

**CAUSES AND RESOLUTION OF CONFLICT BETWEEN CATTLE HERDERS
AND CROP FARMERS IN KATSINA STATE**

BY

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DECEMBER, 2015

DECLARATION

I hereby declare that this dissertation titled “**Causes and Resolution of Conflict between Cattle Herders and Crop Farmers in Katsina State**” has been written by me and it is a record of my research work. No part of this work has been presented in any previous application for another Degree or Diploma in this or any other institution. All borrowed information has been acknowledged in the text and a list of references provided.

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CERTIFICATION

This dissertation titled “**Causes and Resolution of Conflict between Cattle Herders and Crop Farmers in Katsina State**” by **Abdu Sada ALIYU** meets the regulation governing the award of the Degree of Master of Science of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Dissertation is dedicated to my parents

AlhajiAliyuSada and Hajiya Rabi.

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ABSTRACT

The study was conducted in Katsina State with the objective of investigating the causes of farmer-herder conflict and the performance of management institutions towards the resolution of the conflict in the State. Three (3) local government areas were purposively selected from the 3 senatorial zones. This was followed by the selection of 21 crop farmers and 21 cattle herders from each of the 3 local government areas through snowball sampling to obtain a sample size of 126 respondents. Data were gathered with the aid of structured interview schedules; however, Focus Group Discussion (FGD) was also conducted with separate groups of herders and farmers. Descriptive statistics (mean, frequency counts, percentages) were used to describe the personal characteristics of crop farmers and cattle herders, identify the types of conflict resolution mechanisms employed by these institutions and determine the causes of the conflict as well as examine the institutions involved in the management and resolution of the conflict and logistic regression analysis was used to examine the factors responsible for the cause of conflict in the study area. Results from the findings indicate that 75% of the cattle herders had no formal education implying that formal education level is very low. Crop damage by cattle (3.165, $P < 0.01$), encroachment of cattle routes (2.175, $P < 0.01$), inadequate grazing reserves (3.444, $P < 0.01$), lack of access to water points (2.737, $P < 0.05$), pollution of water points (3.022, $P < 0.05$), indiscriminate bush burning (1.512, $P < 0.05$), cattle rustling (1.485, $P < 0.05$), land tenure system (1.621, $P < 0.05$), and changes in climate conditions (1.507, $P < 0.05$), were the causes of the conflict. Traditional rulers and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) through amicable resolution were found to be 100% effective in handling farmer-herder conflict in the study area. It was recommended that, mass campaign for formal education should be intensified in both communities; involvement of indigenous resource user groups in policies; survey, demarcation, beaconing and gazetting of the government owned grazing reserves and cattle routes; amending the existing land use policy; and sedentarizing some of the herders.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

One major problem confronting world peace today is the manifestation of conflicts in different dimensions across the globe. From Europe to America, Africa to Asia, conflicts are common phenomena (Marshall and Gurr, 2005 in Jeong, 2008). Conflict has been defined in different ways by different scholars. For instance, Ekong (2003) defined conflict as that form of social interaction in which the actors seek to obtain scarce reward by eliminating or weakening their contenders. Folger *et al.* (2009) defined conflict as the interaction of interdependent people who perceive incompatible goals and interference from each other in achieving those goals. Gyong (2007) defined conflict as the struggle for dominance or control of one person or group by the other in such a way as to subjugate or even eliminate the opponent.

Nigeria has experienced and is still experiencing conflicts of grave proportions among several ethnic and religious communities across the states. These conflicts significantly vary in dimension, process and the groups involved. It was observed by Momale (2003) that, while some conflicts arise between same resource user group such as between one farming community and another, others occur between different user groups such as between herders and farmers or between foresters and farmers. Adisa (2012) observed that the farmers-herdsmen conflict has remained the most preponderant resource-use conflict in Nigeria.

According to Abbas (2009) a study of major sources of conflicts between the Fulani pastoralists (to be used interchangeably with “herders” or “herdsmen”) and farmers

shows that land related issues, especially on grazing fields, account for the highest percentage of the conflicts. In other words, struggles over the control of economically viable lands cause more tensions and violent conflicts among communities.

Social and economic factors continue to provoke violent conflicts among the Fulani pastoralists and farmers. The intensity and variations of the conflicts largely depend on the nature and type of the user groups where the pastoralists graze. These conflicts have constituted serious threats to the means of survival and livelihoods of both the farmers and pastoralists and what both groups are tenaciously protecting. The conflicts (though provocative) over access rights to farmland and cattle routes (*labi*), have become ubiquitous and seems to have defied solutions (Abbas, 2009). However, Coser (2000) has noted that, the inevitability of conflict in the claim for scarce resource is considered here as the bane for struggles over the inestimable value for land and its resource, with the claim for ownership and the claim for its position as a common resource. Nevertheless, the complex land use system that has changed markedly overtime has culminated in the present day tension and conflicts between Fulani herdsmen and host communities.

1.2 Problem Statement

Historical tensions between Nigeria's pastoralist Fulani and settled indigenous farmers have intensified in recent years, with dwindling natural resources and land availability greatly contributing to the ongoing, escalating conflict in the country (Okello *et al.*, 2014.).

Berger (2003) considered that, pastures, woody vegetation, water resources and land are taken as a common property resource. The increasing number of reports of violence at

this occupational boundary makes understanding herder-farmer conflicts an urgent task. We need to know not just why friction begins, but also why and how, as some conflicts unfold they articulate with religious, ethnic, and political conditions (Morizt, 2010).

Competition-driven conflicts between arable crop farmers and cattle herdsmen have become common occurrences in many parts of Nigeria (Ingawa *et al.*, 1999). The competition between these two agricultural land user-groups has often times turned into serious overt and covert hostilities and social friction in many parts of Nigeria (Adisa, 2012). Cases of herders-farmers conflicts are widespread in recent times. Nweze (2005) also stated that, many farmers and herders have lost their lives and herds while others have experienced dwindling productivity in their herds. In most of these encounters, citizens are regularly killed and the destruction or loss of property leaves an already endangered populace even poorer. The frequency and scale of these communal conflicts have become alarming (Leadership Newspaper, May 17, 2011).

The dimension of militancy in the conflicts is associated with the advent of the aggressive *Udawa* and *Bokoloji* pastoralists which further led to the emergence and introduction of guns and other sophisticated weapons in the conflicts as well as the use of mobile phones, accompanied with banditry. All these have produced adverse consequences in the destruction of villages, settlements, crops, irrigation facilities, human and animal lives. The incidence of serious cases of conflicts for survival between pastoralists and farmers also led to loss of lives and destruction of properties with the emergence of insecurity due to the continuous desire for vengeance by the parties involved (Pyramid Trust, July 17, 2009).

The rate of the incessant conflicts between Fulani herdsmen and farmers made the Local, States and the Federal Government of Nigeria to employ different mechanisms in order to end the menace. For instance, the Federal Government of Nigeria has commenced the construction of grazing reserves, and has clearly delineated stock routes covering 1,000,000 hectares in Jangere village of Katsina State (NAN in Daily Trust, September 22, 2009).

According to 2009 official report of the Federal Ministry of Agriculture and WaterResources, Nigeria has officially demarcated 4125 grazing reserves or routes. Out of this number, only one third is put in use, whereas 270 grazing reserves have been put into cultivation. In order to curb farmers-pastoralists' clashes, the federal government in September 2009 carried out demarcation of a grazing route running through the central states of Nasarawa, Benue and Plateau. Other grazing routes also marked out and demarcated were started across Katsina and Bauchi States, spanning across Abuja. Further grazing routes were also demarcated from Sokoto in the Northwest to Oyo State in the Southwest as well as another 2,000km grazing route from Adamawa State in the Northeast to Calabar in the Niger Delta (IRIN,2009). All these were done to strengthen the relationship between the two groups, but the relationship keeps on degenerating.

The question not yet answered is why have all these efforts and resources not produced the desired result? What is clear to all, however, is that something fundamental is amiss. Could it be the defective public policy, in some cases, the lack of policy or the failure of the Fulani to avail themselves to modernization (Iro, 2000).

Similarly, Tonah (2006) opined that, farmer-herder differences are not only seen as resource conflict but are also sometimes represented as ethnic conflict involving the two

groups. Since herder and farmer groups have very different values, customs, physical and cultural characteristics, disputes between them are frequently characterized as ethnic conflict. The task here is to examine some of the factors responsible for the conflicts and also examine the roles played by institutions in managing the conflicts between crop farmers and cattle herders in Katsina State.

The study therefore provided answers to the following questions:

- i. What are the socio-economic characteristics of crop farmers and cattle herders in Katsina State?
- ii. What are the factors responsible for the conflict between crop farmers and herders in the State?
- iii. Which institutions are involved in resolving conflict between farmers and herders in the study area?
- iv. What are the types of conflict resolution mechanisms employed by these institutions?

1.3 Objectives of the Study

The broad objective of the study was to analyse the causes of farmer-herder conflicts and the roles played by institutions towards the resolution of the conflicts in Katsina State.

The specific objectives of the study were to:

- i. describe the socio-economic characteristics of the respondents in the study areas;
- ii. examine the factors responsible for the conflict between crop farmers and cattle herders in the State;
- iii. examine the institutions involved in the management and resolution of the conflict between farmers and Fulani herders in the study area, and

- iv. identify and describe the types of conflict resolution mechanisms employed by these institutions.

1.4 Justification of the Study

The increasing number of reports of violence at this occupational boundary makes understanding herders-farmers conflict an urgent task. We need to know not just why friction begins, but also why and how, as some conflicts unfold they articulate with religious, ethnic, and political conditions (Morizt, 2010).

In addition, there is the need to comprehend how the ‘farmers and herders’ on the one hand and the ‘community and the state’ on the other have viewed such conflicting issues and the strategies put in place to ameliorate or even resolve them. Until the sources of such conflicts are clearly identified, understood, managed and resolved, such incidences will continue to show their ugly heads at the slightest provocation (Abbas, 2009). Conflict between farmers and herders could be reduced or averted when Government policies are clearly formulated and implementation framework aimed at setting a guiding principle on future cooperation between the two warring groups is established.

The study examined the perception of the two different groups on land usage and access to natural resources which were basically the main cause of the conflict, so as to enable further understanding of the issue from the viewpoint of the conflict actors. It, therefore, provides a sort of communication platform that will enable bottom-up flow of information from the grassroots to the general public and the policy making unit of the government.

Although scholars such as, Abubakar (2012), Kehinde (2011), Ofuoku and Isife (2009) and Adebayo and Olaniyi (2008), have written on land resource conflict and considerable research has been devoted to farmer-herder conflict in particular, the most recent security challenges that leads to the escalation of violence of different dimension across the country, has prompted the need for a fresh investigation. This will complement the efforts of the other researchers. This being the case, it is hoped that the study has provided the Government, Non-governmental organizations and the general public with relevant and up-to-date information on causes of farmer-herder conflict and efforts of various institutions towards the resolutions of conflicts between them. It has also provided the required information on the current status of farmer-herder conflict as well as helps contribute to the existing literature on global conflicts with specific emphasis on land resource use conflicts. Finally, the best ways to improve the relationship between these important groups form the concern of this study.

1.5 Hypothesis of the Study

- i. There is no significant factors responsible for the conflict between crop farmers and cattle herders.

CHAPTER TWO

LITERATURE REVIEW

2.1 Ethnographic Background to Pastoralism in Nigeria

Antonio and Silvia (2009) described Pastoralists as people who live mostly in dry, remote areas. Their livelihoods depend on their intimate knowledge of the surrounding ecosystem and on the well-being of their livestock. According to them, pastoral systems take many forms and are adapted to particular natural, political and economic environment, and the key feature qualifying pastoralism is Mobility. The term nomadic is used when mobility is high and in irregular patterns; transhumant when there are regular back-and-forth movements between relatively fixed locations; and sedentary for the rest.

Pastoralists are people who derive more than 50 per cent of their incomes from livestock and livestock products. Although the livelihoods of these communities are vulnerable to climate change, shifting global markets, population growth and increased competition for land and other natural resources, pastoralism remains a viable natural resource management system, and understating its rationale, importance and dynamics is a key element in efforts to reduce poverty (Antonio and Silvia, 2009).

According to Blench (2010) the Fulbe (another name for the Fulani) and the arable farmers among whom they move, have an interdependent relationship based on the exchange of dairy products for grain, and a market for the animals that must be periodically sold to provide cash for domestic purposes, such as cloth or marriage payments. Moreover, in many regions, Fulbe management strategies depend on access to cereal crop residues -something arable farmers permit because of the perceived advantages of manure as fertilizer.

However Blench (2010) stressed that, in no case the goods or services the pastoralist has to offer essential to the farming community, and therefore the pastoralist is obliged to remain on good terms with farmers if he wishes to continue to exploit the same locale in successive years. If Fulbe herders are unable to build up exchange relations with the farming communities, they can only survive by becoming sedentary, by flexible movement patterns that involve exploiting new arable communities every year, or by intimidation of the farmers. All of these strategies can be observed in operation in Nigeria, sometimes practiced simultaneously by different Fulbe subgroups.

