Macrothink Institute™

Environmental Management and Sustainable Development
ISSN 2164-7682
2013, Vol. 2, No. 2

Sustaining Pastoral Resources in the Kuloko and Zuluga Communities in the Bawku Municipal, Ghana

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Received: September 1, 2013 Accepted: September 20, 2013

doi:10.5296/emsd.v2i2.4323 URL: http://dx.doi.org/10.5296/emsd.v2i2.4323

Abstract

Natural resources are managed under various property regimes: open access, state property, private property and common property. Various scholars have over the years tried to justify the importance or effectiveness of each property regime. Garret Hardin was the first to extol the virtues of the private property regime in his Tragedy of the Commons theory. This theory expressed doubts in the sustainable management of resources held under the common property regime and thus recommends the privatization of open access and common property resources. Private ownership and management was thus seen as the best way forward in avoiding the 'misuse' of natural resources and ensuring their sustainability. However, since Hardin's publication of the theory of 'Tragedy of the Commons' in *Science* in 1968, many scholars have also come out to highlight the effectiveness of the other property regimes in the management of natural resources. This paper examines the management of grazing lands in the Kuloko and Zuluga communities in the Bawku Municipal under the common property and private property regimes. This study used key informant interviews and focus group discussion in the collection of information. Among the two property regimes, the common property regime or communal management by far provides a more robust institutional framework for managing grazing lands, at least in the study communities. This property regime presents a basket of institutional arrangements that largely define and enforce rules, as well as monitor compliance. Nonetheless, the study revealed that all the property regimes face various problems in the management of grazing lands, including the difficulty in regulating use and excluding potential users.

Keywords: Grazing lands, common property, management, encroachment

1. Introduction

Resource management is often concerned with the efficient and sustainable use of the resource. It is in putting place arrangements that facilitate and regulate the use of a particular resource and the resolution of conflicts arising from the usage of that resource. This has to do with the institutional arrangement in place to manage such resources. The use of a particular institutional arrangement for the management of natural resources has been the subject of theoretical debate over years. One theory that greatly influenced the management of natural resources is the "Tragedy of the Commons" published in *Science* in 1968 by Garret Hardin.

In his attempt to explain the concept of finiteness, Garret Hardin (1968) developed the "Tragedy of the Commons" using an open pasture field as a case study. He noted that the commons works well as long as the number of cattle remains in balance with the ability of the pasture to support enough grass to feed the cattle. Expansion by many herders however conceals an ecological trap. Tragedy looms when herders – acting in seeming self-interest but to their ultimate detriment – overshoot the carrying capacity of the commons (Hardin, 1968; Strada, 1999). In short, this theory argues that the commons and open access resources are prone to massive degradation through misuse and/or mismanagement. According to Feeny et al (1990), Hardin's "Tragedy of the Commons" model predicts the eventual overexploitation or degradation of all resources used in common. Garret Hardin was informed by the belief that resources held in common are subjected to massive degradation through misuse and/or mismanagement. "Pastoralists have often been viewed by researchers and policy makers as agents of land degradation through their profit-maximising and ultimately unsustainable behaviour" (Reed, et al, 2007: 250). "In short, local people could not look after their local resources – therefore, in the name of scientific and sustainable management, they should be privatised through fencing and exclusion of local cattle hitherto grazed on communal lands. The local herder, it was implied, was incompetent, and the community invisible, therefore the range would be invaded and used more responsibly by non-locals" (Blaikie, 2006: 1948). The theory doubted the capacity of community institutions to effectively manage natural resources. On the basis of this, Hardin (1968) recommended that the commons could be privatised or kept as public property to which rights to entry and use could be allocated. As Upton (1996) points out, the 'tragedy of the commons' argument has been used in favour of the 'enclosure' and private ownership of common property natural resources of rangelands, forests, fisheries, rivers, streams and aquifers. This would allow market forces to operate effectively in the allocation and conservation of these resources.

