

Herding the Nomadic Herdsmen: Gauging the Perception of Rural Communities about the Activities of Nomadic Herdsmen in Builsa South District of Northern Ghana

Principal Investigators: Niagia F. Santuah, Dennis Chirawurah, Dr. Stephen Apanga, and Dr. Emmanuel Derbile



Project Summary

Background: Climate variability is a global phenomenon. The movement of nomadic herdsmen from the Sahel into forest areas is a natural response to the dwindling forest cover of the Sahelian ecological belt of Africa. Nomadic herdsmen encroach on farmlands, cut trees to feed their flocks, and deplete the limited water resources of host communities. The environmental degradation that ensues often pitches the visitors against host communities, with occasional outbreaks of violence. This is the situation in the Wiasi Valley in Builsa South District of North Ghana. This study assessed community perceptions of the activities of nomadic herdsmen and climate variability in order to find pathways to reduce individual and community vulnerability, improve adaptive capacity, and promote mutual cohabitation among nomads and indigenes.

Methods: Respondents were randomly sampled from three communities (Wiesi, Fumbisi, and Kanjarga). Data collection lasted from June 21 to August 10, 2014. Ten key informants and five focus groups were interviewed.

Results: The study found that knowledge about climate change and its effects on livelihoods is universal in Builsa South District and that the activities of nomadic herdsmen worsen the effects of climate variability. Disregard for taboos and traditional values that once protected the environment and indiscriminate felling of trees are the main causes of these changes. The cumulative effects of the activities of nomadic herdsmen and the natural phenomenon of climate variability have reduced the population of shea nut trees, and this has greatly affected shea butter production. Communities feel powerless to take action against the nomadic herdsmen and believe that only government can salvage the situation.

Conclusions: This study concludes that climate variability is real and clearly understood by residents of Builsa South District. While the activities of nomadic herdsmen exacerbate the rate of environmental degradation, communities are aware of the social, economic, and legal implications of expelling them. The destructive activities of the nomads particularly affect women, whose livelihoods depend on farming and shea butter processing. However, the herdsmen also help take care of community livestock, trade with the communities, treat their diseases, provide milk, and sometimes transport sick people to health facilities. Their cattle's dung provides fertilizer. Therefore, their presence could be a blessing in disguise if their

activities are properly managed. The study recommends a national debate on the issue and local enactment and/or enforcement of bylaws to regulate their activities of nomadic herdsman. To improve community resilience, the study proposes developing the entire value chain of the millet crop, which grows well in the district.

1 Introduction

The majority of people in Northern Ghana depend on agriculture for their livelihoods. There is one rainy season, starting in April–May and ending in September–October, followed by a dry season that lasts for the remainder of the year. The dominant farming system is therefore based on rainfed cultivation of crops such as sorghum, millet, groundnuts, maize, rice, and vegetables (Dietz et al, 2004; Shepherd et al, 2005). Crop production for sustenance is often combined with animal husbandry on small farms and maintained through labor-intensive agricultural methods (Naylor, 1999). The practice of shifting cultivation, which is essentially a zero-input form of agriculture because it makes maximum use of the resources available within the system, helps maintain vegetation with properties similar to the native forest and thus effectively protects the environment. Sustainable agricultural practices include forest or bush fallowing to allow forest regeneration, clearing of limited spaces leaving root stumps and large trees, retaining useful trees such as those with medicinal properties, intercropping, maintaining ground cover most of the year by including crops with trailing systems, and using household refuse as fertilizer for selected crops in the farm or garden.

