are owned and managed by county councils. Although the Department provides national policy guidelines and gives regular advice and technical support to national reserves, the county councils have a great deal of autonomy over the affairs of their respective reserves.

Kenya has experienced remarkable success in the promotion of its tourism potential. Continuous and rigorous advertisement campaigns abroad, coupled with quality services at home, have enabled the country to develop a lucrative tourism industry. The industry has steadily grown to a position where it is now the leading foreign exchange generator in the Republic. Kenya has even superseded other African countries endowed with superior natural features, larger populations of wildlife and more diverse environments. In 1985, for example, Kenya received 541,200 tourists, compared with 361,640 and 78,075 for Zimbabwe and Tanzania respectively. In the following year, Kenya had 604,000 visitors compared with 395,091 in Zimbabwe and 103,209 in Tanzania (WTO, 1987).

Since Tanzania attained independence, it has almost trebled the number of its national parks, from four to eleven since 1961. These parks, together with the nation's game reserves, forest reserves and game controlled areas, now account for some 26% of the country's land area. This places Tanzania among the few countries in the world which have set aside such a high proportion of territory for wildlife protection. Despite these extraordinary attractions of immense tourism potential, their contribution to the national economy has persistently been dismal, reflecting years of indecision on the role of tourism in the nation's development.

#### 2.2.1 Maasai Mara National Reserve

Ngorongoro Crater, Serengeti National Park and Maasai Mara Reserve are the most popular protected areas in Tanzania and Kenya. Maasai Mara is currently by far the leading game viewing area in Eastern Africa. The development of large scale commercial wheat farming, propelled by the pursuit of Kenya's national wheat self-sufficiency goal, is seen by wildlife



patrons to pose the gravest threat to the integrity of the Reserve. Arable agriculture is rapidly advancing right to the boundary of the Reserve, and threatens to encompass the whole of the Loita Plains in the northeast and the Isiria Plateau to the northwest.

Two main negative consequences of this expansion are foreseen. First, the loss of the Loita Plains and the Isiria Plateau will deprive the wildlife migration of crucial dispersal areas. Secondly, the displacement of the local Maasai pastoralists and their livestock will, it is feared, squeeze these people into direct conflict with the Reserve.

### 2.2.2 Serengeti National Park

Serengeti owes its grandeur to the extensive open grasslands and the largest herds of migratory wildlife in the world. The main concern in this vast, 14,263 square kilometre national park and adjacent Maswa Game Reserve, is poaching. The gravity of this problem can be appreciated more fully when viewed in the light of the low level of tourism revenue accruing from the Park relative to its size and to the Tanzanian economy at large, runaway inflation, very low real wages and the deterioration of the law enforcement capacity of the administration. Other problems include rising encroachment by peasant settlements, illegal incursions of livestock into the Park in search of water and grazing, and seasonal wild fires ignited by hunters, poachers, honey collectors, cattle rustlers and herders.

### 2.2.3 Ngorongoro Conservation Area

Ngorongoro Crater is one of the greatest unbroken calderas in the world: 610 metres deep, 20 kilometres in diameter and 311 square kilometres in area. The Crater has won global fame on account of the sheer physical beauty of its volcanic landforms and the diversity and abundance of its wildlife populations.

But the area is far bigger than the Crater itself (Fosbrooke, 1972). Although the two main craters of Ngorongoro and Empakaai, together with Olduvai Gorge, are the foci of tourism interest in the Conservation Area, these attractions constitute but a tiny fraction - a mere three percent - of the whole of the Ngorongoro Conservation Area (NCA). Forests, by far the largest being the Northern Highlands Forest Reserve, account for another ten percent of the Area. Wildlife are predominant in these sections of Ngorongoro. However, the Maasai who used to reside in the Crater, until they were evicted in 1974, still make seasonal use of the grazing, water and salt licks in both the craters and the forests, but only with permits issued occasionally by the administration.

The NCA can be divided into two principal land use zones. The non-forested highland maasif is used predominantly for Maasai habitation and livestock grazing. Here, the density of wildlife is low, and visits by tourists restricted. The rest of the countryside is mainly wet season common rangelands utilised by

domestic and wild animals. Canadian ecologist H. J. Dirschl was the first commissioned expert to note this natural pattern of range resources use. In his report, Dirschl (1966) recommended that this indigenous land use pattern be officially adopted as the best way to promote the principle of multiple land use as stipulated by Tanzania law for this area.

Poaching, fires, arable agriculture from within the area and encroachment from the south, are prevalent in Ngorongoro. However, apart from the threat to the survival of the rhinoceros, the most controversial issue in Ngorongoro has become the historical and legally stipulated rights of the indigenous Maasai to inhabit and develop the Area. This statutory provision guaranteeing the rights of the local Maasai community has become an anomaly in the eyes of wildlife preservationists, who wish to see it eliminated so that the Area can become a national park in which local rights of occupation are extinguished.

### **3 THE BROADER PERSPECTIVE**

#### **3.1 The Greater Serengeti Region**

The evolution of conservation strategies has been impeded in east Africa by the dominance of the preservation approach. This "mono value" conception has led to a fragmented and insular approach to conservation and development. In glaring contrast to the publicity invested locally and abroad on tourism, silence has reigned in respect of other, fundamental components of conservation.

Furthermore, the three contiguous preservation enclaves are integral components of a greater whole superior to the separate constituent parts. The Greater Serengeti Region extends over more than 60,000 square kilometres, and encompasses the Ngorongoro Conservation Area, Serengeti National Park, the Lake Eyasi Basin, Maswa Game Reserve, the Grumeti, Ikorongo, Loliondo and Lake Natron Game Controlled Area in Tanzania, together with Maasai Mara National Reserve, the Loita Plains, the Isiria Plateau and the Loita Highlands in Kenya.

#### **3.2 Home of Man**

Equally valid and important, this region has a rich human heritage that includes 14 distinct indigenous cultural communities. Historically, arable agriculture has constituted the subsistence base of these communities, although both animal husbandry and hunting have provided important supplements. In contrast, the southern frontier - the Lake Eyasi Basin - is the home of the Hadzabe people, who continue to follow a traditional system of hunting and gathering.

The Hadzabe community has been deeply disturbed by the haphazard and unscrupulous hunting of wildlife in the Lake Eyasi Basin

area. This land has become the meat, charcoal and firewood mining ground for the densely populated agricultural belt of Oldeani and Karatu, neighbouring Hadzabe country. Professional game hunters are also taking their toll. The Hadzabe have also been affected adversely by the utter failure on the part of the state to understand the rationality of their socio-economic system. As a result of this failure, both pre- and post-independence efforts to launch development initiatives aimed at their socio-economic transformation have met with little success (Bwire, 1987).

Tatoga pastoralists, of which the Barabaig are the largest group, are also inhabitants of this southern frontier. Together with their livestock, they share the natural resources of the Lake Eyasi Basin with the Hadzabe and wildlife (although pastoral activities do have some adverse effects on the Hadzabe, as they disturb the distribution of wildlife in the area).

