SELF-MANAGEMENT OF COMMON POOL RESOURCES AMONG PASTORAL OVAHERERO IN SEMI-ARID EASTERN NAMIBIA

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Abstract

The main objective of this paper is to explore the feasibility of range management among the ovaHerero pastoralists of semi-arid eastern Namibia. It intentionally focuses on the devolution of authority over communally held resources to pastoral communities in the eastern communal areas. The paper uses historical analysis to highlight the role of marginalization (in political ecology sense) in resource (mis)management, and how it subsequently affects the proposed community based natural resource management (CBNRM) program pursued by the Namibian government. Government attempts to enlist community participation has so far yielded dismal results.

1. Introduction

Namibia inherited a dual agricultural system at independence from apartheid South Africa in 1990, which resulted in about 4200 white families (0.2% of total population) possessing 44% of the most productive land in Namibia as freehold land, supported by government subsidies. While on the other hand, about 140 000 black families have to eke their livelihood on 43% of the poorest agricultural land designated as communal areas by the South African apartheid regime (Corbett, 1999; Adams and Devitt, 1992). Post-independent government policy reform is mainly part of transformation from apartheid. Most prominent is the land question. Communal lands are regarded as mismanaged, degraded and in need of rehabilitation. This was to be achieved through greater community empowerment in the popular tradition of CBNRM. The process involved the devolution of authority over communally held resources namely wildlife and rangeland, to local user groups.

The case-study area, Hereroland is a pastoral area and emphasize is laid on rangeland rehabilitation and self-management of rangeland resources, namely pasture and water. Each village has between 15 and 50 households. Villages are not fenced off, and a village territory is usually defined by that area grazed by livestock of a particular village. Cattle are not herded and are allowed to roam freely. Since there is one central waterpoint, each household herd leaves the waterpoint and walk in different directions radiating from the waterpoint to reach their grazing areas (*omario*). These circular walking distances around the form the village territory. Adjacent

villages sometimes form overlapping grazing areas, depending on the distance between them and also on the season. In the rainy season when grass is abundant cattle walk shorter distance, and the inverse is true for the dry season. Hence, the village territory shifts with the season, forming overlapping "village territories".

Handing over of water points to local communities is proceeding smoothly. Since, livestock in a village uses one waterpoint; defaulters can be denied access to water forcing high level of compliance with village rules. However, management of an 'open rangeland' proves to be trickier. In the current study I am more interested in pasture management. I employ a political ecology approach to examine the political economy context of rangeland in Hereroland that render the concept self-management insurmountable. In the first part of this paper I look at the changing view on pastoralism, as well as the management of common pool resources in the general literature. The second part highlights the complex issues of managing the commons in Hereroland.

The paper is based on an ongoing research project in Hereroland. A mixture of qualitative and quantitative data was collected through the use of secondary and archival sources. Data collected has been organised into four major components viz. land, labor, livestock/rangeland development and livestock marketing. These were then organised according to three main periods: the German era, the South African apartheid rule and post-independent Namibia. For the economics of space, most background information and relevant data has been omitted.

2. Concepts and Definitions of Terms

Common Pool Resources

Common Pool Resources (CPR) is the shorthand form of *coordinated access institutional regimes*. The term coordinated access regimes has been introduced to distinguish between property right based and non-property rights based approaches. Coordinated access regimes are not focussed on property rights, but emphasize joint-ness in use (Van de Laar, 1990). Hence our definition of Hereroland common grazing lands as a common pool resource. We are reluctant to call it a common property because of the vagueness of rights in the then 'African reserves'. Some form of exclusion, based on the colonial definition of "tribal native" does exist.

The problem facing common pool resources is (a) when is it potentially feasible to coordinate individual users to attain an optimal rate of production or consumption for the whole community through a sustainable use of the resource base such as rangeland. (b) If so, what are the problems in achieving it through collective action (Oakerson, 1986). The choice of future institutional regimes is not a question of a priori ideology, but it is a choice that could be made

dependent upon the relative ease with which various regimes can be established. This is a major problem in many countries, in view of what has been the mainstream approach to common pools e.g., to bring them under private or state property based management regimes. Is this transformation worthwhile? Might there be an alternative approach to strengthen viable and effective *coordinated access regimes*? Where, and under what conditions, is that possible?

Determinants of this transformation process are the cost of exclusion and the cost of coordination, including the *ex ante* and *ex post* costs of rule making. These costs can be influenced by technical factors and by social factors. For instance, the invention of barbed wire made the fencing of rangelands possible, leading to easy privatization. Socio-cultural and economic homogeneity of communities should make the problems of coordination easier to solve by the community itself (Van de Laar, 1990).

Communal Pastoralism

Pastoralism can be defined as a system of production in which humans and domestic livestock live in a symbiotic relationship, making use of natural pastures on an extensive basis. The human population gains greater part of its support from the animals kept, both directly from milk and meat and indirectly through exchange of livestock products for other goods (Toulmin, 1983; Goldschmidt, 1979). Dietz (1987) operationalises this concept by demanding that livestock products directly or indirectly provide more than half of the food needs of households. This definition according to Morton and Meadows (2000) has the very important advantage of de-emphasizing nomadism. 'Nomads', long used as a term for some pastoralists, focused on a particular strategy, mobility, not the production and consumption system within which it is used, and carried negative connotations of people moving for obscure psycho-cultural reasons, which needed to be overcome in the name of efficiency and civilization. A distinctive character of *communal pastoralism* is privately owned livestock grazed on a communally grazed pasture. This institutional arrangement is thought to be the major cause of rangeland degradation.

Causes of Rangeland Degradation

Two important theories, which had to a greater extend shaped the way in which African pastoralism and degradation has been viewed need a brief mention here. I briefly revisit Herskovits' *cattle complex* and Hardin's *tragedy of the commons*.

Herskovits Cattle Complex: This view refers to the propensity of pastoralists to accumulate and retain cattle more for their social value and prestige than what is needed for subsistence (Gebre, 2000). It has been interpreted to mean that some groups of pastoralists are so obsessed with their

livestock that they are unable to respond to new opportunities. It is sometimes given as a reason why African pastoralists are materially poor, why their soils become eroded, and why regional or even national economies fail to grow. This misinterpretation led to the notion in planning and intervention to overcome 'the cattle complex culture', which was regarded as a serious impediment to development and range management (Horowitz 2001). Hopcraft (1981) also strongly criticized the 'cattle complex' thesis as follows:

> Maximizing cattle numbers is not an irrational cultural holdover from a period when land was truly abundant and cattle were scarce, nor is it a neurotic or aesthetic hangup, a cattle complex psychosis that will be cured by time or education or "coming into the 20th century"; it is the rational consequence of current incentives and institutions (p. 231).

Hopcraft further argues that the optimal herd strategy for the group is aimed not at the maximization of livestock numbers on the land but at the maximization of aggregate livestock production from the land over time.

Hardin's Tragedy of the Commons: While the *cattle complex* can be interpreted as labeling pastoralists as irrational producers, the *tragedy of the commons* looks at the stocking decision of a rational herder who uses a communal range. Hardin posits a finite pasture, open to all. Each herdsman is assumed to be a rational individual who obtains full benefit from each animal, but faces costs of decreasing land productivity due to overgrazing. Because the individual's contribution to total decline in land productivity is small compared to the full benefits of having an animal for use or sale, each rational herder will expand his herd until the resource is destroyed.

Hardin's *tragedy of the commons* has crept into many livestock development projects in Sub-Saharan Africa (Livingstone, 1986; Leach and Mearns, 1996; Simpson and Evangelou, 1984). The conclusions drawn by policy-makers from this hypothesized behavior, writes Livingstone (1986), is that degradation is man-made, rather than the result of natural and climatic factors; correction of the situation requires an institutional change, i.e., land reform in the direction of privatization. The *tragedy of the commons* view has been used to justify privatization and the ranching model was proposed for livestock development projects in Africa from the late 1950s. The ranching model was based on three main assumptions (Behnke and Kerven, 1994): (1) stocking rate determines vegetation characteristics, (2) fewer animals lead to higher output and (3) the rangeland is overstocked. These assumptions are based on the *equilibrium model of vegetation succession* (Clementian theory) which are now contested in the literature by *disequilibrium theory* of range ecology under conditions of climatic variability and impaired

environmental functions (Westoby et. al, 1989; Kuiper and Meadows, 2002; Dahlberg, 1996; Perrings, 1993). For lack of space these theories won't be reviewed here.

On the use and management of the commons, the *tragedy-of-the-commons* scenario has been criticized by social scientists for mistakenly associating *open access* resources with common pool resources, where coordination is possible. Hardin is further criticized for his solution to the *tragedy, which* is a "mutual coercion, mutually agreed upon"[1]. This proposition takes for granted that coercion won't be done through the state apparatus. Hence, it does not discuss or analyze methods and consequences of implementation by an authority, which is external to those living on the commons. Abuse of power and/or lack of understanding about the production system may often accompany such far-reaching interventions (Ostrom, 1990; Van de Laar, 1990). The tragedy of the commons and the property rights school discussed below offered a strong theoretical basis for the ranching experiments.

Property Rights School and Land Tenure

The advocacy of land reform in Sub-Saharan Africa rests upon two different strands of thought. The first doctrine can be referred to as the 'static view of land tenure reform', while the second is often referred to as the Evolutionary Theory of Land Rights. According to the first doctrine, the main source of inadequacy of African land tenure system is a misfit between these systems that embody a long tradition of extensive farming practices on the one hand, and the requirement of output growth in the context of intensive agriculture on the other hand. Accordingly, public authorities need to introduce drastic alteration of customary land rights to avoid output losses resulting from such misfit (Platteau, 1996). The criticism leveled against this view is that it is 'static' and have ignored or downplayed the dynamic potential of indigenous African land systems.

The starting point of the Evolutionary Theory is the inner limitations of communal land ownership. When there is growing competition for the use of land as a result of population growth and/or growth in product demand, communal ownership becomes unstable and produces harmful effects in the form of mismanagement and/or overexploitation of the now valuable resource (Platteau, 1996). By implication, when the benefits derived from controlling access to the resource exceed the transaction costs of defending the resource from others and managing it, then we can expect a greater chance of more exclusive forms of property regimes to emerge (Scoones 1994, Field 1989).

[1] Hardin (1968) states that: "the word coercion implies arbitrary decisions of distant and irresponsible bureaucrats, but this is not a necessary part of the meaning. The only kind of coercion I recommend is mutual coercion, mutually agreed upon by the majority of the people affected" .

Although Platteau and Baland (1998) applaud the less deterministic nature of the evolutionary theory of property rights approach to institutional change, they still hold that the approach has a number of important limitations. It remains problematic in so far as it assumes *a priori* that the main force behind institutional evolution is the search for a more efficient utilization of natural resources. Also, two central conditions needs to be fulfilled for the Evolutionary Theory to be valid, unfortunately, both are not satisfied in present day Africa (Platteau, 1996). First, new technical packages must be available so as to create attractive investment for people willing and able to invest. Secondly, efficiency and equity considerations must be separable. If they are not, as is the case in the present context of Sub-Saharan Africa, legitimation problems resulting from such a change are likely to cause new transaction costs that will increase the malfunctioning of land markets. And if, land titling is unlikely to enhance land security for large segments of the population concerned, demand for formalized private property rights is not going to be as widespread as the Evolutionary Theory seems to assume.

The World Bank 1975 Land Reform Policy Paper

Deininger and Binswanger (1999) reviewed in a joint paper the 'evolution of the World Bank's land policy'. They restated the Bank's three guiding principles viz. (1) the desirability of owner-operated family farms; (2) the need for markets to permit land to be transferred to more productive users and (3) the importance of an egalitarian asset distribution. However, the evolution was among other things, the recognition that the communal tenure systems can be more cost-effective than formal title. The pertinent question that remains hanging is whether this shift in the Bank's policy will find a fertile ground. That is, are local communities institutionally geared towards embarking on collective programs of resource management in the name of sustainability and greater efficiency? How can the complexities of managing the commons be overcome? Some of these concerns are voiced at the BOSTID Conference[2], where social scientists across disciplines made an intellectual attempt to 'make the commons work'.

BOSTID Conference: "Making the Commons Work"

Privatization was seen as the solution towards internalizing the negative effects of range management, until the groundbreaking Conference on Common Property held in Annapolis in 1985 (BOSTID 1986). The Conference acknowledges successful cases of common property management, and also the importance of commons in the livelihoods of millions of people. Common pool resources in general have been studied from different professional backgrounds and entry points. Although each paradigm raises interesting and relevant features, their

[2] Conference on Common Property Resource Management, April 1985.

disciplinary orientation makes them less communicative. Issues pertaining to the environment, institutions and human behavior are treated independently while they could be understood better if treated as interdependent. It was also realized that in order to overcome methodological and analytical differences the Conference adopted the Oakerson (1986) framework as a generalized framework for analysing all common pool resource problems. The framework specifies the issues involved in collective resource management.

Despite the acceptance of the Oakerson framework as an analytical tool for systematic analysis of common property management problems, it has been critiqued for adopting the customary two-party framework i.e., the framework does not explicitly introduce government intervention as a "third party" in what it sees as "private ordering" under legal pluralism, as opposed to legal centralism in modern states (Van de Laar, 1990).

In addition, Cousins (1993) noted that it is also important to contextualise the analysis and one of the contextualising variables is the larger socio-economic and political system. Further, Cousins noted that analyses of socio-economic structures and power relations must be informed by an understanding of the complex processes through which identities, institutions and ideologies are constructed and constituted, and how these are mediated by cultural forms and practices (1993:13).

Combining natural science and social sciences introduces political processes and these relate to power relationships. This leads to a tendency to consider interrelationships. In the social sciences a consensus is developing that it is not enough to focus on local cultural dynamics or international exchange relations. The past and present relationship between policy, politics or political economy in general and the environment need to be explicitly addressed. This directly introduces concepts of relative power at many levels of environmental and ecological analysis. This wider perspective is in the realm of political ecology (Greenberg and Park, 1994).

Political Ecology Approach

Political ecology combines the concerns for ecology and a broadly defined political economy. Together they encompass the constantly shifting dialectic between society and groups and subgroups within society and land-based resources. This approach derives from political economy a major concern with the role of the state. For the state commonly tends to lend its power to dominant groups and classes, and thus may reinforce the tendency for accumulation by these dominant groups and marginalization of the losers, through such actions as taxation, food policy, land tenure policy and the allocation of resources. In what is termed *regional*[3] political ecology it

[3] The adjective regional is important because it is necessary to take account of environmental variations in resilience and sensitivity of land, as different demands are put on the land through time. Also, to imply the

is hypothesized that many areas of the developing world suffer from a set of related symptoms which combine the result of land degradation, political and economic peripherisation, stagnant production, outmigration and poverty. Despite variations in the politico-economic and physical histories of peripheral areas, these processes have led to the marginalisation of groups and subgroups in society (Blaikie and Brookfield, 1987). *Political economic marginalization* occurs when poor grassroots actors such as farmers or shifting cultivators are pushed onto lands that are economically marginal as a result of their marginal political and economic status. Desperate to extract a living from such lands, these actors intensify production, but in the process often increase the land's *ecological marginality*. By devolving control over natural resources from government agencies to user groups, it is thought that those marginalised groups will be empowered, and the devolution process might lead to sustainable resource use and increased output.

Community Based Resource Management

Murombedzi (1998) describes the evolution of resource management in Sub-Saharan Africa. He noted four phases that are closely associated with the evolution of development paradigms since 1970. As some of the paradigms fall to the wayside and African governments became heavily indebted, structural adjustments proposed for Africa called for downsizing of governments, and the devolution and democratization of participation in the economy. *'During this phase of participatory development, community participation in natural resource management rose to prominence as the pre-eminent natural resource management paradigm'* (*ibid: 6*).

Since the mid-1980s, donor and government policies toward natural resource management have gradually changed. *Conservation by the people* is viewed as broadly desirable objective of current policy initiatives in Sub-Saharan Africa (Murombedzi, 1998). In the Francophone countries of sahelian West Africa, the approach of *gestion des terroirs villageois* or *amenagement des terroirs villageois* has become the norm. This concept is that agrarian communities should exercise authority over natural resources within the areas they exploit and that government should support local communities by providing institutional, technical, financial, and political support (Swallow and McCarthy, 1999). Similar approaches were adopted in eastern and southern Africa e.g., group ranches in Kenya (Hopcraft 1980), the communal grazing cell in Botswana (Sweet 1987), Management Schemes in Zimbabwe (Cousins 1993). There is an ongoing attempt in Namibia to establish self-management of wildlife and rangeland resources

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incorporation of environmental considerations into theories of regional growth and decline (Blaikie and Brookfield, 1987).

through the conservancy concept and grazing committees respectively (Ashley, 1996; Corbett, 1999; Neumann and Kroll, 1998).

Despite being regarded as the desirable way to promote sustainable use of natural resources, why has the results of community based management initiative been so dismal?

3. The Case of Ovaherero Communal Pastoralism

The recent history of Ovaherero pastoralism starts with the German colonization of Namibia. The German colonial authority embarked on a systematic land expropriation that led to the genocide of 1904-1907 in which approximately 80% of Ovaherero men, women and children were brutally butchered by the German occupation forces. At the end of what is also known as the Ovaherero-German war, the German authorities slammed a livestock ban on Ovaherero and incarcerated them in labor camps. From there they were contracted as 'slave' labor on public works and to white settler farmers (Gewald, 1999; Hall, 1966, Vedder, 1928). The German defeat in Namibia (World War I) by the Union of South Africa in 1915 brought with it hope to the Ovaherero who reestablished their pastoral mode of production in the Namibian highlands. However, their efforts were short lived as the same highlands, which are situated in the proximity of the administrative center of Windhoek, were earmarked for resettlement of poor Afrikaner settlers from South Africa. Again, Ovaherero were rounded up and confined to 'temporary' reserves in the Namibian highlands in 1916, before been relocated to the semi-desert of the Kalahari in eastern Namibia in 1923. That area was henceforth to be known as Ovaherero 'homeland' or just Hereroland. (Gewald, 1999; Werner, 1998; Kössler, 1997; Drechsler, 1966). Reservation represent a systematic marginalization of the Ovaherero pastoralists in the Blaikie-Brookfield sense, i.e., economic, political economic and ecological marginalised by the incoming South African regime.

Reservation -- History of Marginalization

Reservation introduces the 'newly' re-established Ovaherero pastoralism to a harsh terrain, disease-ridden and with no surface water. Reservation was based on two factors (1) to eliminate competition between black and whites for pasture in the Namibian highlands (2) to create a subsistence economy were laborers could keep their dependants. Settler farmers petitioned to the administration to secure that African labor was availed to them, and at the same time the administration were to keep their families off the farms. Women and children were a liability and needed to be removed from white farms. Thus the reserve was created only for the 'infirm', women and children. (Silvester, 1998; Gewald, 1999). The Vagrancy Law of 1922 (Proclamation 25 of 1925) which was controlling the movement of "idle" Africans was extended to Namibia and enforced through pass laws.

South African legislation towards blacks had serious production implications and could be directly tied to overgrazing in the African reserves. Blacks were turned into laborers with the reserve (bantustan) as a cost-effective back-up system for their dependants. This system I argue, was a cost-effective measure to exploit black labor without taking care of its women, children and the aged. While at the same time was robbing the system of its most productive labor. Restriction to wealth accumulation were instituted through stifling financial assistance to the reserves, reserves were left to carry their own financial burden through the utilization of puny grazing fees for reserve development. Limited development in the area in terms of water and livestock marketing meant that too many animals were concentrated at few waterpoints, leading to localized range degradation[4]. To add insult to injury, rangeland conservation was concentrated in the hands of white colonial administrators (Kössler, 1997). This process alienated resources used by pastoralists and left resources without local custodians. Ovaherero pastoralists regarded Hereroland as property of a hostile government. This attitude turned Hereroland into an *open access* as opposed to a common property arrangement.

Reservation established a new set of variables unknown to the pastoral community before. Disease and water shortages ('thirst') affected both people and their livestock. In this case the *dominant knowledge* associated with local communities (Murombedzi, 1998) no longer holds. Their attempts were based on *trial and error* in this hostile environment. On top of that as argued somewhere, the colonial authorities imposed its own 'white structures' of power while undermining any attempts of resource 'self-management' by the local population.

Rangeland and Livestock Development Policies

Rangeland management in Hereroland has been influenced by the range science that evolved in Namibia since 1923. The Drought Investigation Commission of 1923, which investigated rangeland use and management in the white commercial sector, set the veld[5] management agenda. The major finding of the Commission was that overstocking led to overgrazing and all its evils. It also attributed drought-related losses to the universal practice of overstocking on settler farms. The Commission therefore recommended rangeland management, which is based on a realistic stocking rate (Rawlison, 1994).

Range management since then took the forefront in order to protect the country's biological capital. Experiments with different management scenarios, such as the so-called *paucicamp* (two or three camps and long grazing periods), *three-camp to one herd system* (resting

[4] Importation of labor in the 1940s, the Odendaal Plan of 1962 saw the removal of livestocked Ovaherero from settler farms to Hereroland. Although Odendaal introduced limited in Hereroland in terms of water development finding sufficient underground sources remains a serious problem.

one-third of the rangeland until after the following rainy season) and the *multi-camp system* were conducted. Those experiments were conducted on government experimental farms and extended to the white farming sector (Bester, 1993). Although these systems were never extended to Hereroland, the ideas that sprout out of the findings were to have profound effects on rangeland management in Hereroland. Colonial administrators saw it as their duty to conserve rangeland resources in line with the conservation vibes of the time.

In Hereroland the colonial administration invoked Section 3 of Native Reserve Regulations of 1924 (Werner, 1997) which empower the colonial Superintendent to:

> prohibit for any period to be fixed by him the grazing of animals or any particular species of animal in any portion of the common grazing ground in such reserve …for the better preservation of the grazing therein.

However, the cooperation between the local pastoralists and the colonial officials was set on a collision course. While in the white commercial livestock sector conservation was practiced through the resting of parts of the range, thanks to the ranching system, this was difficult to implement in the *open system* in Hereroland. Leading the colonial authorities to believe that livestock restriction was the only solution to keep stocking levels in line with the 'recommended carrying capacities'. On the other hand pastoralists were vehemently opposed to this measure. They saw it as a measure to restrict wealth accumulation by Africans, which given the oppressive nature of the state around this time is justified. An example on how mainstream views can be used against the poor in the guise of good conservation practices. The post-colonial governments in many parts of the developing countries have inherited this tradition, extending textbook wisdom to the poor, regardless of the consequences.

Hereroland: An Open Access or Common Property

Hereroland does not fall neatly into the definition of a fully developed common property regime. It lacks mostly on two counts: Firstly, there are no clearly spelled out communally defined guidelines for resource use and secondly, there is no enforcement mechanism for punishing deviant behavior. However, it qualifies on the other three conditions of a common property regime, namely (1) no single individual has exclusive rights to the use of the resource, (2) group members have secure expectations that they can gain access to future use of the resource and (3) there are functioning membership criteria (colonial legislation stipulated ethnicity as the criterion for membership). At the village level outsiders were to a certain extent, required to have

[5] Veld is the Afrikaans word descriptive of the general vegetation and soils within an area

permission of the *village assembly* (which had the *de facto* but no *de jure* power) to settle in a particular village.

Another important consideration is the scale at which exclusion occurs. And here it becomes ambiguous whether Hereroland is an open access or a commons property. On exclusion, Oakerson (1992) refer to two types of exclusion where (1) access may be fully regulated on an individual basis or (2) it may be partially regulated and applied only to those outside the immediate community. This distinction is related to the potential exposure of the commons to increases in demand. Within a definite community of users, increases in aggregate demand derive mainly from expanded operations, for example the commercialization of livestock products. If there is *open access*, however, increases in the number of users can also contribute to an increase in total demand (more users). It can be argued that both happened in the case of Hereroland. It is observed that, the bantustan policy specified the group (ovaHerero) as 'residents' of Hereroland, which in a way gave all ovaHerero a *de jure* right to Hereroland. Thus any Omuherero including those in formal employment could theoretically keep cattle there. Those in formal employment increased their extended family livestock holding by investing livestock. In that sense, the system remains an *'open system'*. This arrangement increased pressure on the range with the relaxation of stock restrictions, which was also accompanied by increased off-farm employment.

Independent Namibian Government and the Management of Hereroland

Current government policies and policy instruments stem from the political need to redress past injustice perpetrated on the indigenous Namibians by the colonial governments, and which, according to government, have led to environmental degradation of communal lands. The first political commitment of the Namibian government was to redistribute land, in order to alleviate pressure on the communal land that is said to be heavily degraded. But land distribution turned out to be very expensive, and even if it was not that expensive in area units; it is not conceivable that there is enough land for every one. Some of those realities led to the government to restate the position of its predecessor: Hereroland will remain state land/property and pastoralism will continue to be communal.

A second set of policies is aimed at changing pastoralists' behavior, by making them "responsible for their actions" and as such improves collective range management practices and range productivity. The underlying idea was the creation of CBNRM framework that combines the rehabilitation with self-management. A German sponsored initiative, the Sustainable Animal and Rangeland Development Program (SARDEP) is supposed to ensure that *"land degradation caused by human interference in the communal areas is reduced"*. However, this program,

according to Mr. Kroll of the SARDEP project, failed to receive support in Hereroland Reserve (pers. comm. July 1999).

SARDEP

This program falls within the framework of the Southern African Development Community (SADC) plan of action (MWARD 1992), known as the Kalahari-Namib Action Plan, a sub-regional program aimed at:

> stopping human-induced land degradation and desertification, improving the welfare of local communities toward the breaking the vicious circle of poverty-overgrazing-land degradation, and achieving sustainable resource exploitation in the affected areas of several SADC countries (SADC 1999).

In an attempt to keep up with the Kalahari-Namib Action Plan the Ministry of Agriculture, Water and Rural Development of Namibia, in collaboration with the German government through the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ) embarked on a Sustainable Animal and Rangeland Development Program (SARDEP) in 1992. SARDEP was given a 10-year mandate to improve animal production and range utilization in the communal areas of Namibia. The overall objective of SARDEP is stated as the reduction of land degradation caused by human interference in the communal grazing areas of Namibia and to ensure that communal livestock holders in the program areas apply sustainable and ecological natural resource management practices [MAWRD/GTZ Project Planning Matrix 1998]. The basic approach of the program intended to promote the sustainable management of natural resources among local communities in selected pilot areas, which could serve as demonstration plots. If successful the project could then be scaled-up to include the whole of Hereroland.

The second phase involved the establishment of *grazing schemes*. It was the most crucial test to see whether the program was achieving its objective. Range management planning was to take place within the proposed grazing schemes, whereby pastoralists in the pilot areas were to cooperate with the *community management committees*. In order to embark on rangeland rehabilitation and the promotion of sustainable range management, the program proposed the following:

- culling of old unproductive cows,
- selection of superior female replacement,
- promotion of the use of superior male animals,
- introduction of mating seasons and
- implementing an acceptable culling schedule

The logic behind these production strategies was that superior animals grow fast and offtake will increase, keeping animals for a shorter period on the range. The introduction of mating seasons allows cows to calf during a certain selected season, preferably when fodder is plentiful, which allow the cows to be in top condition. Cows in good condition have enough milk for both their calves and for human consumption. While securing enough milk for household consumption, calves grow faster and are weaned at higher body weight, ready for the market. It also has the advantage of economies of scale, since planned mating season allow weaners to be sold in bulk.

Through such planning, one could encourage a higher offtake, while achieving the intended management objective at the same time. First, management could be based on what Bester (1993) refer to as the fodder flow principle, encouraging the veld to grow during the critical growing season for use during the dormant season. The strategy is to sell as many animals as possible to encourage the range to recover during the critical period. Secondly, the planned marketing of animals could mean that pastoralists could sell their animals in bulk, direct to the feedlots in South Africa or to the local meat company, MEATCO at higher prices, rather than to speculators. By so doing, income levels of pastoralists will increase, and as such achieving increased welfare as articulated in the SADC plan.

However, the sophistication of undertaking these management strategies on an open range proved to be trying, and this second phase became hard to implement. The culling of old unproductive cows which sounds so obvious, is rejected by pastoralists who see the function of old animals as pacifiers of the herd. Different generations of the same 'family' are held together by older cows, making the herd to 'stick together'. Disposal of older cows breaks the cohesiveness of the herd. It becomes easy for younger animals to stray. Similarly, the introduction of mating seasons requires fences, and not everyone in the area is having fences. Herding of cattle proposed by some management 'experts' could increase labor demand and hence increase labor cost, as herders need to be employed from outside Hereroland. The increase of production cost while the benefits are uncertain may be unacceptable to pastoralists. Also, the herding of close to 1000 head of cattle in one part of a degraded range is illogical, as it might lead to more degradation through trampling. This second phase is serious case of design failure and not an implementation failure per se. Again, foreign aid staff had the vaguest idea about the politicised nature of the environmental issues in the area. On top of that senior local staff in the agriculture ministry were drawn from the white agricultural sector, without any knowledge of the communal system.

Legislating for Land and Water Rights?

Another government-initiated project is the gradual abolition of subsidized water provision through introducing user cost charges. This is supposed to increase costs to the users, leading to a better management of the resource, as formulated by an economist in the Department of Environment Affairs (Ashley, 1996:16). Water Point Associations have already been established to take over the responsibility of water provision from central government. The Water Bill was implemented with relative ease. However, the Communal Land Reform Bill (CLRB) remains in its draft form years after it has been introduced in Parliament. The delayed passing of CLRB is a reflection that the content of the Bill does not necessarily reflect the social reality of the affected communities. Although it is somewhat easy for the proposed Land Boards to allocate agricultural plots in the crop producing areas, it will take an imaginative mind to see how the Bill will be applied to the communal pastoral areas. Resource conservation measures suggested by the bill suggest a misfit between the drafters of the Bill and the technical and ecological nature of the rangeland.

Threat to Sustainable Use of Rangelands

Although it is difficult come across any 'hard scientific evidence' to satisfactorily prove that agricultural productivity has been affected negatively it is evident that some form of degradation is taking place. The problem of coming up with a 'scientific proof' is hampered by lack of data on pastoral activities. However, assessment of both the local pastoralists and outsiders points in the same direction: something needs to be done or communal pastoralism is in danger due to increased competition for resources, and lack of regulated use.

I also based my evaluation on pastoralists' evaluation of the state of the environment on interviews aimed at interviewees reconstructing environmental history in terms of grass species availability and incidence of bush encroachment. Older interviewees remember the abundance of highly palatable perennial species such as *Stipagrostis uniplumis* and *Panicum maximum*, while today only isolated stands of these species are found in distant grazing areas. Younger interviewees only know of annuals such as *Arestida adscensionis, Aristida stipoides, Chloris virgata, Enneapogon cenchroides, Enneapogon desvauxii, Eragrostis porosa, Pogonarthria fleckii, Setaria verticillata* and *Triraphis purpurea*. These grass species collected in the area and identified during 1993 are said to be indicators of an over-utilised range (Kakujaha-Matundu, 1993). Informants also indicated that over the years they have observed the growth of invader bush reaching impenetrable thickets. Pastoralists also use different phrases such as "dead range", "destroyed range" to denote degradation.