The Fulani or Fulbe indisputably represent a significant component of the Nigerian economy. They constitute the major breeders of cattle, the main source of meat, the most available and cheap source of animal proteins consumed by Nigerians (Eniola, 2007). The major source of animal protein is the cattle which are in the hands of Pastoral Fulani's (Ajala, 2000).

The fact that the Savannah zones of Nigeria have abundance of grasses and forages and also the absence of the deadly cattle disease called Trypanosomiasis make the zone conducive for rearing cattle (Ibrahim *et al.*, 2014).

2.2 Cattle Herding System

Having raised livestock for centuries, the Fulani have evolved a herding system that withstands time, weather, social change, and government intervention. The movement of the Fulani over the years has led to a pastoral calendar in which the location and the grazing habits of the Fulani can be predicted (Iro, 1994).

The name Fulani has become synonymous with grazing and cattle ownership. The *Fulbeness, pulaaku*, is determined by the extent of Fulani involvement in herding. The primary occupation of the Fulani is herding, followed by farming. Less than a tenth of the Fulani have jobs other than herding or farming. Non-herding jobs are seasonal and opportunistic. For example, during the wet-season, the Fulani take advantage of the abundant rain and manure to plant corn, millet, sorghum, and home gardens in their backyards (Iro, 1994).

Describing the annual herding cycle of the Fulani, Iro (1994) stated that the herding season begins with southward movement of the herds along rivers and stream valleys from October to December – marking the end of rainy season and beginning of dry season. January to February is the harmattan season that is characterized by longer grazing hours, herd splitting, and more frequent visits to stable water sources. The months of March and April are usually the toughest for the herdsman and his cattle, as it is the hottest period in the grazing calendar. Indeed, he now herds his cattle only in the evenings and nights (Iro, 1994).

May and June signify the end of dry season and vegetation begins to appear. This also marks the beginning of northward movement of cattle herds. From this period up till September, which is the peak of rainy season, though characterized by cattle breeding, more milk production and shorter grazing hours, cattle herding coincides significantly with arable crop production. Farmer-herdsmen conflict therefore becomes prevalent during this period (Iro, 1994).

2.3 Land Use and Migration

Accounts of Fulani pastoralists moving southwards into Nigeria's sub-humid 'Middle Belt' zone appear as early as the 1820s; however, tsetse flies and the associated trypanosomiasis disease necessitated return northwards into the semi-arid zone during the rainy season. This gradual southern movement has been attributed to the creation of dairy markets by Hausa traders and the relative security of the British colonial period, when violence related to the trans-Saharan slave trade was curtailed (Migration was also seen as a way to avoid the hated *jangali* (cattle tax) imposed by the British with the introduction of trypanocidal drugs further enabling pastoralist cattle herds to access the high-quality grazing land in the southern sub-humid zone (Blench, 1994).

There has also been movement in the opposite direction: northwards expansion of agricultural cultivation into the semi-arid zone occurred from the 1960s, alongside a general increase in the amount of land under cultivation in the region. The resulting gradual disintegration of the *burtali* (official stock migration routes) allowed indigenous farmers to claim ownership rights to fertile land and waterways which Fulani cattle had been grazing for over two centuries (Blench, 1994). The situation was exacerbated by

the 1978 Nigerian Land Use Decree which gave complete authority to the state and local governments to assign and lease land. The relative ease with which settled farmers could obtain the ‘certificate of occupancy’ demonstrating land ownership, due to their ‘indigene status’ and higher literacy levels, left the Fulani in Nigeria ‘permanently on the outside of land tenure’ (Ezeomah,1985). Contributing to the complexity regarding land ownership is the observed reluctance of the Fulani to buy land even when the opportunity exists. Several mechanisms for addressing the growing issues of land use in northern and central Nigeria have included the mapping and demarcation of cattle routes and the ongoing promotion of grazing reserve establishment (IRIN, 2009).

2.4 Nigeria's Grazing Reserve Act of 1964

The Nigerian Grazing Reserve Act of 1964 was passed as an initial attempt to improve Fulani access to grazing land for their cattle, simultaneously encouraging sedentarisation in order to address existing conflicts between farming and grazing communities and improve provision of essential amenities to pastoralist families. In a broader sense, it was expected that the policy would help address some of the wider constraints facing livestock development in Nigeria at the time, such as disease control and market supply (Ingawa *et al.*, 1989). Following this, the National Agricultural Policy of 1988 declared that a minimum of 10% of the national territory, equivalent to 9.8 million hectares, would be allocated for the development of grazing reserves in an attempt to protect pastoralism. However, this policy has not been enforced; as at 2012 only 2.82 million hectares has been acquired in a total of 313 reserves (Ibrahim, 2012).

2.5 Arable Cropping in Nigeria

According to Adisa (2012), 75 percent of today's food comes from 12 arable crops and five animal species, with just three arable crops (rice, maize and wheat) accounting for about 60 percent of the calories and proteins obtained from plants. Worldwide, arable crops enjoy remarkable dominance, playing significant roles in the socioeconomic lives of both rural and urban people. Arable crops include a wide range of annual crops of primary importance such as maize, rice, sorghum, millet, cassava, cowpea, wheat, soybeans, melon, groundnut yam, vegetables and so on.

Adisa (2012) opined that, Nigerian agricultural production is dominated by rural-based small scale arable crop producers, who account for about 80% of total food requirement. Most arable crop farmers rely on rainfall to produce, with farming activities normally beginning as soon as the onset of rains. Apart from being veritable sources of income for farmers; arable crops are processed into other useful items at industrial and household levels.

2.6 Some Causes of Cattle Herder-Crop Farmer Conflicts

Conflicts between cattle herders and farmers have existed since the beginning of agriculture and increased or decreased in intensity and frequency depending on economic, environmental and other factors. For example, increases in the herd sizes, due to improved conditions of the cattle, compelled the cattle herders to seek for more pastures beyond their limited range. Climate change has constituted a great threat by putting great pressures on the land and thus provoking conflicts between them. However, improvements in human health and population have enhanced a much greater pressure on land. Since the 1980s therefore, there has been a marked expansion of cultivation of the *fadama* (riverine and valley-bottom) areas. This means that both the

farmers and cattle herders have engaged in fierce struggles for access to such valuable lands which, more often than not, result in increased conflicts and violence (Abbas, 2009).

These conflicts have constituted serious threats to the means of survival and livelihoods of both the farmers and cattle herders and what both groups are tenaciously protecting and projecting. The conflicts, through provocative claims over access rights to farmland and cattle routes (*labi*), have become ubiquitous and seem to have defied solutions (Abbas, 2009).

The genesis of conflicts over access, use and management of land resources between nomadic cattle herders and sedentary farmers is as diverse as the nature of the conflicts themselves (Abubakar, 2012). In general terms, however, the expansion of population throughout northern Nigeria has led to the expansion of farming activities into areas utilized by cattle herders for the purpose of livestock production. This phenomenon is particularly noticeable in Hausa land where the traditional pastoralist grazing area (*hurumai*), stock routes, and water points have been turned into farming areas over the years (Baba, 1987).

Clashes between cattle herders and crop farmers have been a major cause of increasing violence and general insecurity in Nigeria. In most of these encounters, citizens are regularly killed; the destruction or loss of property leaves an already endangered populace even poorer. The frequency and scale of these communal conflicts have become alarming (Leadership Newspaper, May 17, 2011). In Nigeria, the most frequent causes of conflicts between the nomadic cattle herders and sedentary farmers are illegal

invasion of farms and destruction of crops by cattle, particularly during the planting season and immediately after the harvesting period (Blench, 2004).

The causes of farmers-herdsmen conflicts are often not far-fetched. However, there appears to be no consensus among both groups as to the causes of their mutual conflict. According to De Haan (2002) destruction of crops by cattle and other property (irrigation equipment and infrastructure) by the cattle herders themselves are the main direct causes for conflicts cited by the farmers, whereas burning of rangelands and fadama and blockage of stock routes and water points by crop encroachment are important direct reasons cited by the cattle herders. He went on to point another cause of farmers-herdsmen conflict as increasing rate of cattle theft which is often accompanied by violence.

Ingawa *et al.* (1999) reported that the key underlying causes of farmers-herdsmen conflict in Nigeria are:

- i. Changing resource access rights, whereby traditional access rights to communal grazing and water resources are being obstructed by the individual tenureship of arable farmers. This is particularly severe on the traditional trek routes, which become favorite cropping sites because of their better soil fertility resulting from the concentration of animal manure from the trekking herds in these areas. Within the fadama areas, this is exacerbated by the fragmented nature of the crop plots, which makes prevention of animals straying in the crop plots difficult;
- ii. Inadequacy of grazing resources, as increasing crop cultivation (and increasing commercialization of the crop-residues) and poor management of the existing

grazing reserves have resulted in a significant reduction in available livestock feed resources, in particular in the Northern States. Moreover the high value crops introduced by National Fadama Development Programme NFDP (tomatoes and onions) produce almost no crop-residues for livestock feeding.

- iii. Decline in internal discipline and social cohesion, as the adherence to the traditional rules regarding grazing periods, and the authority of the traditional rulers is broken down.

Another contributing factor is the fact that grazing resources including pasture and water are found in different places at different times of the year, hence the need for constant mobility among cattle herders for opportunistic resource use. This brings them into contact with the 'landed' settled farmers, and cause competition and conflicts (Abubakar, 2012).

Tonah (2006) opined that the causes of farmers/herders conflicts include the southward movement of pastoral herds into the humid and sub-humid zones, promoted by the successful control of the menace posed by disease, the widespread and availability of veterinary medicine and the expansion of farming activities into areas that hitherto served as pastureland. As a result, the herdsmen destroy crops of the farmers on their farmland.

Land tenure system or ownership of land was also regarded as a cause of the conflicts. In most societies in Nigeria, farmers are regarded as those that own the land, and therefore determine how it is used; while the nomadic cattle herders are regarded as the

landless group, who do not own land to use and settle on (Baba, 1987 in Abubakar, 2012).

Hoffmann *et al.* (2008) opined that the relationship between farmers and nomadic Fulanis started degenerating when the Hausa farmers began to raise animals, including cattle. The farmers would take crop residues to their animals, and as a consequence, forage became scarce for herders in the dry season. Probably, out of frustration, the settled herders invited the nomadic ones to carry-out group herding on farmers field even while crop were yet to be harvested. When the farmers attempted to challenge them, violence erupted. This shows that nomads'-farmers' conflicts can be determined by ethnicity.

Government policies can also be seen as a cause of nomads/farmers conflicts. For example, Hoffman *et al.*(2008) further explained that the conflicts do occur as the size of the existing reserve shrink due to encroachment and government approved expansion of farmlands. This leads to the conversion of water points and stock routes into farmlands.

Ofuoku and Isife (2009) conducted a research in Delta State and found that a cow once strayed and destroyed farm products and as a result, the offended party slaughtered it. This resulted in conflicts between the host farming communities and the nomads. They further observed that the contamination of streams that the host communities rely on and the rape of community girls by the nomads also cause and aggravate the conflict.

Yahaya (2008) noted that the two groups accuse each other of the cause of the conflict. For instance, farmers accuse nomads of deliberately destroying farm products, and as such this is the immediate cause of the violent conflicts between the two groups. On the other hand, the nomads claimed that the cultivators was fully expanded their farms beyond areas demarcated for animal grazing, and that the dry season cropping has claimed most of the uplands and lowlands (Fadama) allocated to cattle herders for grazing. Cattle routes and water points have also been tampered with by the farmers. For their survival, therefore, the cattle herders resort to violence.

Another cause of the conflicts is lack of sensitization of people to apply the land use Act of 1978. One of the policies (Nationalization policy) states that the land in Nigeria shall be available to all Nigerians in any state, local government, or district of their choices for residential, agricultural, grazing, commercial or industrial purposes, irrespective of their states of origin, ethnic background, religious and political affiliation (Abubakar, 2012)

Colonial policies were also seen as the cause of the historical rivalry between farmers and herders in some parts of Africa. For example, the highly complex issue exacerbated by colonial French policy was the cause of the bloody conflicts between the two major Rwandan rival ethnic groups. These are Tutsi which is not exactly the name of the ethnic group: historically it meant “people who own cattle”, and Hutu, which means “people who farm”(Bachelor, 1996 in Herero, 2003 cited in Abubakar, 2012).

In a related development, Adamu (2007) also observed that colonial policies in Katsina State has led to the seizure of vast tracts and farming lands and turned it into native authority forest reserve. The immediate impact of this was that it made the herders and

farmers to compete over land that had shrunk as a result of colonial forest policy. The rate of the competition resulted in conflict between the groups.

Negligence on the part of both groups was also seen as a cause of the conflicts. For instance, Yahaya (2008) observed that the cattle herders often left a large number of cattle in the care of children who did not care about the consequences in the event of destruction of farm produce. The farmers also left their harvested crops on their farm unprotected, while others who had poor yield intentionally left their crops on the farm un-harvested for cattle to graze, so that they could claim heavy compensation.