Climate variability poses a direct and present challenge to small-scale agricultural production and food security in northern Ghana. Human activities have exacerbated the situation. Faced with the increasing effects of climate variability, people either stay in place and do nothing, stay in place and mitigate the problems, or leave the affected areas. The people in Builsa South District have stayed and developed various strategies to mitigate the effects of climatic change. However, people in the northern part of the Sahelian ecological belt may be more likely to leave affected areas, which can cause conflict in receiving communities (Reuveny , 2013). Over the past couple of decades, a constant stream of nomadic herdsmen fleeing the increasing effects of climate variability has moved south into northern Ghana in search of new grazing grounds for their cattle. In the Upper East region, farmers in the Wiasi Valley, described as the bread basket of northern Ghana, have borne the brunt of the activities of these uninvited guests. The herdsmen encroach on farmlands, graze their cattle on large tracks of land, cut trees where grasses are no longer luxuriant enough to feed their flocks, and deplete the limited water resources. Nomadic herdsman also reportedly regularly and intentionally set fires to promote the growth of new shoots of fodder for their starved livestock. The environmental degradation that ensues often pitches the visitors against host communities, with occasional outbreaks of violence. This is the situation in the Wiasi Valley.

There are no permanent settlements in the nomadic system because the herdsmen move freely in search of forage for their livestock. Many authorities agree that overgrazing by

livestock, improper cultivation of agricultural crops, deforestation, or a combinations of these and other factors cause environmental degradation (Anderson & Fishwick, 1984; Repetto, 1988; Whitehead et al., 1988; FAO, 1989; Weber, 1989; El-Baz, 1991; Mouat and Hutchinson, 1995; Hoekstra and Shachak, 1999). Water rights, the environment, and pastoral practices have been a topic of discussion in many countries, including Ghana. However, the focus has been on the negative effects of pastoral activities on environmental resources with less attention to their positive effects.

In a study in the Upper West Region of Ghana, Fielmua et al. (2014)¹ organized focus group discussions and key informant interviews with various actors to understand relationships regarding pastoral practices and water rights. The study found that the government agencies, community members, herdsman, livestock owners, and chiefs blamed each another for weak management of pastoral practices. This attitude had serious implications on social life and food insecurity.

The southward migration of nomadic herdsman is a natural response to dwindling forest cover with increasing desertification in the Sahel. This movement may increase in coming years, mainly as a result of climate variability. Building on the work of Fielmua et al. (2014), this research study evaluated the perceptions of community members and nomadic herdsman about the environmental and vulnerability impact of cattle grazing in Builsa South District.

The Wiesi Valley harbors some of the most fertile lands in the country, ideal for growing a variety of cereals. This has largely made the Fumbisi market the largest grain market in northern Ghana. Therefore, any impact on farming practices in the valley as a result of the activities of nomadic herdsman has serious implications for food security in northern Ghana. As climate variability is a global phenomenon, common solutions must be found that mitigate individual and community vulnerability, improve adaptive capacity, and promote mutual cohabitation among nomads and indigenes. Whereas national climate adaptation policies could better incorporate sources of indigenous knowledge to ensure programs are cost-effective, participatory and sustainable, local farmers have successfully developed adaptation measures that reduce their vulnerability to climatic shocks (Hanson Nyantakyi-Frimpong, 2013). Mechanisms therefore need to be developed that provide the nomads with a sense of belonging and also increase the resilience of host communities to natural and man-made shocks and stresses.

2 How Did You Go about Achieving the Outputs/Outcomes?

The investigators made a reconnaissance visit to the district to identify opinion leaders, who helped identify study respondents and form focus groups. Focus group discussions, key

informant interviews, observation, and photography were the main methods of data collection. Five focus groups were formed, three with men only and two with women only. The 10 key informants included a chief, a Member of Parliament, (MP) a political representative (District Chief Executive), a women's group leader, two Assembly members, a spiritualist, two farmers, a retired public servant, and a businessman). The respondents being few, data was entered into Excel spreadsheets and analyzed. Focus group discussions were conducted in Buli, the main language of the district, whereas key informant interviews were conducted in Buli and English. All focus group discussions and key informant interviews were audio-recorded and later transcribed and translated into English. During data collection, research assistants observed the environment first hand and documented the activities of the nomadic herdsmen and their interactions with community members. They also took photographs of relevant scenes where appropriate and permissible.

