

# The Tragedy or the Benefits of the Commons? Common Property and Environmental Protection

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## Abstract

*This paper attempts to identify the essential elements of the communal land tenure system which contributed to the sustainable use of resources in Africa. A number of factors which could enhance and preserve the sustainable use of communal land tenure systems (given the socio-economic changes that have taken place) are discussed. Hardin's (1968) idea that resources held in common are likely to be over-exploited is re-examined. According to Hardin, in a communal pasture system, "Each man is locked into a system that compels him to increase his herd without limit - in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all". According to Hardin, since there is no technical solution to this problem, the government must limit the freedom in the commons or undertake privatization of common resources. The paper argues that in most of Africa, conditions are not in favour of individually owned pastures and that Hardin's reasoning ignores the advantages of common land tenure systems.*

## Introduction

In 1968 Hardin popularized the idea that resources held in common are likely to be overexploited. According to Hardin (1968:1244), in a communal pasture system, "Each man is locked into a system that compels him to increase his herd without limit - in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all." Thus common ownership of pasture is seen as creating a contradiction between individual and the group's interests. When an individual increases his/her herd size, all the benefits revert to him/her while the cost of overgrazing is shared with the rest of the group members. It follows that where the individual cannot prevent others from increasing the size of their herd, it is in his/her best interest to increase his/her herd size also.

According to Hardin (1968) since there is no technical solution to the problem, the government must limit the freedom in the commons or undertake privatization of the common resources. Since Hardin's publication others have joined him in arguing that the lack of privately owned resources (specifically land) is a major cause for environmental degradation (Whitaker and Wennergren, 1978; Picardi and Seifert, 1976). This call for privatization of commonly held resources has been very attractive to many African governments especially in the current socio-political environment where privatization is seen as a panacea for the economic ills of African countries.

In the other hand, others have pointed out that the above line of reasoning tends to ignore the advantages of common land tenure systems and the poor conditions of many privately held land. More important, it is argued that in most of Africa, conditions are not in favour of individually owned pastures (Gilles and Jamtgaard, 1981). It is argued that in most pastoral Africa, where large areas of land are needed because of the poor quality of pasture and unevenly distributed rainfall, the conversion of common pasture land would only impede the movement of animals and encourage overgrazing. "Private ownership of range

land is often neither practical nor advisable. Where per hectare levels of forage production are low and highly variable, only very large units of land can be efficiently used for livestock production. The subdivision of these pastures will lead to overstocking, but the only other way to eliminate the commons would be to deprive large numbers of small producers of a source of livelihood. Under these circumstances, common ownership of pastures must be the basis for any ecologically sound but equitable system of range management" (Gilles and Jamtgaard 1981:133). The question that arises therefore is how can we avert the tragedy of the commons? - This paper takes the view that what is needed is an attempt to identify the essential elements of the traditional communal property system which contributed to the sustainable use of the resources, and to find ways in which these elements combined with other factors (in light of the changing socio-economic environment) would enhance and preserve the sustainable use of common property systems. Using the available information from the Kaokoland of Namibia and the Tswana society, an attempt is made to identify the essential elements that have contributed to the sustainable use of resources and how these elements could be used to enhance and preserve the sustainable use of common property in the future.

### **The Himba and Herero of Kaokoland, Namibia**

According to Biesele and Associates (1992), land among the Himba and Herero is communally owned. Families could establish occupancy rights over water points and the surrounding grazing and by finding areas that are not settled by others by setting up a homestead. Should a family wish to occupy an area that is already claimed by another group it could ask permission to join the occupants in exploiting the local resources. If the resident group felt that there were enough resources to share, the new family would be allowed to stay. In case of land conflict, this was resolved through negotiation and discussions among the affected groups. Serious cases were normally taken to the local headman who provided a neutral view. Although lineage heads and headmen did not have authority over land matters, they could suggest ways in which an issue could be

handled. Although where to live and where to graze one's animals were individual decisions, these decisions were made within social rules and discussions with other groups in the region over resource rights were generally held. In most cases, these negotiations were held among related individuals or at least those who knew each other.