The Sonjo and Njemps ethnic groups occupy small areas of the Lake Natron Basin. The Njemps are a tiny community practising irrigation in the Nguruman area north of Lake Natron in Kenya. The Sonjo are concentrated in five villages in Tanzania adjacent to the Nguruman area in a narrow valley fed by permanent streams, in the mountains east of the Rift Valley. These two groups have developed a well-established system of small scale irrigation. With appropriate improvements to this system, these valleys could perhaps produce surplus fruits and vegetables for the nearby prospective urban centre at Loliondo.

Apart from the Ndorobo, Sonjo and Njemps, the Maasai - the largest pastoral ethnic group in east Africa - occupy virtually the whole of the eastern and northern frontier of Serengeti Park and Mara Reserve. Of the fourteen indigenous ethnic groups living in the region, the Maasai occupy by far the largest land area. This community is unique for its cultural code which precludes consumption of meat from wild animals. Arable agriculture has only recently become a significant source of livelihood for the Maasai.

A key factor that is central to Maasai identity is the institutionalised age set structure, which can be harnessed to recruit the youth and the whole community for development and conservation purposes. Ironically, it is this very factor which continues to be officially misunderstood and condemned, despite the obvious role it has played in safeguarding the rich biological heritage of the region. It is not a mere accident of history that many of the most spectacular wildlife protection areas in east Africa are found in territories previously part of Maasailand.

### 3.3 The Impact of Wildlife on Local Communities

#### 3.3.1 Population Explosion

There has been a 400% increase in the wildebeest population of

the Greater Serengeti, from the relatively modest herd of 263,000 animals estimated in 1961 (Sinclair and Norton-Griffiths, 1979) to the current figure of some 1.5 million. This increase has been hailed by preservationists as a conservation success, in total disregard for the havoc being wreaked upon the entire region. These people are not alarmed by the vegetation destruction caused by this wildlife population. Moreover, they are blind to the plight of local communities who have been increasingly affected as wildlife populations have spilled over the Serengeti National Park and Maasai Mara Reserve boundaries into the villages and ranches beyond.

### 3.3.2 Western Frontier

The whole of the western frontier of the Serengeti National Park and Maswa Game Reserve, where the game controlled areas of Gruneti and Ikorongo are situated, are no longer sparsely populated. These areas are the home of a fast-growing human population, living in legally registered villages. The peasant inhabitants of this area produce maize, millet, sorghum and cassava for their subsistence and cotton to earn cash. The communities also raise livestock and pursue what has historically been their intrinsic right to crop surplus wildlife to meet their subsistence protein needs, despite prohibition by statutory law. Successful violation of the law, combined with economic imperatives, have encouraged these peasants to take up commercial meat poaching. The western frontier is also the expansion area for those people who have been forced to leave the densely populated Lake Victoria zone, which is now one of the most heavily settled and extensively cultivated areas in rural Tanzania.

As the huge wildebeest and zebra herds spread beyond the park into the western frontier, they destroy food and cash crops. Villagers try to protect their crops, and at the same time take the opportunity to compensate themselves with a bumper harvest of meat. Some is consumed locally, and some is sold to boost incomes and defray the risk of poor rains and offset declining yields resulting from declining soil fertility.

### 3.3.3 Eastern Frontier

Most of the eastern frontier is now preserved exclusively for wildlife and tourism, comprising the whole of the eastern half of Serengeti National Park and the whole of Maasai Mara Reserve. This area was previously part of an extended Maasai pastoral system whose rangeland resources were freely utilised in common by livestock and wildlife. Until the 1950s, the northern and eastern sections of the present-day Serengeti Park were part of Ngorongoro and Loliondo administrative divisions respectively. With the creation of the national park in 1959, the Maasai of Western Serengeti and Loliondo lost vast grazing areas, salt lick grounds and permanent sources of water which were critical to the viability of their pastoral economy. These rangelands, although partially infested with tsetse flies, provided an important livestock refuge in times of drought.

At the onset of the rains, the ungulate migration moves east and northwards, eventually crossing the borders of the protected areas into the adjacent Maasai villages, group ranches and rangelands. The herds stay on the eastern frontier through to the end of the rains. Before retreating back to the protected areas, they disrupt the rotational grazing system which has been the backbone of Maasai range management practice, deplete pasture, and displace livestock. The severe reduction of range resources and the breakdown of the system of rotational grazing cause losses of livestock from starvation and causes overgrazing. The pastoralists also lose livestock from diseases like malignant catarrh fever, transmitted by wildlife.

#### 3.3.4 Lopsided Coexistence

Maasai rangelands continue to provide critical dispersal zones for wildlife from four major protected areas in Tanzania and Kenya. First, the eastern and northern frontiers of Serengeti and Maasai Mara continue to serve the wildlife from these two protected areas. This wide zone has been the home of thousands of resident wildlife, and has also served at times as a temporary refuge for those driven out of Serengeti National park by trophy poachers. It also serves as the wet season domain and breeding area for the migratory wildebeest. All the 25 registered livestock villages of Ngorongoro District suffer from the adverse impacts of this migration.

Likewise, the wildlife of Manyara and Tarangire national parks depend heavily upon the range resources of Maasai villages in northern Kiteto and western Monduli. The Simanjiro plains and woodlands to the south of Tarangire, together with the rangelands extending northward to Lake Natron, Gelai and Ketumbeini mountains, constitute the only dispersal zone left open to wildlife from the two parks.

Thirdly, the group ranches of Loitokitok serve as a critical dispersal area for the wildlife of Amboseli, Chyulu and Tsavo national parks. Lastly, Maasai ranches on the Kitengela and Kaputie plains to the south of Nairobi National Park constitute the only dispersal area left open to the wildlife of that park.

In sum, virtually the entire land area currently utilised by the pastoral Maasai support wildlife grazing side by side with domestic stock. Before European hunters, trophy poachers and local meat harvesters disturbed the balance, domestic and wild animals coexisted in all the pastoral areas of this region.

When Serengeti, Amboseli and Maasai Mara were first gazetted, the authorities conceded the rights of the Maasai to continue to live in these protected areas. In due course, however, the pastoralists were forced to vacate their lands. In 1957, the late Professor Bernard Grzimek offered to raise money with which to purchase the whole of the countryside now occupied by Serengeti National Park and the Ngorongoro Conservation Area, exclusively for wildlife protection and tourism. When that offer

was turned down by the British colonial authorities, he came up with an alternative proposal to place the area under the direct jurisdiction of the United Nations.

The idea of annexing the Lake Natron basin to the Ngorongoro Conservation Area was mooted in the early 1980s. The Frankfurt Zoological Society has proposed the expansion of Manyara National Park and the establishment of a new conservation area in Simanjiro to cushion Tarangire. Conservation areas have similarly been proposed at different times for Loitokitok, the Loita plains, and the Kitengela and Kaputic plains. In Loliondo Division, a ten kilometre wide de facto buffer zone along the length of the eastern border of Serengeti National Park has been arbitrarily set up, despite there being no provision for buffer zones in Tanzanian law. In addition, the Maasai of Olulosokwan, Soitsambu, Oloipiri, Loosoto and Arash villages - who own the land - have not been consulted, and have not provided their consent for the establishment of a buffer zone.