As the state cannot regulate the mutual coexistence of its citizens in the harmonious sharing of the competed resources, the parties may have to resolve to struggle among themselves with no retreat, no surrender and for the survival of the fittest. The failure of the state, for example to resolve the ‘settler/ ‘indigene’ identity and the inherent struggles over resources can be adduced to have brought dangerous dimensions of economic and political elements in the Fulani cattle herders and farmers’ conflicts (Abbas, 2009).

The most predominant causes of conflict between the crop farmers and pastoralist are damaging of crops and blockage of water points and they preferred informal authority in resolving conflicts. It was found out that variables such as age, gender, marital status, religion, education and year of residence were significantly related to causes of conflict between the crop and pastoral farmers (Adebayo and Olaniyi, 2008).

Blench (2010) in conclusion, summarizes some number of issues regarding the causes of farmers/ pastoralist conflicts:

- i. conflict between farmers and cattle herders in Nigeria has been documented from the pre-colonial era onwards;
- ii. dispute resolution mechanisms functioned until the 1970s, though there is evidence that they were weighted towards herders' interests;
- iii. since the 1980s, the frequency of violent clashes has increased, with a further acceleration since the introduction of democracy at the end of the 1990s;
- iv. widespread availability of modern automatic weapons and improved communications are increasing the intensity of conflicts;
- v. conflicts are being increasingly interpreted as religious and/or political even though the underlying drivers may be conflicts over access to resources;
- vi. ethnicity remains a major factor in recruitment to the conflicting parties and is crucial in raising funds;
- vii. Government is unwilling to acknowledge the scale of conflict for reasons that relate to its external political presentation. The local press has played an important role in making public various situations but they are seen as partisan. World media have taken almost no interest in these matters;
- viii. action by the authorities to quell violent conflict has been minimal or ineffective, leading to a perception by communities that they should take responsibility for their own security;

- ix. judicial commissions held subsequent to conflicts do not result in effective action;
- x. strategies of conflict resolution, however framed, have little impact unless the political will to both follow up and enforce agreements is present. This would require a major change in political culture in Nigeria.

In his paper on conflict between the Fulani cattle herders and farmers in Northern Nigeria, Abbas (2009) concluded that, “Recurring scramble for scarce ecosystem resources has degenerated into violent conflicts in Northern Nigeria between fulbe cattle herders and farmers. These conflicts have become more intense, widespread and destructive. Since most of the fulbe cattle herders do not own or possess the rights to land, they therefore depend absolutely on open land to feed their cattle, culminating in intense pressure on land and frequency of conflicts. Ecological, climate change and of course government policies on agriculture, especially the all-year *fadama* farming, are threats to pastoralist access to pasture. However, additional farms acquired and encroachments of traditional cattle routes have drastically reduced the grazing space for the livestock to access pasture areas and water points. Furthermore, the use of police and courts to resolve conflicts between fulbe cattle herders and farmers by government has been ineffective. This has contributed to the frequency of the clashes especially since the 1980s sequel to the democratic dispensation, introduction of modern weapons in the conflict and communication devices as well as the use of bandits in terrorists’ activities. All these have exacerbated chronic insecurity that has encouraged the conflicting parties to take responsibility for their own security and to defend themselves, which is a threat to the sustainability of the federation (Abbas, 2009).

On a research conducted by Ifatimehin and Tenuche (2009) the various conflicts that ensued between Fulani herdsmen and farmers arose from the destruction of farm lands by herds of cattle. Government at various levels (federal, state and local) have not addressed the issue of adequate provision of grazing reserves to accommodate the interest of herdsmen who are always on the move to secure food and water for their herds. The socio-economic lives of both the farmers and the herdsmen revolve around land and therefore land matters become easily conflicting.

Bello (2013) enumerated the major causes of herdsmen-farmers conflict to be:

- i. destruction of crops by cattle and other property (reservoirs, irrigational facilities and infrastructure) by the herdsmen themselves are the main direct causes for conflicts cited by the farmers;
- ii. burning of rangelands, fadama and blockage of stock routes and water points by crop encroachment are important direct reasons cited by the herdsmen;
- iii. increasing rate of cattle theft which is often accompanied by violence;
- iv. antagonistic perceptions and beliefs among farmers and herdsmen could compound conflict situation, especially due to failing institutions and fierce competition for resources.

2.7 Institutions and Mechanisms Employed in Resolving Herder-Farmer Conflicts

2.7.1 Traditional and religious institutions

In a research conducted by the Centre for Peace, Diplomatic and Development Studies (CPDDS), University of Maiduguri (2012) on conflict management mechanisms in the North Eastern Nigeria, a number of conflict management institutions and mediation

processes were identified in the study area. These include various arms of the government, traditional and religious institutions, and non-governmental or civil society organizations. Traditional institutions arose from the pre-colonial and colonial systems of governance and were subsequently integrated into the modern governance structure, although playing an ancillary role and subsidiary to elected (or military) governments (CPDDS, 2012). State governments and Local government councils both have subsidiary structures incorporating traditional leadership on advisory capacity. Having been in place for many generations, traditional institutions are recognized locally as being an inherent part of the culture of the community concerned. Religious institutions include churches, mosques, shrines and their organizations. In Nigeria, there is some overlap between traditional and religious institutions, since in some communities ‘traditional’ leaders such as emirs are closely linked to their ‘spiritual’ counterparts. Government assigns limited roles to these institutions on the bottom rung of the ladder of judicial, political and administrative authority, for example as mediators in marital disputes. ‘Institutions’ here refers to both the organizations (churches, mosques, etc.), and the authority-holders (chiefs, ward heads, pastors, imams, priests, for example), as well as practices such as praying for peace or carrying out *sulhu* mediation (CPDDS, 2012).

2.7.2 Government organizations

In the area of conflict management, the study found that the Nigerian police have been very active in managing conflicts. However, the problem with the police is that the force lacks the capacity to guarantee security due to inadequate logistics, particularly mobility, which would enhance their ability to respond to crises effectively and efficiently (CPDDS, 2012)

“The study also found that local, State and Federal Governments have responded to the conflicts taking place in the study areas over the last few years. However, the narratives also show that in general the population has lost faith in these security forces, the police and the judiciary, saying that corruption and material greed had distanced these institutions from the general populace (CPDDS, 2012).

According to the findings from the report by Centre for Peace, Diplomatic and Development Studies (CPDDS, 2012) as far as dispute resolution was concerned, the vulnerable and the less privileged prefer to take their cases to alternative dispute resolution rather than to the police or the judiciary. In contrast, traditional and religious leaders have a central role in marital and other disputes. Testimony after testimony attests to the belief that ‘informal’ mechanisms such as traditional authorities, religious leaders, family heads, and women’s groups are more effective than the security forces and the judiciary in resolving problems. In addition to the respect in which citizens of the North East hold their leaders, respondents also pointed out that such mechanisms, by bringing people together to express their viewpoints, get to the heart of the matter and thereby prevent recurrence of the dispute. On the other hand formal mechanisms such as the court system merely calm the situation without addressing the real causes of the problems.

The *sulhu* mediation process is often used by communities in the areas under study for settling disputes. Community leaders constitute the *sulhu* committee, which calls the disputants to the negotiating table and listens to the stories on both sides of the conflict. It is after listening to both sides that the *sulhu* elders offer their suggestions for resolving the conflict.

2.7.3 Community initiatives

Some community-based and non-governmental organizations (CBOs and NGOs) have played a role in solving intra- and inter-community conflicts. These include:

- i. **Interfaith reconciliation and peace building projects:** These are found mainly in the Middle Belt, where Christian and Muslim leaders and associations hold joint meetings and other activities to exemplify values of mutual tolerance and respect. In Dadin Kowa for example, local leaders have agreed with a practice of publicly exploring and resolving every incident of inter-communal violence in turn, while urging their co-religionists to resist the temptation to respond. This method appears to have reduced the incidence of violence by modeling non-violent responses in preference to reprisals.
- ii. **Women's groups:** women's groups and women leaders have traditionally played a role in settling disputes between women, in several parts of the three zones. Respondents from Omuokiri in the Niger Delta described how women leaders have also played roles in reconciliation initiatives in the wider community, albeit mainly within the confines of domestic disputes. Although it is rare to find women playing political roles of any sort, some women respondents have taken part in dispute resolution, including at the inter-community level.
- iii. **Community development projects:** given the universally-articulated view that poverty and unemployment are the major drivers of conflict in all three zones, it is surprising that so few respondents referred to initiatives to address the economic dimensions of violence through community development. However, a

few such projects - for example micro-credit programmes for youth – were mentioned.

- iv. Individual initiatives: some narratives describe efforts by individuals to swim against the tide and reach out to the ‘other side’. Often the individuals who stand out in such narratives are local office-holders such as local government council Chairmen or village heads, who take their responsibilities to serve all citizens impartially exceptionally seriously.

2.7.4 Some mechanisms of conflict management

Different methods of conflict management strategies have been advanced by different scholars. For example, Gyong (1998) stated that the traditional method of conflict management before the advent of colonialism in Africa was better than the present strategies. According to him, the desire was to remove the cause of the dispute and reconcile the two parties in such a way as to restore the social structure of society to its state of equilibrium. That settlement of conflict was usually done in a “village square” under the leadership of a team of elders representing various clans, and they amicably settle and reconcile the parties involved.

The result of a research conducted by Adebayo and Olaniyi (2008) showed that, informal traditional mechanisms for conflict resolution are still functional in the study area, both crop farmers and pastoralist have preference for the issue of conflict arbitration. The desire for sustaining relationships is the major factor that informed farmers and pastoralist preference of informal authority because taking disputes to formal authority like police/courts of law may worsens the relationship between the disputants.

Best (2009) identified some basic strategies of conflict resolution as follows: Alternative dispute resolution, is about the search for, and application of, “non-conventional” peaceful methods of settling disputes and resolving conflict situations using the least expensive methods, and in ways that satisfy the parties, as well as ways that preserve relationship after a settlement might have been reached. African traditional dispute resolution, according to him, is a method used to resolve conflict by the use of the authority given to the traditional leaders. Africans use collaborative methods of conflict resolution. Another method is Western alternative dispute resolution, which is a process of conflict resolution without violent means. It is also collaborative in nature. Grassroots community-based activities, good governance, collaborations, negotiation, reconciliation, mediation, arbitration, adjudication and crisis management are all elements of western alternative dispute resolution (Best, 2009).

The best way of dealing with conflict situations according to Nkom (1999) is to preempt or nip them in the bud. This implies an ability to pick out conflict situation in their infancy; to understand their nature, causes and the possible danger signals that may herald their eruption, and to act quickly and decisively to arrest such situations before they explode into open violence. He gave three important dimensions in conflict managements, conflict analysis, conflict containment and confrontation, and conflict resolution.

On the conflicts between nomads and cattle herders, different strategies were also suggested by different communities, government and researchers to improve on their relationship. For instance, Blench (2004) in a research conducted in Kebbi and Plateau

States found that most of the conflicts are settled directly between the two parties. However, if not, then it is usually carried to a meeting between the Ardo (Head of the Herders) and the Village Head of the farmers. Similarly, if the dispute is not settled, it would then be taken to the District Head in some rare cases. The last resort, according to Blench, is to go to the police which is usually by the farmers. He further explained that Herders declined going to the police for conflict resolution because they are always made scapegoats.

Umar(2008) stated that Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN), the biggest and most influential herders association in the country is the best institution that manage the conflicts in Zamfara State. MACBAN averts crisis between the two groups by timely reporting to the relevant authorities, acts that can cause crises. The association is also represented in the state Farmer-Nomads Dispute Resolution Committee of all the local governments Areas.

Heinrichy (2006) suggested negotiation, adjudication and violent confrontation as the ways of managing the conflicts. However, Baba (1987) believed that the most effective solutions to the problem of unhealthy competition of land resources are: to introduce the nomadic Fulani to sedentary life and getting them to adopt farming as an occupation in conjunction with cattle rearing.

Tukur (2013) has this to say: “The role of traditional community leaders in dispute resolution need not be re-emphasized. The emphasis on western modes of administration of justice had not worked in rural settings. If ignorance of the law is not an excuse, then the law that rural communities are not ignorant of, are their own laws

and customs not those of the statute books. The traditional community leaders are products of people's consensus, customs and cultures. Traditional and customary community leaders are well respected unless if they are imposed. There is need to find a role for them in the administration of justice system particularly in rural settings and avoid impositions".

He further stated that, Economic Community of West African States (ECOWAS) had also developed Strategic Action Plan for Livestock in West Africa to develop and transform the sector. The Food and Agriculture Organization (FAO) of the United Nations had also developed an Action Plan for Transhumance Livestock Breeding in West Africa. There are also other interventions and support by other agencies and development. Some of these interventions are already on board and some are about taking off. If properly implemented these interventions would significantly reduce conflicts between Farmers and Grazers, enhance pastoralism and bring about economic, ecological and political stability in not only Nigeria but in sub-Saharan Africa (Tukur, 2013).