In some cases, individuals or families could claim a territory of their own. Rights to such areas were recognized on the basis of the presence of former residential location or sacred sites such as the burial places of ancestors of the local groups. Family rights to certain specific resources such as patches of melons were also claimed by individual extended families. The rights to these resources were transferred from one generation to the next. One of the remarkable features of the Himba and Herero social system was the absence of a hierarchical structure. Decision-making was based on consensus. Decisions as to which individuals get access to which resources were based on long discussions and were locality specific. Marrying into another group opened access to other resources as married women had access to the resources of their husbands' community as well as the resources of their community of origin.

The social, political and economic life of the Himba and Herero are currently undergoing a tremendous change. The more important events which have contributed to this change are the colonial legacy, the struggle and attainment of independence and two droughts within approximately 10 years. The drought particularly has changed the physical landscape of Kaokoland. The drought devastated the animal herd size and changed settlement patterns. Families now stay much longer at the permanent water points and have established gardens which in turn encourage more permanent settlement. A greater number of communities have settled around boreholes. As herd sizes dropped due to the drought, illegal hunting increased, threatening the destruction of the wild life as a resource.

In an attempt to restore the ecological balance, two programmes have been developed through the cooperative efforts of the affected communities and a non-

governmental organization (Integrated Rural Development and Nature Conservation, IRDNC). As a result of community meetings and the suggestion of community members, a community game guard system was put in place. The guards who are selected by members of the community are responsible for monitoring and tracking wildlife in their areas as they herd their cattle. As members of the communities in the area, the guards are likely to know when outsiders are present in the area and are therefore able to identify potential poachers. The guard's responsibilities are limited to monitoring and reporting, while all enforcement activities are handled by government authorities. The second programme is referred to as the Purros Tourist Levy Project. As the wildlife population recovered in the late 1980s, Purros became a favourite tourist stop because the permanent spring in the area which attracted wild life became an area for several Herero and Himba settlements.

Residents took advantage of the increase in tourism by selling crafts and by utilizing the commodities the tourists left behind. To take a greater advantage of this profitable contact, some of the residents stayed near the spring throughout the year instead of using it as strictly a dry season location. The result was the deterioration of the vegetation in the area and conflicts developed among residents who became competitors in servicing the needs of the tourists. To correct the situation, consultations were held with the communities involved. The result was the establishment of an agreement with a designated tour operator who worked in the area whereby a levy of 25 Rands would be paid for every tourist who stayed overnight in Purros while 5 Rands was paid for a short visit. The tour operator was also encouraged to have tourists stop and greet and talk to the residents and to be more conscious of the environmental consequences of tourism. The levies collected were distributed every two months to the lineages who had traditional rights to the area. In addition, crafts were marketed more cooperatively so that craft-makers did not have to actually stay at Purros in order to sell their goods.

## Tswana Society

According to Schapera (1930), although groups of individuals had a claim to a stretch of land based on exploitation over a period of time, other groups might seek and obtain permission to make use of its water and pastures so long as the rights of the resident group were recognized. All the land claimed by the tribe was the common property of that tribe. Neither the chief nor any single individual of the tribe could claim ownership. In general, alienation of land to other tribes or individuals was rare. Every member of the tribe had the right to the use of the land, water and pasture for himself, his/her family and stock. The individual could move freely and settle in any part of the land without interference from the chief or anyone else.

However, in certain cases, there were restrictions in the exploitation of the land and its resources by any member of the tribe. Although all members of the tribe had common hunting rights, the animals were regarded as the herd of the chief. Anybody who killed a big animal was thus required to give the chief the head and the four lower legs, while in case of small animals, he received portions of the meat. Refusal to obey this rule was punishable. In addition, although members of the tribe had common access to pasture land, the chief could order certain grazing grounds to be vacated in order to rejuvenate the vegetation. Permission must also be sought from the chief if one wanted to burn the grass shortly before the rainy season.