The MP was in Parliament at the time of data collection, and a team traveled to Accra, 900 km away, to interview him. At the start of data collection, the issue of nomadic herdsmen was sensitive and the researcher required tact to avoid alarming people or raising undue expectations. The data collection period coincided with the beginning of the rainy season, and people were busily preparing their farms in expectation of the rains. They were therefore not readily available for interviews. Time expended in agreeing on dates for interviews prolonged the data collection process. Therefore, community-based agents were recruited to assist in the data collection. The team worried thought that it might be difficult to arrange interviews with the nomadic herdsmen, but they were willing to participate. However, it was not possible to organize a focus group discussion with nomadic women because the nomads would not permit their women to voice independent opinions about the sensitive issue.

3 What Did You Learn?

Awareness of the effects of climate change is high among community members in Builsa South District. All focus group participants and key informants mentioned delayed onset of rains, insufficient rainfall, and unexpected heavy downpours.

The beginning of climate change is difficult to determine. My father used to put it in a funny way when the rains were not falling adequately for people to sow their crops. He said God has decided to punish us by giving us rain by installments. (Male key informant)

When I was about 12 years [old], I used to work with my father on the farm and usually around the end of April to early May, we would have sown our crops ,but now we only get fewer rains which even start late; mostly around June or later. (Male focus group participant)

Depleted vegetation cover (8/15 respondents) and reduced or dried up water sources (6/15) are attributed mainly to the activities of nomadic herdsmen:

If you observe the environment, they have cut down all the trees for charcoal and firewood, which would have actually aided in bringing more rains. (Female key informant)

The overall effect of these changes is loss of livelihood, as farming and livestock rearing are no longer seen as profitable (9/15). Disregard for taboos and traditional values (13/15) and indiscriminate felling of trees and bush burning (8/15) are held to be the main causes of these changes.

In those days, when the first rain fell, all the elderly men and landlords of every household would gather at the house of the main shrine to consult it before sowing so that the gods would bless the crops to have a good yield, but these things are no more done. (Male key informant)

Need is one of the major causes of these environmental changes:

I think it is hunger and poverty that are causing all these changes. The women for instance simply resort to felling trees to produce charcoal or sell as wood fuel to enable them make ends meet, even though we are aware that all these activities degrade the environment. (Male key informant.)

Naturally, we educate them [community members] not to cut down fresh trees, but we cannot prevent them from charcoal production because that is what they depend on for their daily bread. (Male key informant)

The climatic changes and their effects have increased the vulnerability of the community to food insecurity.

Due to the change in the weather conditions, we are not able to produce enough food to feed ourselves, and all this is caused by the activities of nomadic herdsmen. So during these few years we have suffered severe hunger and poverty. (Female focus group participant)

In the past, communities observed the taboos, respected the traditional values that protected the environment (12/15), and made sacrifices to the gods for rain in times of drought (10/15).

In those days, there were devoted and patriotic citizens who could stand up for the community members and consult the gods for their favor any time there was disaster or delay in the rains, but now they have lost the core values and practices of our traditions (Male focus group participant)

The community also prohibited the felling of trees (6/15), except under certain circumstances:

In the past, our parents did not practice what we call “charcoal burning.” It was only when they were preparing the land for cultivation that they got firewood in the process, but they never intentionally went round cutting down the vegetation. (Female key informant)

A men’s focus group and a male key informant also mentioned the use of compost manure for farming, which was safe for the environment.

Effects of the activities of nomadic herdsmen

Nomadic herdsmen came to the Builsa South District mainly to look for greener pastures, literally, for their livestock (13/15).

