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“Wildlife Conservation, Ecological Strategies and Pastoral Communities. A
Contribution to the Understanding of Parks and People in East Africa”

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Wildlife Conservation, Ecological Strategies and Pastoral Communities

A Contribution to the Understanding of Parks and People in East Africa

Martin Enghoff

Introduction

Wildlife conservation, as a form of landuse organized by the state, has had a long history in East Africa, and today it must be considered one of the major forms of alternative use of semiarid pastoral land. Huge tracts have been set aside as wildlife reserves or national parks, where only tourists can come. The fact that wildlife moves, and that most pastoral areas are just as suited to wildlife as to domestic herds, means that all pastoral lands of East Africa fall under the influence of wildlife (Pratt and Gwynne, 1977). In addition, wildlife conservation promotes tourism, and tourism is one of the biggest earners of foreign exchange in Kenya, Tanzania and to a certain extent Uganda. Because of tourism, wildlife conservation provides a high return of foreign exchange from the land in many of these pastoral areas, and it is thus seen as a highly rational form of landuse by these governments (Croze and Mbuvi, 1981). In this way, it must be considered alongside most other official development strategies of pastoral land, that, above all, seeks to increase the economic contribution of the pastoral areas (Århem, 1985 a; Collett, 1987). Justification for wildlife conservation is never held solely in terms of economics of tourism. Benefits of conservation are also claimed to be indirect and long term to humanity and production in the pastoral areas. In this way, it also resembles other development interventions in pastoral areas, where local benefits are said to succeed to an increasing contribution to the national economy. In light of the fact, that it holds such a important position in the

development of pastoral lands, and that so much has been written about pastoral development, it is surprising how little has been written on the social and developmental aspects of wildlife conservation.

Surely wildlife conservation has come to East Africa to stay, and therefore it is important, that this policy is integrated in a sustainable and acceptable way into the development strategies of pastoral areas. Unfortunately, the situation regarding wildlife conservation today is far from acceptable, for most of the affected pastoral communities (see Parkipuny, 1988; Århem, 1985; Odegi-Awondo, 1982; Fumagalli, 1978; Dahl, 1979; Yeager and Miller, 1986). It has come to mean negative and destructive state intervention for the majority of pastoral people. In my opinion, this unfortunate situation is partially rooted in the perceptions, that the official bureaucracy has had of the pastoral production system and development. In this paper, I will first give an overview of the current status of wildlife conservation in East Africa, followed by an historical account of the rise of these perceptions, in connection with the evolution of the policy of wildlife conservation. I will then move on to discuss central parts of pastoral ecological strategies, that infringe on wildlife conservation. The understanding of these issues is important, if we want to contribute to the betterment of the present situation of pastoral people, and at the same time conserve important parts of the East African natural heritage.

Wildlife conservation in East Africa is most pronounced in the present and former Maasai areas of northern Tanzania and southern Kenya, and therefore my material partly focuses on this region. Finally,

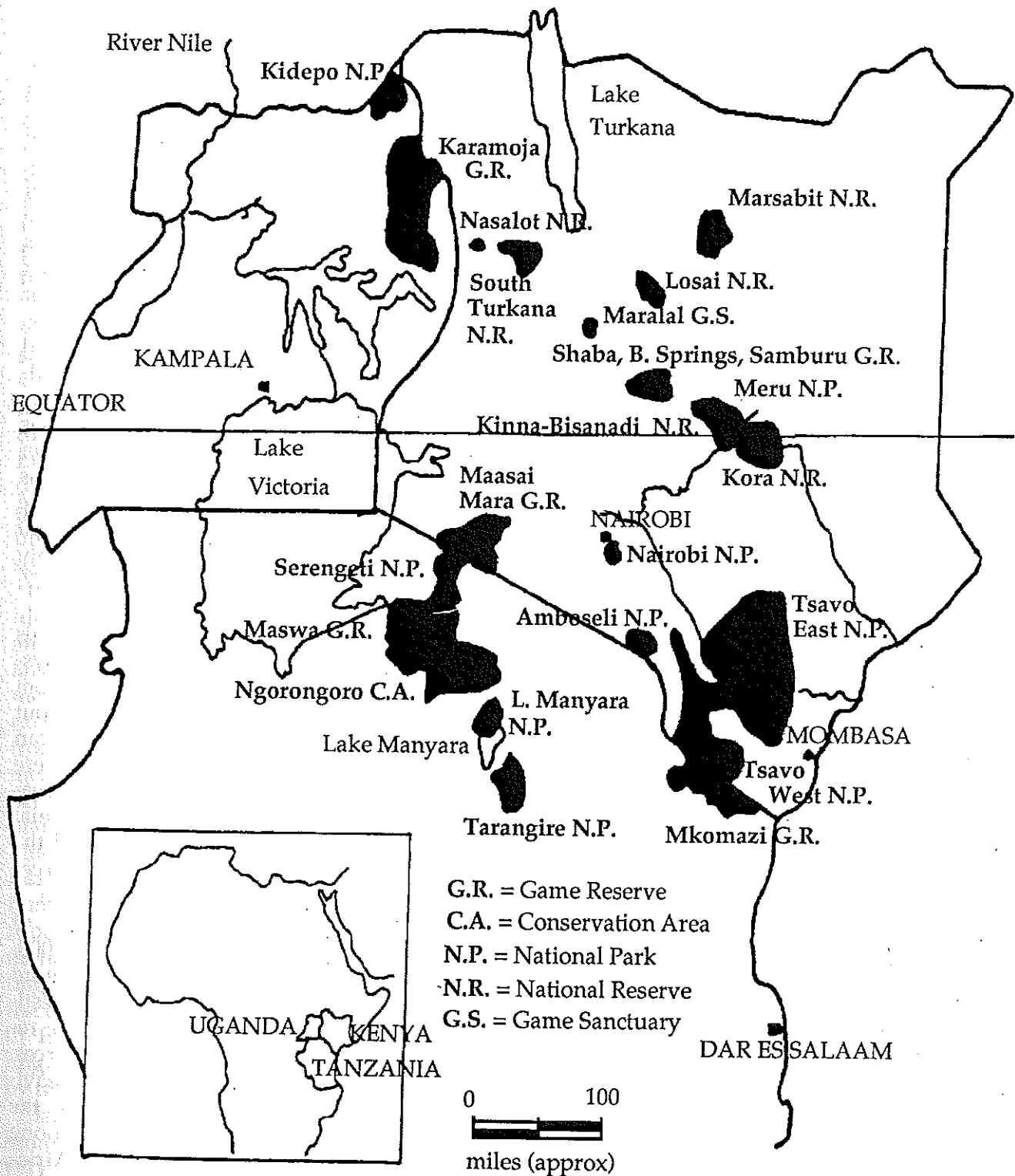
in this paper I will use the situation of Ngongoro District of northern Tanzania as a case study of conservation as related to state interaction with pastoral communities. Admittedly my interpretation is a biased one, as I try to see wildlife conservation in its relation to pastoralists and their livestock production system. I think this is defensible not only in terms of the rights of indigenous peoples to land and culture, but also because conservation, in the long run, will only work in collaboration with the people that are most affected in their daily lives.