However, in other cases individual rights were recognized. If a man dug a well or opened up a spring, it was regarded as under his authority and others who wanted to use it must seek his permission. So also any one who found a swarm of wild bees could acquire ownership over the honey by laying a few broken twigs in front of the hive. Should any other person take the honey from this hive, that person was regarded as a thief and must compensate the owner. However, in this case the chief as the head of the kraal exercised some control. If the swarm was still young, it might not be molested and the owner must not

extract all the honey causing the swarm to move elsewhere. Violation of these rules was punishable.

Recently, Yellen (1974) has given us a description of the Basarwa in the Dobe area. At the time of Yellen's study, the Basarwa had customary rights to use land and other resources. These resources were under groups (bands) which controlled between three hundred and six hundred square kilometers. Thus, the region was divided into tracts which were occupied by groups whose core members had long-standing rights there. Although land was inherited, individuals could gain access to land through various relatives including in-laws.

The central point of the land use system of the Basarwa were pans. These were territories of one or more water points with the surrounding mixture of plant and game resources. Bands moved freely in these areas based on the availability of water, food and the existence of other groups. However, as Schapera (1930) points out, individuals could gain access to the resources of other groups so long as permission was sought.

Since 1970, significant changes have taken place in the Dobe area. People who wished to hunt must obtain a special license under the Botswana Unified Hunting Regulations. More important, since 1970, land allocation in the area was controlled by the Tswana Land Board based in Maun. The Land Board has taken over control and allocation of land from the chiefs. The Land Board operates through a series of sub-land boards in the allocation of land for grazing, arable, residential and business purposes. Although some Basarwa have applied for and received arable land, there seems to be problems with grazing land. In conformity with the law, the Basarwa have registered their wells with the Land Board but have been unable to prevent the encroachment of other groups particularly the Herero cattle owners. The real source of the problem is that although the Dobe area was zoned as communal land, the number of boreholes allocated to non-local residents greatly increased. Since under Tswana customary law, the establishment of borehole or well provides a person with de facto rights

over the grazing land surrounding that water point, the Herero cattle owners have appropriated an increasing share of the land to themselves.

As late as the 1960s, the Dobe Basarwa were some of the more isolated people to be found in Northern Botswana. Indications were that the Basarwa of that time were obtaining sufficient resources for their needs. However, since the late 1960s, hunting and gathering has become more difficult due to overgrazing by livestock and the reduction of wildlife as a result of changes in the habitat and hunting pressure.

### **Essential Elements of the Communal Property System**

A close examination of the two case studies presented above would reveal that there are some similar features which contributed to the sustainable use of resources. Firstly, in both cases there existed rules and regulations which controlled access to and use of resources. Perhaps it is this oversight that led Hardin (1968) to assume that common ownership would inevitably lead to over-exploitation. The fact is that common ownership may not necessarily mean open access. Among the Himba and Herero of Kaokoland in Namibia, although land was communally owned, families could establish occupancy rights over water points and the surrounding grazing areas. Where conflicts arose over land, mechanisms existed to resolve these conflicts. The chief among the Tswana had control over land and other resources. This authority was revealed in terms of sharing the animals killed with the chief. The chief was the custodian of the land and its resources, thus the chief could order certain grazing grounds to be vacated in order to rejuvenate the vegetation.

Secondly, the evidence presented above indicates that communal property users were willing to cooperate toward their common interests, a point ignored by Hardin (1968). According to Hardin, (1968:1244), "*Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that*

*believes in the freedom of the commons*". The information presented above shows clearly that in both societies there was a great deal of cooperation among resource users. Although certain resources came under individual/family control, non-group members were given access to these resources provided they sought permission and recognized the ownership of the resident group. Thus, instead of over-exploiting an area, a group could move to join other groups where resources were available.

Related to the above is the fact that in both societies, there existed institutions and institutional arrangements that enforced prescribed rules of conduct with respect to access and utilization of resources. In the case of the Himba and Hereros, although lineage heads and headmen acted merely as advisors, social pressure dictates that all decisions as to which individuals get access to which resources must be based on consensus. In case of the Tswana, the authority of the chief was not in dispute.

