

Governing Interests of Fulani Herdsmen and Peasant Farmers in Natural Resources in the Asante Akim North District of Ghana

John Victor Mensah

Department of Planning

Kwame Nkrumah University of Science and Technology (KNUST)

Kumasi, Ghana

Ronald Adamtey

Department of Planning

Kwame Nkrumah University of Science and Technology (KNUST)

Kumasi, Ghana

Abdul-Rahim Abdulai

Department of Planning

Kwame Nkrumah University of Science and Technology (KNUST)

Kumasi, Ghana

Abstract

This study examined the governance of interests of Fulani cattle herdsmen and peasant farmers in land, water and pastures of the Asante Akim North District of Ghana. Using stakeholder interviews with key officers of the Asante Akim North District Assembly (AANDA), senior officers of District Police Service, key persons in the Traditional Council, cattle owners and focus group discussion sessions with farmer groups and groups of herders, the study revealed that conflicting interests among stakeholders have led to violent conflicts between the herdsmen and peasant farmers. It is recommended that stakeholder governance should employ a platform that provides equal opportunity to herders and farmers to raise their concerns, negotiate and find a solution for peaceful coexistence as well as enforcement of the rule of law in the area.

Keywords: Stakeholders, Interests, Fulani herdsmen, Peasant farmers, Natural resource, Governance, blame game

INTRODUCTION

Natural resources are materials provided by the earth that humans can use to make more complex products. They occur naturally and human beings cannot create them but rather use and modify them to be beneficial. They include air, animals, coal, minerals, natural gas, oil, plants, sunlight and water. There are several ways to classify natural resources such as where they can be found and whether or not they are renewable. Renewable resources are those that can be replenished over a period of time such as sunlight, wind, plants and animals.

Biotic resources are natural resources derived from organic materials including animals, fossil fuels (e.g. coal, oil and natural gas), and plants. In contrast, abiotic resources (e.g. air, sunlight, minerals and water) originate from nonliving and inorganic materials. Natural resources are crucial in the social and economic development of communities and nations in terms of providing income, employment, identity and industry (USIP, 2007). They are conservers of cultural and ancestral heritage of communities and nations. They also provide raw materials

for industries and businesses. Research has shown that about half of the population globally depend on their local community resources for survival through livelihood activities and income generation (Homer-Dixon, 1999). Natural resources are not only for human survival but also form the basic sources of livelihoods.

With the current growth in populations influencing the need for economic development, the pressure on natural resources is eminent. The natural resources-human life linkages are a complex phenomenon because of the diverse nature of both entities. The linkages bring out various stakeholders with varied interests depending on how they interact with the land, water and vegetation. Stakeholders here refer to people or entities that stand to gain or lose through interaction with these natural resources. They usually seek to maximize their interests in the course of interacting with natural resources and in some cases, even at the expense of other interests (Homer-Dixon, 1999; European Commission, 2009). These complex interactions among different stakeholders need to be effectively governed in order to avoid conflicts and for the ecosystem to perform its optimum functions.

Various authors have written on natural resource use and related conflicting interests of farmers and herdsmen. Conflicts between farmers and pastoralists are noted to be a prominent feature of the economic livelihoods in many parts of West Africa and these conflicts are usually linked to property rights issues (Baxter and Hogg, 1990; Dietz, 1993; Baxter, 1994). They usually result from the competition for land, water, and pastures by farmers and herdsmen. Clashes emerge around destruction of crops by herdsmen, marginalization of pastoralists and land tenure issues (Blench, 2004; Hussein et al., 1999; Moritz, 2006; Dosu, 2011). These conflicts are not only caused by changes in or limited access to natural resources, but also by the policies that govern the land uses. The policies are mostly decided by a number of factors like import and export economies of immigrants and indigenes' rights of access (Moritz, 2006).

Despite vast literature on herdsmen-farmer interests over the use of natural resources, very little is known on the aspect of how to govern the stakeholder interests in the natural resources. The paper examines the governance of multi-stakeholder interests in the use of natural resources using the Fulani herdsmen and peasant farmers as the subjects of study as many of the conflicts around the use of land, vegetation and water resources have occurred between these two groups over more than two decades (Dosu, 2011; Myjoyonline, 2011; The Chronicle, 2015; Ghanaweb, 2011). The Fulani herdsman-peasant farmer conflict in the Asante Akim North District is one of the many kinds of conflicts in Ghana (Seini and Tsikata, 2004).

We argue for building channels for peaceful co-existence between the two actors in order to derive win-win outcomes. This paper attempts to add to the existing body of knowledge by giving a new dimension of governing interests of the two main stakeholders and resolving conflicts related to natural resource use in the district.