An Overview of Wildlife Conservation in Contemporary East Africa

Landuse related to wildlife conservation in East Africa is dominated by the national parks and their equivalent reserves. Both exclude any local inhabitation. Alone in Maasailand of Kenya and Tanzania, we are talking about eight different large parks and reserves with an important influence on the survival of the livestock production system of the Maasai pastoralists. Starting in Tanzania, there is the Serengeti National Park with the adjoining Maswa Game Reserve, the Tarangire National Park, the Manyara National Park and the Mkomazi Game Reserve. In Kenyan Maasailand, we have the Nairobi National Park, the Amboseli National Park, the Tsavo National Park and the northern extension of the Serengeti ecosystem; namely the Maasai Mara National Reserve: all being large areas, where the Maasai pastoralists have had to vacate their homeland; all containing important water resources and dry season grazing grounds; all areas from where the wildlife in large numbers critically depends on the surrounding Maasai pastoral rangeland; and all areas where the wildlife population in general have increased during the last decades (Yeager and Miller, 1986; Parkipuny, 1988; Bennett, 1984).

Further north in Kenya, we have other parks and reserves carved out of former pastoral areas with similar problems of those of Maasailand, though with much less documentation as to the actual situation of the pastoralists and the specific me-

asures that have been taken towards regulating landuse. The Samburu pastoralists are affected today by the Samburu, Buffalo Springs and Shaba National Reserves, the Maralal Game Sanctuary and the Losai National Reserves. The Samburu, Buffalo Springs and Shaba National Reserves are closed to grazing, whereas the actual situation in the Losai National Reserve is not documented. Up until the 1950s, most of Samburu lands were part of the Northern Game Reserve, which were seeking to maintain a territorial reservoir of all the species of wild animals, that could compensate for the reductions taking place in other parts of the colony. Human inhabitants were not excluded from this reserve. The growing competition over available grazing between wildlife and livestock and the damage done by the wildlife to human interest could not be resolved, because most of the area had been set aside as a game reserve (Fumagalli, 1978). Today the most serious direct threat to the system of pastoral production in the area is livestock diseases, which are, to a large extent, spread by wildlife (especially different forms of East Coast Fever - ECF). One of the main reasons for the increased threat posed by ECF are the conditions of former and present wildlife management of this area, which have brought on an high degree of direct wildlife/livestock interaction (Perlov, 1982 and 1983). The Borana pastoralists in Kenya have lost large and important grazing grounds in the Meru National Park, the adjoining Kinna-Bisanadi and Kora National Reserves and in the Shaba National Reserve. This reduction in available grazing land has resulted in a grave loss of security in the Borana pastoral production system (Dahl, 1979). Further North, other Borana pastoralists have lost their important dry season grazing reserves in the large Marsabit National Reserve (Odegi-Awundu, 1982). In the Turkana District of northern Kenya the huge South Turkana and the smaller Nasalot National Reserves protect wildlife, yet the Turkana pastoralists apparently still have access to grazing within the reserves. In the far north of Uganda the large Kidepo Valley National Park was established in 1962, resulting in critical loss of grazing land for the Karamojong pastoralists (Cum-



Map 1. Parks and reserves mentioned in the article

mings, 1987). Also three very large game reserves have been designated, running north and south through most of the Karamoja District. These lie entirely within the Karamojong grazing grounds, but the actual development of the reserves and control of the landuse in this region is not documented (Williams, 1981).

Many more pastoral areas in East Africa are under pressure from different wildlife lobbies to be transformed into parks or reserves (Yeager and Miller, 1986; Parkipuny, 1988). Apart from the parks and reserves, wildlife conservation is also developed in the Ngorongoro Conservation Area of northern Tanzania. Here a large area has been set aside to promote conservation, tourism and development for the local Maasai and their system of livestock production. This multiple landuse strategy also implies many problems for the pastoralists, but these will be dealt with later in this paper.