However, this theory has been contested by many scholars, most of whom are in favour of the common property regime. This group of scholars argued that it is rather under the common property regime that the right to entry and use could be allocated and regulated. "The 'tragedy of the commons' allegory arising from the writings of Garrett Hardin has done much to confuse scholars and others, and hence meaningful progress in understanding resource management regimes has been stifled" (Bromley, 1991: 22). As Bromley (1991: 22) notes "common property carries the false and misplaced burden of 'inevitable' resource degradation that properly lies with situations of open access." As noted by Feeny et al (1990), there is abundant evidence, contrary to Hardin's doubts on the ability of social groups to design,

utilise and adapt ingenious mechanisms to allocate use rights among members. To them, Hardin did not consider the possibility of exclusion under common property regime, where an identifiable community of interdependent users holds the resource. These users have the power and ability to exclude outsiders, while regulating use by members of the local community. This paper explores the management of grazing lands under the common property and private property regimes in the Kuloko and Zuluga communities in the Bawku Municipal.

1.1 Methodology

The Kuloko and Zuluga communities are in the Bawku Municipal. They are located along the Bawku – Bolgatanga highway. They can best be described as communities of farmers. Common crops grown in the two communities are millet, guinea corn, maize, rice and groundnuts. The common livestock raised by households include sheep, goat and cattle. Farm sizes are relatively small because of the high population density in the Bawku Municipal. According to the 2000 Population Census Reports, the Bawku Municipal has a population density of 149 persons/sq. km. This exerts enormous burden on the land.

The study employed qualitative methods of data collection. The made use of key informant interviews, focus group discussion and on-the-spot observation of relevant features of the phenomenon studied. Key informant interviews were conducted on a number of people in the community including the two Agricultural Extension Officers who work in Zuluga and Kuloko, as well as the chiefs and the earth priests of the two communities. The key informants were interviewed on a wide range of issues including the communities' seasonal calendars, key events that occurred in the communities over time and issues concerning the use and management of grazing lands in the two communities.

Another technique employed to generate information for the study was focus group discussion. A number of focus group discussions were held with the farmers and shepherds in the two communities. Number of participants per each focus group discussion ranged from six (6) to ten (10) people. In all, six focus group discussions were organized in the two communities. The focus group discussions centred on the management strategies of the various stakeholders.

On-the-spot observation was another technique employed in the collection of information. I conducted on-the-spot observation and analysis of the various grazing fields in the two communities as well as the Bansi Hills, which are located outside the study communities, but serve as grazing fields to them. The researcher also spent a great deal of time observing the way shepherds implement their grazing land management strategies. On-the-spot observation became a very important technique for generating information for this particular study as most of the activities were better observed at first hand than interviewed. On-the-spot observation enriched the other data collection techniques especially the focus group discussion as it helped to probe into certain activities during the interview sessions. The analysis was largely descriptive.

1.2 Institutions/Property Regimes

This section seeks provides the theoretical framework of the study by briefly reviewing the key concepts associated with the subject. The review of concepts would set the tone for the study and also provide the framework for the assessment of the concepts and the findings of this study. All natural resources are managed under different property regimes. The use of a particular property regime is sometimes influenced by the socio-economic environment of that locality. According to Bromley (1991: 22) "a resource management regime is a structure of rights and duties characterising the relationship of individuals to one another with respect to that particular environmental resource." Common (1995) observed that the way in which producers and consumers use natural resources depends on the underlying set of property rights. Property refers to the benefit stream that one derives from a resource (see Bromley, 1991). "Property is an expectation to a stream of future benefits ...", (Swallow, 1994: 4). Right on the other hand is the relationship between a person and others with respect to a given resource (Bromley, 1991). In line with this, Bromley (1992) defines property right as a claim to a benefit stream that some higher body, usually the state, will agree to protect through the assignment of duty to others who may covet, or somehow interfere with the benefit stream. Natural resources are held and managed under four property regimes: private property, state property, common property, and open access (see Feeny et al, 1990; Bromley, 1991; Ellis, 1993).