LITERATURE REVIEW

The concepts and theories that inform the study are reviewed in this section. They include ownership and control mechanisms of natural resources, stakeholder interests and power in natural resources, wise use concept, and natural resource and conflict.

Ownership and control mechanisms of natural resources

Natural resources ownership and control mechanisms are usually classified under four regimes: private property, common property, state property, and open access resource (IFAD,

1995 cited in Mensah, 2003). Though these form the common property rights in theory, practically, property rights are in continuum without clear cut categories (Tisdell, 2006).

In natural resources management, resources which are owned and managed by private entities fall within private rights. Under common property, the right to a natural resource is accrued by specified groups excluding non-members. Resources owned or managed by the state are state property. Open access resource refers to a form of common-property resource that lacks any system of rules governing its usage and they are free for anyone to use without payment and subject to no social control (Ostrom, 1990; Bromley, 1991; Cavendish, 1998; Tisdell, 2006). These types of resources are therefore common properties but what differs is the societal control and governance over them. They can best be described as “non-excludable” resources because all members of the community have access to them at any time without restrictive limits.

The natural resources of the Asante Akim North District fall under common property and open access resource rights. The rivers, streams, forest and grassland are therefore common property with open resource where farmers and herdsmen are free to use. Hardin (1968), explaining common properties and open access, cites societal property like pastures and parklands as examples. Other examples of open access resources include air, water, land and other component of the ecosystem. Open access status of resources makes it difficult to control and manage. There is normally a challenge of how to protect and regulate the quality, consumptive use, and mitigation of their use (Libecap, 2008 cited in Mowery, 2013). Lack of control of open access resources leads to competition among various interests and this can generate conflicts. In addition, misallocation and wastage are likely to occur ruining the resources for the entire community (Hardin, 1968; Mowery, 2013).

Hardin’s (1968) warning about the consequences of non-control of open access resource use points to the fact that there is always the need for government and other authorities to step in to regulate the usage to reduce decline and depletion. When resources are left in the hands of community (commons) control, there is the incentive to overuse. Hence the call for private ownership for individuals to take good care of resources entrusted to them (Hardin, 1968). Private ownership is associated with the capitalist form of governance and has roots in resource economics. Many resource economists are of the view that, entrusting natural resources in the hands of private individuals leads to efficiency and helps in achieving environmental goals (Chueng, 1970; Johnson, 1972; Fujita and Bonzon, 2005; Helson et al., 2010).

Modern philosophical discussions on the ownership and management of resources appear to focus on justifications of private ownership. They mostly justify a system of governance that allocates particular objects like pieces of land to particular individuals to use and manage as they wish to, to the exclusion of others. They even exclude people who have dire need for the resource and control of society (Waldron, 2004). There is the principle of exclusivity in private ownership. Private owners have the right to exclude others as opposed to common property ownership where everybody has the right to use the resources.

There is always a split among scholars on how beneficial private ownership can be. According to Tucker (1999), establishing a secure tenure in forest management is mostly recognized as a step to achieving sustainability. Turner (1999) notes that, policy-makers generally prefer to use privatization to achieve a secure tenure of forest resources although common property can also help in that regard. However, when forest ecosystems are left in the hands of private

individuals and entities, there is the tendency for private entities to exploit these resources for profit gains to the neglect of sustainability. There is also the denial aspect as people in need are denied access by private owners, which can result in natural resource conflict.

In Ghana, ownership of most natural resources like land surface, vegetation cover and water resources are communally owned and held in trust on behalf of the people through the stools and skins (stool lands) even though the government has purchased some lands outright from the landowners (Asare, 2000). These are used for diverse activities like farming and grazing. However, the government still owns some components of the ecosystem like land and forest reserves. In the Asante Akim North District, stools are custodians to farmlands but private individuals also own farmlands and other natural resources on it. Private individuals have the right to control the use of these lands and are in a position to protect their usage. Kuusaana and Bukari (2015) clearly describe the processes of agricultural land acquisition in the district.

Stakeholder interest and power in natural resources

Natural resource management involves processes of conserving and restoring natural resources to meet the socio-economic, political and cultural needs of both present and future generations. This implies the application of principles of sustainable development. It helps to ensure efficient and effective use and maintenance of natural resources (Szaro et al., 1988; Brussard et al., 1998). Natural resources serve the interest of various actors hence the concept of stakeholders is applied in their management. Stakeholders comprise various actors some of which are gaining while others are losing in their interaction with the ecosystem. There are also unequal power relations among stakeholders.