Wildlife Outside Parks

In Kenya and Tanzania, hunting is prohibited or strictly regulated almost everywhere in pastoral areas. This means that the spread of disease between wildlife and livestock and grazing competition are increased in many areas, because killing or otherwise driving away the wildlife from the livestock grazing grounds is not allowed (Odegi-Awondo, 1982). A wide range of livestock diseases originate in wildlife and are often transmitted to livestock that use the same rangelands. Today the general picture is that livestock diseases now pose a major threat to the pastoral production in East Africa. Through this mechanism, wildlife conservation must be viewed as an important limiting factor in the performance of pastoral production systems in the region (see Raikes, 1981; Odegi-Awondo, 1982; Perlov, 1982). The tourist generated revenues from parks and reserves in East Africa, are returned only in a very low degree back to the pastoral communities. If some kind of compensation system is set up, the benefits rarely reach the level of pastoral communities that are most heavily affected by the conservation measures (Lindsay, 1987; Bell, 1987).

A History of Conservation and Perceptions

East Africa, today, stands as one of the world's last regions teeming with wildlife and with the world's highest concentration of national parks. An understanding of this phenomenon must be sought in the history of the colonial encounter more than in any special environmental characteristics of East Africa. Following Kjekshus (1977), the ecological situation before the 1890s was indeed very different from the one that met the first Europeans colonizing the interior of East Africa at the end of the last century. The precolonial situation was characterized by a conflicting relationship between wildlife and man, but a relationship where man had the upper hand. Wildlife populations was decreased and relegated to smaller pockets of land. The human populations were also considerably higher. Many of the now famous national parks, before 1890 were densely populated areas with only small amounts of wildlife (Kjekshus, 1977: 69-79).

A series of incidences in the 1880-90s made these man-controlled ecological systems collapse. Rinderpest introduced from India to Somalia in the 1880s, wiped out between 90 and 100% of the East African cattle population, thereby causing severe famine. Drought, newly introduced diseases (smallpox, sandflies etc.), and colonial warfare, together with famine reduced the human population drastically. Some sources quoted by Kjekshus (1977), estimate a likely reduction of the population of Maasai pastoralists from around 400,000-500,000 before this catastrophe, to around 50,000 after. This is the most dramatic estimate available, but a picture of a huge reduction is clearly presented in all sources. The pastoral populations were most heavily affected, and scenarios such as the Maasai population crash, occurred among other pastoral peoples of East Africa (Dyson-Hudson, 1985). Within a few years, without bush and wildlife controlling practices of these pastoralist, huge former pastoral areas regressed to tsetse infested bush often teeming with wildlife. When the European colonists arrived on the scene, they saw the pastoralists trying to survive in a country heavily populated with wildlife

and sparsely populated with people. This picture was largely understood as a static fact of pastoral production systems, and not as a unique historical situation (Knowles and Collett, 1989). This picture served to justify wildlife conservation policies, introduced by the colonial governments as early as the turn of the century. These policies played a crucial role in arresting the situation of wildlife domination of large areas; a situation that still plays an important part in the performance of the pastoral production in East Africa. The majority of the Europeans believed pastoralists to be "natural man" living on the mercies of the wild nature. To a large extent, wildlife conservation at this very early stage was not seen as a threat to the interest of pastoralists nor were pastoralists seen as a threat to the interest of wildlife conservation (see Eliot, 1905). The subsequent recovery and development of the systems of pastoral production have ever since been seen as unnatural, threatening and ecologically unsound (Bell, 1987).

In the first decades of colonization, the idea of "natural man" was dominant among influential colonial administrators and the creation of game reserves was seen more as a way of protecting wildlife from excessive white hunting and a way of controlling hunting in the interest of the colonies. The reason why wildlife conservation became so prominent in East African colonial history, is understood by the special kind of colonization that took place here. First of all, the Kenyan colonial administration was trying hard to attract as many European settlers as possible. Those with money were preferred, and wildlife, hunting and nature were used as the main attraction in many advertisements appearing in English magazines. This attracted the English gentry, who were especially drawn by those unique features.

Also early safari tourism in the form of hunting parties, was promoted from the very beginning of the colonial period of East Africa. This provided an important source of revenue for both Kenya (Sandford 1919, Eliot, 1905) and Tanganyika (Yeager and Miller, 1987). Trophy hunting of big game soon reached proportions that endangered the survival of the large herds. Game reserves were established to protect

this important East African colonial asset and assure that in the future this would still be able to attract people from abroad. In these reserves, hunting was licensed as a means of control and of raising revenues from the land. The first game reserves in Kenya and Tanganyika were demarcated in 1896. In Kenya, the huge Southern and Northern Game Reserves were established in the early years of the 1900s, occupying most of the pastoral lands used by the Maasai and the Samburu pastoralists. Many other game reserves followed these and the pastoralists was not moved out of these areas.

From the beginning of the colonial period, indigenous systems of pastoral production had been seen as economically irrational, based on a system of raiding and incapable of any development other than settlement and switching to agro-pastoralism (see Eliot, 1905). This view also suggested that pastoralists do not trade, nor do they eat agricultural products (Knowles and Collett, 1989), which served as justification for taking over large tracts of their pastoral lands, simply because "they don't use it". This description of pastoral production systems was also presented in one of the earlier ethnographies (see Hollis, 1905 on the Maasai).