The specific objective of all of these extensions - going by such names as "buffer zones", "dispersal areas", and conservation and management areas - is to extend conservation control over additional land area, so as to safeguard range resources for the continued use of the wildlife which migrates from the national parks. This implies strict control on development of local communities in the areas beyond protected areas. However, the experience gained by the Maasai from Serengeti National Park, Ngorongoro Conservation Area and Amboseli, has taught them in both Tanzania and Kenya not to take at face value promises made by the authorities when soliciting their cooperation in the establishment of such areas. As a result, they have built up deep-rooted antagonism to proposals to extend protected areas onto their land.

### **3.4 Threats Posed by Arable Agriculture**

#### **3.4.1 Narok District**

Narok District has historically been a pastoral domain, and has enjoyed until recently, the low human population densities typical of extensive livestock rearing areas. However, Narok borders Kisii, Kericho and Nakuru Districts, which have large peasant populations with high growth rates. Over the decades, those people confronted with shortages of arable land have sought to expand into the Narok rangelands. However, the British colonial administration restricted this by declaring Narok and Kajiado Districts a closed pastoralist reserve (having already alienated in 1904 and 1911 vast tracts of prime Maasai grazing areas for white settlement).

When Kenya attained independence in 1963, tribal reserves were abolished. Individuals from the densely populated areas were quick to take advantage of their new freedom to settle anywhere. The obvious emigration areas were the more sparsely populated pastoral rangelands. Before the end of the first decade after

independence, virtually all of the prime rangelands of the upper Mau had been lost. This area was alienated by both peasant immigrants and commercial grain farmers, the latter having been granted leasehold by the government. To this day, high rates of immigration and the consequent advance of arable agriculture continue despite land disputes with the local Maasai community.

Within the first 25 years of independence, the human population of Narok District nearly trebled, having grown from 125,200 persons in 1969 to 210,306 persons in 1979, according to national censuses. By 1987, it had increased to an estimated 336,923 people. In this process, the District has changed, from a low human density pastoral area to one in which annual human population growth rates exceed 5% - a figure well above the already high national average of 4% percent (DDO, 1983b). High population densities and rapid growth rates are centred in the northern part of the District, where arable agriculture has become predominant.

In addition to this rapid expansion of smallholder farming, large scale commercial grain production has also grown and has now become the leading economic activity in Narok. In the wake of this change, a significant number of Maasai, consisting of a few with western education and access to loans, have effectively adopted mixed farming.

In most of what remains of pastoral areas in Narok, but for the remote zone bordering Loliondo and the Isiria Plateau, the average grazing area available to the household herd is already either at or below the minimum necessary for a viable family subsistence livestock herd.

While the majority of the people involved in agriculture in the Narok are immigrants living in the northern part of the district, the predominant concern of wildlife conservationists is centred on activities further south. The Maasai now living in the marginal eastern, central and southern part of the district have gradually learnt to till the land.

Large scale grain farming, however, is the major concern for supporters of the Maasai Mara Reserve. The production of wheat and barley in Narok is dominated by a small community of medium scale farmers. The most lucrative crop in Narok is wheat. The production system is a replica of grain production operations in the American mid-west. During the 1987 season, Narok District produced 25% of Kenya's national wheat supplies. Of this total, 75% came from the northern Loita plain. Despite easy access to credit, most wheat farmers do not invest in improvements to the land, rarely apply soil conservation measures and invariably practise monoculture. As a result, the risk of soil erosion and declining fertility is very high. Most of the farmers in the area operate strive for high yields of about 30 bags per hectare, which they attain through heavy mechanisation coupled with intensive application of fertilizers, herbicides and fungicides.

Land tenure systems in the area are certainly part of the



explanation for this short-sighted exploitation of the land. Most of the farmers do not own the land but rent it from Maasai group ranches on short-term contracts, ranging from five to eight years. Land leasing has actually become a major source of income for group and individual ranchers in the wheat zones of Narok District.

#### 3.4.2 Kajiado District

Kajiado District presents a similar scenario, despite its very limited potential for arable agriculture. According to the FAO's generalised agro-ecological zones, the District has only a few small strips of land with the potential to support rainfed crop production. These strips include Ngong at the northern edge of the District next to Nairobi, part of Loitokitok Division on the foothills of Kilimanjaro. These areas combined amount to 7% of the total land area of the district (DDO, 1983). Despite the constraints, Kajiado has witnessed a large influx of cultivators. Ngong, Loitokitok and Sultan Hamud areas now have heavy human population concentrations well above the national average. This figure contrasts greatly with the densities prevailing in the predominantly pastoral zone. In 1979, for example, the national census recorded an average population density for Kajiado District as a whole of seven people per square kilometre - much below the overall mean for Kenya of 27 per square kilometre. In contrast, the densities registered for the agricultural areas of Loitokitok, Ngong and Sultan Hamud were over 50 people per square kilometre. This gave Kajiado District a high population growth rate of 13 percent per annum during the inter-censal period (1948-1979). By the end of the period, the proportion of pastoralists of the total population had fallen to 62 percent (DDO, 1983a). In comparison, the population growth rate of Narok District in the same period was 15 percent, and the proportion of pastoralists fell to 59 percent by 1979. Ever more cultivators are moving in every year.

#### 3.4.3 Loliendo Division

As with Narok District to the north, the apparent potential of Loliendo Division for arable agriculture has attracted farming entrepreneurs in Tanzania. Pressure to open-up Loliendo for arable agriculture is mounting despite the area still being remote, without an all-weather road link to the rest of the country. For many years, the only cultivation found in the Division was confined to Sonjo and to very small areas in the narrow valley around the trading and administrative centre of Loliendo town. However, in the face of population growth and in the absence of any development investment, this traditional system is no longer capable of meeting the needs of the people.

The first community engaged in rainfed arable agriculture was established in the vicinity of Loliendo by Kikuyu, Kipsigis and Kamba immigrants, who came to the area through Narok during the colonial period. At that time, Loliendo was linked to Narok by an all-weather road and a regular bus service. Communication between Arusha and Loliendo was mainly via Narok - Nairobi -



Namanga. Most of the Kenyan peasants in Loliondo left gradually when the two countries gained independence. However, with the establishment of communication through Ngorongoro, there has been a gradual movement of peasants from Kilimanjaro, Kondoa, Singida, Arusha, Musoma and Mbulu into the Loliondo area. As a result, arable agriculture has expanded although it is still confined mainly to Loliondo, Sakal and Wasso villages.

Large scale commercial farming poses a more immediate and serious threat to both pastoralists and wildlife in Loliondo Division. The British colonial administration carried out an investigation in 1962 of the potential for large scale wheat production in Hanang and Loliondo areas which confirmed that there was indeed potential for wheat production in both areas. Hanang was chosen for the Tanzania-Canada Wheat Scheme because of its proximity to communication routes, markets and facilities in Arusha town. It was therefore inevitable that large scale grain farmers would look to Loliondo for expansion. Indeed, in 1982, a team of Canadian experts was despatched to Loliondo to investigate the potential for large scale mechanised wheat production, as an extension to the Hanang wheat complex. In their report, this team tentatively estimated that 31,700 hectares of land were suitable for wheat production in the whole of Loliondo Division (Nielsen, 1982). A draft report prepared in 1987 by the Tanzania National Land Use Planning Commission has recommended a total of 34,176 hectares be allocated for arable agriculture in the area (NEUPC, 1987).