The first is state property regime, where resources are held and managed under the ambit of the state. As Feeny et al (1990) point out, under state property; rights to the resource are vested exclusively in government, which in turn makes decisions concerning access to the resource and the level and nature of exploitation. The state property regime has been succinctly described in the following terms:

> "In a state property regime, ownership and control over use rest in the hands of the state. Individuals and groups may be able to make use of the natural resources, but only at the forbearance of the state. National or state forests and parks and military reservations are examples of state property regimes [...] The state may either directly manage and control the use of state-owned natural resources through government agencies, or lease the natural resource to groups or individuals who are thus given usufruct rights for a specified period of time [...] State property regimes remove most managerial discretion from the user, and generally convey no long-term expectations in terms of tenure security" (Bromley, 1991: 23).

In short, under the state property regime, the right of ownership and appropriation of a resource is vested in the state. Under this property regime, private individuals can only access such resources through the state or state agencies.

The second is the common property regime where the right of ownership and use is vested in a well defined social group. Thus, common pool resources are resources jointly held, used and managed by a well-defined social group. According to Bromley (1991: 26) "we may think of common property as corporate group property. The property-owning groups vary in nature, size, and internal structure across a broad spectrum, but they are social units with

definite membership and boundaries, with certain common interests, with at least some interaction among members, with some cultural norms, and often their own endogenous authority systems." According to Ostrom (2000: 29) "most natural resource systems used by multiple individuals can be classified as common pool resources." Resources held under the common property regime have several characteristics. As Ostrom (2000: 29) notes "most common pool resources are sufficiently large that multiple actors can simultaneously use the resource system and efforts to exclude potential beneficiaries are costly." Similarly, Ostrom et al (1994) define common pool resources as resource systems where excluding potential appropriators or limiting appropriation rights of existing users is nontrivial (but not necessarily impossible) and the yield of the resource system is subtractable. According to McCarthy, et al (2001: 297) common pool resources are "characterised by joint access by a finite set of users and by rivalry appropriation. When a community member decides individually on appropriation of a common pool resource, he generates negative externalities on others by reducing supply available to them."

Other scholars have also elaborated on the distinguishing features of resources held under common property from those held under the other property regimes:

- Pure public goods can be used by any number of consumers because goods like the light from the street lamp are consumed collectively.
- By contrast, private goods are individually consumed; what one individual consumes is either used up or becomes (at least temporarily) unavailable to others.
- Like pure public goods, the commons is shared; however, unlike pure public goods, the commons cannot be shared without limit.
- Like the use of private goods, the use of the commons is characterised by individual consumers who appropriate a portion of the flow benefits and make that portion unavailable to others; however, unlike private goods, the commons either cannot be or is not divided among separate consumers, (Oakerson, 1992).

In the view of Ellis (1993), common property regimes are just such institutional arrangements that govern the access of people to renewable resources and they constitute a most important middle ground between the extremes of open access and private property.

The third is the private property regime where the ownership or right of usage is vested in hands of private people. "Private property is the legally and socially sanctioned ability to exclude others – it allows the fortunate owner to force others to go elsewhere" (Bromley, 1991: 25). Under private property, the rights to exclude others from using the resource and to regulate the use of the resource are vested in an individual or group of individuals such as a corporation, (Feeny et al, 1990). The private property regime confers on the individual owner the right to exclude others from the use of such resources. Similarly, it is the responsibility of the individual owner to maintain or manage the resource. Thus, private ownership and appropriation is the key issue under this property regime.

Finally, there are also open access resources whose access is available to everybody. Runge

(1992) defines free or open access as a state where there are no rules regulating individual use rights to a particular resource. In open access regimes, "it can only be said that everybody's access is nobody's property" (Bromley, 1991: 30). Thus the difference between open access resources and resources held under the other property regimes, particularly common pool resources is that the right of usage or access is not restricted to any social group. In the view of Runge (1992), common property is to be distinguished from free and open access, where there are no rules regulating individual use rights. Essentially, open access is viewed as the absence of property rights over a given resource.