Changing European perceptions

Around the end of the 1920s, when the first decades of colonization were through, pastoral production had regained part of its potential through a rise in population and an increase in livestock. Partly as a result of this, the dominant administrative perception of pastoral production systems and development began to change. The perception of a nonviable system lingered on, but now formed the idea of pastoral mismanagement of the lands through heavy overstocking (Collett, 1987). This idea found a scientific base in the anthropological writings of Herskovits (1926). He gave further credit to an already existing idea of an economically irrational system of pastoral production and called this "the East African Cattle Complex". After the Dust Bowl catastrophe of the USA in the 1920s, there was an enormous output of written material on soil conservation, that helped to create this idea of pastoral mismanagement

of East Africa (Anderson, 1984). Ever since, pastoral land has been seen as going through a steadily and ever worsening degradation. From this time on, conservation measures including destocking, settlement and soil conservation, have been to a large extent equated with pastoral development (Hogg, 1987). The general understanding rose, that pastoral land is in immediate danger of destruction through overstocking and overgrazing. These were seen as unavoidable features inherent in the ecologically unsound practice of pastoralism, which therefore had to be changed drastically or abandoned completely (Hogg, 1987; Bell, 1987). In this scenario wildlife conservation was seen as the only sound utilization of pastoral land (Homewood and Rodgers, 1987). Ever since, wildlife conservation lobbies have been in front with charges of pastoral mismanagement (Collett, 1987). Also, around the end of the 1920s, the game department took over the responsibility of tsetse control, and from this time on it was officially denied that wildlife could serve as important links in the spread of tsetse (Kjekshus, 1977: 70).

Steps towards the separation of wildlife in protected natural parks, with pastoralists settled outside were now advocated by more and more Europeans from East Africa and abroad. During the colonial period pastoralists came to be viewed less as a part of nature and more as a part of culture. This was caused by actual change in pastoral areas and by the rise of a generally more humanistic view of Africans. Nature, as pure wilderness so longed for by modern western man, therefore had to be protected from this new picture of the pastoralist. A dichotomy between nature and culture lies at the root of Western civilization, and must be understood as central to ideologies behind the creation of parks. Here progress is equated with the domination and alienation of nature, meaning that civilized people have to live outside wildlife areas - a view shared by modern East African administrators (Knowles and Collett, 1989; Olwig and Olwig, 1979). The pastoralists were not viewed as fully cultured, but as standing in a somewhat undefined space between nature and culture. This is still the case of the pastoralists today (Schlee, 1989).

The first national park to extinguish the right of pastoral communities to use an area was created in the mid-1930s (Lake Manyara in Tanganyika), and just after the Second World War the pastoralists were ordered out of Nairobi National Park in Kenya. A long pressure from wildlife lobbies also ended with the exclusion of pastoralists from Serengeti National Park in Tanganyika in the 1950s. In Uganda and Kenya, this decade saw the development of other national parks. In the sixties, before and after independence, the creation of a large number of parks took place throughout East Africa. The idea of separating conservation and development was thus wholeheartedly taken up and continued until today by the newly independent governments (Knowles and Collett, 1989). Only in the Ngorongoro Conservation Area of Tanzania was a large scale attempt at multiple land use in a pastoral area tried out - we will return to that later. With the creation of national parks, large areas were definitively placed outside the controlling praxis of the pastoral production systems, and lost to these pastoral societies.

Impact of the early pastoral studies

During this period, a number of anthropological studies were made of East African pastoral societies, within the British structural-functional tradition. In popular and well-known studies such as Evans-Pritchard, 1940; Gulliver, 1955; Spencer, 1965 and Jacobs, 1965 all kinds of trade, relationships with neighbouring societies and sales of livestock were not emphasized. The institutions of the pastoral societies were analysed in vacuum of time and space, meaning that their system of production was not explained in a regional and historical perspective. The pastoral societies were described, here, mainly in terms of their obsession with livestock, their numbers and with pastoral food products. Other kinds of production and food strategies were explained as temporary deviations from the norm of pure pastoralism, which due to a pastoral ideal and a conservative commitment was totally unwanted. Also nomadism was partly described as a cultural commitment and not just as a production strategy. I am not saying, that these descriptions of the pastoral so-

cieties were completely wrong. Rather they stressed a certain reality of these societies which was academically interesting, at that time, but which in retrospect seems unfit for a thorough understanding of what is occurring in pastoral areas. Unfortunately, the timespan between the rise of an academic explanation of society and its spread to bureaucratic levels often takes many years. This partly explains the fact that many of these ideas flourish today in the administrative dealings of pastoral development and wildlife conservation in pastoral areas

On the Ecological Strategies

I will now focus on some of the pastoral ecological strategies, that are most relevant to the policy of wildlife conservation today and in relation to perceptions of pastoral production systems.