Freeman and Reed (1983) define a stakeholder as any individual or group who can affect the achievement of an organization's objectives or who is affected by gaining or losing by the achievement of an organization's objectives either directly or indirectly. Hein et al. (2006: 213) define a stakeholder as "any group or individual who can affect or is affected by the ecosystem's services". According to Demeyer and Turkelboom (2014) cited in Hauck et al. (2014), ecosystem stakeholders can be classified into four main groups who relate to the biological or physical resource(s) and its ecosystem (dis)service can be distinguished. These groups are:

1. Beneficiaries – this comprises people or entities who directly benefit from ecosystem services;
2. Burden - these are stakeholders negatively affected by the ecosystem services;
3. Stakeholders who directly impact on ecosystem services (e.g. land owners, resource managers); and
4. Stakeholders who indirectly influence ecosystem services (e.g. decision makers, civil society organizations).

The activities of each stakeholder in the ecosystem need to be carefully managed to achieve a balance. Stakeholders such as herdsmen and peasant farmers directly impact on natural resources in the ecosystem. Each stakeholder has an interest which can be positive or negative and possess various degrees of power over the management systems of the natural resources. The interest of each stakeholder influences the kind of actions they take and the power shows the kind of control a stakeholder can exercise over the resource.

Stakeholders from different levels and categories have various motives and expectations of a natural resource. Lienert (2011) advises that stakeholder interests are identified by asking questions like: what are the expectations of each group? What are the motives of each group? What benefits are likely to accrue to each group? How does each group consider other groups? Power is the relationship among social actors in which one social actor, A, can get another social actor, B, to do something that B would not have otherwise done (Dahl, 1957). In the context of the natural resource, each stakeholder holds some level of influence or authority of office or access to greater authority or networks which serves as a source of power. A stakeholder power in natural resource use can be derived from ownership rights.

Diverse interests and varied degrees of power of stakeholders point to the need to manage them. This is why stakeholder involvement is considered essential in the governance of environment and ecosystem services (Harrington et al., 2010; Hauck et al., 2013). Effective functioning and sustainability of the natural resources are in line with the wise use concept which would depend on the interplay among these stakeholders.

Wise use concept

The concept of wise use was originally defined by the Ramsar Convention in 1987 and updated in 2005. The convention interpreted wise use of wetlands in 1987 as “their sustainable utilisation for the benefit of humankind in a way compatible with the maintenance of the natural properties of the ecosystem” (Ramsar Convention Secretariat, 2010: 8). Extending the concept beyond wetlands, wise use is the inter-generationally equitable utilization of resources. This means a judicious use of resources such that the needs of present generations and future ones are effectively and efficiently met.

The concept as used by the Ramsar Convention brings out three main elements: ecological character (the ecosystem components, processes and benefits/services that characterise the wetland at a given point in time); ecosystem approaches (which consider the complex relationships between every element of an ecosystem, and promote the integrated management of land, water and living resources) and sustainable development (development that satisfies the needs of both present and future generations equitably) (Ramsar Convention Secretariat, 2010).

Giving the numerous stakeholders that usually have interest in the exploitation of natural resources, conflicts often emerge among the stakeholders regarding the rate and manner of resource utilization. Avoiding such conflicts would require the involvement of key stakeholders in defining the terms of resource utilization and exploitation, and how benefits and services accruing from the resources are shared. This calls for consultation, coordination and cooperation among land owners, the local community and government agencies responsible for land management. Local natural resource management should ensure active participation by local communities and indigenous people and be supported by local indigenous and traditional knowledge. This suggests the use of participatory, interdisciplinary and transdisciplinary approaches to ensure that local social and economic factors crucial to sustainability of natural resources are effectively handled.

Natural resource and conflict

USIP (2007) argues that the ability of the developing world to effectively propel forward its economic development process is greatly tied to natural resources. Access to, utilization and sustainable exploitation of natural resources largely determine the level and rate at which a developing nation can progress economically. Despite their developmental role, natural

resources can derail development. Historical evidence has shown that struggle over territorial resources has been a trigger of conflicts and violence.

The complicated relations between conflict and natural resources have led to the putting forward of theories to explain the relationships therein. These theories are of two main types: scarce resources and abundant resources. The former is often referred to as neo-Malthusian theory and the latter as resource curse.

The scarce resource theorists argue that high population growth, environmental degradation, inequitable access to resources and rapid resource depletion cumulatively worsen the severity and scope of poverty within and across communities and countries, especially in the developing world. These tend to deepen socio-economic deprivation in society. These deprivations easily grow and develop into grievances, social bitterness, increasing rebellion and social unrests, thereby culminating in temporal or sustained violence and conflicts (Kahl, 2006).