In both societies there existed an information system that allowed people to monitor and evaluate changes in the quality and quantity of the resources. Such knowledge dictated when a resource should no longer be exploited. The Tswana were aware that young swarm must not be molested and the owner must not extract all the honey lest the swarm move elsewhere. In addition, the fact that the chief could order certain grazing land to be vacated for vegetation recovery means that the chief had knowledge of the vegetation of the area.

Lastly, in both societies, adaptation to the environment was achieved through geographical mobility. Seasonal movements meant that over-utilization of resources was avoided. As indicated in the two case studies, the limitations placed on geographical mobility, as a result of socio-economic and political changes, has resulted in over-utilization of resources, especially over-grazing and decline of wildlife.

## **Factors Contributing to Sustainable Use of Communal Property Systems**

Earlier, we have indicated that given the conditions prevailing in some parts of Africa, Hardin's (1968) prescription of privatization is unacceptable. We have also indicated the essential elements which contributed to the sustainable use of communal property systems in the past. Given the above and the fact that these societies have undergone tremendous changes it is important to know under what conditions communal property systems would become benefits of the commons rather than the tragedy of the commons.

Recently, Associates in Rural Development Inc. (1992) has identified what it refers to as "Institutional Conditions for Sustainable Natural Resource Management (NRM) Related to Decentralization and Local Autonomy." It is our view that if these "conditions" are carefully incorporated into the design and implementation of current communal property systems, their sustainability would be enhanced. Below is a review of these conditions.

First, there must be incentives for resource users to govern and manage the natural resources sustainably including an acknowledged authority to control access and membership. Clearly, this was one of the conditions which made the sustainable use of the traditional communal property system possible. However, it should be remembered that incentives are not only economic ones. Thus, it is important to consider cultural incentives as well as economic ones. For example, among the Himba and Herero, the fees paid to the community by the tour operator provide an incentive for the residents to welcome tourists and to protect the animals the tourists would like to see. Through the interaction between the community, the tour operator and the tourists, certain negative social and environmental impacts of tourism such as increased amounts of trash and use of firewood were reduced. It should be noted, however, that the success of the project has a lot to do with the Himba and Herero people's traditional association of abundant wildlife population with a healthy environment. A necessary prerequisite is for the resource users to have secure rights to land and the resources involved. The case studies reviewed earlier indicate that in both cases

some sort of secured right and access were present. Without this, incentives alone may not be sufficient to guarantee sustainable use.

Secondly, any regime of natural resource management that is developed must be based on indigenous knowledge or a combination of outside knowledge and indigenous knowledge. As we have indicated earlier, resource users are knowledgeable about their environment and any changes that might occur. It was this knowledge that enabled them to co-exist harmoniously with the environment. Thus when those who attempt to develop new administrative structures and ways of controlling the resources ignore such knowledge, sustainability is likely to be compromised. For example, as Yellen (1974) has pointed out, the changes in land tenure systems that were introduced in Botswana ignored the resource knowledge of the Basarwa. The Basarwa's traditional methods of resource conservation through local institutions which controlled access to resources were abandoned. Thus, though the Basarwa's rights to resources were recognized, they now find it difficult to obtain sufficient food in their territory since they have no authority to exclude others. The attempt here is not to deify indigenous knowledge but rather to suggest that it is better to build on what the people know.

The third condition is that self-governing institutions must exist in the resource area and the resource users must participate meaningfully in the decisions that affect the management of the resources. Local institutions are more likely to have an intimate knowledge of the resources and the environment, a better understanding of the access and use regulations. In addition, local institutions are more likely to be sensitive to the resource needs of the residents. The case studies reviewed earlier indicate how local communities developed their own institutions to control access and use of resources thereby achieving sustainability. For example, the development of government policies regarding grazing and hunting without the involvement of the Basarwa has had negative impacts on the Basarwa. For the Basarwa, seasonal mobility was an important mechanism. Boreholes and the rules governing boreholes that were developed

tend to promote permanent settlements and have therefore significantly affected mobility patterns, resource access and use and rules governing resources.