Mobility

Restriction on mobility is the outcome of exclusion of pastoralists from the parks. Through predation, grazing competition and disease interaction, the increased presence of wildlife on pastoral lands outside parks also restrict mobility of the domestic herds. Settlement of pastoralists and intensive ranching are both still widely believed to be sound measures for conserving soil and wildlife and for securing a proper development of livestock production (Horowitz, 1979; Hogg, 1987; Ndagala, 1982). But today, more and more studies show, that man-induced soil erosion is more commonly associated with areas occupied by settled agropastoralists and agriculturalists than with areas under extensive production. It has also been shown that wildlife is bound to be wiped out in areas settled by ranchers. In addition, we know that wildlife populations from parks heavily depend on surrounding areas now under extensive and mobile pastoral use (Homewood and Rodgers, 1984; Parkipuny, 1988; Western, 1982). Also, mobility of pastoral herds is, according to many recent studies, a prerequisite for efficient production in most pastoral areas of East Africa (Dyson-Hudson, 1985; Western, 1982). Patterns of mobility involve the use of wet and dry seasonal

grazing lands and the allocation of water and salt resources. Full access to these resources leads to the most efficient form of pastoral production, and exclusion from any one of these resources might lead to a collapse of pastoral production systems (Horowitz, 1981). Mobility is aimed at securing access to the best pastures and the best range resources, before they are exhausted by wildlife (Western, 1982). The pattern of livestock mobility and that of wild grazing herds often resembles one another to a large degree. They both seek access to the same resources. This implies a degree of competition between wildlife and livestock, and a degree of common interest in creating and maintaining the same kind of rangeland. Moreover the geographical distribution of these resources might change from year to year (especially regarding pasture and surface water). This means that both wildlife and livestock require potential access to the resources of a large area.

Wildlife on the range

All pastoral societies of East Africa have from time to time and in varying degree, depended on wildlife as a source of food in periods of scarcity. Therefore, wildlife is normally viewed as a resource to heighten the food security of the pastoral communities, and is never viewed only as competitors to be gotten rid of (Collett, 1987; Western, 1982). Furthermore, the aesthetic value of wildlife seems to be important, at least for some groups of pastoralists (Saitoti, 1978; Bell, 1987). All in all, this means that wildlife in certain numbers can be tolerated in the pastoral areas. But the control of these numbers of wildlife on rangelands and their use in regard to central resources, seems to be a critical element in systems of pastoral production, over all. This control has taken many forms. Fencing strategic waterholes is used to keep away large numbers of wildlife. This strategy is, due to wildlife conservation regulations not available to the pastoralist of many areas. The spread out of pastoral populations, over most of the range where the potential for pastoral production is optimal, furthermore controls the numbers of wildlife (Bennett, 1988; Conant, 1982). This spacing of populations was, as mentioned before, des-

troyed during the catastrophe of the 1890s and has been partly inhibited from being established again in large areas due to the creation of parks; resulting in the spread of wildlife from these uncontrolled areas into the remaining pastoral rangelands. Burning of the range, and the use of goats are according to recent studies two successful strategies, that among other things seek to control the invasion of bush. This ensures that an area will not revert to the exclusive use of wildlife (Western, 1982; Horowitz, 1981; Homewood and Rodgers, 1987).

Burning and grazing patterns

Burning of the range and the use of goats both have been deemed evident signs of pastoral mismanagement and are used as arguments for the eviction of pastoralists from areas, where the conservation of wildlife and soil have been seen as a necessity. Grassland in East Africa is generally a sub-climax habitat. Goat and camel browsing and burning actually help to maintain open grassland that is favourable to wildlife (Western, 1982). Studies show that neither burning nor goats and camels need be destructive to the environment, if used in line with the well established pastoral production praxis of an area (Horowitz, 1981). In addition, grassburning is also used as a strategy to create new growth in an area, where the grass would otherwise be too fibrous and hard to digest for the livestock. Growing grass is the most nutritious grazing available. Furthermore, grassburning in the more well-watered pastoral areas is essential to control the spread of tick borne diseases like ECF (Homewood and Rodgers, 1987). The strategy of burning, then, on the one hand puts a check on the numbers of certain kinds of wildlife, and on the other hand promotes the kind of habitat in which many forms of wildlife proliferate. Controlled burning of the range by pastoralists has generally decreased either due to prohibitions or through denser settlement making proper burning of the range impossible. Yet another factor in the increased occurrence of tick borne diseases and in the competition between wildlife and livestock over the remaining resources (Odegi-Awondo, 1982; Perlov, 1982; Homewood and Rodgers, 1984; 1987). That the effects from burning on wildlife are seen as

positive in the eyes of conservation is partly shown by the fact that, today, park management in certain national parks has opted for a park ranger-controlled burning of the range.

Stocking levels

Another ecological strategy of pastoralists, that has played an important part in the picture of mismanagement, is their strategy of stocking levels. Pastoral production systems is, by conventional wisdom, equated with overstocking and overgrazing. This is seen as leading to the ultimate destruction of the habitats and, thereby, endangering the survival of the wildlife. The common belief that levels of overstocking leads to severe overgrazing is difficult to establish. In fact, it is rare to find substantiated cases of irreversible vegetation destruction due to overgrazing (Bell, 1987; Horowitz, 1981). Many cases have been cited, where pastoralists have been accused of mismanagement of the lands through overstocking, and where closer examination fails to find, that any kind of irreversible destruction is actually taking place (Homewood and Rodgers, 1987; Horowitz, 1979). Of course, the pastoral production to some extent destroys or transforms the surroundings, but this is to be expected from all kinds of human production. A heavily destructive impact will, if taking place, most likely be connected with a system of pastoral production seriously off balance due to loss of access to strategic resources (Hjort, 1982). Moreover, it is important to note, that these areas where the pastoralists are accused of mismanagement, are very often the same areas, which are most prone to naturally occurring geological erosion (Western, 1982). Overgrazing is often nothing more than a temporary situation, not leading to anything but a passing and partial loss of vegetation cover (Bell, 1987). Actually, overgrazing can also be a means of making the pasture become more productive; a heavy grazed pasture is to a certain point more productive than a lightly grazed one (Hjort, 1982). This can also be a strategy to control the tick population and henceforth the spread of livestock diseases (Raikes, 1981). Overstocking must be viewed in light of the fact that wildlife competes in most areas with livestock, meaning that

any destocking of livestock will likewise lead to an increase in wildlife (Western, 1982). On the other hand, understocking seems to be a general problem in East Africa. As mentioned before, this leads to the degradation of the habitat in relation to future pastoral production. Under and overstocking are connected in the sense, that overstocked areas often are accompanied by other understocked areas (Hogg, 1987; Conant, 1982). All this, I think must lead to the question, what the "over" in overstocking and overgrazing actually refers to.