The abundant resource theorists' argument is rooted in what has come to be known as the 'resource curse'. This is a state where corruption, embezzlement, misappropriation and mismanagement in the use of natural resources occur. This leads to economic stagnation, economic overheating, and consequently fuel violent conflicts over natural resources and their proceeds. This is particularly possible with easily loot-able resources such as diamond, oil and gas, timber, water bodies, pasture and forages (USIP, 2007). The argument over which of these theories presents the issues well is of less importance. The main issue of relevance is that both theories have been able to prove logically that there is a clear nexus between natural resources and conflicts.

The Fulani pastoralists in West Africa have had a long historical relation with farmers. Although their relations with farmers are a mixture of cooperation and conflict, conflict has often become more likely due to competition for space. The Fulani pastoralists have often been considered strangers because of their nomadic lifestyles. Fulani settlements in Ghana in the early 20th century were in the northern savannah but now also in many parts of Ghana, tending their own cattle or employed as caretakers for indigenes (Oppong, 2002; Tonah, 2006). It is often difficult to determine the cause of farmer-herder conflicts because these conflicts are related to natural resources (land competition) or intertwined with other ethnic, religious or political underpinnings (Moritz, 2006).

STUDY CONTEXT AND METHODOLOGY

The Asante Akim North District is one of the newly created districts under Legislative Instrument (LI) 2057 in 2012. It is located in the Ashanti Region of Ghana with Agogo as its administrative capital. It shares boundaries with Sekyere Kumawu District and Sekyere Afram Plains District in the North, Kwahu East District in the East, Asante Akim South District and Asante Akim Central Municipality in the South and Sekyere East District in the West. The district, which lies between latitude 6° 30' North and 7° 30' North and longitude 0° 15' West and 1° 20' West covers a land area of 1,126 square kilometers (Figure 1). According to Ghana Statistical Service (2014), the district had a population of 68,186 with males and females constituting 48.8 percent and 51.2 respectively while the rural population represented 53.5 percent in 2010.



Figure 1: Map of Asante Akim North District
Source: Ghana Statistical Service (2014)

The district is undulating ranging from 305m to 605m and it is interrupted by a stretch of the Akwapim-Mampong Range. It is drained by rivers such as Oweri and Afram. The district experiences wet semi-equatorial climate and temperature is uniformly high all year round with a mean annual temperature of 26°C. The rainfall regime is double maxima with annual total rainfall between 125cm and 175cm from May to July and from September to November.

The district lies within the moist semi-deciduous forest. The major vegetation types are the Open Forest over the highland areas, the Closed Forest on the range and the Wooded Savannah. The vegetation of the area makes it suitable for animal grazing and crop farming. The two predominant soil types are the Forest Ochrosol and Savannah Ochrosol. The Forest Ochrosol supports the cultivation of cereals, oil palm, cassava, plantain, cocoa and vegetables while the Savannah Ochrosol supports the cultivation of yam, maize, cassava, groundnut and vegetables. The soils and climatic conditions support plant growth and water bodies which make the place suitable for crop cultivation and animal husbandry.

Just like in many other parts of the country, the district has a mixed system of land ownership. Unlike the predominately known system of land ownership vested in stools, families and individuals, the land tenure arrangement in the Agogo traditional area is dynamic and assumes various forms such as leasing, share contracting, hiring and outright purchasing (Baidoo, 2014). The situation is however, different in the more remote parts of the district where lands

are mostly owned by the stool and are open to members of various communities. These lands are more of common properties which members utilize for farming and other purposes. The actual proportions of land held under each of these arrangements are however not known due to limited capacity of institutions in charge (Asante Akim North District Assembly [AANDA], 2014).

The qualitative and case study approach seemed more appropriate to understand the issues from the perspective of various stakeholders. The study population was made up of stakeholders including the AANDA, the Ghana Police Service, Traditional Authority, cattle herdsman, peasant farmers, and civil society groups. Primary data was collected through in-depth key informant interviews and focus group discussions (FGD) by the use of interview guides and FGD guides respectively. Those interviewed included five high profile officers in the AANDA, three senior officers in the District Police Office, and five cattle owners. Focus group discussions were held with 15 farmer groups from 15 communities and five groups of herdsman from five villages. Purposive sampling was employed to select all the interviewees and discussants. Field work took place in the months of March - April, 2015 and February - April, 2016. The data collection methods were used to obtain multiple perspectives on the causes, effects and management of the conflicts.

The primary data was supported with secondary data obtained from published documents, articles, journals, periodicals, the internet, newspapers and reports from the relevant organizations. Qualitative technique was used in analyzing the data. The key informants and focus group discussions were recorded using digital recorders, which were transcribed, organized into themes and analysed manually. Content analysis was also employed to uncover stories covered on news items and other documents related to the subject matter.