2.8 Theoretical Framework

2.8.1 The conflict theory

The contemporary society is characterized by different schools of thought, each analyzing social phenomenon from its own orientation. For the purpose of this study, the conflict theory is adopted to explain herders-farmers' conflicts in Katsina State.

In its general usage the word or term “conflict” envelops view of difference and disagreement, strife and struggle. The conflict perspective or conflict theory was derived from the ideas of Karl Marx (1818-1883) the great German theorist and political activist believed that society is a dynamic entity constantly undergoing change driven by 1 conflict. According to Marx, men, in the social production of their existence, inevitably enter into definite relations which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production the totality of which constitutes the economic structure of society. The fact that the dominant or ruling class (the bourgeoisie) controls the social relations of production, the dominant ideology in capitalist society is that of the ruling class. Ideology and social institutions, in turn, serve to reproduce and perpetuate the economic class structure, According to Marx, the real foundation upon which the superstructure of social, political and intellectual consciousness was built, has been the exploitative economic arrangements of capitalism. Marx believes that any social setting based on exploitative economic arrangement generated within it the seed of its own destruction (Marx, 1971).

In general, conflict perspective view Society as made up of individuals competing for limited resources. Competition over scarce resources is at the heart of all social relationships. Competition, rather than consensus, is characteristic of human relationships. Broader social structures and organizations reflect the competition for resources and the inherent inequality competition entails, some people and organizations have more resources (i.e., power and influence), and use those resources to maintain their positions of power in the society (Marx, 1971). According to the

conflict perspective, society is constantly in conflict over resources, and that conflict drives social change. For example, conflict theorists might explain the civil rights movements of the 1960s by studying how activists challenged the racially unequal distribution of political power and economic resources. As in this example, conflict theorists generally see social change as abrupt, even revolutionary, rather than incremental. In the conflict perspective, change comes about through conflict between competing interests, not consensus or adaptation. Conflict theory, therefore, gives sociologists a framework for explaining social change. All conflicts share common qualities. The first is that there is a kind of contact between the parties that are involved, secondly, the parties in conflict perceive conflicting views and finally, one of the parties always wants to redress existing contradictions (Ofuoku and Isife, 2009).

2.8.2 The structural-functionalist theory

The structural functionalism evolves from the ideas of Emile Durkheim (1858-1917). It was concerned with how societies maintain internal stability and survives over time. It sought to explain social cohesion and stability through the concept of “solidarity”. According to Durkheim, in more primitive societies, it was mechanical solidarity; everyone performing similar tasks that held society together, such societies tends to be segmented, having equivalent parts that are held together by shared values, common symbols or systems of exchange. While in modern complex societies, members perform very different tasks, giving rise to a strong interdependency between individuals. Durkheim argument that modern complex societies are held together by organic solidarity was based on the metaphor of an organism in which many parts function together for the sustenance of the whole. All social and cultural phenomena are therefore seen as being functional in the sense of working together to achieve the state of equilibrium and are perfectly deemed to have a life of their own.

2.8.3 Application of the theories

Conflict theory is relevant in proving the fact that competition for access to natural resources between farmers and herders gives rise to conflict. It sets the background for the origin of the conflict in terms of access to the means of production.

The structural-functionalist on the other hand emphasizes the conditions necessary for the society to remain at equilibrium or balance position. It stressed the need for interdependence of both the cattle herders and crop farmers on the use of common resources as well as specialized areas. There is clear demarcation between different types of conflicts in farmer-nomadic herder relations. Hagberg (1998) in Tonah (2006) has likewise made a distinction between the various types of conflicts in farmer-nomadic relations. He differentiates between disputes among individuals and groups, conflict of interest and violent conflicts. While dispute refers to disagreement between two or more persons or groups, violent conflict involves mayhem, the destruction and killing of persons and livestock, arising from a dispute. Every farming system such as the nomadic cattle herding has a boundary, which separates it from the larger system, the environment. The boundary represents the limits in the larger system. Farmers increasingly compete with nomadic herders for farmland, pastures, water, trees and the use of rangeland in general (Akpaki, 2002 in Ofouku and Isife, 2009).

2.8.4 Conceptual Framework

A model is a figurative representation of a perceived object used to guide one in pursuit of knowledge. A model is also seen as a construction that shows relationships existing among variables. These relationships are depicted schematically or mathematically. Theoretical model is therefore, a broad system of explanation that is founded not so

much on prior research findings but largely on untested and unproved assumptions about social realities (Ekong, 2003). The model in figure 1 shows how the independent variables (Box 1) are related to the dependent variables (Box 2). The independent variables represent the causes of conflict between cattle herders and crop farmers. They consist of inadequate grazing, Land encroachment, lack of access to water points, killing of stray cattle, indiscriminate bush burning, cattle rustling, land tenure system, change in climate, land use policy (1978 which gives rise to interpersonal conflict between crop farmers and cattle herders (the dependent variable) and is indicated by either one or a combination of the followings: dispute, confrontation, maiming and killings, destruction and displacement.

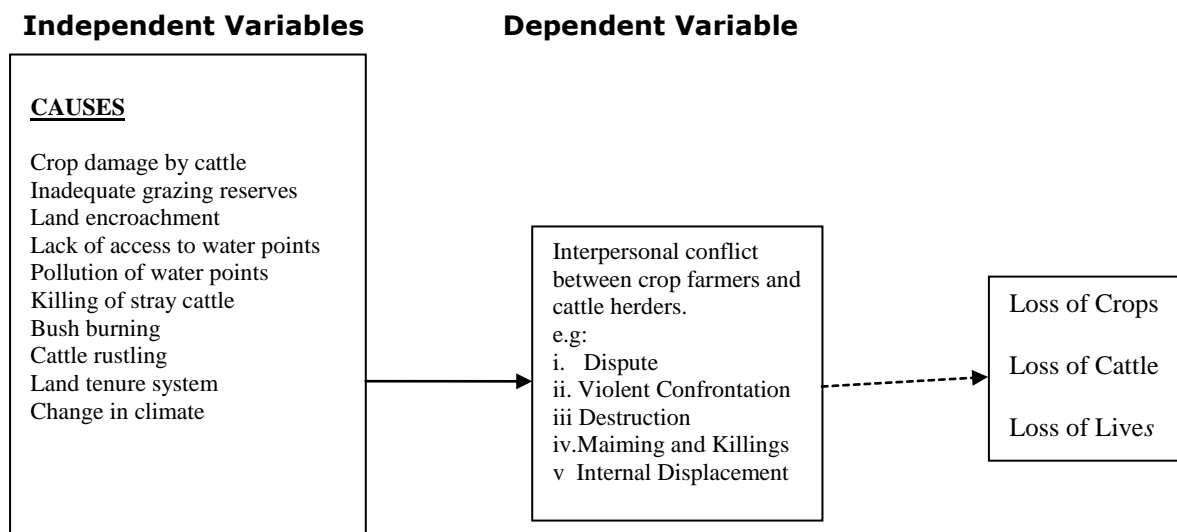


Figure 2.1: Conceptual model of factors responsible for the Conflict between Crop Farmer-Cattle Herder

CHAPTER THREE

METHODOLOGY

3.1 The study Area

The study was carried out in Katsina State, North-western Nigeria located between latitude $11^{\circ} 08'$ to $13^{\circ} 22'$ and longitude $6^{\circ} 52'E$ and $9^{\circ} 20'E$. The State is made up of 34 Local Government Areas. It has a total land area of 24,971 square kilometers with estimated population of 5,801,584 (NPC, 2006) and an estimated projected population of 7,430,781 (unfpa.org, 2015). The State share common boundaries with Niger Republic to the North, Sokoto and Zamfara States to the West, Kaduna State to the South and Kano and Jigawa States to the East.

Katsina State was carved out of Kaduna State on 27 September, 1987 by the then regime of General Ibrahim Badamasi Babangida. It is made up of the two prominent Hausa emirates of Katsina and Daura. Katsina State is characterized by two distinct rainy and dry climatic seasons. Southern part of the State has an average annual rainfall of 800-1000mm while the Northern part has an average rainfall of 600-700mm, with minimum and maximum temperature of 21° - 35° .

The land of Katsina State is situated on the uplands which form the watersheds of some of the major rivers that drain the Northern part of the plateau of Hausa land. These rivers include the Tubo and Galma to the South, the Gulbin Gari and the Challawa being extensions of Chad basin to the east and lastly the four major rivers that form the Sokoto basin (Grove in Adamu,2002).

The climate of Katsina has been largely affected by two major wind currents. The first blows from the North east (Sahara) bringing along with it a warm, dusty and dry air mass (harmattan). It reaches its maximum in January. The second wind current blow from the south-west formed over the southern Atlantic Ocean and carries with it a high

degree of moisture and heavy clouds. The moist winds begin to blow from southwest from late April to October. It is responsible for the rainfall in the area of study (Adamu, 2002).

Sudan savannah is the main vegetation type in the state. Due to its arable land, crops are grown all year round including irrigated agriculture along river banks and the several dams developed by the state and federal government. A great majority of the people are settled cultivators and traders. Crops grown include cotton, groundnut, cowpea, millet, sorghum, maize, rice, wheat and vegetables. Livestock include cattle, sheep, goats and poultry which provide food for human consumption with potentials of providing raw materials for industries. Katsina is predominantly a Muslim community. However, there are some of its indigenes particularly from Batsari, Kafur and Malumfashi Local Government Areas that practice Christianity, while some practice traditional religion (*maguzanci*). Fulani and Hausa are the main ethnic groups in the state. However, there is a considerable number of Fulani cattle herders, whose males rear livestock, while the females hawk locally prepared fermented milk in towns and villages. A number of other non-indigenous ethnic groups like Yoruba and Igbo also live in the state.

(www.Katsinastate-igac.com/history).

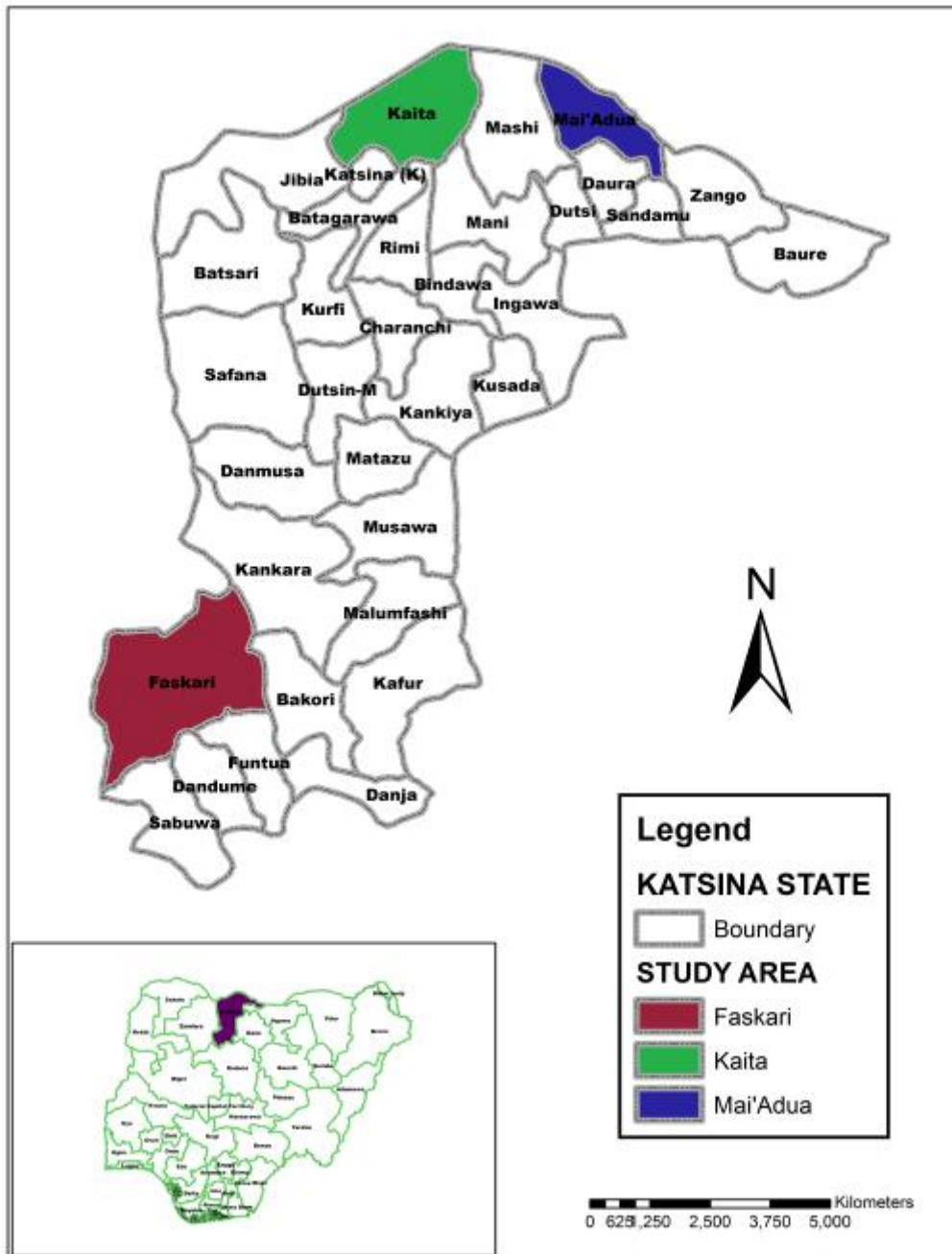


Figure 3.1: Map of Katsina State showing the Study Areas

3.2 Sampling Procedure and Sample Size

The target populations for this study are the cattle herders and crop farmers. A multi-stage sampling was used to select the respondents of this study. The first stage involved the purposive selection of three Local Government Areas, one from each of the three senatorial zones. This selection was based on the frequency of occurrence of farmer-herder conflict in the state. These Local Government Areas selected has recorded frequent clashes between herders and farmers. They are: Faskari in the South, Mai'Adua from the North and Kaita from the Central senatorial zones.