As for nomadic herdsmen, they just want to find pasture for their animals... you know, one of the [major] problems facing animal husbandry is water, so the moment they come to your area and the land is fertile, there is grass, and there is water [they settle]. (Male key informant)

The nomadic herdsmen are also said to have fled hunger and drought in the Sahel (6/15), to enjoy the peace in the area (4/15), or to look for women to marry (2/15). Nomadic herdsmen primarily engage in the rearing of livestock (13/15) and farming (2/15). However, others had an entirely different view of their activities:

Stealing is their major job in this community. (Female focus group participant)

Some respondents acknowledged that the activities of nomadic herdsmen have advantages for the environment and community livelihoods. Apart from rearing their own livestock, the herdsmen also take care of the livestock of some community members (8/15) and trade with them (5/15).

I think their major positive thing is the way they are taking care of the livestock of the community members. I believe this is helping them [community members] to allow their children to go to school, because if not, their own children should have been taking care of their cattle. (Female key informant)

Some of us do business with them. We buy their cattle and later transport them to Kumasi and other places to sell. (Male focus group participant)

Some nomadic herdsmen also serve as herbalists or spiritualists and treat people with various diseases. They allow their cattle to crossbreed with those of indigenes (2/15) and the cow dung from their cattle fertilizes the land. ‘

As for [their] cattle, they graze on the land and they have a way of re-fertilizing the land with their dung. (Male key informant)

Another thing I can say is that, as their cattle graze around, they drop waste which serves as manure for the land. (Female key informant)

Their cows also provide milk, which strengthens the nutrition of community members. Some nomadic herdsmen lend money to people in need and also transport the sick to health centers on their personal motorbikes.

Most of the nomadic herdsmen own motorbikes, so they sometimes offer to help, especially when a person is sick, by transporting the person to the health center for medical attention. (Male focus group participant)

I know of one in Wiesi who they say is generous. It means he supports people when they are having economic challenges. (Male key informant)

The activities of nomadic herdsmen equally have negative effects. Nomadic herdsmen are said to fell trees, especially shea nut trees, for their cattle to graze on (10/15).

They destroy our forests because normally in the dry season, they cut down the trees for their animals to feed, especially the shea nut trees, which are our “cocoa” [source of wealth]. (Male key informant)

They also burn the bush (2/15) to enable new grass to grow to feed their flocks. Others engage in livestock theft and armed robbery (11/15), sleep with people’s wives, rape or harass women (8/15), and intimidate and threaten community members who challenge them for any wrongdoing (8/15). They allow their cattle to destroy crops and farmlands (10/15) as well as overgraze, causing land degradation (8/15).

Sometimes their animals go to destroy other people’s farms. For instance, some few weeks ago their animals went in to the Gbedembilisi Valley and destroyed a lot of rice farms. (Female key informant)

The Fulani men are stealing our animals that we used to sell to solve our small, small problems, thus leaving us empty and hopeless. (Female focus group participant)

The animals also pollute and silt water sources (8/15), which has aggravated the effects of climate change (4/15), reduced farming activities and livestock production (6/15), disrupted social life (4/15), and increased poverty (10/15):

Areas where these nomadic herdsmen have settled with their cattle normally turn into a desert within a short period of time because of the overgrazing and cutting down of the trees. (Male focus group participant)

There is so much suffering these days because our women do not get enough shea nuts to sell or extract shea butter [from] in order to earn money and cater for their basic needs, because the nomadic herdsmen have almost finished cutting down the shea trees. (Male key informant.)

Community response to the activities of nomadic herdsmen

Some communities report the destruction of their crops to the authorities for compensation (6/15), whereas others plan or attempt to expel the nomadic herdsmen (5/15). Sensitization of nomadic herdsmen (7/15) has also been carried out.

Those [the nomadic herdsmen] who live around the Gbedembilisi and Wiesi communities, I have been to them personally and sat with them and discussed about their stay in our community. They promised not to do anything bad because they would not be pleased to hear people say that it is the nomadic herdsmen who are doing this or that. [Female key informant]

Some communities have instituted bylaws (3/15) to regulate the activities of nomadic herdsmen, whereas others have been unable to take any action (6/15). Though some say indiscriminate tree felling has decreased as a result of community action against the activities of nomadic herdsmen (2/15), response to the issue of the nomadic herdsmen has generally been ineffective (10/15) because of an Economic Community of West African States (ECOWAS) protocol that guarantees free movement of goods and persons within West Africa and the legal and social implications of taking drastic measures against them (7/15).