Pastoral Perceptions on Degradation

Pastoralists' perceptions on degradation are diverse, giving different reasons for the reduced pasture. During interviews with 50 full-time and 20 'weekend' pastoralists identified what they perceive as main problems or threats to their activities. About 30% of our respondents felt that land shortage was the real problem. The problem of perceived land shortage have two dimensions. First, pastoralists are of the opinion that piped water can be imported as was proposed in the Water Master Plan of 1988 as a way to open up 'unoccupied' areas of Hereroland. Secondly, pastoralists eye the commercial farming sector as a possible resettlement area, either through communal resettlement or through the government's Affirmative Action loans for the acquisition of commercial land. These options make the management of the existing pasture not an immediate concern to them.

Local Pastoral Organization & Institutions

Traditional Leadership: This in many ways reflects the legacy of the South African apartheid period as described in the previous sections. Proclamation R38 of 1967, Proclamation 181 of 1977 and Proclamation AG50 of 1980 undermined Powers of headmen. Headmen were turned into mere couriers of colonial instructions. The colonial administration established local leadership structures that lacked the mandate and power to enforce even local rules. A void of community leadership still remains, which calls for urgent reorganization if the traditional leadership is to be a viable institution on which resource management could be based. It is doubtful at least for now, whether traditional chiefs may provide an effective, low cost means of managing land and resolving conflicts.

Despite government attempts to re-create traditional authorities through the Traditional Authority Act, the traditional leadership is currently divided along political lines, between those supporting the ruling SWAPO party on the one hand and the opposition DTA on the other. This has led to a situation where each sub-reserve is having two chiefs, and a number of headmen and their councilors (*ozorata*) under them. The significance of this dual leadership is that it left the reserve residents without any authority to appeal to in case of disputes over resources, such as illegal fencing and the privately drilled boreholes close to existing villages or worse still, in existing grazing areas.

A credible and united traditional leadership structure could have formed a basis for resource management platforms. Unfortunately these wider leadership conflicts have also been felt at the grass roots level, allowing for a divided community at all levels. Individual pastoralists exploited the 'internal divisions' to further their own objectives such as the fencing off communal pasture, as the local leadership could no more take a common stand on issues.

Farmer Associations: A national black farmers union, the Namibia National Farmers Union (NNFU) was formed in 1992 to represent the interests of black communal farmers. One of its objectives is stated as sensitizing the rural community on the needs and strategies for management and sustainable use of natural resources.

About the same time ovaHerero pastoralists started organising themselves into farmer associations. There are about ten farmer associations in Hereroland affiliated in two regional body called Omaheke Regional Farmer's Union (ORFU) and the Otjozondjupa Communal Farmer's Union (OCFU) respectively. ORFU and OCFU in turn are affiliated to the Namibia National Farmer's Union. It is interesting to note that there is no explicit mention of resource management in the objectives of the affiliates, although this is mentioned in the NNFU's objectives. The main preoccupation of the Hereroland associations is the struggle for better livestock prices rather than resource management. However, these associations could be harnessed to promote sustainable range management strategies among their members.

4. Conclusions and Implications

In this paper an attempt is made to explore links between the political economy of pastoralism in Hereroland and the ovaHerero pastoralists' attitude toward range conservation policies and strategies pursued by the Namibian government. The post-independent government may have good intentions, but there is a lack of understanding of how the ovaHerero pastoral system actually works. The reliance on contemporary theories of rangeland degradation and development paradigms such as *'conservation by the people'* is driving the rangeland development agenda. However, outcomes are not as optimistic as hailed by Neumann and Kroll (1998) as a '*participatory people centered process oriented approach for achieving progress in communal land development'*.

I reached the conclusion that, despite the optimistic view that local people can self-manage their resource portrayed in the literature; complexities brought upon the pastoralists by the political economy context make them to be outward looking. Colonial legislation and pastoral organization has created an 'open access' situation rather than a common property regime. That state of affairs created circumstances not conducive for successful creation of self-management institutions. Pastoral organization and technical inputs for range rehabilitation has not been attained under the SARDEP program. Pastoralists even though they are aware of the resource problems such as degradation they realize that self-management or planned resource management raises issues that are highly conflicting and contested. Hence, they instead use history or the political economy context to demand solutions from government, in line with the treatment that was accorded the white settlers.

Although I did not offer any concrete suggestions on resource management or the creation of resource management institutions, I attempted to highlight the complex issues surrounding resource management in Hereroland. Those issues should take the forefront in resource planning if resource conservation is to be successful and be accepted by the local pastoralists. For programs such as SARDEP to succeed under these circumstances, longer project horizons may be necessary. If the program is extended, project staff could learn from the past 10-year teething problems and offer better designs.

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