There is a strong commitment in official circles and among commercial farmers to exploit what they view as high potential land which is lying idle. Loliondo Division has long been looked on as the future granary of Tanzania. Currently, there are no less than 200 outstanding applications for title to land in the area. These applications have been submitted by individuals and companies seeking long-term leases. These requests range from a few hundred up to 40,000 hectares, and total nearly 100,000 hectares in all. This is in addition to the unplanned peasant immigration.

The applicants for farming land in Loliondo include commercial farmers, both Tanzanians and foreigners, parastatal companies, as well as individual government and Party officials based at Loliondo. Tanzania Breweries (TBL) have been granted 4,000 hectares granted by the District Council. Despite litigation by the local community of Sukenya, TBL remains confident about its chances for expansion in Loliondo, citing standing promises made by regional and district officials that they will be permitted to grow barley on the 40,000 hectares requested. As in Narok, these developments threaten the interests of both the local Maasai community and wildlife.

Apart from the promise of producing wheat and barley for the nation, the development of commercial agriculture in Loliondo Division is backed by the authorities to rescue the Maasai and Sonjo people from the ever-present threat of starvation. It is true that during the dry season the people of Ngorongoro District

have been relying for their subsistence on grain transported by lorries 400 kilometres from Arusha and at times from Karatu. Food supplies are intermittent as the road is in very bad condition; it is virtually non-existent on the 200 kilometre stretch between the Ngorongoro-Seronera highway and Loliondo.

Secondly, the people living in the NCA (which accounts for 59 percent of the land area of the District), have no certain year-round supply of grain. This is compounded by the fact that they are prohibited by law from cultivating in the Arca.

The third argument that propels commercial agriculture into Loliondo is that it will open up the area to development. That is to say, when large scale production of crops becomes established in the area, good roads will be built, and reliable health facilities, secondary schools, electricity, shops, workshops and the many other facilities which go together with a thriving commercial economy will follow. In addition, the income of Ngorongoro District Council will be increased by the collection of crops cess and business license fees, instead of relying mainly on development levies.

These arguments might appear valid, but the actual reality reveals different motives. Local production of food for the people of Ngorongoro is only used as a pretext for a different motive. The Loliondo Maasai cultivate crops for three major reasons: first, to have greater food security; secondly, as a complement to declining livestock production; thirdly, to assert their rights of occupation.

#### **4 LOCAL COMMUNITY BENEFITS AND WILDLIFE EXTENSION**

##### **4.1 Benefits from Wildlife to Local Communities**

In contrast to most other African countries which possess significant wildlife populations, Kenya has gained considerable experience in attempting to channel a proportion of earnings generated by the tourist and wildlife industries to local human communities. More than half of the 47 protected areas in the country are national reserves under the jurisdiction of local county councils. For most councils, tourism constitutes either an important, or more often, the main source of revenue used to support basic socio-economic services. Kenya also has projects which provide grazing fees to group and individual ranches in lieu of range resources utilised by wildlife outside protected areas. Such payments, based on animals feeding on group or individual ranches, at one time became a major source of income for the group ranches situated between Amboseli, Chyulu and Tsavo parks in the administrative division of Loitokitok.

The third avenue through which revenue from wildlife has accrued to local communities has been fees charged by group ranches and individual owners of land which they leased for campsites and lodges. Fees are also charged for water used by lodges and camps, as well as firewood and road gravel collected from

ranchers' land. Money is also made from the sale of handicrafts and photography fees at designated kraals known as "Maasai cultural centres".

Before game hunting was proscribed in Kenya in 1978, local communities living in wildlife rich areas benefitted from hunting concessions. Furthermore, Kenya law recognised the rights of people to be paid compensation for losses caused by wildlife. The Wildlife Act of 1979 Section 62 (1) stipulates that:

"... where after the appointed day any person suffers any bodily injury from or is killed by, any animal or suffers any damage to or loss of crops or property or, in the case of a deceased person, any other person who was dependent upon him at the date of his death, may make application to a District Committee established by this section, for the award of compensation for such injury or death or damage or loss"

(GDK, 1977)

Despite this provision, payment of compensation has been limited by inadequacy of funds allocated for this purpose, inefficiency and dishonesty in the assessment process and in submission of claims. Among the common grievances is non-payment of compensation claims, many outstanding as far back as 1982.

#### **4.2 Kajiado Wildlife Management Project**

The Kajiado Wildlife Management Project (WMP) was jointly sponsored by FAO and the Kenya Government (Berger, undated). The project was an attempt to reconcile the protection of natural resources with the welfare of local communities. Thus, it sought to develop a system of wildlife management through which local communities would be able to secure direct benefits from the wild animals found outside protected areas. The project helped group ranches introduce and administer a system by which they issued hunting concessions and allowed controlled game cropping from which they earned incomes.

Secondly, WMP assisted group ranches to identify potential camp sites, lodges and tourist routes, so that they could attract and cater for visitors coming to Amboseli, Tsavo and Cyulu parks. The project also carried out regular counts of wild animals and assessments of ranch resources utilised by wildlife so as to work out estimates on which payments of grazing fees could be based. Although the activities of WMP were very popular among the Maasai the project suffered from a lack of follow-up. Only two of its main initiatives have been continued. Regular counts of livestock and wildlife were taken over by the Kenya Rangelands Ecological Monitoring Unit (KREMU), operating under the Ministry of Environment and Natural Resources, KREMU's surveys cover all of the country's rangelands, ie. 500,000 square kilometres (80% of Kenya). These surveys are intended to furnish reliable and up-to-date data on population dynamics of both domestic and wild animals and their distribution in relation to range resources.

The surveys are also intended to be used to forecast long-term population and habitat changes relative to land use patterns and human settlements.

The popular grazing fees scheme for Kajiado ranchers operated entirely on project funds. Disappointing as it was, there was no alternative but to replace this source of funds at the end of the contract. Consequently, payments to ranches for grazing losses ceased in 1977. In the following year, local communities living in areas of wildlife abundance throughout Kenya lost another major source of revenue from game cropping as hunting concession fees as a result of a ban on hunting.

In 1974, the people of Kajiado suffered from the nationalisation of Amboseli Reserve. Up to that point, Kajiado County Council had been deriving more than 75% of its annual revenue from Amboseli. This had placed the Council among the most well-off local governments in Kenya. The Presidential decree which changed the status of Amboseli to a national park reversed overnight the fortunes of the County. It was left with only two sources of wildlife and tourism revenue. First, a fixed sum of only KShs 460,000/- received as a compensation fee from central government each year. Secondly, rents from both Oltukai Lodge and Amboseli New Lodge.