The second stage involved purposive sampling of 3 villages (farming communities) from each of the 3 selected Local Government Areas, also based on the frequency of occurrence, making a total of 9 villages. In the case of the herders, due to the nature of their settlement pattern and economic activities, their grazing places, markets and their extended family settlements (*Rugage*) were detected. A total of 21 farmers and 21 cattle herders from each of the 3 Local Government areas were chosen using the snowball sampling method, thus given a total of 63 crop farmers and 63 cattle herders. The snowball method was used by identifying one respondent that helps the researcher to identify the other, on and on. In all, 126 respondents were selected for enumeration by use of structured interview.

Table 3.1: Sample Size of Respondents

Senatorial Zones	Selected Local Governments	Sampling frame for herders	Sample Size for Herders (10%)	Sample Size for farmers (10%)	Sample size of Respondents
North	Mai'adua	211	21	21	42
South	Faskari	212	21	21	42
Central	Kaita	213	21	21	42
Total		636	63	63	126

3.3 Sources of Data Collection

Data for the study were collected from both primary and secondary sources. Primary data were collected using 126 structured interview schedules with the aid of properly trained enumerators and translators to generate data for the study. Focus Group Discussion (FGD) were conducted with separate groups to corroborate the findings from the quantitative result. Data for the study were collected in 2015. Information collected included those based on the socio-economic characteristics of the herdsman and the cattle farmers, causes of the conflicts, institutions involved in managing conflicts and mechanisms employed by these institutions in managing the conflict among others. Respondents for the study included crop farmers and cattle herders. The selection of these herders was assisted by the list of cattle herders given by the Katsina Agricultural Development Project (Table 3.1). About 10% of the sampling frame of the herders was randomly selected, also equal numbers of the crop farmers in the same Local Government Areas were selected giving a total of 126 respondents.

3.4 Analytical Techniques

The data collected were analyzed using descriptive statistics, specifically, the mean, rating, frequency counts and percentages, which were used to achieve objective one, and four, Likert scale for objective three, while logit regression analysis was used to achieve objective two and to test the hypothesis .

3.4.1 Logit regression model

This was used to achieve objective ii. Logistic regression model is well suited for studying the degree of relationship between a categorical or qualitative outcome variable and one or more predictor variables. In the simplest case of one predictor X and one dichotomous outcome variable Y, the logistic model predicts the logit of Y from X. The logit is the natural logarithm (ln) of odds of Y (Gujarati, 2004). The logit regression model is explicitly specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} \dots \dots \dots (1)$$

Where:

Y = Interpersonal conflict (any conflict mentioned = 1; otherwise 0)

X₁ = Crop damage by cattle

X₂ = Land encroachment

X₃ = Inadequate grazing reserves

X₄ = Lack of access to water points

X₅ = Pollution of water points

X₆ = Indiscriminate bush burning

X₇ = Cattle rustling

X₈ = Land tenure system

X₉ = Change in climate condition

X₁₀ = Killing of stray cattle

β_0 = constant

β_1 - β_{13} = régression coefficients

u = error term

3.5 Definitions and Measurement of Variables

The objectives of this study, was achieved through the use of two types of variables, viz: independent and dependent variables.

3.5.1 Independent variables (causes of crop farmer-cattle herder conflict)

Crop damage by cattle

This refers to damage done to farmer's crops by the herder's cattle.

Land encroachment

This refers to unlawful cultivation of land beyond individual's approved boundary limit.

It is usually common with farmers against cattle tracts and grazing reserves.

Inadequate grazing reserves

Insufficient tracts of land specially set aside by government for use by cattle rearers to graze their cattle.

Lack of access to water points

This refers to inability of cattle herders to have access to wells, lakes and streams for watering their cattle, which may be due to farmer's extension of cultivation to cattle tracts.

Killing of stray cattle

This refers to killing of a cow that is lost or wandering at large. It is usually committed by farmers in protest over the damage likely caused by the animal.

Indiscriminate bush burning

Indiscriminate bush burning is the indiscriminate setting ablaze of the vegetation cover and the burning down of grassland and forest resources by fire.

Cattle rustling

This is an act of stealing cattle.

Land tenure system

This refers to how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints which are based on the 1978 land use act that vested control of land to Government Authority. .

Pollution of water points

This refers to the contamination of water sources such as lakes and rivers where the animals drink.

Change in climate

Climate change refers to the variation in global or regional climates over time. It reflects Change in the variability or average state of the atmosphere over time scales ranging from decades to millions of years. These changes can be caused by processes internal to the earth, external forces (e.g. variations in sunlight intensity) or, more recently, human

activities. It is measured through environmental forces such as cropland, vegetation and fresh water.

3.5.2 Dependent variable (Interpersonal conflict)

The dependent variable is the interpersonal conflict between crop farmers and cattle herders. (Dispute, violent confrontation, destruction, maiming and killings and internal displacement). Any of the conflict mentioned score 1, otherwise 0.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Description of Socioeconomic Characteristics of Crop farmers and Cattle Herders

Sex: The result of the analysis in Table 4.1 indicates that, 60 crop farmers representing 95.2% of the sampled farmers are males and only 3 representing 4.8% are female. In the case of the herders, all the 63 respondents, representing 100% of the sampled herders are males. This result was consistent with the findings by Adisa (2012) that all respondent herdsmen were males. As evident from the findings, both crop farming and cattle herding seems to be a male dominated enterprise in the survey area. This may likely have resulted from the cultural barrier imposed on women as it is being practiced in most parts of the far north where women are restricted from taking certain occupations that are basically considered to belong to males. By implication, the tendency to be involved in conflict is greater in males who are more energetic and therefore regarded as the protectors of every community.

Age: The result also indicates that, majority of the respondents were within the age range of 40-49 years for crop farmers (41.3%) and 30-39 years for the herdsmen (39.7%) respectively. It could therefore be inferred that both farming and cattle herding are

predominantly carried out by middle aged people within the range of 30-50 years who are energetic, more productive in the economic sector and more prone to conflict. This findings agreed with that of Kehinde (2011) and Adebayo and Olaniyi (2008). The mean age of the farmers was 42. Among the herdsman, the mean age was 31 years. All these, perhaps, indicates that cattle herding attracts more youths than farming.

Education level: The Table further reveals that farmers (50.8%) were far ahead of the herdsman (25.4%) in terms of formal education. Majority (74.6%) of cattle herders interviewed had no formal education at all, while only 7.9% of the farmers have exceeded the primary level and none from the herders. About 23.8% of the farmers have attended adult class, while 19% attended primary education. Also 17.5% of the herders have attended adult education class, while only 7.5% attended primary education. According to Ofuoku and Isife (2009) in their research on farmer-herder conflict in Delta State, educated people are more likely to bring better understanding to issues than uneducated people. Educated person may likely be more open to dialogue during conflict.

Ethnic groups: Result of the analysis in Table 4.5 indicates that half of the respondents are Hausa and Fulani tribes. It further indicates that Hausa and Fulani form the two major tribes in the state. It is quite evident that the study was carried out in Hausa land where most prominent tribes are Hausa and Fulani. Ethnicity may play a significant role in the conflict as noted by Tonah (2006) who stated that, farmer-herder differences are not only seen as resource conflict but are also sometimes represented as ethnic conflict involving the two groups. Since herder and farmer groups have very different values,

customs, physical and cultural characteristics, disputes between them are frequently characterized as ethnic conflict.

Marital status: More than three quarter of both farmers (84.1%) and herders (82.5%) are married, while only 11.1% of farmers and 17.5% of herders were single. This means that, majority of the respondents from both groups have at least one dependent, making them economically liable, hence greater tendency to challenge all kind of occupational threats. All the 3 female farmers were widows. The marital status corroborates the findings of Kehinde (2011) in his study on socioeconomic and environmental factors influencing farmer-herder conflict in Kabba/Bunu Local Government Area of Kwara State.

Years of residence: The result in Table 4.7 shows that, majority of both the farmers (82.5%) and herders (54%) have been living in the area for more than 16 years. 7.9% of herders spent less than 6 years in their respective areas, while none of the farmers had lived for less than 5 years. This results shows that majority of the respondents, being within the middle age category (see Table 4.2), grew up in the study area. According to the findings by Kehinde (2011), in a research conducted on farmer-herder conflict in Kabba/Bunu local government area of Kwara state, herders that lived in the community between 1-4 years were found to be in conflict with crop producers, while those that lived in the area above 8 years had the least frequency of conflict with crop farmers.

Farm size: Majority of the farmers (74.6%) owned a farm of less than 4 hectares per farmer, while only 7.9% own more than 7ha per farmer. This may be due to high pressure on land due to increase in population vis-à-vis the traditional land tenure of inheritance, whereby the land is usually divided into pieces and shared among several

family members. The implication is an increase in the tendency of the farmers to encroach more land reserves and cattle tracts, thereby creating room for conflict.

Herd size: Table 4.9 shows that the majority of the herders (68.2%) keep a herd size of less than 60 cattle, 12% within the range of 60-99, while only 12.7% maintain more than 100. The optimum herd size according to the Fulani in this sample lies between eighty and one hundred cattle (Iro, 2004). The smaller herd size is due to the activities of cattle rustlers which according to the herders, is posing serious threat to their existence.

Table 4.1: Distribution of Respondents according to Socioeconomic Characteristics

	Crop farmers		Herders		Pooled	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sex						
Male	60	95.2	63	100	123	97.6
Female	3	4.8			3	2.4
Age						
20-29	8	12.7	17	27	25	19.8
30-39	19	30.2	25	39.7	44	34.9
40-49	26	41.3	9	14.3	35	27.8
50-59	6	9.5	7	11.1	13	10.3
>60	4	6.3	5	7.9	9	7.1
Educationlevel						
Qur'anic	31	49.2	47	74.6	71	65.9
Adult	15	23.8	11	17.5	26	20.6
Primary	12	19	5	7.9	17	13.5
Secondary	5	7.9	0	0	5	4
Tertiary						
Ethnicity						
Hausa	63	100	0	0	63	50
Fulani	0	0	63	100	63	50

Maritalstatus						
Married	53	84.1	52	82.5	105	83.3
Not Married	7	11.1	11	17.5	18	14.3
Divorced	0	0	0	0	0	0
Widow	3	4.8	0	0	3	2.4
Residency (Yrs)						
1-5	0	0	5	7.9	5	4
6-10	2	3.2	7	11.1	9	7.1
11-15	9	14.3	17	27	26	20.6
above 16	52	82.5	34	54	86	68.3
FarmSize						
<1ha	15	23.8				
1-2ha	19	30.2				
3-4ha	13	20.6				
5-6ha	11	17.5				
7 &above	5	7.9				
HerdSize						
1-29	15	23.8				
30-59	28	44.4				
60-99	12	19				
7 and above	5	12.7				

4.2 Perceived Causes of Farmer-Herder Conflict

Respondents were requested to identify what they perceived to be the causes of their mutual conflict. The positive responses were graduated on a 5 point Likert Scale, from Strongly Disagree=1, Disagree=2, Undecided=3, Agree=4, strongly Disagree=5. The cut-off point was the mean of the cumulative points 1-5 which was calculated as 3.

Crop damage by cattle: Result from Table 4.10 indicates that a very large number of the respondents (f=88) have strongly agreed that crop damage by cattle is one of the causes of their mutual conflict.

Encroachment of cattle tracts: Similarly, result from Table 4.2 shows that, a very high number of the respondents (f=93) have agreed with encroachment of cattle tracts as one of the causes of the conflict. On the contrary, only a few herders (f=24) disagree.

Inadequate grazing reserves: result from Table 4.2 also indicates that a very significant number of the respondents (f=117) agree that inadequate grazing reserves is one of the causes of their mutual conflict. While none disagree, a few (f=9) remain undecided.