We have not been able to do anything specifically because any time we try to say something to them, they tell us that we are all ECOWAS members, so we fear that our reactions may be contrary to the laws of the country which may put us in trouble. (Male focus group participant)

We even sent the issue to the District Assembly for discussion, and the answer was that we cannot derive them away due to the ECOWAS agreement. (Male key informant)

Failure to deal effectively with the phenomenon of the nomadic herdsmen has also been attributed to lack of consensus among community members and the imposition of penalties that are considered not deterrent enough. Some community members have even formed alliances with the nomadic herdsmen, making it difficult to take collective action.

Sometimes you hear [about] Mr. So and So's Fulani man, or Mr. B's Fulani man [which compromises community response against the nomadic herdsmen].

Pathways for improving community resilience

As a way of curbing the activities of nomadic herdsmen and improving community resilience, respondents proposed community mobilization and sensitization (8/15).

If the elders, chiefs, sub-chiefs, and landlords, as well as the government, can come together and visit the nomadic herdsmen where they settle to educate them about things they should do to live peacefully with the community members, that is what I would suggest. (Female key informant)

Another suggestion was to regulate the activities of nomadic herdsmen (6/15) through registration of both the nomads and their livestock (3/15) for easy identification and payment of taxes and compensation for damaged property.

The government and the chiefs should make them [nomadic herdsmen] pay an amount of money as tax for being in the community. (Male focus group participant)

They [nomadic herdsmen] have a lot of animals. We can get revenue from these people and be able to use the same money to develop our area. (Male key informant)

The chief and his elders should organize and register all the nomadic herdsmen in the community for easy identification so that we make them pay for any damage caused by their animals or themselves, as compensation to the victims. (Male focus group participant)

However, others suggested that in the event that the measures taken do not yield fruitful results, the nomadic herdsmen should be expelled from the community (9/15).

The best way to handle the issue of the nomadic herdsmen is to drive them away from our community. (Male focus group participant)

We believe the best alternative is to drive them away from our land because we have been talking to them about [the negative effects of] their activities but they would never listen to us nor obey us. (Women's focus group participant)

A key informant had a more balanced approach.

For me, I think the government should really come out with measures to regulate the movement of these people within the community, so that if they fail to abide by the bylaws, then we can drive them away. (Key informant)

Another respondent concurred with the suggestion to expel the nomadic herdsmen but noted that this would come at a cost.

I think the best way is to drive away the nomadic herdsmen, but in doing so we must be prepared to bear the consequences of allowing our children to stay at home and take care of our cattle. (Female key informant)

However, it appears that something concrete is already being done about the situation.

What we are doing right now is issuing identity cards to all nomadic herdsmen so that we will be able to identify them. (Female key informant)

The issue of integrating the nomadic herdsmen into the mainstream Builsa community also came up.

On the other hand, these [nomadic herdsmen] are people who are difficult to live with, but instead of sacking them, we can also integrate them into our community.

Some see the issue from a broader perspective that requires the intervention of government (4/15).

I think the issue of nomadic herdsmen goes beyond my community and the issues need to be tackled from the seat of government. We need to take a decision about how to deal with these people because they are destroying farms in more than just one community. If we sack them from this community, they will migrate to another community, then in the night, their cattle will come and destroy our crops.

One respondent was more inclined toward integration measures.

The Fulani [nomadic herdsmen] should know that we are all one. There should be mutual co-existence, self-respect, and respect for one another and being mindful that your actions affect others. If they understand and live by these tenets, things will improve. After all, they were in the bush taking care of animals but now their children are attending school and being taught by our teachers, who are paid by the Ghanaian taxpayer's money. (Male key informant)

In terms of the wider issues of climate change, communities recommended intensification of public education on climate change issues (8/15).