Studies have shown that the stocking levels and herd structures of East African pastoral herds, in general, are quite rational, when we view the herds as reproductive herds, aimed at securing at least a minimum stable surplus in a very unstable climate either in terms of subsistence or for trading purposes (Dahl and Hjort, 1976; Schneider, 1979; Dyson-Hudson, 1982). Stocking levels and herd structures are linked to environmental variations, so production is boosted in good years, with the inevitable die-off in bad years, but with capacities for rapid recovery; all in all, meaning more efficient overall production (Sandford, 1983).

Pastoral surplus

Comparison between three different landuse systems of semiarid pastoral land (wildlife, commercial ranch, pastoralism) shows that pastoral use is the most efficient in terms of production per unit of land (Western, 1982). Also, pastoralism supports a comparatively large number of people, in an otherwise inhospitable environment.

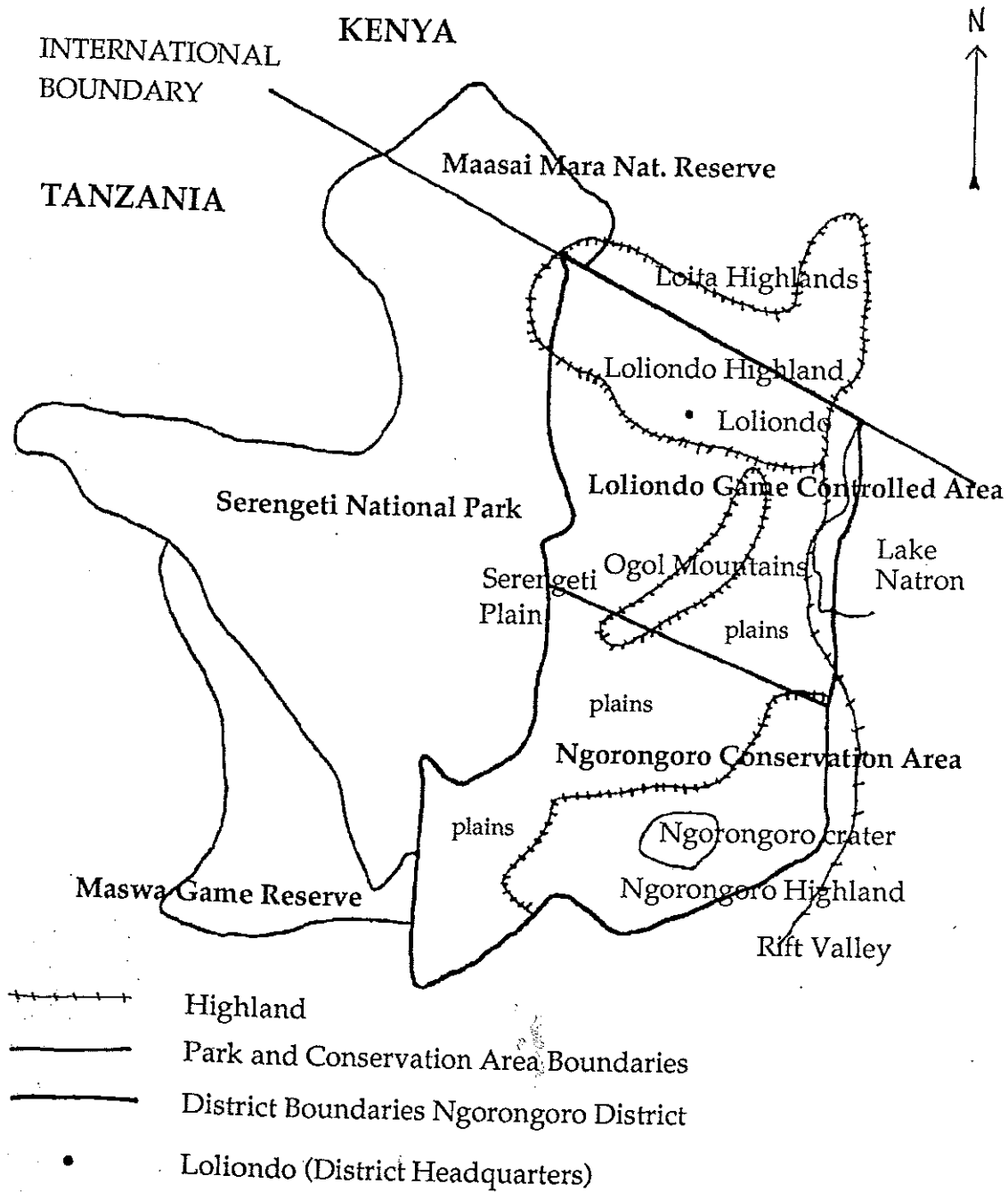
Pastoralists are accused of not contributing to the national economy of the states, and development of pastoralism to generate higher economic contribution is seen as essential by the bureaucracies. Very often this is claimed possible, only in form of settled ranching, which is not compatible with wildlife conservation. Therefore, administrative regulations still seek to separate wildlife areas completely, from those areas where pastoral development should take place. It is important, to note that current pastoralism does create a substantial surplus, that is potentially available for markets; a surplus frequently exceeding 8-

10% a year from a herd (Western, 1982; Hjort, 1981). One problem, is that this surplus often is sold locally or on the black market, and therefore does not figure prominently in the official statistics.