The challenges of the study included mistrust and fear among the stakeholders coupled with inadequate funds to stay in the field over a long. There were complexity of the conflicts characterized by unequal power relations, lack of transparency and unresolved conflicts.

RESULTS AND DISCUSSION

Key stakeholders and their interests

The study found that diverse activities are undertaken by different stakeholders depending on their interests in the land, water and vegetation of the district. The various stakeholders have different interests in the natural resources as presented in Table 1. These interests are recipe for conflicts as the stakeholders exercise different levels of power over these resources.

Table 1: Interests of stakeholders in natural resources of the Asante Akim North District

Stakeholder	Interest
Peasant Farmers	Access to land, water and vegetation for farming and building materials as well as fuel wood as energy source
Large-scale farmers	Adequate land and water for farming to maximize profit
Fulani Herdsman	Adequate pastures and water to feed cattle
Cattle Owners	Having a large herd of healthy cattle to maximize income
Traditional Authorities	Use and protection of natural resources and peaceful environment for community members
Law Enforcement Agencies	Maintenance of law, order, peace and security

Civil Society Organisation	Protection of public interest and peaceful environment
District Assembly	Ensuring overall development of the district and peaceful environment for every citizen
Community Members	Peaceful environment for sustainable livelihood
Forestry Division	Protection of forest for sustainable use and ecosystem function
Loggers	Adequate timber logs to earn income

Source: Field data, March 2015

Peasant farmers in the Asante Akim North District

In 2010, the district had 72.7 percent of the total households, 64.4 percent of the urban households and 79.7 percent of rural households engaged in agriculture as well as 98.4 percent of the households involved in crop farming (Ghana Statistical Service, 2014). The peasant farmers therefore, sought to make good use of the land and water to do farming without disturbance. They desired to protect their fields from destruction by cattle. The major crops produced by peasant farmers included maize, cassava, yam, cocoyam, rice and plantain.

Peasant farmers practise slash and burn, and bush fallowing with the aim of balancing the ecosystem. However, peasant farming practices negatively affect the forests, rivers, soils among others. They leave lands and water bodies bare, thereby exposing them to evapotranspiration as well as soil and wind erosion. The sampled District officials reported that the rudimentary farming practices had contributed to the transformation of the original evergreen forest into secondary forest and grassland.

Fulani Herdsmen in the Asante Akim North District

Cattle rearing in the district is usually done by Fulani herdsmen who move from one location to another looking for fresh pastures and water for their herds. Climate change and dwindling forage and water shortage have led to increased arrivals of Fulani herdsmen in Asante Akim North District where ecological conditions are suitable for their activities.

According to the interviews with cattle owners and corroborated by other key informants, the nomads arrived at the Kwahu Hills around 1987. In terms of land arrangements, there are two main groups of herders in the area. The first group is those who had land leased to them between 2006 and 2008 as manifested in the arrangements between the paramount chief and cattle owners through a lease agreement ranging from 25 to 50 years. These cattle owners hired Fulani herdsmen to take care of their cattle.

The main components of the lease agreements are as follows:

- a. A specified amount was to be paid to the traditional authorities in periods agreed.
- b. The land was expected to be used for only cattle ranching and nothing more.
- c. The lessee had no right to assign part of the land to anybody without prior notification of the traditional authority.
- d. The land was to be used in such a way it does not cause nuisance or annoy anybody.
- e. The lessee where to ensure cattle were kept within the bound of land assigned them.
- f. The lessee where expected to provide facilities within the area to prevent pollution of water bodies and prevent cattle from causing problems in the communities.

- g. The lessee had no right whatsoever to extend facilities under the lease to any third party.
- h. The lessees were also made aware of the dissatisfaction of some sections in the District on the agreement. They were therefore to remain calm and not engage in anti-social activities so not to justify fears of the people (REGSEC, 2010 cited in Baidoo, 2014: 45-46).

The second group of herders involves Fulani herdsmen who acquired lands in the area from family freeholders to rear their cattle. The focus group discussions with the herdsmen in Abrewapong, Bebome, Nyamebkyere and Nyinatokrom revealed that: first, cattle owners acquired their lands from families; and second, the dwindling nature of grazing land make it difficult to keep their cattle in the assigned location as specified in the agreement. They therefore, move continuously in search of fresh pastures and water. In some cases, the cattle drink from the same water sources as community members (Plate 1)