At the end of the project, WCMD employed one adult education officer to carry on the extension work started by WMP. Under this interim arrangement, a series of conservation education and rural development workshops were conducted. Local wildlife development committees were also set-up to provide links between ranchers, parks and WCMD administration. These activities helped to reduce tension and to ameliorate the poor relationship between park and anti-poaching unit personnel on the one hand and the local communities on the other.

#### **4.3 Loitokitok Wildlife Extension Project (WEP)**

Much experience has been gained in Kenya from wildlife extension projects. These projects are confined to selected administrative divisions or wards where large populations of wild animals utilise ranch resources; invariably, these are areas bordering parks and reserves. The Loitokitok Wildlife Extension Project was launched in 1984. Funds for the project were provided by UNESCO and the African Fund for Endangered Wildlife (AFEW). The project started at a time when the morale of local communities, which had received and then lost major incomes from wildlife, was very low. The loss of grazing fees and hunting concessions, coupled with the loss of Amboseli itself to the central government, created fundamental grievances, and a sense of having been betrayed, neglected, and robbed of the basic means of development.

WEP was conceived with the experience of WMP. Originally, it was intended to carry out project activities in both Kajiado and

Narok Districts. The project began with a series of preliminary surveys and meetings among group ranchers and cultivators in Loitokitok and in three areas of the District. The project team evaluated the impact of the previously applied extension and community education methods, and then went on to identify resource needs and the type of work to be done by wildlife extension staff in protected areas and districts with large populations of wild animals.

It was found that group ranch members, the project target group, lacked unity of purpose as members of cooperative ventures. This was a fundamental constraint to community development and resource management. The project team recommended that leadership training and community mobilisation be made the priority. WEP adopted the approach of integrating its activities with those of other institutions and groups active in group ranch development and community leadership training.

A project survey confirmed that the attitudes held by local communities toward wildlife are determined above all by the level of economic security. As a result, WEP activities have been based on an acceptance of providing local communities with direct benefits from the wildlife which share their land.

The first WEP workshop, held in February 1985, brought together pastoralists and cultivators selected by five group ranches in Loitokitok Division. The cultivators came from farming clusters established near springs and in swamps within the ranches. This workshop attracted the involvement of UNESCO, the Development Education and Group Ranches Education Programme (GREG) of the Catholic Diocese of Ngong, the Kenya Energy and Environment Organisation (KENGO) and the Wildlife Conservation and Management Department.

The extension team used the workshop to introduce itself and the project to the people of Loitokitok. Thereafter, it organised a series of follow-up meetings as well as community education and leadership training activities. Through this process they decided to work with local communities through "conservation action leaders". These were leaders respected in their communities, although they may not have held any traditional or official post. They were soon at the forefront of action in their respective areas.

#### **4.4 How Maasai Mara Benefits People in Narok**

Maasai Mara National Reserve is owned by the Narok County Council. A team led by the Mara Warden manages the Reserve on behalf of the County Council, under the guidance of the Maasai Mara National Reserve Management Committee. This committee is composed of representatives of the Wildlife Conservation Department, the Chairman and several councillors of the Narok County Council, the Narok District Commissioner, Chiefs and representatives of the neighbouring group ranches.

Revenue from tourism is highest from this reserve relative to

other protected areas in the region. Narok County recruits, trains and pays some 240 employees working in the Reserve. Virtually all of these employees, the largest group being rangers, are Maasai employees of the County Council. These are mainly special projects staff involved in the anti-poaching unit, rhino surveillance and specific research projects, undertaken by the Wildlife Conservation and Management Department and international organisations.

The people of Narok also benefit directly from the reserve through employment in lodges and safari camps. Before hunting was outlawed, a ten kilometre zone was divided up into hunting concession blocks which were leased to professional hunters. Subsequently, these blocks were offered by group and individual ranchers for the establishment of safari camps. In short, the Mara Reserve constitutes a vital employment area in familiar surroundings for the Maasai of Narok District. Whereas this provides income to individuals, it is worth pointing out that given the cultural framework, these earnings are shared and go a long way to improving the quality of life for the extended families of the local communities.

The Maasai community living in the immediate neighbourhood of the Reserve also benefits directly as a whole. During times of drought, the office of the Senior Warden may permit livestock to utilise pastures in the Reserve. Local communities also enjoy access to essential services available in the Reserve. Moreover, the local community is well represented - both directly and indirectly - on the Maasai Mara Management Committee; this Committee provides the community with a forum in which to express its views, present its grievances, and take part in the decision making processes in and around the Reserve. It was through the Management Committee, for example, that a total of 164 square kilometres of the Reserve to the Maasai of Olololo, Talek and Siana was given to the local people. Their livestock now have access to permanent watering points and crucial salt licks on the Mara, Talek and Sand rivers.

The decision aroused the indignation of wildlife patrons abroad, who immediately denounced it as a move by the Government of Kenya to undermine the integrity of Maasai Mara. Yet this was truly a humble concession, made after the admission of gross trespass on the intrinsic rights of the local Maasai. The denial of access to water and salt licks along the three permanent rivers in the area was a serious cause of disharmony and local community animosity towards the Mara administration. To many, this was a glaring demonstration of preservation rigidity and myopia, and of the lack of appreciation on the part of conservationists for the genuine grievances of the people. This tactical concession has proved to be a major contribution to the restoration of an amicable relationship between the Mara Reserve administration and the Mara local community.

As much as 85 percent of the gross income of Narok County Council is earned from the Reserve through fees chargeable for aircraft landing, gate entrance per vehicle and for every visitor,

camping, guides, filming and balloon safaris, together with business licenses and lodge tariffs. The Council contributes grants in aid for the construction and maintenance of dips, purchase of livestock vaccines, drugs, acaricide, antibiotics, salt licks and veterinary supplies. These are sold to livestock producers at subsidised prices, at only 10% above factory price. In addition, the Council provides secondary school education bursaries for local children and for retired employees who are known to be unable to pay school fees. Every councillor is also allocated a standing sum of KShs 26,000/- for self-help (Harambee and Nyayo) projects.

The Narok County Council overwhelmingly owes its prosperity to the Maasai Mara Reserve. Yet despite the Council's impressive involvement in the welfare of the people living in the District, there is a sense of discontent amongst those pastoralists who live nearest the reserve and suffer the most from the Mara wildlife migration. These people believe that the Council's development initiatives are lopsided, in that they tend to favour those communities closest to the town of Narok and other urban centres.

#### **4.5 Wildlife Extension in Narok**

The World Wildlife Fund (WWF), which has been cooperating with the Narok County Council on various projects is organising a wildlife extension project geared to group ranches in the area. Unlike Loitokitok, where the possibilities for alternatives to livestock production and wildlife conservation are limited, the Mara pastoralists are confronted with competition from cultivation. This constitutes a challenge to accommodate the two types of land use found in the area. There is no doubt that a comparative analysis of returns from arable agriculture versus those from livestock and wildlife will be decisive for ranchers who own the land in the neighbourhood of the Reserve.