I think that we have to go into the communities to educate the people on the importance of the environment and how the changes affect us. We also have to make bylaws at the District Assembly, stating which practice is legal and which is not, with the appropriate sanctions attached. (Female key informant)

Respondents requested respect for taboos and traditional values that protect the environment (6/15) and recommended instituting bylaws to prosecute and punish people

who degrade the environment (9/15), such as prohibiting tree felling (7/15) and bush burning (3/15). Reforestation was also recommended.

I am also thinking of going round the schools in the district with samples of trees to help educate students on the need to plant trees. I will be focusing on the secondary school, and I intend to give every student a mango plant to take care of until it grows up. (Female key informant)

One key informant mentioned the provision of alternative livelihood opportunities that enable people survive without harming the environment in the process.

Discussion

Knowledge about climate change and its effects on livelihoods is universal in Builsa South District, but people find it difficult to pinpoint exactly when the changes started because such changes happen slowly over time. Communities assign natural and supernatural causes to these changes. Respondents highlighted the disregard for the taboos and traditional values that protected the environment as the major drivers of these changes. This underscores the belief systems of the Builsa community and the need to take such values into consideration in designing interventions to deal with environmental issues.

This study found a lot of stereotyping and xenophobia directed against nomadic herdsmen, corroborating the findings of Fielmua et al. (2014) that the blame game attitude of various actors in the management of pastoral practices in the Upper West Region of Ghana has serious social and food security implications in the area.

Communities also feel helpless because their leaders have let them down by failing to take firm action against nomadic herdsmen whose animals have damaged their property. In parts of northern Ghana, chiefs are held in high esteem and regarded as next to God. Ordinary community members are unable to take action that is not sanctioned by the chiefs. Because the nomadic herdsmen mainly deal with the chiefs, who offer them land to settle on, the onus is on the chiefs to initiate action to bring them to order.

A very strong action against the nomadic herdsmen should come from the chiefs, not policemen. If the chief comes out and tells them [nomadic herdsmen], "We don't want you to live in this particular area anymore," that will be the end of the issue and they will leave, but some of them [chiefs] have now turned to collaborate and connive with the nomadic herdsmen and are helping them to stay. (Male key informant)

Some people feel betrayed and desperate, threatening to take the law into their own hands.

Now if your animals come to my farm and consume everything and I do not get justice from the chief house, the next time I get the animal I will shoot it. (Male key informant)

The ineptitude of the chiefs fuels the impression that nomadic herdsmen operate above the law and have nothing to offer except to destroy the environment. The cutting of shea nut trees in particular by nomadic herdsmen for their animals to graze on is very much resented by community members, especially by women whose livelihoods depend on shea butter processing.

The concern expressed by the communities that if no action is taken immediately against the activities of nomadic herdsmen, Builsa South District could soon turn into a desert, deserves priority attention. However, the issue is complicated because of the social, economic, and legal implications. One thorny issue is that nomadic herdsmen who may have lived in the community for several decades regard themselves as Ghanaian citizens. It would be difficult to distinguish them from the occasional migrants who have not been integrated into the community. Any action, therefore, must be carefully calculated in order not to fuel xenophobic feelings against the nomads or a sense of vulnerability among indigenes.

The nomadic herdsmen are not the only people degrading the environment, even if the consequences of their nomadic lifestyle is particularly unfriendly to the environment.

It is not only the nomadic herdsmen who are destroying the forest, but our own community members because it's our people who fell trees for charcoal burning. Our own community members also use chemicals (DDT) to fish in the water bodies. (Male focus group participant)

Despite many accusations of nomadic herdsmen being involved criminal activities,

We have not been able to pinpoint or identify any Fulani [nomadic herdsmen] in our communities being responsible for any crime. (Key informant)

Nevertheless, every instance of environmental degradation is blamed on the nomadic herdsmen. Communities must therefore change their perceptions while sanctioning recalcitrant nomadic herdsmen who degrade the environment with impunity. There is no doubt that the activities of nomadic herdsmen have exacerbated the effects of climate change in Builsa South District. This calls for immediate action to stem the tide of environmental degradation. Local actions against nomadic herdsmen will be ineffective unless they are situated within a national, even sub-regional, context. As long as the climatic conditions in the Sahel continue to worsen, more and more nomadic herdsmen will migrate toward forested areas in West Africa in search of greener pastures, literally and metaphorically.