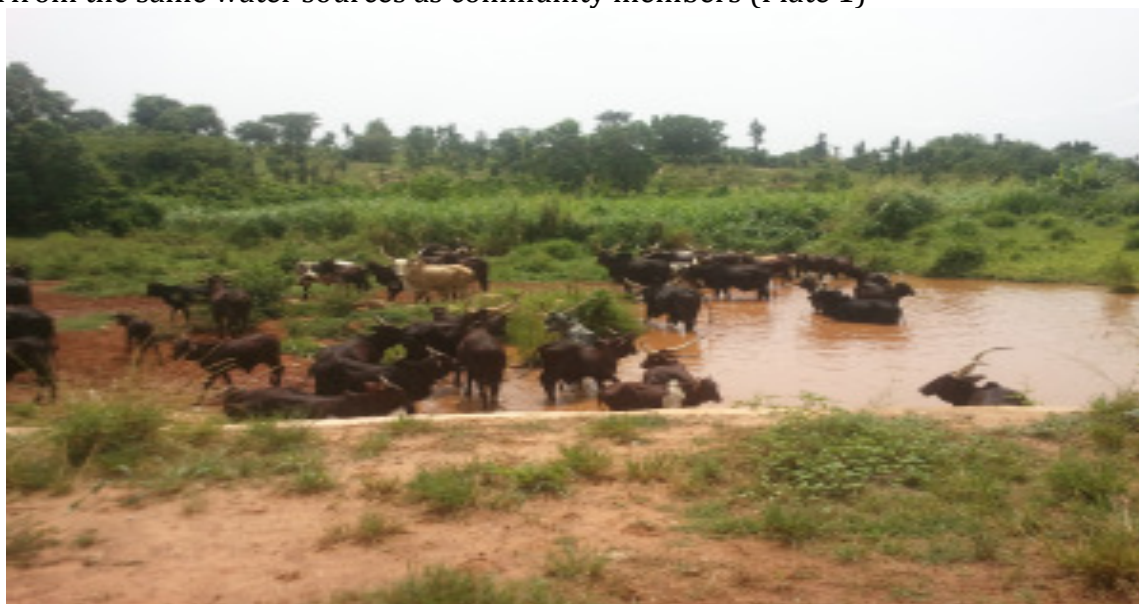


Plate 1: River Bontre near Agogo being polluted by cattle
Source: Field data, March 2015

Activities of these Fulani herdsmen pose threat to the ecosystem, particularly in the Afram Plains section of the district. The continuous grazing by the cattle leaves lands bare and exposes them to erosion, thereby contributing to land degradation. The key informants revealed that, during dry seasons, herdsmen burn bushes to get fresh pastures and this can deplete the forest and destroy farms. The herdsmen, on the other hand, explained that burning the bushes is not meant to destroy the land, forest and farms but to have fresh grass for their cattle. In spite of this claim, we found that burning of bushes by the herdsmen sometimes destroys farmlands and other properties in the area (see Plate 2). They added that the farmers also burn the forest with the view to make the soil fertile for themselves. These arguments introduce the element of blame game between the herdsmen and famers. The implication is that the activities of both the farmers and herdsmen negatively affect the natural resources but at different degrees. Observations during field study revealed deteriorating natural resources in the district supporting claims of the local stakeholders on the damaging effects of farming and grazing activities. AANDA (2014) also reports that environmental degradation resulting from poor farming practices and uncontrolled grazing has been cited as one of the key environmental challenges to be tackled within the next plan period of 2014-2017.



Plate 2: Police Officers helping to put out fire set by Fulani to the Regional Best Farmer's farm
Source: myjoyonline (2016)

The conflict: Fulani herdsmen and peasant farmers

The study revealed that individual and communal level conflicts occur between farmers and Fulani herdsmen over natural resource utilization. Increasing resource utilization and unfavourable climatic conditions have led to farmers and herders struggling for water, land and pasture. This section discusses the causes, effects and governance of the conflicts.

Causes of the conflict

The farmers identified five causes of the conflicts namely; the herdsmen cause bushfires, rape women on their farms, shoot innocent citizens, their cattle destroy food crops and also pollute water bodies. These causes are consistent with the findings of Poku (2014). According to the farmers, the herdsmen often overstep their boundaries in the quest to feed and water their cattle.

Generally, farmers have rights to their farmlands and the produce from their labour. The herdsmen also have rights to pastures and water their cattle. The first point of the conflict builds around Fulani herdsmen who allow their cattle to graze on farms. The open access to natural resources in the area is the main cause of competition. Although the pastures belong to everyone, the cattle herdsmen move round in search of pastures without restrictions. This leads to excesses in the way cattle are allowed to graze. Interactions with local residents revealed that Fulani herdsmen allow their cattle to graze in any part of the district including farmlands. The farmers cited the inability of herdsmen to exert proper control over their cattle when grazing as one main cause of the conflict. The failure of the herdsmen to admit their faults when confronted by farmers further elevates the conflict situation.