A recent meeting of the Maasai Mara Management Committee illustrates this point. The Director of the Kenya Wildlife Conservation and Management Department, sitting as the Chairman of the Committee, sought the views of group ranch representatives on their willingness to have their land gazetted as a conservation area. The representatives were unanimous on three points. First, the idea of gazetting was utterly unacceptable; however, they would consider cooperating if it was timebound subject to extension only if it proved beneficial. Secondly, the representatives were unanimous in their demand that the community needed to be informed and persuaded that wildlife would provide revenue comparable to agriculture. Thirdly, they wanted to be convinced that livestock losses would be minimised. These were the conditions for an agreement to halt the development of arable agriculture on their ranches (Maasai Mara Wildlife Management Committee, 1987).

In February 1988, the Koyaki Group Ranch (east of the Mara Reserve) passed a resolution to divide its land into individual



holdings (Chairman of Koyaki Group Ranch, pers comm). It is expected this will bring arable agriculture to the boundary of the Reserve. The country on the eastern fringes of the Reserve is ideal for grain farming. The move would extend wheat farming across the hilly stretch of land at Aitong and Lamek, thereby surmounting an obstacle which has previously served to slow the advancement of wheat.

In Kenya, considerable experience has been gained over the years in designing a conservation and development approach to the management of the wildlife resources. However, popular policy decisions, such as the granting of ownership rights over national reserves to county councils and the payment of compensation, hunting and grazing fees to group ranches, tend to be nullified by the lack of a consistent, concrete system designed to ensure that these innovations are implemented within an efficient and sustainable framework. In addition, the main impetus is provided by international organisations. Whilst there is a current need for external initiatives and financial support, it is important, however, that there is a shift away from this dependence on external resources to increasing reliance on earnings generated by tourism and wildlife.

## **5 CONCEPTUAL AND POLICY CONTRADICTIONS**

### **5.1 The Tanzanian Contradiction**

Having persistently toed the old conservation line, Tanzania enjoys the admiration of preservationists throughout the world. However, despite the pride and unquestionable commitment of the state to wildlife protection, actual performance by conservation structures remains very disappointing. Protected areas continue to suffer from out of date policies, poaching, isolation from the public and a callous disregard on the part of wildlife managers for the genuine grievances and needs of local communities who share wildlife ecosystems.

The security of wildlife is inherently tied to that of its natural habitat. In this regard, game controlled areas - which limit hunting but do not restrict development or otherwise control land use - are essentially meaningless. Wildlife protection in game controlled areas and reserves is the responsibility of the Wildlife Division of the Ministry of Lands, Natural Resources and Tourism. But this division depends on regular budget allocations from central government for funds.

In the prevailing national economic crisis, government resources are allocated to numerous competing demands. Many other state commitments carry greater weight than the needs of the Wildlife Division. Consequently, this division receives an annual budget allocation which is grossly inadequate. This eventually results in the failure of the Wildlife Division to discharge its duties over the large and often remote areas under its jurisdiction. It would be more effective for investment in conservation to be met directly from revenue generated from wildlife and tourism.



Tanzania National Parks (TANAPA) and the Ngorongoro Conservation Area Authority (NCAA), both of which earn and utilise revenue directly from tourism have substantially increased their annual incomes with the current upswing in the tourist industry. But the problem of scarce funds is not the only - and perhaps not even the most fundamental - cause of degeneration.

The preservation approach to conservation is contrary to the progressive image of the Tanzanian state. It is anomalous that the security of animals in game controlled areas, reserves, and national parks continues to be entrusted to armed rangers under the command of wardens. Local communities are viewed as nests of potential poachers and therefore are neither involved in decision making nor are they thought to have a role to play in conservation.

The competence of game rangers has been enhanced by support from government and international wildlife conservation institutions, which have supplied vehicles, uniforms, radios, aircraft, guns and ammunition, in an effort to maintain law enforcement capacity. But the achievements resulting from these investments have been of only short-term value. The people of Tanzania who share habitats with wildlife have invariably been ignored and alienated from conservation, despite the contributions they have made in the past. Local communities in particular have been forced by the authorities to perceive wildlife enclaves as exotic entities, imposed against their will and at their expense.

The wildlife authorities have refused to concede recognition of even the most fundamental grievances of local communities. They have been persistently denied their rights. They have been denied the opportunity to participate in the decision making processes on issues located in their homelands. They have no rights as communities to receive direct benefits, nor to share the revenue generated by tourism and wildlife. They are not entitled to receive, in any form whatsoever, compensation for injury, loss of human life, or damage to property caused by the wildlife. The only reward from wildlife is paid to individuals who report poachers to the authorities, and that is payable only if such culprits are arrested and convicted.

#### 5.1.1 Ngorongoro Conservation Area

Even in the NCA, the plight of the people is no better. In addition to the debilitating impacts of the ungulate migration, the Ngorongoro Maasai suffer from the trauma of problems specific to the disregard by the administration of its mandate to safeguard and promote the interests of the human population.

When Serengeti National Park, inclusive of the Ngorongoro Highlands, was first established in 1940 the Maasai responded with categorical refusal to obey government orders, which required them to vacate their homeland. This created the crisis which was settled by the 1958 compromise agreement. The government opted to split the land into two entities: Serengeti

National Park and the Ngorongoro Conservation Area which was to be run as a multiple land use area. The Maasai conceded to this compromise but only after the Government promised them guaranteed rights of occupation to the land, priority of interest and development of compensation water in Ngorongoro.

When the Governor of Tanganyika addressed the Maasai Federal Council on the 27th August, 1959, he said:

Another matter which closely concerns the Maasai is the new scheme for the protection of the Ngorongoro Crater. I should like to make it clear to you all that it is the intention of the government to develop the Crater in the interests of the people who use it. At the same time the Government intends to protect the game animals of the area; but should there be any conflict between the interests of the game and the human inhabitants, those of the latter must take precedence. The Government is ready to start work on increasing the waters and improving the grazing ranges of the Crater and the country around it; for your part you must take care to fulfil the agreements into which you have entered to keep the countryside in good heart. You must not destroy the forests, nor may you graze your cattle in areas which have been closed under any controlled grazing scheme; at the same time you must be certain to follow veterinary instructions designed to prevent diseases.

Subsequently, several dams were constructed at Kakesio and Endulen, and boreholes were drilled and equipped with diesel pumps at Kakesio and on the eastern Serengeti plains. However, these water sources soon proved inferior to the permanent natural supplies of Moru, western Serengeti and Ngare Nanyuki, which the Maasai had lost with the creation of the Serengeti National Park. The dams silted-up or breached within the first two years after construction was completed. The boreholes also proved a disappointment due to poor maintenance, while that at Kakesio delivered water too saline for livestock, let alone for human consumption. These inadequacies have never been remedied. To date, the Ngorongoro Maasai continue to suffer from an acute shortage of water for both domestic and livestock use.

When the Ngorongoro Act was revised in 1975, cultivation was outlawed. When the Maasai raised objections to this proposal, they were promised that a branch of the Regional Trading Company would be opened at Ngorongoro to ensure the availability of adequate grain supplies. They were also promised assistance with the development of a more productive livestock economy, which would afford them greater food security without having to resort to cultivation.