Lack of access to water point: The result also indicates that a significant number (f=50) of the respondents agree that lack of access to water point is among the causes of their mutual conflict, although many (f=47) disagree, few (f=29) remain neutral.

Killing of stray cattle: result shows that a significant number (f=56) of the respondents disagree as against those that agree (f=47) with killing of a stray cattle being among the causes of their conflict, 23 remain undecided.

Indiscriminate bush burning: result from Table 4.2 indicates that more of the respondents (f=59) agree that indiscriminate bush burning is among the causes of farmer-herder conflict while only 25 disagree and 42 remain undecided.

Cattle rustling: The result also revealed that, a high number of respondents (f=76) agree with cattle rustling as being among the causes of their mutual conflict. 36 disagree while 14 remain undecided.

Land tenure system: from the result, a significant number of the respondents (f=68) agree land tenure is one of the causes of conflict in the area. Only very small number (f=23) disagree, while the rest (f=35) remain neutral.

Pollution of water points: The result further indicates that majority of the respondents (f=45) agreed with pollution of water points as a cause of farmer-herder conflict in the study area, 40 remain neutral, while only 41 respondent disagree.

Change in climate condition: indicates that majority of the respondent (f=71) and the farmers have agreed with change in climate conditions as one of the causes of conflict in the area, while only (f=33) did not. The climate change may be the reason why herders move from the North to the South, as a result of the movement, the destruction of crops takes place.

Table 4.2: Distribution of Respondents according to their Perception on Causes of Conflicts

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Total	Mean
Crop Damage by Cattle	3	5	8	22	88	126	4.5
Land encroachment	4	20	9	32	61	126	4
Inadequate grazing reserves	0	0	9	29	88	126	4.6
Lack of access to water points	16	31	29	50	0	126	3.0
Pollution of Water points	5	36	40	45	0	126	3.0
Indiscriminate	3	22	42	36	23	126	3.4

Bush Burning							
Cattle							
Rustling	12	24	14	31	45	126	3.6
Land Tenure							
System	5	18	35	22	46	126	3.7
Change in							
Climate	12	21	22	44	27	126	3.4
Killing of stray							
cattle	22	34	23	41	6	126	2.8
<hr/>							
Farmer and herder (n=126)							

4.2.1 Factors responsible for the conflict between crop farmers and cattle herders

Result from the regression analysis in Table 4.3 above indicates that, out of 10 independent variables tested, 9 were statistically significant in predicting the outcome, which is the farmer-herder conflict. Out of these variables, 3 has a significantly strong affinity ($p < 0.01$) with the conflict. All the variables included in the model had positive signs, implying their direct relationship to the respondents' involvement in conflict. The -2 log likelihood (-2LL) of the above model estimating the causes of conflict between crop farmers and cattle herders in Katsina State, indicated that there is no difference between the estimated logistic model and the hypothesized model. This implies that

there is a significant relationship between the probabilities of engagement of farmers and herders in conflict and the explanatory variables included in the model. The Nagelkerke R-Square values and the model Chi-Square also suggest that the estimated conflict model had a good explanatory power.

Crop damage by cattle: This variable has a statistically significant ($p < 0.01$) direct relationship with farmer-herder conflict. It implies that a unit increase in the damage done to farmer's crops by the herder's cattle would lead to an increase in the probability of occurrence of the conflict between the two different parties. This corroborates with the findings of Ingawa *et al.* (1999) and Bello (2013) among many others, that crop damage by cattle is among the causes of herder-farmer conflict

Land encroachment: This is also strongly significant ($p < 0.01$). The positive relationship indicates that the more the cattle routes are encroached the more the probability to engage in conflict between farmers and the herders. This concurs with the assertion by Ingawa *et al.* (1999) and Yahaya (2008) that land encroachment is among the causes of herder-farmer conflict.

Inadequate grazing reserves: This variable has a direct influence on the crop farmer – cattle herder conflict and is statistically significant at $p < 0.01$. The implication is that, the more the grazing reserves continue to shrink, the more the probability of occurrence of the conflict.

Lack of access to water points: This variable was found to be statistically significant ($p < 0.05$) and has a direct relationship with the conflict between crop farmers and cattle herders.

Pollution of water points: This variable was found to be statistically significant ($p < 0.05$) and has a positive and direct relationship with the conflict between crop farmers and cattle herders. The more the water points became polluted by the activities of farmers, the more likely is the occurrence of the conflict between the two different common resource users.

Indiscriminate bush burning: Variable was found to be statistically significant ($p < 0.05$) and has a direct relationship with the conflict between crop farmers and cattle herders. According to a herder in one of the villages in Kaita local government during a focus group discussion, *“the farmers burn the trees, cut and burn the shrubs within their farms during the dry season just with the full intention to starve our cattle, and this is provocative”*

Cattle rustling: This variable was found to be statistically significant ($p < 0.05$) and has a positive relationship with the conflict between crop farmers and cattle herders. The more the menace continues to occur, the more likely that conflict between crop farmers and cattle herders thrives.

Land tenure system: The relationship between the independent and dependent variable is positive and significant at $p < 0.05$. The traditional land tenure system creates land shrinkage due to inheritance, which reduces the average farm size of a household, thereby creating more room for encroachment, which in turn give rise to conflict. On the other hand, the 1978 land use act currently being used, which vested so much control of land to government officials, does not favor the common man due to its complex

procedure of acquisition. Having title to land, has become a very difficult affair for the farmer and almost an impossible task for the herder.

Change in climate: This variable was found to be statistically significant ($p < 0.05$) and has a positive relationship with the conflict between crop farmers and cattle herders. The climate change can be the main reason for the movement of herders from north to south, which triggers crop destruction as the herd moves.

Killing of stray cattle: This variable, although maintains a positive relationship, is not significant at all. It is therefore not among the major causes of crop farmer–cattle herder conflict.

Test of hypothesis

The null hypothesis which stated that there is no significant factors responsible for the between the conflict between crop farmers and cattle herders was tested using the result of Table 4.3. From the results, 9 variables out of 10 variables were significant at $P < 0.01$ and $P < 0.05$ levels of probability. Therefore, the null hypothesis is rejected and the alternative which states that there is significant factors responsible for the between the conflict between crop farmers and cattle herders accepted.

Table 4.3: Logistic regression estimates of the factors responsible for the conflict between crop farmers and cattle herders

Variable	Coefficient	Standard error	t-Value
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Crop damage by cattle	2.233	0.700	3.165**
Land encroachment	1.489	0.505	2.175*
Inadequate grazing reserves	1.237	0.525	3.444**
Lack of access to water points	1.888	0.690	2.737**
Pollution of water points	1.392	0.545	3.022**
Indiscriminate Bush Burning	0.776	0.570	1.512
Cattle Rustling	0.756	0.509	1.485
Land Tenure System	1.002	0.515	1.621
Change in Climate			
Conditions	1.015	0.525	1.507
Killing of stray cattle	0.33	0.614	0.713
Constant	4.23	0.652	4.631*
Model Chi Square	51.15		
Log Likelihood	0.008		
Nagelkerke R- Square	0.62		
N=126			

* P< 0.05 and **P<0.01 levels of probability

4.3 Institutions Involved in Managing and Resolving Farmer-Herder Conflict

4.3.1 Identification of Institutions Involved in Managing and Resolving Farmer-Herder Conflicts.

Result from Table 4.4 indicates that 100% of all the respondents, both the farmers and the herders acknowledge the involvement of traditional rulers, police and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) in conflict management and resolution in the area. This was followed by Government committees (48.4%) which are ad-hoc committees set up to resolve issues to do with the conflict as they arise. It usually comprises of representative from the state government, local government, representative each from the Emirate council, the District council, the police, the

representative from secretariats, representative each from farmers association, Miyetti Allah Cattle Breeders Association and the immigration, customs, police and sometimes the military. From the result, the involvement of the courts according to all the respondents seems to be very minimal (26.2%) as indicated by both the farmers (23.8%) and the herders (28.6%). Conflict, in most cases were been resolved by the institutions mentioned earlier. Crop farmers Association recorded low pooled percentage (14.3%) due to the fact that, in as much as the respondents are concern, the Umbrella National Farmers Association such as All Farmers Association, True Farmers Association, have no official representation in most of the villages covered.

Table 4.4: Distribution of Institutions Involved in Managing and Resolving Farmer-Herder Conflicts

Institutions	Farmers		Herders		Pooled	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Traditional Rulers	63	100	63	100	126	100
Police	63	100	63	100	126	100
Courts	15	23.8	18	28.6	33	26.2
Government Committees	32	50.8	29	46.0	61	48.4
Crop Farmers association	13	20.6	5	7.9	18	14.3
Miyetti	63	100	63	100	126	100

4.3.2 Performance of Institutions Involved in Managing and Resolving Farmer-Herder Conflicts

Respondents were asked to evaluate the effectiveness of the institutions involved in managing farmer-herder conflict in the study area. Result from the analysis in Table 4.5 assesses the institutions' level of effectiveness in managing the conflict based on the weighted mean score. A cut-off point of 3 was selected. An institution with a weighted mean score below 3 was considered as inefficient, while weighted mean of 3 and above was regarded as being efficient. Findings from the research shows that a significant number of the farmers (Mean=2.2) and herders (Mean=1.7) indicates that the police institution is ineffective having scored a total weighted mean of 2.0, which is far below the cut-off point. This shows that the police have not been effective in the way they handle the conflict. The degree of effectiveness of the traditional rulers was also investigated. The result reveals a total mean score of 3.5, which means that the traditional rulers are more effective in managing the conflict. This may be attributed to the closeness between the traditional rulers and the masses. The table further reveals that, Miyetti Allah (MACBAN) are more effective in managing the conflict having recorded a total mean of 3.2. This was agreed by both farmers (mean=3.3) and the herders (mean=3.5). It can be inferred from this that the nomadic leaders are capable of managing the conflict. This is because they fall among the herders' ethnic group and do speak their language and understand their culture very well. Data in the Table also shows the total mean score of 2.4 for the courts, which means that the courts are not effective in the way they handle the conflict. The government committees, having

scored a total weighted mean of 3.0, are therefore regarded as efficient in managing the conflict. This may be due to the inclusion of traditional leaders and MACBAN officials into the committee's membership.

It can be inferred from the table that the traditional rulers and cattle breeders association are the most successful institutions that can manage the conflict, while the police and courts are regarded as unsuccessful. This is probably as a result of the following reasons: people live and respect their customs, traditions and leaders, while the police, courts and local government officials are perceived to be corrupt and make unequal treatment when the conflict occurs.

The in-depth interview also shows that majority of the key informants believed that the traditional rulers and Miyetti Allah Cattle Breeders Association were more effective in handling conflicts.

Table 4.5: Performance of Institutions Involved in Managing Farmer-Herder Conflicts

Institutions	Farmers	Herders	Total	Overall Perception
Police	2.2	1.7	2.0	Ineffective
Courts	3.0	2.2	2.6	Ineffective
Local Government Committee	3.1	2.9	3.0	More effective
Traditional Rulers	3.9	3.0	3.5	More effective
Crop Farmers Associations	2.9	2.5	2.7	Ineffective
Miyetti Allah Cattle Breeders Association (MACBAN)	2.9	3.5	3.2	More effective

Figures are mean derived from 5-point Likert scale of 1= Very Ineffective (Strongly Disagree) to 5= Very Effective (Strongly Agree).

4.4 Mechanisms Employed by Institutions in Managing Farmer-Herder Conflicts

Result from Table 4.6 shows the various methods of conflict resolution commonly employed in managing/resolving the farmer-herder conflict in the study area. Greater percentage of the respondents (42.5% of farmers and 37.6% of herders) indicated amicable resolution as the most popular method of managing/resolving conflict followed by verbal warning with a score of 38.2% farmers and 36.0% herders). Payment of compensation (18.9% of farmers and 26.4% herders) was less popular in the survey area, so also with the re-allocation of new plot which was hardly experienced. The pattern of result obtained is attributed to the leading role played by the informal institutions in resolving the conflict.

Table 4.6: Distribution of Respondents by Method of Resolution Commonly Used

Conflict Resolution	Farmers		Herders		Pooled	
	Frequency	percentage	Frequency	percentage	Frequency	percentage
Payment of Compensation	20	31.7	33	52.4	53	42.1
Verbal Warning	41	65.1	45	71.4	86	68.3
Amicable Resolution	45	71.4	47	74.6	92	73.0

Total	106	168.3	125	198.4	231	183.3
Multiple responses; farmer and herder (n > 126)						

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study was conducted in Katsina State. In all, 126 respondents (63 crop farmers and 63 cattle herders) were selected for enumeration by use of interview schedule using structured interview schedules in form of questionnaire Focus group

discussion was also employed. The data collected were analyzed using mean, frequency counts, percentages, ratings and Likert scale, while logistic regression model was used as inferential statistics.

Major findings of the studies revealed that majority of the farmers are males and only very few are female. In the case of the herders, all the respondents are males. Majority of the crop farmers were within the age range of 40-49 years, while the largest percentage of the herders cut across 30-39 years. Majority of crop farmers and of cattle herders interviewed had no formal education at all. More than three quarter of both farmers and herders are married. Most of the herders keep a herd size of less than 60 cattle due to activities of cattle rustlers. 12% within the range of 60-99, while only 12.7% maintain more than 100.

Result from the logit regression analysis indicates that only 3 out of 10 causal variables of farmer-herder conflict have significant relationship as factors responsible for the conflict in the study area. These are crop damage by cattle (3.165), land encroachment (2.175) and inadequate grazing reserves (3.444).

All the respondents interviewed identify traditional rulers, police and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) as major arbitrators of farmer-herder conflict, which are also more effective in handling the conflict in the study area. On methods of conflict resolution commonly employed, amicable resolution was identified as the most popular, followed by verbal warning.

5.2 Conclusion

From the findings, socioeconomic variable such as age has significant implication on the conflict. This is because of the fact that farming and rearing of animal are predominantly carried out by middle aged people within the range of 30-50 years, who are energetic and therefore more willing to participate in violent conflict than the elderly persons. Also, a very low level of formal education is peculiar to the respondents, which is not a healthy situation with regard to the conflict; this is because educated people are more likely to bring better understanding to issues than uneducated people. Despite the importance of education, many of the respondents have not embraced it. The major immediate causes of the conflict are crop damage and land encroachment. Cultivation of crops was extended into grazing reserves and cattle routes, while crops are being eaten and destroyed by cattle. This is an issue that has consistently been in the forefront of most of the farmer-herder conflicts. Each party blaming the other, but the reality is that, land has been under pressure as a result of increase in population coupled with the problem aggravated by poor land tenure administration. As such, farmers view cattle tracts and grazing reserves as lands not possessed by anyone and can therefore be freely encroached. The herder on the other hand, has the believe that feeding his cattle at whatever circumstances is a superior and uncompromising right given to him by nature. One of the major threats to peaceful coexistence according to findings from group discussion with some traditional rulers is the damage caused by the influx of *Udawa* and *Bukoloji* cattle herders, who usually comes through Niger/Nigeria border. These types of herders do not recognize the existence of any boundary in terms of their grazing and they come in hundreds and are usually fully armed with modern guns. They move with thousands of cattle sparing no farm. At the same time, a mix of weather-related factors has pushed farmers to cultivate more land each year, leaving the herders

fewer places to water and graze their stock. The resulting contests have been responsible for the deaths of several hundred Nigerians. This calls for urgent attention. It is therefore, important for government at all levels to put more machinery on ground to encourage climate change adaptation and mitigation. Also, Nigeria as a country should invest more in combating crimes and also research should be enhanced to combat desert encroachment, which in the long run may reduce the north-south movement of the herders.

The Traditional rulers played a significant role in the management of herder-farmer conflict, but the abolishing of native authority followed by the establishment of 1978 land use act that vested the authority over land to government, has limit their effort in this regard.

5.3 Recommendations

The following recommendations are suggested for proper conflict resolutions between cattle herders and the farmers:

- i. Formal education for both the herders and the farmers should be encouraged through sensitization using individual and mass communication with the aid of extension agents and radio programmes respectively. Also nomadic education and vocational training schools should be strengthened to perform better.
- ii. There should be enhanced public information and education on the need to respect the law with regard to restricted areas such as grazing and forest reserves.

- iii. Government at all levels should explore better involvement of indigenous resource user groups in policies relating to natural resource management and utilization.
- iv. Survey, demarcation, beaconing and gazetting of the government owned grazing reserves and cattle routes, to reduce pressure on the already overstretched reserves.
- v. Indiscriminate burning of rangelands and forest reserves should be controlled through sensitization campaigns by Non-Governmental Organizations and environmentalists, while government sanctions erring party.
- vi. Governments and communities should jointly cooperate to improve the security situation around the villages with a view to tackling the menace of cattle rustling.
- vii. The National Assembly should amend the existing Land use policy so as to afford the herders a more balanced recognition in terms of land ownership, usage and control. This may encourage the herders to accept the sedentary life.
- viii. Farmers and herders should form more cooperatives and associations that can represent their interest and enable them speak as a group. This may reduce the frequency of 'jungle justice' by seeking redress from relevant authority whenever dispute arose.
- ix. The option of sedentarization of the herders in order to control the frequency of their North-South movement should be fully explored. This can be done in collaboration with traditional rulers and the herders' famous Miyetti Allah

Cattle Breeders Association (MACBAN) which the herders have so much faith in.

- x. Increased international border patrol during the dry season in order to obtain information on the influx of Udawa and Bukoloji herders from the neighbouring countries especially Niger Republic. This will enable the authority to take a proactive decision on how to prevent violent confrontation.

5.4 Contribution to Knowledge

1. Most of the herders were found to keep cattle herd of less than 60 cattle due to activities of cattle rustlers while only 12.7% maintain more than 100 who use extra vigilance to ensure security of the herds.
2. The study also found that 3 variables were the factors responsible for the cause of conflict in the study area. These are crop damage by cattle (3.165, $p>0.01$), land encroachment (2.175, $p>0.01$) and inadequate grazing reserves (3.444, $p>0.01$).
3. The study also indicates that 100% of all the respondents, both the farmers and the herders acknowledge the involvement of traditional rulers, police and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) in conflict management and resolution in the area.

REFERENCES

- Abbas, I. M. (2009). No Retreat No Surrender Conflict for Survival between Fulani Cattle Herders and Farmers in Northern Nigeria, in *European Scientific Journal*, 8(1), 331-349.
- Abubakar, M. B. (2012). Sociological Assessment of Nomadic Pastoralist and Sedentary Farmers Conflicts in Katsina State. *An unpublished M.Sc. Thesis submitted to Sociology Department, Ahmadu Bello University, Zaria.*
- Adebayo, O. and Olaniyi, A. (2008). Factors Associated with Pastoral and Crop Farmers Conflict in Derived Savannah Zone of Oyo State Nigeria, in *Journal of Human Ecology*, 23(1), 71-74.
- Adamu, M. (2002). The Role of the Native Authority in the Agrarian and Pastoral Economy of Katsina Emirate:1903-1960. *An unpublished Ph.D Thesis submitted to History Department, Ahmadu Bello University, Zaria.*
- Adamu, M. M. (2007). Colonial Origins of Post-colonial Conflicts between Cattle Rearers and Farmers in Katsina State, in *Historical perspectives in Nigeria's post-colonial conflicts*. Olayemi, A., Fwatshek, S.U. and Okpeh, O.O. (Eds.) Nigeria, Unimark Ltd.
- Adisa, R. S. (2012). Land Use Conflict between Farmers and Herdsmen – Implications for Agricultural and Rural Development, *Department of Agricultural Extension and Rural Development, University of Ilorin, Ilorin, Nigeria.*
- Antonio, O. and Silvia, S. (2009). Livestock and Pastoralists. *Livestock thematic Papers: Tools for Project Design, International Fund for Agricultural Development* Retrieved from www.ifad.org/lrkm/index.htm
- Ajala, M. (2000). Socio-economic Factors influencing Dairying among the Agro Cattle Herders in the Northern Guinea Savanna of Nigeria” *An unpublished Ph.D Thesis submitted to the department of Agricultural Economics and Rural Sociology, Faculty of Agriculture. Ahmadu Bello University, Zaria.*
- Akpaki, A. Z. (2002). *Ackerbauern and mobile tierhatter in zentral & nord benin.* Berlin: dietrich reiner verlag.
- Bello, A. U. (2013). Herdsmen and Farmers Conflicts in North-Eastern Nigeria: Causes, Repercussions and Resolutions, MCSER-CEMAS-Sapienza University of Rome, in *Academic journal of Interdisciplinary Studies*, 2(5): 129-139
- Berger, R. (2003). Conflict over Natural Resources among Pastoralists in Northern Kenya: A Look at Recent Initiatives in Conflict Resolution. *Journal of International Development*, 15: 245-257.

- Best, S. (2009). *Protracted Communal Conflict and the Failure of Conflict Management: the Bassa-Egbura conflicts in Toto Local Government Area, Nasarawa State, Nigeria*. Ibadan: John Archers Publishers.
- Blench, R. 1994. The expansion and adaption of Fulbe pastoralism to subhumid and humid conditions in Nigeria. *Cahiers d'etudes africaines* 34 (133-135).
- Blench, R. (2004). *National resource conflicts in North-central Nigeria: A handbook and case studies*. London: Mandaras Publishing.
- Blench, R. (2010). *Conflict Between Cattle herders and Cultivators in Nigeria*. Cambridge: Kay Wasiamson Educational Foundation.
- Centre for Peace, Diplomatic and Development Studies (CPDDS), Unimaid (2012). Nigeria Stability and Reconciliation Programme 'Watching Us Die on CNN'. *Report on the Study of Community-Level Conflict Management Mechanisms in the Niger Delta, Middle Belt and North East, Zones of Nigeria: Analytical report, Abuja, Vol 1*. Pp69-84
<http://www.nsrp-nigeria.org/wpcontent/uploads/2013/11/CCMM-Vol-1-Reports-6.12.12.pdf>
- Centre for Conflict Management and Peace Studies (CECOMPS), Unijos (2012). Nigeria Stability and Reconciliation Programme 'Watching Us Die on CNN'. *Report on the Study of Community-Level Conflict Management Mechanisms in the Niger Delta, Middle Belt and North East, Zones of Nigeria: Analytical report, Abuja, Vol 1*. Pp48-68
<http://www.nsrp-nigeria.org/wpcontent/uploads/2013/11/CCMM-Vol-1-Reports-6.12.12.pdf>
- Centre for Ethnic and Conflict Studies (CENTECS), Uniport, (2012). Nigeria Stability and Reconciliation Programme 'Watching Us Die on CNN'. *Report on the Study of Community-Level Conflict Management Mechanisms in the Niger Delta, Middle Belt and North East, Zones of Nigeria: Analytical report, Abuja, Vol 1*. Pp23-47 <http://www.nsrp-nigeria.org/wpcontent/uploads/2013/11/CCMM-Vol-1-Reports-6.12.12.pdf>
- Coser, L. A. (2000). *Continuities in the Study of Social Conflict*. London: Macmillan publishers. Retrieved from: www.amazon.com
- De Haan, C. (2002). Nigeria Second Fadama Development Project (SFDP), Project Preparation Mission Report, Livestock Component. World Bank. Pp 1-13.
- Durkheim, E. and Lewis, A. A. (1997). *The Division of Labour in Society*. Free Press.

- Ega, L. A. and Erhabor, P. O. (1998). Farmer-Pastoralists Conflict in National Fadama Development Project in Core States: *proceedings of the workshop on Farmer-Pastoralists Conflict and the Sustainability of Fadama Users' Association*, held in Hillton Hotel, Abuja 25-26 Feb. Ingawa, S.A, Ega L.A, Erhabor, P.O (eds). Pp 9
- Ekong, E. E. (2003). *An Introduction to Rural Sociology* (2nded.). Uyo, Nigeria: Dove Educational Publishers.
- Eniola, F. (2007). Key Issues in Livelihoods Security of Migrant Fulani Cattle herders: Empirical evidence from Southwest Nigeria. *AEGIS European Conference on African studies – African Alternatives: Initiative and Creativity beyond Current Constraints. 11-15 july*. African Studies Centre, Leiden, the Netherlands.
- Ezeomah, C. (1985). Land tenure constraints associated with some recent experiments to bring formal education to nomadic Fulani in Nigeria. Overseas Development Institute Agricultural Administration Unit Paper 20D, London.
- Folger J. P., Poole M. S. and Stutman, R. K. (2009). *Working through Conflict Strategies for Relationships, Group and Organizations*. USA: Pearson Education, Inc.
- Gefu, J. O. (1986). *Land Utilization Patterns of Nomadic Pastoral Producers in Northern Nigeria: the Sedentarization Issue Revisited*. Land Resource Workshop Sponsored by Bayero University and the Ford Foundation.
- Gyong, J. (1998). Conflict Management: Traditional Methods from Pre-colonial Times to the Present. *A Paper presented at the conference on enhancing peaceful co-existence in Nigeria. Organized by the centre for peace and conflict resolution. National War Col. Abuja.*
- Gyong, J. (2007). *The Structure of Communication in Peace and Conflict Resolution, Identity, Crisis and Development in Africa*. (B. A. Celestine, Ed.) Lagos. Malhouse Press.
- Hagberg, S. (1998). Between Peace and Justice: Dispute Settlements between Karaboro Agriculturalists and Fulbe Agro-Pastoralist in Burkina Faso. *Uppsala Studies in Cultural Anthropology*. Uppsala Universitet.
- Heinrichy, W. (2006). *Building the Peace: Experiences and Reflection of Peace-Building. The Case of Somalia*. Sweden: Life and Peace Institute.
- Hoffman, I., Umar, B. F. and Tukur, H.M. (2008). Crisis and Cooperation over Control and Management of Zamfara Reserve, Nigeria. In: Gefu, J.O. Clement, B.I.A. and Maisamari, B. (Eds.) *The Future of Transhumance Pastoralism in West and Central Africa: strategies, dynamics, conflicts and interventions*. Shika-Zaria: National Animal Production Research Institute.

<http://www.katsinastategov.org>

<http://www.ireports-ng.com>, Mar 13, 2014

<http://HYPERLINK> "http://www.katsinastate-igac.com/history" www.katsinastate-igac.com/history

<http://www.nigerianewsdigest.com>, May 8, 2014

<http://www.sunnewsonline.com>, Mar 24, 20

Ibrahim, A. (2012). Linking vision with reality in the implementation of policy framework for pastoralism in Nigeria. *Pastoralism: Research, Policy and Practice* 2: 7.

Ibrahim, M., Adesiji, G. B., Tyabo, I. S., Umar I. S. , Ndanitsa M. A, and Abdullazeez, A. (2014). Extent of Extension Service Delivery for Agro-Pastoralists in Niger State, Nigeria. *Research Journal on Humanities and Social Sciences* 4(20), 82-87. Retrieved online from: www.iiste.org/Journals/index.php/RHSS/article/download/15793/16584

Ifatimehin, O. O. and Tenuche, M. S. (2009). Resource Conflict among Farmers and Fulani Herdsmen: Implications for resource sustainability. *African Journal of Political Science and International Relations*, 3(9), 360-364.

Ingawa, S. A., Tarawali, G and Kaufmann, R. (1989). Grazing Reserves in Nigeria: Problems, Prospects and Policy implications. African Livestock Policy Analysis Network. *Network Paper no. 22, December*. <http://www.ilri.org/InfoServ/Webpub/fulldocs/X5516E/X5516E00.HTM>

Ingawa, S. A., Ega, L. A., and Erhabor, P. O. (1999). *Farmer-Pastoralist Conflict in Core-states of the National Fadama Project*. Abuja: FACU.

Integrated Regional Information Networks (2009). Nigeria: Government steps in to Curb Farmer-Nomad Clashes. *Humanitarian News and Analysis*, A project of the UN Office for the Coordination of Humanitarian Affairs.

Iro, I. (1994). *The Fulani Herding System*. Washington: African Development Foundation.

Iro, I. (2000). Should Pastoral Fulani be Sedenterized? *A Literature Review and Theoretical Framework on Policy Issues in the Socioeconomic Transformation of the Pastoral Fulani of Nigeria*. Retrieved from HYPERLINK "mailto:webmaster@gamji.com" webmaster@gamji.com

Iro, I. (2004). *Nomadic Education and Education for Nomadic Fulanis*. Washington DC, USA.

- Jeong, H. (2008). *Understanding Conflict and Conflict Analysis*. London: Sage Publication
- Kehinde, E. A. (2011). Socio-economic and Environmental Factors Influencing Conflict between Crop Producers and Pastoralists in Kabba-Bunu Local Government Area of Kogi State, Nigeria. *An unpublished Phd. Dissertation submitted to Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria.*
- Kaufmann, R., Chater, S. and Blench, R.M. (eds.) (1986). *Livestock systems research in Nigeria's subhumid zone*. Proceedings of Sub-humid zone Livestock Conference, Kaduna 29/10-2/11/84. International Livestock Centre for Africa, Addis Ababa
- Leadership Newspaper May 17, 2011
- Marshall, M. G. and Gurr, T. R. (2005). *Peace and Conflict 2005: A Global Survey of Armed Conflicts, Self-determination Movements, and Democracy*. Maryland: Center for International Development & Conflict Management.
- Marx, K. (1971), Preface to *A Contribution to the Critique of Political Economy*, Tr. S.W. Ryazanskaya, edited by M. Dobb. London: Lawrence & Wishart.
- Momale, S. B. (2003). Resource Use Conflicts in Agricultural and Pastoralist Areas of Nigeria. In: Gefu J.O. (Ed.) *Land tenure systems in Nigeria; evolving effective land use policy for poverty alleviation*. Nigeria: Land Network.
- Morizt, M. (2010). Understanding Herder-Farmer Conflicts in West Africa: Outline of a Processual Approach. *Journal of Human Organization*, 69(2), 138-148.
- NAN (2009). New Grazing Reserves to Gulp N65m. In *Daily Trust, Thursday, September 22(54):07.*
- National Population Commission (2006). 2006 Official Dairy, National Population Commission. Abuja
- FMARD (1988): Federal Republic of Nigeria: Agricultural Policy, Federal Ministry of Agriculture and Rural Development, Lagos.
- Nkom, S. (1999). Managing Conflicts: A Sociological Appraisal. *Paper presented at the workshop on media and conflict resolution, organized by the Media Service Centre. Kaduna, September 6-7.*
- Nweze, N. J. (2005). Minimizing Farmer-Herder Conflicts in Fadama Areas through Local Development Plans: Implications for Increased Crop/Livestock Productivity in Nigeria. *A Paper Presented at the 30th Annual Conference of the Nigerian Society for Animal Production, Held on 20th -24th March.*

- Ofuoku, A. U. and Isife, B. I. (2009). Causes, Effects and Resolution of Farmers-Nomadic Cattle Herders Conflicts in Delta State, Nigeria. In *International Journal of Sociology and Anthropology*, 1(2):49.
- Okello, A. L., Majekodunmi A. O., Malala A., Welburn, S. C. and Smith, J. (2014). Identifying Motivators for State-Pastoralist Dialogue: Exploring the Relationships between Livestock Services, Self-Organisation and Conflict in Nigeria's pastoralist Fulani. Retrieved from <http://www.pastoralismjournal.com/content/4/1/12>
- Pyramid Trust (2009). "Jigawa Cattle Rearers, Farmers in Bloody Battle" Sunday, 19 July
- Tonah, S. (2006). Managing Farmer-Herder Conflicts in Ghana and Volta Basin. *Ibadan Journal of Social Sciences* 4(1):33-45.
- Turner, M. A. (2008). Farmer-Herder Relations and Conflict Management in Agro-Pastoral Zone of Republic of Niger. In J. C. Gefu (Ed.), *The Future of Transhumance Pastoralism in Nigeria*. Shika-Zaria: NAPRI.
- Tukur, M. B. (2013). *Conflicts between Transhumant Pastoralist and Farmers in Nigeria: The Way Out*. Wordpress.com Retrieved from <https://pastoralist2.wordpress.com>. November 11, 2014
- Umar, B. F. (2008). The Pastoral-Agricultural Conflicts in Zamfara State, Nigeria . North Central Regional Centre for Rural Development Iowa State University, Ames, USA.
- United Nations Population Fund. (2014). *UNPFA*. Retrieved May 24, 2015, from <http://nigeria.unfpa.org/katsina.html>: <http://nigeria.unfpa.org/katsina.html>
- Yahaya, Y. S. (2008). Perspectives on Nomads/Farmers Conflicts. A paper presented at Zamfara State College of Education, Zamfara state, Nigeria. September 14th–16th.

APPENDIX I: RESEARCH QUESTIONNAIRE

I am a Postgraduate student of the Department of Agricultural Extension and Rural Sociology, A.B.U., Zaria conducting a research on “CAUSES AND RESOLUTION OF CONFLICT BETWEEN CATTLE HERDERS AND CROP FARMERS IN KATSINA STATE” in partial fulfillment of the award of M.Sc. Agricultural Extension. Information provided shall be strictly confidential and will be used for academic purpose only.

Request: Please tick or respond where appropriate.

SECTION A: SOCIO-ECONOMIC CHARACTERISTICS

1. **Name (Optional):**
2. **Title (if any):** (a) Official [] (b) Unofficial []
3. **Village/Town/LGA:**
4. **Age (Years):** (a) 20 – 29 [] (b) 30– 39 [] (c) 40– 49 [] (d) 50 – 59 [] (e) 60 and above []
5. **Sex** (a) Male [] b. Female []
6. **Religion:** (a) Christianity [] (b) Islam [] (c) Traditional []
7. **Highest Level of Education:** (a) Qur’anic [] (b) Adult [] (c) Nomadic [] (d) Primary [] (e) Secondary [] ((f) Tertiary [] (g) None of the above
8. **Ethnic group:** (a) Hausa [] (b) Fulani [] (c) Yoruba (c) Others (specify).....
9. **Country of origin:** (a) Nigeria [] (b) Niger Republic [] (c) Chad [](d) Others (specify).....
10. **Years of Residence:**(a) 1– 5 [] (b) 6 – 10 [] (c) 11 – 15 [](d) 16 and above []
12. **Marital status:** (a) Married (b) Not Married (c) Divorced (d) Widow
13. **Number of wives:** (a) One [] (b) Two [] (c) Three [] (d) Four [](e) Others, (specify)...
14. **Number of Children:** (a) None (b) 1– 5 [] (c) 6 – 10 [] (d) 11 – 15 [] (e) 16 and above []
15. **Occupation:** (a) Farming [] (b) Cattle rearing [](c) Farming and cattle rearing[]
16. **Number of Cattle:**(a)None [] (b)1-100 [] (c)101-200 [] (d)201- 300 [] (e)301 andabove[]
17. **Size of Farm:** (a)Less than 1ha [] (b) 1-2ha [] (c)3-4ha [] (d) 5-6ha [] (e) 7ha and above []
18. **Group/association:**(a)Religious[](b)Professional[](c)Cooperative[(d)Traditional/cultural[]

SECTION B: CAUSES OF THE CONFLICT

Kindly choose either 1, 2, 3, 4 or 5 from the followings which best indicate your opinion regarding the causes of the conflict. Please remember to tick only once for each of the listed items.

1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = strongly Agree

The followings are the likely causes of the conflict in your area?

S/N	Causes	1	2	3	4	5
19	Crops damage by cattle					
20	Land encroachment					
21	Inadequate grazing reserves					
22	Lack of access to water points					
23	Killing of stray cattle					
24	Pollution of water points					
25	Indiscriminate Bush Burning					
26	Others (Specify)					

S/N	Causes	1	2	3	4	5
27	Land tenure system					
28	Disregard to rules and regulations					
29	Change in Climate condition					
30	Land use policy that vested control of land to Government Authorities					
31	Family Problem					
32	Financial Problem					
33	Perceived Hatred					
34	Others (Specify)					

- 35. Available land use resources in the area: (a) Forage [] (b) water [](c) land [] (d)Others (specify): -----
- 36. Size of the grazing area: (a) Large enough[] b. Too Small [] (c)No Idea[]
- 37. Grasses and or fodder in the grazing area: (a) Abundant [](b) Scarce [] (c)No Idea []

- 38 Public water points in the area: (a) Sufficient [] (b) Insufficient [] (c) No Idea
- 39 Things that hinder free access to these resources: (a) Blocking of access to pasture and water by crop farmers [](b) Construction of Public and Private Building on Grazing Areas [](c) Others (specify): -----

40. Involvement in Government development plans in the community : (a)yes [] (b) No []
41. If not, why? (State):-----
42. Frequency of involvement in the conflict: (a) frequent [] (b) Not Frequent []
43. Apart from disputes resulting from animals, have you ever had any problem with your host community before? a. Yes [] b. No []
44. If yes, what was the cause of the dispute? a. Political crisis [] b. Religious crisis [] c. Cultural disharmony []d. Others (specify): -----

SECTION C: INSTITUTIONS INVOLVED IN MANAGING THE CONFLICT

45. Which of the following institutions are involved in managing the conflict in your community? Please tick in the box [] as appropriate.

- a. Traditional rulers []
- b. Police []
- c. Courts []
- d. Local Government Committees []
- e. Crop Farmers Association []
- f. Miyetti Allah Cattle Breeders Association []

46. The following institutions are efficient in their role of managing the conflict in your area?

1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = strongly Agree

S/N	FORMAL	1	2	3	4	5
A	Police					
B	Courts					
C	Local Government Committees					
D	Others (specify)					

S/N	INFORMAL	1	2	3	4	5
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A	Traditional rulers					
B	Crop Farmers Association					
C	Cattle Breeders Association					
D	Others (Specify)					

47. Who settles disputes between the pastoralists and crop producers? a. Law court [] b. Traditional rulers [] c. Farmers association [] d. Police [] e. Others (specify): ---
48. How was the conflict resolved? a. Payment of compensation [] b. verbal warning [] c. amicable resolution [] d. re-allocation of new plot [] e. Others (specify)--
49. Was the settlement satisfactory? a. Yes [] b. No []
50. If no, why? a. There was no justice [] b. Payment was inadequate [] c. Payment was beyond damage [] d. Others (specify) -----

SECTION D: SOLUTIONS

51. Suggest possible way(s) in which farmers can help resolve the conflict in the community

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.....

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52. Suggest possible way(s) in which herders can help resolve the conflict in the community

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.....

.....

53. Suggest possible way(s) in which the above institutions can further be strengthened to perform better

.....

.....

54. Suggest what you think government should do to resolve the conflict

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