On the other hand, the cattle owners and herdsmen argued that, it is sometimes difficult to exert total control over some stray animals within the flock into people's farms but the farmers often kill them instead of reporting the destruction to them. As noted by Baidoo (2014), they also accused farmers of using agro-chemicals that could affect the health of cattle when they graze. The herdsmen added that, armed cattle rustlers attack them and therefore, they need to protect themselves with sophisticated weapons.

The large herd of cattle and the dwindling pastures resulting from climate change were identified as the root causes of uncontrolled grazing, thereby leading to conflicts between herdsmen and farmers. The peasant farmers, District Assembly officials and civil society groups attributed uncontrolled activities of cattle herdsmen as a threat to water bodies in the area. Continuous pollution of rivers such as Bontre and Asuofu, which serve as sources of drinking water for communities like Mpesempese, Mantukwa and Aberewapong is a case of resource threat in the district (refer to Plate 1). The results confirm the fact that conflict between herders and farmers are as a result of competition for land, water and pastures (Hussein et al., 1999; Blench, 2004; Dosu, 2011; Baidoo, 2014).

Effects of the conflict

The main effect of the conflicts reported by all the respondents was insecurity in terms of humans and livelihoods. The human insecurity component deals with both farmers and herdsmen to carry out their daily socio-economic activities with fear, terror and being harmed. According to the farmers and district officials, there have been reported cases of shot-outs, deaths and rape caused by the herdsmen as also pointed out by Dosu (2011). The herdsmen and cattle owners, on the other hand, claimed to have lost some of their animals through physical attacks and poisoning by the use of agro-chemicals by the farmers.

The Member of Parliament who is also a farmer in the area reported that:

I harvested my maize but all of it was consumed by the cattle and I didn't even get a bag. The Fulanis prevented the labourers from entering the farm. I called the MCE and he gave me a detail report of how he tried to intervene and he couldn't. The leadership of Agogo Traditional Council invited the elders of the Fulanis to a meeting but to no avail ... They petitioned the security agencies for intervention but to no avail. I invested a lot of money into that farm and I don't know what to say again. I will go to the extent of saying that if nothing is done to solve this problem; we should not approve any budget for any agency again. People must sit up in this country and do the right thing (Ghana's Members of Parliament Website, 2011).

The violent conflicts between peasant farmers and Fulani herders often escalate into a community level conflict with various groups perceiving the herdsmen as enemies. This confirms the assertion by Seini and Tsikata (2004) and Turner et al. (2011) that, conflict between herders and farmers often escalate into large scale conflicts.

Farmers, traders, small-scale agro-business operators (e.g. palm wine tappers, palm kernel oil extractors, palm oil producers and cassava processors) have their sources of income threatened and even in some cases, the cost of production escalates due to the conflicts. Crops of farmers are often devoured by stray cattle leading to low outputs and great losses, thereby threatening household food security and incomes. Traders in raw agricultural produce face dangers travelling between the farm gates and market centres. Female traders indicated that they are usually molested sexually and their monies confiscated by herdsmen. The fear of being killed has made them to hire men as escorts at an average cost of GHc250 (US\$67) per day. This has increased their cost of operations leading to lower profits. As noted by the District Assembly officials, the conflicts have endangered the investment climate of the district as some existing businesses had relocated from the area.

Governance of the conflicts

According to our key informants and literature review, the conflicts between Fulani herdsmen and peasant farmers in the Asante Akim North District have lingered on for over 20 years now. The parties to the conflict go beyond the two main stakeholders as shown in Table 1. The interplay of these parties has produced complex socio-economic and political governance scene. The respondents reported that various strategies had been applied to deal with the conflicts including avoidance, mediations, arbitrations, negotiations and adjudications. Avoidance is characterised by behaviours that either ignore or refuse to engage in the conflict. It may be a negative strategy but sometimes it provides strategic reasons to avoid conflict. Both mediations and arbitrations use a neutral third party to oversee the processes. However, mediation is a non-binding process while arbitration is a binding process. Mediation is generally conducted with a single mediator who does not judge the case but simply helps to facilitate discussion and eventual resolution of the dispute. Bargaining is a give-and-take process between two or more parties seeking to reach an agreement to settle a matter of mutual concern or resolve a conflict. Adjudication is the formal pronouncement of a judgment in a court proceeding. In some cases and areas in the district, a particular strategy might work for some time but lasting resolution has not been achieved.