The property regimes are the social institutions that govern the use and management of natural resources. According to Ellis (1993), the existence of property rights over a commodity or service permits the holder of those rights to exclude others from their use, control their access, or charge a market price for their use. Thus, the degree of exclusion that can be exercised over a particular resource at any point in time depends on the property regime under which that resource is held. Sustainable management of resources obviously differ with respect to the nature of the resource, where the resource is located, the demand imposed on such a resource at any point in time and above all the institutional framework under which the resource is governed. Natural resources are organized under different property regimes. These property regimes have differing capacities in managing a particular resource system. It is only an assessment of the property regimes with respect to a particular resource system that their effectiveness in managing a resource can be determined.

2. Communal Management of Grazing Lands

This section discusses the management of grazing lands as communal pool resources in the Kuloko community. The sustainable management of grasslands for animal grazing has been a challenging task all over the world, particularly under the common property regime. According to Conant, et al (2001: 343) "much of the earth's grasslands are over used and poorly managed, and significant amounts of native forest, shrubland, and woodland have been converted to grassland." As Ostrom (2005: 219) points out "common pool resource problems are among the core social dilemmas facing all peoples. Grazing lands constitute a vital component of the livestock production system. As Hadjigeorgiou et al (2005: 51) point out "grazing lands and their management as livestock production systems are a matter of special importance since they support the maintenance of biodiversity, landscape-soil-air and water quality, recreation, rural employment and social benefits." Despite their importance, the maintenance or management of grazing lands has not been given the needed attention over the years. "It may be noted that the land available for grazing and fodder collection for livestock continuously declined over the years" (Ray, 2008: 43). Collective action is required to establish and enforce rules limiting the appropriation of water, fish, forest products, pasturage, and other resource products." Grazing fields in the two study communities also face these challenges.

In the two study communities, there is no open access grazing field during the rainy season. However, the absence of open access grazing fields during the rainy season has not blinded livestock farmers in the two communities from discovering and utilising open access grazing

fields from neighbouring communities, like the Bansi Hills. Both farmers and shepherds at separate focus group discussions mentioned the Bansi Hills as unrestricted grazing fields that is being used to graze livestock from different communities. Livestock farmers here, especially those from the Kuloko community have for a very long time made use of the Bansi Hills which serve as free or open access grazing fields to them. The Bansi Hills are located in a neighbouring community, Bansi and offer a wide range of space and pasture for grazing livestock as well as trees for domestic fuel. The area occupied by the hills is stony and has subsequently been declared unsuitable for farming by farmers from the Bansi community. Following this, the area has not been subjected to any serious encroachment by the farmers. There are currently no clear institutional arrangements in place to exclude livestock farmers from using the hills for grazing purposes, thus making it an open access field. It was made known by the shepherds that apart from going there to sacrifice to the two gods located on the hills, the Bansi community members have for now not been deeply involved in management issues like restricting access or regulating use and users, especially for livestock grazing and the extraction of fuel wood. There is no expressed interest to put in place institutional arrangements to regulate the use of the Bansi Hills as grazing fields. As Bromley (1992) points out, rights have no meaning without correlated duties, and the management problem with open access resources is that there are no duties on aspiring users to refrain from use. In the absence of clear institutional arrangements capable of restricting access and regulating use as well as users, the Bansi Hills for now can largely be regarded as open access grazing lands. This is evidenced by the existence of unrestricted access to the hills by livestock farmers from various neighbouring communities in the Bawku Municipal for livestock grazing. In the absence of clear institutional mechanisms to restrict access and regulate use, an assessment cannot be made on the effectiveness of community institutions in managing the Bansi Hills as grazing lands.

Most natural resources, including grazing lands are usually managed as common pool resources (see Mvula and Haller, 2009; Akpalu and Martinsson, 2011). Various forms of institutional arrangements have evolved in many communities over time to govern common pool resources including hunting grounds (see DeMotts, et al, 2009; Mvula and Haller, 2009). Grazing lands in the Kuloko community are communally owned and managed. They include lands that have since time immemorial been earmarked as community grazing fields, lands that have been free from individual ownership as a result of their barrenness or infertility, as well as sacred sites. In common pool resource management, two questions are often addressed: the degree of exclusion and the extent of subtractability (see Feeny et al, 1990). “Exclusion means that control of access is problematic or costly, while subtractability means that each user’s use of the resources results in less being available to other users” (Hara et al, 2009: 522). The above three categories of grazing lands in the study communities share a common bundle of attributes: physical boundaries, mutual usage, shared ownership and collective management, and a stream of benefits to be reaped by the community as a whole. Communal grazing lands are marked or recognised by physical boundaries. These boundaries show the limits of the grazing lands in terms of size. The boundaries of grazing lands in the two study communities are clearly known by the relevant actors. This has made it possible for the key actors to monitor the encroachment of grazing lands in the communities over time.

Physical boundaries also show the viability of the pastures in a particular communal grazing land in terms of its capacity to support livestock grazing in a particular rainy season. This physical attribute of grazing lands has particularly been the concern of livestock owners and shepherds, who often have to shuttle their livestock from one location to another in search for fresh pastures.

Communal grazing lands are also characterised by mutual usage or joint appropriation. As Bromley (1991: 26) notes "the customary common property regimes in the developing world are characterised by group/corporate ownership with management authority vested in the respective group or its leaders." These user groups often formulate and implement a set of appropriate institutional arrangements to regulate the use of existing common pool resources within their jurisdiction (Agrawal, 2001). I observed that there is a high level of understanding on the part of the community members in the Kuloko in particular that the usage of communal grazing lands is not limited to private individuals, but the community as a whole. All the three categories of communal grazing lands in the Kuloko community have been jointly appropriated by livestock farmers in the community. The communal grazing lands in the Kuloko community also generate a stream of benefits to the people. This takes the form of pastures for livestock in the community. Aside the pastures, the communal grazing lands also generate a wide range of benefits to the community, including firewood, medicinal plants, chewing sticks and housing for the community earth 'gods'.

An equally important attribute of communal grazing lands is shared ownership and collective management. The three categories of grazing lands in the Kuloko community are not only communally owned, they have been jointly managed since their creation. As Woodhouse et al (2000) note, in contrast to the 'crisis narratives' that view African land users as agents of destruction, the alternative discourse argues that resources such as land, forests, fisheries and pasture were efficiently and equitably managed under local 'customary' (or 'traditional', 'indigenous') institutions. There is evidence of joint ownership and collective management of the three categories of communal grazing lands in the community. It has been the collective responsibility of the people in the community to define boundaries and rules, enforce rules and monitor compliance and resolving conflicts arising from the usage of the grazing lands.

The above processes have over the years been facilitated by robust institutional arrangements. In the management of grazing lands in the Kuloko community, traditional institutions and knowledge systems play a key role. As Reed et al (2007: 250) note, "... during the 1970s and 1980s, with the rise of participatory research, a number of studies began to recognise the value of local pastoral knowledge." According to Berkes, et al (2000: 1256), "the practice of traditional ecological knowledge differs from that of scientific ecological knowledge in that it is largely dependent on local social mechanisms." Prominent among these arrangements is the institution of the chief and the traditional earth priest (*tindana*) the farmers, and the shepherd guild. The chief and the tindana are key stakeholders in the management of communal grazing lands in the Kuloko community. In matters relating to land, the earth priest is the most revered person in the community. As the custodian of the community land, and the 'link person' between the people and the 'earth god', the earth priest represents the people in all matters relating to land. As Berkes et al (2000: 1256) point out, "world view or cosmology

gives shape to cultural values, ethics, and the basic norms and rules of a society." In view of Bromley (1991: 27), there are built-in structure of economic and non-economic incentives that encourages compliance with existing conventions and institutions governing common pool resources. The duties of the earth priest in the Kuloko community with regards to the management of the communal grazing lands were identified as determination of areas to be used as communal grazing lands and creation of boundaries, monitoring compliance on boundary rules and maintaining the sacred site, which also serves as a communal grazing land. The chief on the other hand simply complements the activities of the earth priest. His principal duty regarding the management of grazing lands has been the resolution of conflicts arising from the encroachment on boundaries of the communal grazing lands. This role is relevant since the use and management of most common pool resources is largely associated with conflict. As Huggins et al (2005) note, limited access to land exacerbated by its inequitable distribution, and by tenure insecurity have been described as key aspects of the 'structural conflict' – patterns of economic domination and exclusion that create deprivation and social tension, and prepare the way for violence. Huggins et al (2005) further note that many people still consider land disputes to be at the heart of most conflicts between households. Conflicts over the use of common pool resources are indispensable. What is important is the ability of society or social groups to put in place measures to resolve conflicts associated with the usage of common pool resources. In the Kuloko community, the chief is said to have tried in several occasions to build consensus among the relevant stakeholders in the community, especially the farmers, as well as mobilise them for collective action in matters relating to the maintenance of the communal grazing lands. Collective action is indisputably one of the essential ingredients in the management of common pool resources. A community that has a shared vision and good leadership stands in better position to ensure effective management of her common pool resources.

Besides the chief and earth priest, farmers in the Kuloko community were also been identified as key stakeholders in the management of communal grazing lands. The farmers were identified as key actors and detractors in the management of the grazing lands. Farmers in the community were identified as the principal encroachers of the communal grazing lands. The farmers in Kuloko during a focus group discussion stated that those who farm near the communal grazing lands have always made an attempt to extend the boundaries of their farms into the grazing lands on yearly basis. Alternatively, it was also revealed during the focus group discussion that the farmers carry out peer monitoring on the encroachment of boundaries of the communal grazing lands. They are able to identify their colleagues who often encroached on the boundaries of the communal grazing lands and report them for appropriate sanctions. Recalcitrant farmers are often first confronted by their colleagues, and later reported to the chief if they failed to obey their colleagues. It is this peer monitoring and reporting system that enables the chief and earth priest to revise and enforce new rules and to ensure compliance.

The guild of shepherds in the Kuloko community also constitutes another important stakeholder group in the management of the communal grazing lands. The shepherds in the community are relatively young boys with their ages ranging from 8 to 18 years old. These

young shepherds have a special interest in the sustainable management of communal grazing lands. It came out clear during a focus group discussion with the shepherds that they are never consulted by the chief or the earth priest or community elders in matters regarding the management of communal grazing lands. They are often considered young, and ignorant of issues of land governance. However, according to the shepherds, they have their own plans and strategies, and are always willingly and ready to contribute towards a sustainable grazing land management in the community. As Swallow (1994: 4) point out "the most important resources for (agro) pastoralists are their animals, natural pastures, fallow lands and crop land." The shepherds are very knowledgeable with issues relating to the grazing lands in the community. According to Adam et al (2003: 1915) "the knowledge which allows stakeholders to define the problems of resource use falls into three realms: knowledge of the empirical context; knowledge of laws and institutions; and beliefs, myths, and ideas." The young shepherds in the Kuloko community can be described as professional surveyors or architects as far as knowledge of boundaries of communal grazing lands are concern. They are the main group of people that ensures effective monitoring of boundaries and compliance on boundary rules. The shepherds are able to detect the extent to which a particular communal grazing land has been encroached on at any point in time. The shepherds are the lead actors when it comes to ensuring compliance by farmers. The weapon of used by the shepherds to ensure compliance is their animals. The shepherds indicate that they often make sure that their animals constantly graze the encroached portions of their grazing lands. This practice deprives such farmers from obtaining yields from the encroached portions of communal grazing lands, and deters them from further encroachment of the grazing lands. As McCarthy, et al (2003: 299) note, user groups or communities are sometimes left with the "option of engaging in explicit supervision and punitive actions to ensure compliance with cooperative agreement." This action has always been effectively executed by the shepherds during times of rains or late evenings when the concerned farmers have gone home. The repeated action of the shepherds discourages defaulting farmers from further encroaching on communal grazing lands. It was stated during the focus group discussion with the shepherds that they also safeguard the various grazing corridors within and outside the community. They consider these grazing corridors as their highways and would always like to keep them as wide as possible so as to facilitate easy passage of their animals to the various grazing fields. The maintenance of the grazing corridors starts from the respective homes of the shepherds and ends at the main grazing fields.