The 1975 version of the Ngorongoro Conservation Area Ordinance has not been changed. Yet the administration is flagrantly violating this by simply ignoring the clause to "safeguard and promote the interests of Maasai citizens of Tanzania engaged in cattle ranching and dairy industry", which it perceives as a gross defect in the legislation. The administration has shunned

its statutory mandate to safeguard and promote the interests of the indigenous Maasai of the Area. Instead of working together with the local community to evolve a practical way of integrating the interests of people with those of conservation, the authorities have tried to arrange for the departure of the Maasai from Ngorongoro. The development aspirations of the Ngorongoro Maasai are continually frustrated by the NCAA, in the hope that hardship will induce them to leave out of despair.

In collaboration with international preservation lobbyists, the administration of Ngorongoro has endeavoured to extinguish the legal right of occupation of the people in the NCA. They are determined to ensure that the Ngorongoro Maasai are moved out to complete the partial eviction achieved on the Serengeti. Preservationists argue that Maasai livestock are responsible for overgrazing, soil erosion and the spread of unpalatable grasses and causing irreparable damage to important fossil sites at Olduvai Gorge and Laetoli. But the preservationists exonerate the wildlife population of well over two million animals, despite the fact that these animals utilise the same rangelands as only 275,000 livestock.

The Ngorongoro Maasai consider they have a basic right to participate in the decision making process of the Conservation Authority; be free from hunger, harassment and prejudices; enjoy the right to benefit from improvements in livestock production employment opportunities, education, health, water and veterinary services, roads and other basic facilities. They are convinced that the promises of 1959 and 1975 were made solely to enable the authorities to implement unpopular decisions without provoking hostility. To this day, the Ngorongoro Maasai have no effective voice in the NCAA. They are denied employment on the pretext that they do not want to take up job opportunities. Yet more than 90% of the 260 employees in the Mara Reserve are individuals of the pastoral Maasai cultural group. Out of more than 180 employees of the NCAA, only seven are Maasai from within the Area and another two come from Kiteto and Monduli Districts. As far as the Authority is concerned, the only "good" Maasai in Ngorongoro are individuals who work as informers.

As a result of the severe deterioration of all basic services and infrastructure, and the dramatic increase in the wildlife population, the Ngorongoro Maasai suffer heavy losses of livestock from malnutrition and a wide spectrum of diseases (Field, Moll and Sonkoi, 1988). This has led to a very low calving rate, dwindling milk supplies and a sharp fall in herd growth rates. Many families depend on grain for basic subsistence (Arhem, 1985). However, those families below the poverty line do not have animals to sell to meet their needs. This has provoked an outcry for the restoration of the right to cultivate.

The NCAA, unmoved by the plight of this deprived community under its jurisdiction, remains adamant and is opposed to development in the Area. Thus it persistently continues to violate the law which was meant to safeguard the interests of the Ngorongoro

Maasai. To justify this, the NCAA argues that since the Ngorongoro Maasai have development aspirations which in accordance to the principles of justice, civil law and Tanzanian political ideology are inalienable rights, these people should leave the Area to lands where they - like their fellow countrymen - will enjoy the freedom of unrestricted development.

## 5.2 Arable Agriculture Bias

Agriculture constitutes the mainstay of the national economies of Kenya and Tanzania alike. The term agriculture is used in English to denote the "science and art of cultivating the soil to produce crops and raise livestock". In east Africa, however, common use of the word has been narrowed to refer only to arable agriculture. This has arisen from the fact that most policy and decision makers come from a social background which is oriented toward arable agriculture, national food production strategies are consistently oriented toward arable agriculture, foreign exchange earnings accrue largely from the export of crops. In other words, the national perception of rural development is formed and defined under the dominant influence of a crop-oriented, agrarian culture. Development becomes largely synonymous with increasing the area under food and cash crops. Livestock production and pastoral systems inevitably tend to be neglected.

Except for those areas already gazetted for protecting fauna and flora, arable agriculture is given unrestricted freedom to advance. Cultivation has been accorded priority over all other land uses. The principle of land use planning - of allocating land to different purposes on the basis of suitability - is sacrificed wherever arable agriculture is possible, even if the actual potential for cultivation is marginal and viable only in the short term.

A preference for arable agriculture throughout east Africa extends to areas where other land uses have greater potential to contribute to the national economy and are more suitable for the long term conservation of resources. The eastern zone of the Greater Serengeti Region offers a most revealing case of this. This region has been utilised for ages by livestock and wildlife. This coexistence proved amicable until the intrusion of arable agriculture, with the creation of wildlife enclaves and an explosive rise in the population of wild animals, created conditions for resource destruction and conflict.

A German Agriculture Mission has carried out a detailed assessment of the potential for arable agriculture in Kenya. The team has produced a comprehensive report outlining the suitability of different areas of Kenya for the production of 11 main crops. According to this report, even the north Narok area which has already been turned to the plough, is far from being ideal for arable agriculture due to a number of serious limitations. First, in the wettest belt (the northern-most flank of the District) much of the land is forested. This forest needs

to be strictly protected if it is to continue serving as an important water catchment for country to the south and north. Yet this crucial forest reserve has been extensively cleared for farming in the wake of the unplanned immigration of landless peasants. As rivers and streams began to run dry, an outcry was raised by the adversely affected communities, including the town of Narok. The crisis reached such serious proportions that it was eventually brought to the attention of the President of the Republic of Kenya, who ordered the immediate eviction of the immigrants.

There are other reasons that should limit the expansion of agriculture in this area. The steep slopes of the region make the forest land very susceptible to soil erosion following clearance of the natural vegetation. This risk is particularly potent in the light of farming practices in the area. Indeed, monoculture wheat farming over successive years has already led to evident losses of humus, in an area where the soils were naturally shallow. In the area further to the northwest of the District, despite good climatic conditions which favour such prime export crops as coffee and tea, the destruction of the natural forest through grass fires has led to losses in soil fertility. This process has severely lowered the original potential of the land.

The other area of Narok which is being looked to for arable agriculture is the Loita Plateau, which extends across the border into the Loliondo Division of Tanzania. This area has hitherto experienced little encroachment by arable agriculture, due to its remoteness. However, it is now scheduled for the production of wheat, barley, maize and potatoes. A portion of the plateau to the southeast is covered by one of the few pristine natural forests left in east Africa. The forest is rich in wildlife, including large herds of elephant and buffalo. The forest is also a vital water catchment area, feeding numerous streams which flow to the north and south, where the water makes life possible for Maasai pastoralists, livestock and wildlife in the driest parts of Kajiado and Narok Districts.

The Loita Plateau is characterised by shallow soils. Thus, despite generally high rainfall, the area on the whole has only limited possibilities for the commercial cropping which the Narok and Loliondo authorities plan to introduce. Along the western flank, towards Maasai Mara Reserve and Serengeti, the mean annual rainfall is high (averaging 730-800 mm), but commercial agriculture is constrained by its poor reliability and the impact of the ungulate migration. Despite this, however, arable agriculture is given over-riding priority throughout Narok District.

### **5.3 Group Ranches and Sustainable Development**

The Maasai have gradually been pushed off from the high potential land and are now confined mostly to the semi-arid areas

stretching from the border of Tsavo National Park in the east to Maasai Mara Reserve in the west. In the past, the high potential areas provided reliable dry season grazing and refuge from drought for both livestock and wildlife.

The rest of the ranching zone in both Kajiado and Narok Districts has been demarcated into group ranches, registered and incorporated in accordance with the 1969 Land Group Representative Act. The primary motive for group ranches was to provide a framework within which to facilitate the dismantling of communal ownership of land and subsistence oriented livestock rearing. That way of life was expected to be replaced by a sedentary lifestyle and commercial livestock production. It was rationalised that a system of exclusive group rights to restricted range resources and the ownership of land titles would induce pastoralists to take out loans, with which they would finance range and livestock improvements, and enter the commercial livestock sector (Halderman, 1972).

The pastoralists, however, had their own reasons for embracing group ranches. They were eager to use land adjudicated to secure titles that would prevent further alienation, and which would also enable them to retain communal access to range resources over areas large enough for viable extensive livestock rearing. In addition, they were attracted by the opportunities offered to increase water facilities, dips, salt licks, etc, contained in the development programmes which accompanied the group ranch legislation.

Group ranches in Kajiado and Narok Districts have been a success when evaluated against Maasai objectives. The possession of land deeds has halted to a very large extent the alienation of rangeland. Many ranches have been able to capitalise upon development programmes to improve livestock infrastructure. And finally, while group ranch members now graze their livestock within the confines of their group rangelands when resources are adequate, they also maintain the traditional system of sharing resources over areas beyond ranch boundaries. This continues to have tacit approval from ranch membership in times of stress, such as droughts.

Many government objectives have also been met, although there have been some notable disappointments. Ranches have created a sense of identity within the boundaries, which is encouraging gradual sedentarisation of the herding population. There have also been some improvements in the livestock quality. The initial development of range facilities undertaken by the group ranch adjudication project has also improved production conditions. There has been an increase in water, dips, and veterinary services. These improved services have facilitated the rearing of improved breeds of cattle and these have now been introduced in greater numbers in many of the higher potential ranches. Improved production conditions have also stimulated livestock sales and even the marketing of fattened steers on a commercial basis.

Apart from disappointment with the speed of sedentarisation, the main concern on the part of the Government has been the poor repayment of loans and the outright refusal by many group ranches to take credit to finance socio-economic transformation. Secondly, whereas group ranch members are collectively required to limit livestock holdings by selling-off animals considered to be above the carrying capacity of each group ranch, this has not been enforced by group ranch executive committees.

## 6 CONCLUSIONS

The second half of this century has witnessed a growing awareness of the disastrous consequences of a reckless approach to development, and the limitations of conventional wildlife preservation. It is increasingly being realised that the solution to the problem of conservation is not merely to strengthen the power of the authorities against local communities. On the contrary, the solution lies in planned integrated management, geared to harmonise the conservation of biological resources with the need to overcome poverty and backwardness among the local inhabitants. The growing understanding of such an approach among many international development and conservation organisations opens up a new vista for the future. Such an approach will not only help to restore vital community support for the existing protected areas, but will also help to mobilise support for the creation of new, integrated management areas, along the lines of Biosphere Reserves. Such a framework provides the best option for resolving the growing conflicts between conservation, local communities and commercial land users.

It is timely to recall the World Conservation Strategy definition for conservation as "the management of human use of the biosphere so that it may yield the greatest sustainable benefits to present generations while maintaining its potential to meet the needs and aspirations of future generations". This global strategy has as its goal the integration of conservation and development to ensure that modifications to the planet secure the survival and well-being of "all people".

Tanzania and Kenya have both endorsed the World Conservation Strategy and are signatories to the Man and the Biosphere Programme. That commitment, however, is contradicted by the continued predominance of preservationist thinking and practice in the management of protected areas in Tanzania, and the failure to integrate conservation with the needs of local communities in Kenya. The willingness on the part of the state in both countries to uphold wildlife conservation is undoubted. However, despite the rhetoric, actual performance in both countries reveals that the development approach has not yet been given practical interpretation.

This inquiry has led to the conclusion that the range resources of Maasai group ranches and villages are critical to the survival of the rich wildlife heritage of both Kenya and Tanzania. If



this were indeed the shared conviction of the two governments and international organisations involved, then it would be logical to expect a more holistic, integrated approach to the problems of the Greater Serengeti.

Livestock and wildlife constitute the primary resources of Maasailand. The two have immense sustainable potential to meet the needs of conservation and appropriate development. There is an urgent need for the governments of both Kenya and Tanzania to have clear, long-term policies on the issues of wildlife conservation and the development rights of the people who live in wildlife abundant areas beyond protected areas. Wildlife education and extension projects are serving a useful purpose. But such projects are of limited potential and only superficial impact as long as they focus on protected areas dominated by a preservationist philosophy. Cosmetic changes which evade the legitimate socio-economic needs of local communities squander the opportunities still available for a conservation and development partnership. The more effective utilisation of the Greater Serengeti's natural resources has the potential not only to improve the welfare of local people, but also to ensure the long-term integrity of the richest wildlife heritage in the world - a heritage that now seems destined to be lost through recklessness and short-term perceptions.

The challenges presented by the Greater Serengeti are enormous, and they are complicated by the vastness of the land area in question, as well as by the often divergent interests of local communities, two nation states, the international wildlife lobby, tourism, and agriculture. The task at hand is demanding. It requires unbiased and detailed understanding of the region's complex land-uses, the dynamics of human, livestock and wildlife populations. It also calls for financial investment on a scale which is capable of charting out a practical strategy that will reconcile the outstanding contradictions. Lastly, there must be genuine and mutual commitment on the part of all sides to foster sustainable conservation and development within an overall integrated framework.

The status quo cannot be maintained for very long without loss of both the natural and cultural heritage of our homeland. The eviction of indigenous peoples from their land is a barbaric act of alienation of those people who have been the vanguards of conservation. The world has seen many cases of injustice falsely justified to meet the needs of vested interests. However, history also demonstrates that dictatorship and acts of oppression, in whatever form and however disguised, cannot continue in perpetuity. The preservationist approach to wildlife conservation has aged. Its proponents are fighting against the course of history. At first they promoted conservation for tourists with the lure of earning profits for the poor nations of Africa. But when that myth was shattered and awareness of the social costs of tourism and failure of national parks to protect certain valued species they came up with another argument: that increases in livestock not wild animals will usher the Sahara to the Equator.



Wild animals, like forests, are among the primary resources of our nations. Wildlife are an invaluable renewable resource that developing nations must learn to utilise judiciously, so that their benefits accrue today but in such a manner that future generations shall inherit with pride the legacy of previous generations. This will not be achieved by banishing the indigenous wildlife guardians from the land of their birth, and relegating them to marginal areas where impoverishment and deprivation will become their lot.

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