Youth associations such the Agogo Youth Association and Farmers' Associations in Agogo, after all other efforts had proved futile, have taken independent actions in the form of violence attacks on the herdsmen and demonstrations against the traditional and district authorities. In the view of the youth association leaders, these actions were aimed at stopping the Fulani herdsmen from destruction of farmlands and properties, armed robbery, rape, molestation and murdering of farmers.

The traditional authority of the Agogo traditional area is one of the key actors in the governance of the Fulani herdsmen issue. The sampled cattle owners claimed that they sought permission from the traditional authority or family heads and have even paid for their stay, hence the Fulani herdsmen are 'legal' inhabitants of the district. On the contrary, many of the other interviewees had the view that the process of regularizing the stay of the Fulani herdsmen was not transparent and doubted the claim that the Fulanis had been granted permission to stay, especially when the lease agreements had not been complied with. The lack of transparency in the regularization process has brought suspicion among residents. Following the heinous crimes and atrocities that were claimed to have been perpetrated by the herdsmen, residents have turned a blind eye to the fact that the herdsmen had been regularized by the traditional authority and were seeking to send the herdsmen away.

Findings from discussions with District Assembly officials and traditional authorities and corroborated by other key informants show that, an earlier attempt in 2004 to evict the herdsmen proved futile as the Fulanis were heavily armed with AK-47 rifles. This worsened and escalated the furor as residents begun to detest the Fulanis. This way, innocent and well-meaning herdsmen who had stayed with the people for long were also victimized. These herdsmen attributed crimes to the new Fulanis who came to the area after their stay had been regularized. Thus, the indigenous respondents reported that, the traditional authority seemed to be backing the Fulanis and this has complicated the process of evicting the herdsmen from the area.

The District Assembly is the political and administrative representative of the national government at the local level. The Kumasi High Court on January 20, 2012 ruled that Fulani herdsmen should be evicted from the area but the state failed to execute the orders of the court

(Graphiconline, 2016). It was revealed that the District Security Council (DISEC) has outlined a number of measures to resolve the security threat posed by the conflict. According to District Assembly officials, DISEC in collaboration with the Regional Security Council (REGSEC) instituted "Operation Cowleg" in January 2015 to step up efforts at evicting the Fulani herdsmen. This operation involved 15 military men and 10 policemen to ensure herdsmen were driven out of the place. The measures were found to be ineffective as herdsmen continued to stay in the area. The results raised concerns about the commitment of authorities to dealing with the issue.

Unit Committee and Assembly members are also part of the political system of the Fulani-farmer conflict in the district. They are responsible for their various electoral areas representing the people and making decisions on their behalf at the General Assembly. The issue of the Fulani herdsmen seems to be beyond the capacity and authority of the Unit Committees and District Assembly. It exposes the flaws and weaknesses of the local governance system in Ghana. Many of the farmers and their associations claimed that the authorities in the district had been compromised by the herdsmen, thereby undermining their authority to bring the herdsmen and the farmers together to discuss and find a lasting solution. All the District Assembly officials and police officers however, refuted the allegations.

CONCLUSION AND THE WAY FORWARD

The paper has provided an account of the Fulani herdsman-peasant farmer conflicts in the use of natural resources of the Asante Akim North District. It has established the long standing conflict between peasant farmers and Fulani herdsmen in the area. The causes of the conflicts are characterised by blame game, competition and unwise use of natural resources. The effects are destruction of natural resources and personal properties, insecurity, rape, theft and deaths. The strategies used to resolve the conflict have not been effective so the conflicts linger on.

The results show that the governance of the interests of Fulani herdsmen and peasant farmers is complex and connected to other stakeholders characterized by unequal power relations and unresolved conflicts. These call for new strategies, transparency and commitment to manage the multi-stakeholder interests towards conflict resolution and preventing reoccurrence in other parts of the country. Evicting the herdsmen does not appear to be a sustainable solution to the problem as it cannot be confirmed that the herdsmen were not born in Ghana or naturalized with no rights to reside in the district.

The recommendations of the study are that first; there should be a way to work towards a peaceful coexistence between the herders and the farmers. Second, a strong political will is needed at the local level to ensure the effective implementation of law and order to enable the security agencies, traditional authorities and other influential stakeholders to solve the root causes of the conflict. Third, internal security system and agencies should be strengthened to deal with offenders. In this case, the District Assembly and Unit Committees should register herdsmen and cattle owners and issue them identification cards in order to monitor their activities to minimise crop destruction and bushfires. Fourth, cattle rearing should move away from open range to confinement to ensure peaceful co-existence of the cattle herdsmen and peasant farmers. This requires that the cattle owners should invest in land, provision of fodder and water such as boreholes and wells to feed the cattle. Lastly, peasant farmers should adopt modern farming practices to minimise the negative effects of their activities on the natural resources.

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