The Case of Ngorongoro District, Tanzania

The approximate 14,000 km² large Ngorongoro District of Northern Tanzania will serve as my case study of the socio-political aspects of conservation. The district, with headquarters at Loliondo close to the Kenyan border, is by most Tanzanian administrators considered to be an extremely outlying part of the country. In this way, it resembles other pastoral districts of East Africa. In relation to wildlife conservation, it contains three different areas, namely the 8292 km² large Ngorongoro Conservation Area (NCA), the Loliondo Game Controlled Area, and the famous Serengeti National Park (the Serengeti Park is actually lying just outside the district, but it is closely connected with the destiny of the district).

The NCA is a multiple landuse area. Since the early 1960s it has had responsibilities of conserving the unique natural heritage, while at the same time promoting the developmental interests of the indigenous Maasai pastoralists living there. This pioneering attempt of combining development and conservation during the last 15 years has become more and more focused on pure wildlife conservation. This is to the degree that Maasai pastoralists are now viewed mainly as an obstacle, in respect to the proper use of the area. The NCA is under direct management of a special authority appointed by the president, and has a somewhat more powerful status than the district as a whole. The Loliondo Game Controlled Area comprises the remaining land of the district. Here, hunting of wildlife is regulated, but no other conservation policies are directly in place. This area is characterized by a frontierlike mentality, which includes land being taken over by colonist and outside powers, little effective planning and minimal central control. The Serengeti National Park lies under a park authority and is largely outside district ad-



Map 2. Ngorongoro District and surroundings

ministrative powers. Large herds of wildlife within the park influence the surrounding outside lands profoundly. My reason for taking up all three areas in this case study is that events in any one of these areas have a profound ecological and sociological influence on the overall situation of the district. Most of the Ngorongoro District, the Serengeti and the bordering district in Kenya, can in this way be viewed as one big ecological and sociological interdependent system.

On some mobility strategies of Ngorongoro District

The Ngorongoro District has an approximate population of 60,000-80,000 people with 90% being Maasai pastoralists. It is topographically and climatically quite varied and ranges from a hot arid lowland around Lake Natron (altitude c.600m), the short grass plains of the Serengeti (altitude c.1,500m), to the well-watered open highlands of Loliondo and Ngorongoro (altitude 2,000-3,000m). Due partly to the varied environments found here, different pastoral production strategies are used. One strategy is based on transhumant movement of herds between the dry season pastures in the highlands and the rainy season pastures on the low-lying plains. This is the most common production strategy in the district. Another strategy, found in the central plains of the district, is based on a much higher degree of mobility, where both homesteads and herds are moved around the plains many times a year according to occurrence of water, grass, security and diseases. Lastly, a strategy based on keeping herds more or less within the same area all year round, is found in the Ngorongoro and Loliondo Highlands. These three main production strategies are mixed in such a way that even within a boma, some families might lean towards one strategy, while others might lean towards another.

Problems for pastoral production systems in NCA

All three strategies are becoming increasingly difficult to practice. This is significantly due to wildlife conservation measures imposed on the district. First of all, there is less grazing ground available, because of the direct exclusion from the Se-

rengeti National Park in late 1950s, and later from smaller but central areas within the NCA. On the plains, large tracts are lost to pastoral production because of the overflow of wildlife from the vastly increased herds of game in the Serengeti National Park. Wildebeests are especially a problem, since they infect an area with malignant catarrhal fever when they are calving, and thereby effectively close a lot of the plains to livestock in the months of the rainy season.

Thirty to forty per cent of the best grazing lands available in the district are not usable, due to the risk of cattle rustling. These pastures all border the Serengeti National Park, which acts as a large, perfect and uncontrolled hideaway for cattle rustlers on the move. This problem, with well-organized and heavily armed gangs of cattle rustlers, has taken on alarming proportions within the last couple years (Parkipuny, *pers. comm.*). In the Ngorongoro Highlands there is a spread of nonedible grass species (esp. *Eleusine jaegeri*), and a increased incidence of tick borne diseases. Both of these problems are connected with the conservation policies enforced in this area. A ban on burning of the range in the NCA gives both unpalatable grass growth and more ticks (Homewood and Rodgers, 1984). Growing wildlife populations, lead to closer wildlife/livestock interaction, raising difficulties in controlling ticks on livestock (Field, Moll and Sonkoi, 1988). During the last few years, tick borne diseases have reached epidemic proportions in the Ngorongoro Highlands (*ibid.* 1988). Both lowlands and highlands are becoming increasingly difficult to use. It seems, all in all, that the problems facing the system of pastoral production in the low-lying plains are most serious. The trend is that fewer livestock owners today choose the transhumance strategy and instead hold their herds in the highlands all year round. Thus they have to cope with the negative effect that this has on their production of livestock. Also, mobility of pastoral communities on the plains today is severely restricted. It is a common perception among district bureaucrats, that this curbing on mobility is in line with proper development. Therefore, it is not seen as a problem, except among the NCA authorities. Here,

in accordance with a evolutionary view, this change is seen as the inherent development that pastoralism must move towards; namely a Western styled system of ranching. It is thus taken as proof of the latent incompatibility of pastoralism with wildlife conservation.