Despite these institutional arrangements, the management of grazing lands in the Kuloko community are not without challenges. The first challenge relates to questions regarding the robustness and effectiveness of the institutions for governing the communal grazing lands in the communities. As Ostrom (2005: 271) argues "no matter how well a governance system is initially designed, however, all humanly designed systems are vulnerable to threats." For instance, Ostrom (2005: 273) points out that "rapid change of population or culture may lead to a circumstance in which the general principles involved in the design of effective community-governed institutions are not transmitted from one generation to another." Grazing lands in the Kuloko community are under constant threat of encroachment by farmers who are desirous of increasing the size of their farms from time to time. Aside the

strategy adopted by the shepherds, there seems not to be any effective measure of enforcing sanctions on encroachers in the community. As population increases and farm yield declines, farmers will continue to the encroachment of communal grazing lands. If appropriate measures are not devised to complement the effort of the shepherd, grazing lands will be in danger in the community. The second challenge that was identified through the various focus group discussions is the difficulty in excluding or restricting the use of the communal grazing lands by potential users. Livestock rearing is one of the main economic activities of the area. As such, almost every household in the community has some form of livestock, - cattle, sheep, goat or donkey for various needs. Given that all the households in the community would like to graze their livestock in the communal grazing lands, it would become practically difficult to exclude some of them. Aside farmers in the community, it has also become increasingly difficult for the community members to exclude potential users outside the community since there is no fencing mechanism in place. In the absence of practical measures to restrict access or exclude potential users, communal grazing lands are likely to come under threat of encroachment and exploitation.

2.1 Towards Private Ownership of Pastoral Resources

The high incidence of population growth in the Bawku Municipal has brought pressure to land. The Bawku Municipal is the most populous in the Upper East Region, recording a population of 307,162 people in the 2000 census, with a density of 149 persons/sq.km. There is high demand for land for residential and agricultural uses. The increasing demand for land for farming in the peri-urban areas is leading to the gradual disappearance of communal grazing lands. It now appears as a disincentive on the part of people in the peri-urban communities to devote a large tract of land to serve as communal grazing lands. The growing demand for land in the area for residential and agricultural activities does not also encourage the preservation of open parks that are often used for livestock grazing. In response to this, there is a move towards the privatisation of grazing lands. The move towards privatisation is taking the form of individual or family ownership of grazing lands. This phenomenon is gaining grounds in the Zuluga community, which is experiencing the population sprawl from the Bawku Township. It came out clear during the focus group discussions with the farmers that many individuals and families in the Zuluga community were compelled by the disappearance of communal grazing lands to reserve part of their farmlands to serve as grazing fields for their livestock. These are often small in size as compared to communal grazing lands or open access fields. They are used basically to graze sheep and goat.

The focus group discussions with the farmers revealed that communal grazing lands in the Zuluga community have been replaced with individual or household grazing fields. As such, management of grazing lands in the Zuluga community is the responsibility of private individuals. The management of grazing lands by private individuals has not been easy for farmers in the Zuluga community. One of the challenges identified during the focus group discussions is the difficulty in creating stable or permanent fields. Land is a scarce commodity in the Zuluga community. As such, it is becoming difficult for farmers in the community at certain seasons to make provisions for grazing lands. Although the efficient allocation of resources is largely guaranteed under the market regime, the notion of

privatisation or the market has limitation in resource management.

> "Markets are highly articulated institutional arrangements to channel individual initiative and avarice into putatively benign – but, if lucky, useful directions. Markets are wonderful arrangements for those goods and services that conform to certain characteristics. Among these traits are highly divisible factors of production and outputs; the absence of public goods; the absence of externalities in use (no joint costs); an absence of irreversibilities; and a clear and precise structure of property rights. Unfortunately, many environmental matters are often characterised by unclear property rights; indivisibilities; publicness; contemporary or intertemporal externalities; and irreversibilities" (Bromley, 1991: 20).

Aside the difficulty in creating permanent individual grazing lands, the management of such individual grazing fields has also posed a big challenge to the owners. The main management challenge that was identified by the farmers in the Zuluga community during the focus group discussions is the difficulty in restricting access and regulating the use of private grazing fields. It came out clearly that the move towards privatisation has not been accompanied by the adoption of appropriate market mechanisms for the management of private fields in the community. It was noted that the conversion of communal grazing lands to individual private grazing lands has not been accompanied with the desired orientation of the people towards the market system. It has been noted that in so-called private resources like land, only "few are entirely free to do as they wish with such assets" (Bromley, 1991: 24). The farmers complained during the focus group discussions that community members who do not have their own private grazing fields still want to have unrestricted access to their neighbours' fields. They want to freely graze their livestock in their neighbours' private fields as they often do on open access or communal grazing lands. It came to light during the focus group discussion that, though some fields are owned by private individuals, it has become practically difficult for them to effectively regulate the use of such fields. Apart from the overgrazing that these fields are often subjected to, the private grazing lands are also susceptible to encroachment. This incidence is high in areas where the boundaries of such private fields are shared with other community members. When some farmers set aside part of their farmlands as grazing fields, others consider such grazing fields as idle land, often attempt to encroach such lands.

The best option in addressing these challenges would have been the fencing of such private fields, but as it stands now, the cost of fencing and the frequent changes made on individual fields do not encourage the adoption of such measures. In the absence of such measures, private management of grazing lands in the Zuluga community can be described as ineffective. As such, the private grazing lands have assumed the character of open access resources or at best they have assumed the character of common property resources. It has not only become difficult to restrict access and regulate the use of such private grazing lands, they have also been subjected to encroachment. In light of this, many individuals and families are increasingly becoming reluctant to set aside parts of their farmlands to serve as grazing fields. Consequently, this is placing a limit to the number of livestock that individuals in the community can raise at a particular point in time. This would surely have far-reaching

implications on the livelihood scheme of the people.

3. Conclusion

Grazing lands in the Kuloko and Zuluga communities are largely managed under the common property and private property regimes respectively. Clearly, it is the common property regime that has proven effective to some extent in managing grazing lands in the study communities, especially in the Kuloko community. The common property regime has an elaborate community institutional arrangement involving the chiefs, earth priest, farmers and shepherds performing various functions such as the formulation and enforcement of rules, monitoring compliance, and resolving conflicts arising from the use of the grazing lands. The existence of such local institutional framework that clearly defines and enforces rules regarding the use of resources constitutes a key pillar in the management of community resources like grazing lands. Nonetheless, both property regimes that govern the use of grazing lands in the study communities are faced with the difficulty of effectively regulating use and users of the grazing lands, as well as preventing their encroachment. It is obvious that certain resources by their nature and the socio-cultural environment under which they are governed cannot be more effectively managed under any of the various property regimes; though some institutions may somehow provide a better framework than others. This is exactly the case with grazing lands in the Bawku Municipal.

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