Another important condition is that there must exist a mechanism for conflict resolution. Community level conflict resolution mechanism is essential for effective sustainable resource use. From the case studies reviewed earlier, it is evident that one of the factors which enhanced individual/family access and control was the presence of conflict resolution mechanisms. Such mechanisms become even more important as the number of competitors for the resource increases.

Conflict resolution mechanisms or institutions must be locally based rather than centrally designed. Experience has shown that conflict resolution mechanisms that are imposed by central governments have brought negative consequences for the social and physical environment. In Tanzania, for example, the government's new institutions have undermined the Masai culture and its traditional systems of resolving conflicts (Parkipung, 1989). Likewise, the introduction of the Land Boards in Botswana has effectively undermined the traditional conflict resolution mechanisms of the Basarwa, especially with respect to conflicts arising from natural resource use and control.

Lastly, national and regional policies and institutions must create an enabling environment for sustainable resource use. User tenure rules, for example are essential in creating an enabling environment for natural resource use. National policies must recognize and promote local level institutions for conflict resolution and enforcement, education and extension support. National and regional governments must also support local level programmes that promote sustainable use of resources.

## Conclusion

There is a wind of privatization fever blowing over Africa and it has resurrected Hardin's (1968) tragedy of the commons. The attempt in this paper has been to show that in many African societies, it had been the benefits of the commons rather than the tragedy of the commons. In other words, the communal property systems had served these societies well and had greatly contributed to the sustainable use of natural resources. However, it is recognized that given the impact of the socio-economic change that has taken place, we need to take a fresh look at the communal property systems of Africa.

The paper has identified a number of the essential elements of the communal system which had contributed to the sustainable use of natural resources. The paper agrees with the Associates in Rural Development Inc. (1992) that for the communal system to continue to function as a viable and an effective system of control and access to the sustainable use of natural resources, certain conditions must exist. These conditions are not seen as necessary and sufficient under all circumstances but we would suggest that they are necessary in most cases. Before governments obey the "master's voice" in privatizing the land and natural resources, we need to take a second look at the traditional system of communal ownership.

## Bibliography

### **Associates in Rural Development, Inc.**

- 1992 "Decentralization and Local Authority: Conditions for Achieving Sustainable Natural Resource Management". Washington D.C. (Mimeographed).

**Berkes, F., McCay, B.T. and Acheson J.M.**

1989 "The Benefits of the Commons" *Nature*, 340:91-93.

**Biesele, M., Green, D. and Hitchcock, R.**

1992 "Decentralization and Natural Resources Management: Namibia Field Report". In Associates in Rural Development, Inc. *Decentralization and Local Authority: Conditions for Achieving Sustainable Natural Resource Management*, Vol. 11 Appendices, Washington D.C. (Mimeographed).

**Gilles, J. and Jamtgaard, K.**

1981 "Overgrazing in Pastoral Areas. The Commons Reconsidered". *Sociologia Ruralis*, 21: 129-141.

**Hardin, G.**

1968 "The Tragedy of the Commons". *Science*, 162: 1243-1248.

**Parkipung, M.L.**

1989 *Pastoralism, Consideration and Development in the Greater Serengeti Region*, Occasional Paper No.1 Ngorongoro Conservation and Development Project Dar-es-Salaam, Tanzania.

**Picardi, A.C. and Seifert, W.W.**

1976 "Tragedy of the Commons in the Sahel". *Technology Review*, 78.

**Schapera, I.**

1930 *The Khoisan People of South Africa*, London Routledge and Kegan Paw Ltd.

**Whitaker, M.D. and Wennergren, E.B.**

1978 "Common-Property Rangeland and Overgrazing: Resources Misallocation in Bolivian Agriculture" pp 153-155 in Donald, H, Hyder (ed) *Proceedings of the First International Rangeland Congress*, Denver, Society for Range Management.

**Yellen, J. E.**

1974 *The Kung Settlement Pattern: An Archaeological Perspective*, Ph.D. Dissertation, Harvard University, Cambridge, Massachusetts.