On cultivation in the Ngorongoro District

Apart from pastoralists, small pockets of agriculturalists are found in the Loliondo Highlands and in the Sonjo area. Moreover, most pastoral communities today cultivate small gardens in connection with their highland homesteads. This cultivation is carried out by Maasai pastoralists or, on a smaller scale, by outsiders working for the Maasai. Due to wildlife conservation measures, all cultivation is banned within the NCA. Cultivation that does take place is done illegally and under great risks. The question of cultivation is very central to the future of the whole district. Pastoralists claim that cultivation is necessary, because earlier trading links for agricultural produce are no longer functioning; either due to eviction in the mid-1970s of agriculturalists from the NCA, or to a breakdown of trading links in the region, as a whole. In addition, the relative value of stock to grain have deteriorated significantly, during the last decades. Furthermore, supplies of grain in stores within the district, are not to be depended on and are also very expensive. The NCA authority claims that any kind of cultivation will destroy natural values of the NCA, and no modification of the cultivation ban seems likely. Also, NCA administrators believe that pastoralists, in general, do not really have to cultivate or get agricultural produce to supply their diet.

Future landuse in Ngorongoro District

In the Loliondo Highlands, cultivation is not banned and there is good potential agricultural land. Today, part of the district bureaucracy tries to turn this area into large scale farming enterprises. This means alienation of land that is currently under use as important dry season pastures. The rationalization for this, is based on the expressed assumption that pastoral production systems will never be able to contribute

to the national economy, because pastoralists will not sell their stock. Therefore, the land has to be put to better use. Nobody seems to be aware of the fact that cattle markets flourished in the district in the 1950s, when prices paid were higher (Fosbrooke, no date). At the same time, both more pastoralists from the NCA and agriculturalists from other places, move to the Loliondo Highlands to settle, either as agropastoralists or agriculturalists.

A division of the district into two completely different landuse areas is very likely in the near future. One would be settled under intensive utilization, and the other for pastoralists who are not allowed any change. As one senior staff in the NCA said, "All Maasai, who want a better life, must move out of the NCA, and into the Loliondo area where they can settle and become more modern" (pers. communication 1987). This would lead to the complete closing off of the Loliondo Highland to wildlife, that is now common in many areas. It would also result in the loss of important dry season pastures for many pastoral communities in the area. One sees the possibilities of the Loliondo Highland being turned into a heavily degraded area, within a short span of years. Moreover, someone has to explain to the large herds of migratory ungulates from the Serengeti, that they have to stay out of Loliondo Highland, even though rain patterns in a particular year, make them depend heavily on the Loliondo Highlands. This shows that such a sharp separation of landuse zones is fraught with problems. Due to a high degree of interrelatedness, problems will arise not only in development areas outside, but also inside more or less closed parks. To a large degree, open landscape is a cultured landscape created through pastoral grazing and burning patterns. This fact means that the administration of the NCA is not left with an easily manageable park, if the Maasai people finally are forced to leave that area. The insular approach to wildlife conservation has to give way to a much more integrated approach to conservation and development. The whole district and part of some of the bordering districts, will have to be the focus of such an approach (see Parkipuni, 1988 for a suggestion of an approach in line with this).

Conservation vs pastoralism?

The current pastoral use of the area is also believed by the NCA authority to constitute a grave problem. Here, pastoralists are accused of overgrazing and destruction of the vegetation cover, leading to the spread of unpalatable grasses (*Eleusine jaegeri*) in the highland. Even though the area holds the same numbers of livestock as 20-30 years ago, and it cannot be considered overstocked; the spread of *Eleusine jaegeri* is more likely the result of the enforced ban on burning (Homewood and Rodgers, 1987). The much talked about negative pastoral impact on environment and wildlife in the NCA, seems hard to expose to reality. Actually, most wildlife in the area thrives quite well (Fosbrooke, pers.comm.).

The benefits returned to the local Maasai communities within the NCA are indeed very small in comparison with the cost of wildlife conservation they are forced to accept. Also, the power of the conservation authority is largely used to control local people. In both ways, this resembles many other landuse developments of pastoral areas. Identical ideas about the pastoral way of production can be found among both the NCA administrators and the district bureaucrats. In my interpretation, these are largely false perceptions that play a crucial role in the serious problems encountered both in development and conservation in the Ngorongoro District.

What to Learn?

It has been my intention to show, that coexistence of wildlife, conservation and pastoral production is filled with problems. But trying to combine conservation and pastoral development is the only solution, if both pastoral societies of tomorrow and large scale conservation is to continue to exist. This road will be filled with obstacles and management problems, but learning from what's actually going on out in the bush, and listening to what pastoral strategies say, would help in resolving the problems that bureaucrats and pastoralists alike, will experience. Just adhering to well-worn perceptions will not solve anything. When combining pastoral production with conservation of wildlife in large numbers problems exist, though the hardship is

mainly felt by the pastoralists. If wildlife conservation establishments and governments accept the fact that numbers of wildlife can have a limit, and that pastoral production does not necessarily destroy rangelands, then there is ample room for pastoral production in the future of East African landuse.

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