4 Conclusions

This study concluded that climate variability is real and clearly understood by residents of Builsa South District, and that the activities of nomadic herdsmen exacerbate the rate of

environmental degradation. Their activities also adversely affect community livelihoods, particularly those of women who do farming and shea butter processing. Communities are aware of the social, economic and legal implications of expelling the nomadic herdsmen from their communities. Specific mention was made of the ECOWAS Protocol that promotes free movement of goods and people across West Africa. Whereas host communities are eager to see nomadic herdsmen expelled from their communities, the presence of the herdsmen could be a blessing in disguise if it is properly managed.

5 Implications for the Future

Based on the conclusions of the study, it is recommended that:

1. The Ministry of Local Government and Rural Development lead a national debate on the issue of nomadic herdsmen.
2. In the meantime, at the local level, chiefs immediately stop settling nomadic herdsmen in Builsa South District until clear guidelines have been established to regulate their activities.
3. The District Assembly enact and enforce bylaws to regulate the activities of nomadic herdsmen.
4. The District Assembly determine the number of nomadic herdsmen that settle in any particular community, determine the number of herds of cattle and other animals that any nomadic herdsman can own and keep, provide tags for all cattle owned by nomadic herdsmen for easy identification, and designate grazing areas for use by nomadic herdsmen.
5. Communities set up community watch committees to monitor the activities of nomadic herdsmen.
6. The government provide alternative livelihood activities as a strategy for adapting to the effects of climate variability.
7. Community mobilization and sensitization on the effects of climate change be intensified and practical strategies adapted.
8. The Ministry of Agriculture lead the development of the entire value chain of food crops, such as millet, that are grown in Builsa South District.

References

Nyantakyi-Frimpong, H. 2013. Indigenous knowledge and climate adaptation policy in Northern Ghana. *Backgrounder 48*.

Appendix 1. Focus Group Key Informant Guide

**Department of Community Health and Family Medicine
School of Medicine and Health Science
University for Development Studies, Tamale**

Study objective	Research questions
1. What is the level of awareness of climate change issues and the activities of nomadic herdsmen among community members in Builsa South District?	<ul style="list-style-type: none"> a. What changes in the weather conditions and the environment have you observed in this community over the past decades? b. What are the local explanations for and meanings of the observed changes in the weather conditions and the environment? c. What are the causes of these changes in the weather conditions and the environment?
2. What are the effects of the activities of nomadic herdsmen on community resilience?	<ul style="list-style-type: none"> d. Why do you think the nomadic herdsmen came to this community? e. What activities do nomadic herdsmen engage in here in this community? f. What are the positive effects of these activities? g. What are the negative effects of these activities? h. How have these activities affected the environment? i. How do these activities affect the livelihood of this community?
3. How have communities responded to the activities of nomadic herdsmen?	<ul style="list-style-type: none"> j. How has the community reacted to the activities of the nomadic herdsmen? (Probe to find out specific actions they have taken.) k. To what extent have the community actions improved or worsened your livelihood?
4. How can communities best respond to the activities of the nomadic herdsmen in a manner that improves community resilience?	<ul style="list-style-type: none"> l. What did the community do in the past to protect the environment that it does not do anymore? m. What do you think is the most appropriate way to handle the issue of the nomadic herdsmen and their activities? n. How can the issues of climate change be tackled more effectively?

Interview Guide for Focus Group Discussions

Start time:.....

Region: _____ District: _____

Community/electoral area: _____

Population size: _____

Part 1: Respondent's background

Name	Sex	Age/years
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

End time: