SOCIO-ECONOMIC ASSESSMENT OF RESOURCE USE CONFLICT BETWEEN CROP FARMERS AND CATTLE HERDERS IN MISAU LOCAL GOVERNMENT AREA, BAUCHI STATE.

BY

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF SCIENCE DEGREE IN AGRICULTURAL EXTENSION AND RURAL SOCIOLOGY

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DECLARATION

I hereby declare that this dissertation titled **"Socio-Economic Assessment of Resource Use Conflict between Crop Farmers and Cattle Herders in Misau Local Government Area, Bauchi 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 at any institution. All borrowed information have been duly acknowledged in the text and a list of references provided.

_____ _____

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CERTIFICATION

This dissertation titled '**Socio-Economic Assessment of Resource Use Conflict Between Crop Farmers And Cattle Herders in Misau Local Government Area, Bauchi State'**, by Sani **GARBA** meets the regulations governing the award of the degree of Masters in Agricultural Extension and Rural Sociology of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my Late father Alhaji Garba Uzum for his tireless effort to see me succeed in life. May Allah have mercy on him!

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ABSTRACT

Crop farmers and Cattle herders' conflicts have remained the most prevailing resource-use conflict in Bauchi State especially in Misau Local Government Area. Social and economic factors continue to inflame violent conflicts. The competition between these two agricultural land user-groups threats the means of survival and livelihoods of both groups in Misau Local Government Area. The study had the following specific objectives: to describe the socio-economic characteristics of the farmers and cattle herders; determine the socio-economic causes of the conflict in the study area; determine the socio-economic effects of conflict on both groups, evaluate the perception of crop farmers and cattle herders on the performance of institutions involved in managing the conflict. Both qualitative and quantitative methods of data collections were used. The respondents were drawn using purposive, multi stage and snowball-sampling methods in the four selected Villages. Information was elicited using one hundred and thirty-six (129) structured questionnaire and Eight (8) key informants were selected for the in-depth interview. The quantitative data collected were subjected to both descriptive (frequency count and percentage) and inferential (Logit regression) statistical analysis while the qualitative data were analysed in a thematic form. Data analysis revealed that crop damage (-3.479), blockage of watering points (2.601) were both statistically significant at $p < 0.01$ and Lawlessness (1.198) statistically significant at $p < 0.05$ as the major sources of conflict. The findings also revealed lost of expected yield (55.0%), lost cattle, displacement of people (69.0%) and loss of human lives (68.2%) as the major effect of conflict. The study concludes that crop farmers and cattle herders' conflict instigate a loss of livelihoods to both groups and contributes to spread and persistent violence such as ethnic clashes and armed robbery. Therefore, it is in the interest of the State to address the genuine needs of the cattle herders for availability of grazing land, resolve the recurring conflicts in the agricultural sector that provides employment to reasonable portion of the country's population. The study finally recommends that farmers should adopt intensive cultivation by using improved seeds and farm inputs. The cattle herders should embark on fodder production such as growing of Guatemala and Bracharia to feed their cattle in times of scarcity during the dry season. The study also recommends that the religious, traditional and nomad leaders should give more efforts in preaching the implications of the conflict on the people and the community in general.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Land is probably the most important resource needed by Man for his day-to-day existence. All human livelihoods and activities are directly or indirectly dependent on land at varying thresholds. But land connotes different meanings to the various user groups. For instance, builders, manufacturers, fishermen, miners, hunters and farmers have different specifications in their requirements for land for their production/services. Out of all user groups, agricultural production perhaps exhibits the highest form of sophistication in its use of land. Not only must agricultural land be capable of supplying crop-specific nutrients and water; soil temperature, structure, texture and PH levels are inevitable requisites in the choice of land for agricultural production activities. Yet, land is a limited, somewhat scarce resource with both artificial and natural access and usage barriers (Rashid 2012).

These factors of specifications, multifarious uses of land and its limitedness have necessitated that various shades of competition for its utilization must ensue. Thus, competition for land between and within various user groups has been the bane of mankind since time immemorial. Non-agricultural user groups compete with agricultural user groups on one hand, while there are various levels of intra-user group competition on the other. Indeed, competition for land use is becoming keener and fiercer, largely due to increasing human and animal populations (Richard 1976). It has been illustrated that increasing population growth rate has continued to exert great pressure on available land resources with varying environmental and socioeconomic implications (Fiki and Lee, 2004).

Agriculture is the main stay of the northern Nigeria economy, even though there are other mineral resources. The sustainability of agriculture in northern Nigeria economy requires strategic balance in the ecological and socio-economic activities as well as political considerations. Abbass (2012) found that in northern Nigeria, rainfall occurs seasonally with a pronounced dry season. The seasonal rainfall and prolonged dry season bring about dynamics in the ecosystem and sour relationships resulting in a sharp division between the sedentary farmers and the nomadic pastoralists. This division between the groups brings tension and conflict.

Farmer-herdsmen conflict has remained the most preponderant resource-use conflict in Nigeria (Rashid 2012). Fulani and farmers co-existed for a long period but such co-existence has never been without tension because it demands a conciliation of rival interests. Conflict can erupt when livestock is poorly controlled and when herds wander on to cultivated fields. This has always had a tendency to occur at critical periods in the annual cycle, particularly during sowing when herds are late in leaving agricultural lands and during harvests, if they return too early. Clashes occur when agricultural activities hinder the movement of herds and cut off their access to water or pastures (Shetima and Usman 2008).

Conflict appears to be an international feature of human societies, therefore is likely to occur at anytime and anywhere. Conflicts offer a mixture of the good, the bad, and the uncertain. On the positive side, conflict notifies the society that serious problems exist that is not being handled by the traditional organization. It forces the recognition of those problems and encourages the development of new solution to them. Abubakar (2012), believed that conflict allows people to express important issues, they produce

new creative ideas; they releases and built-up tensions. Wherever handled properly, conflicts can strengthen relationships, they can help group and organizations to re-evaluate and clarify goals and missions; and they can also initiate social change to eliminate inequalities and injustice. But perhaps more familiar is the negative side of conflict. Heated exchange spiral out of control, resulting in frustration, tension, hard feelings and ultimately more conflicts.

Ekong (2003) also enumerated that conflict may have positive and negative effects. In positive effect, people may not know that certain nagging issue exists. Thus, conflict leads to clear definition of issue. Once such issues have been identified, they can then be amicably resolved.

Conflict is ubiquitous in human society. Olabode and Ajibade (2010), said that the average increase of global war is predominantly in the third world nations among which Nigeria is one, since independence from Britain in 1960, Nigeria has recorded a major conflicts; the civil (the Biafra war) and several intra-national war in different parts of the country. Conflicts in Nigeria are of diverse types and have been on rapid increase since after the civil war of 1967-1970. This had led to the explosion of 700 pastoralists from Borno state in the north east in May 2009 and some 2000 from Plateau in April.

Conflict is largely a phenomenon of plural society. In Nigeria, conflict has become a very widespread occurrence; manifesting in all spheres of human endeavours. It often arises because of competition over access to or control over scarce resources or opportunities'.

Conflict is defined in different ways by different scholars for instance; Jarry and Jarry (2000) see conflict as the overt struggle between individuals or group within a society, or between nation states. Hogan (2006) defined conflict as direct and conscious struggle between individuals or groups for the same goal. Conflict is also defined as "the interaction of interdependent people who perceive incompatible goals and interference from each other in achieving those goals" (Hocker and Wilmot 1985). Dougherty and Pfalzgarff Jr. (1981), opined that, the term conflict usually refers to a condition in which one identifiable group of human beings in a given environment (whether tribal, ethnic, linguistic, cultural, religious, socioeconomic, political among others) is engaged in conscious opposition to or more identifiable human groups because groups are pursuing what appear to be incompatible goals. Farmers and cattle herders pursue incompatible goals, which brought about direct and conscious struggle between the two groups in agriculture.

Herrero (2003), viewed that, of these rural conflicts over land and cattle have been going on over a long period, with very little attention given to them. Even today most conflicts go unnoticed and unreported. Greed and biased approach to the distribution of scarce resources contributed greatly to these conflicts. Nigeria is good example, where it is always argued that the government cannot be exonerated from the spate of communal and ethnic conflicts largely because of the way the resources are managed (Ibeanu, 1998).

Ethno- religious conflicts have attracted the concern of many scholars, because of the frequencies and effects worldwide. Ethno-religious conflicts are situations in which the

relationship between the members of one ethnic or religious group and another of such group in a Multi-ethnic and multi-religious society is characterized by lack of cordiality, mutual suspicion and fear, and the tendency toward violent confrontation (Salawu, 2010).

Although there are armed conflicts worldwide, they are more prevalent in developing countries. Gyong (2007) notes that since 1970, more than thirty wars have been fought in Africa. Most of these have been internal rather than inter-state wars. He further explained that in 1996 alone, about fourteen of the fifty-three countries in Africa were engaged in one form of armed conflict or the other, with a resultant refugee population of over eight million. Nigeria is one of the countries that suffered most from these wars. In Nigeria, conflict between farmers and cattle herders need great attention as everyday lives and property of the involving groups are lost.

1.2 Statement of problem

The shrinkage nature of life-supporting natural resources per person that comes with population growth is at the survival level. This could lead to unmanageable social tension that translates into broad-based conflict. The most important object in Fulani society is cattle. The quantity of cattle a person owns is a sign of his wealth. This had led to significant conflict in most cases among the Fulani and local farmers. Such conflict has risen from encroachment on cattle routes and sometimes watering points. The issue rests on the fact that the cows many times, stray into the fields and eat the grain of local farmers (Olabode and Ajibade 2010).

Resource use conflict particularly between Farmers and Pastoralists is widespread in the West Africa sub-region. While it is difficult to establish a single explanatory variable responsible for this conflict, it is apparent that social and environmental factors act in tandem to perpetuate it (Shatima and Usman 2008).

Conflict for resources is present in our species from ancient past there is evidence in older to satisfy such a single need as hunger. In Nigeria for instance, the conflict has become a very widespread occurrence; manifesting in all spheres of human endeavours. In a research conducted by Iyorwuese (2013), Fulani have continued to clash with sedentary farming communities in Plateau, Ogun, Oyo, Sokoto, Nasarawa, Benue, Rivers, Bauchi states and Federal Capital Territory. Abbass (2012), in his study of major sources of conflict between the Fulani Pastoralists and Farmers shows that land related issues especially over grazing fields account for the highest percentage of the conflict. In other words, struggles over the control of economically viable lands cause more tensions and violent conflict among communities.

Local clashes over rangeland and rain-fed agricultural land have occurred in many parts of Africa. However, environmental issues like desertification, land degradation and climate change are becoming major factors in this conflict (Nformi et al 2004).

According to the International Regional Information Network (2009), in addition to population growth and continued felling of the forests for cooking fuel, Northern nomad communities are increasingly moving Southwards as once-green pasture becomes desert. According to the International Regional Information Network (2009), just over a third of land that was cultivable 50 years ago is now desert across 11 of Nigeria's Northern state: Borno, Bauchi, Gombe, Adamawa, Jigawa, Kano, Katsina, Yobe,

Zamfara, Sokoto, and Kebbi. The livelihood of some 15 million Pastoralists in northern Nigeria are threatened by decreasing access to water and pasture- shortage linked to climate change. Due to climate change, to massive land acquisitions by capitalist farmers and mainly, to the perpetuation of the Pastoral way of life in Nigeria, there has been a great increase in the presence of Fulani herders in central and Southern Nigeria. This has resulted in frequent conflicts between the herders and Farming communities (Okeke 2004).

Land as a main factor of production is rapidly declining in fertility while population is increasing at annual rate of 2.5% in the face of declining agricultural production (World Bank 2001). Conflict between crop producers and Pastoralists has continued to assume a threatening dimension to human survival and economic livelihood (Tonah 2002). International Regional Information Network (2009), blamed traditional chiefs and local authorities, who control land allocation in rural areas, for the clashes, accusing them of allowing farmers to encroach on the nomadic grazing land. As the farmers paid some money to the traditional and local authorities would allocate them some potion from the grazing field a practice that gradually led to eaten up the reserve land for grazing.

In today's political realities, there is a strong tendency for bargaining and negotiation policies. In times of political, economic and social transformation in West Africa, conflicts of interests over natural resources, particularly between ‘crop farmers' and `cattle herders', are common problems and of growing concern. Various cases of conflict in Northern Nigeria involving the Fulani and crop farmers conflict of significant variables in economic, in areas of stiff competition for grazing land farmers but the degree of intensity differs from state to state depending on the ecological

location and the community involved. Abbass (2012) asserted that, in Bauchi state for example, areas mostly affected include Jama'are, Gamawa, Misau, zaki and kirfi local government areas among others. These local government areas recorded serious cases of conflict for survival between cattle herders and crop farmers, which led to loss of lives and destruction of properties with the emergence of insecurity due to the continuous desire for vengeance. The conflict between these two groups has led to loss of properties worth millions of naira and the death of hundreds of thousands of lives (Adamu, 2007). Despite all these, there seems to be no solutions in sight. Nigerian communities have lost confidence in the capacity of their leaders to provide justice, law and order, for instance in Misau cattle herders and crop farmers seem to have taken the law into their hands. This is supported by the level of murder and arson taking place in the name of fighting for rights, which always results in violent conflicts all over the affected areas. Two days fighting between farmers and nomads in June 2012 left two dead and number of pastoralists settlements burned in Beti B (IRIN, 2012).

The conflict between cattle herders and crop farmers in Nigeria is going out of control particularly Misau local government area since the government cannot bring it to an end. The conflict between the two parties in Misau local government area of Bauchi state has adverse effects on the people. For instance, four people have been killed in a clash between crop farmers and cattle herdsmen in Gugulin. The deadliest fight took place when Fulani herdsmen attacked the farming village of Gugulin in Misau, killing five people. In the reprisal, the farmers killed two Fulani herdsmen and many injured. (IRIN, 2012). According to British Broadcasting Corporation (2013), at least 12 people many of which were women and children have been killed in clashes between herders and farmers in Misau of Bauchi state. Houses and farms were destroyed and many cattle

were killed. From the foregoing, it is discernible that there is a compelling need to continue to find lasting solutions to the problems posed by crop farmers and cattle herders conflicts.

However, even though the phenomenon is no longer news to ordinary people and intellectuals as the issue is made known to the public through media such as radio, television and daily newspapers, the information through those media are narrative and this makes it difficult for different institutions such as police, courts, local government officials and Traditional rulers in Misau LGA to put an end to the conflict. This is because there is little or no scientific research conducted in Misau despite the fact that the conflict has caused loss of lives of farmers and cattle herders as well as innocent citizens. Therefore, this study is set to address the following questions:

i. What are the socio-economic characteristics of the farmers and the cattle herders in the study area

ii. What are the socio-economic causes of the conflict in the study area

iii. What are the socio-economic effects of conflict on the two groups in the study area

iv. What are the levels of satisfaction of the crop Farmers and the cattle herders with the performance of the institutions involved in managing resource use conflict?

1.3 Objectives of the Study

The broad objective of this study is to assess the resource use conflict between crop farmers and cattle herders in the study area. The specific objectives are to

i. describe the socio-economic characteristics of the farmers and cattle herders.

ii. determine the socio-economic causes of the conflict in the study area.

iii. determine the socio-economic effects of conflict on both groups

iv. evaluate the perception of crop farmers and cattle herders on the performance of institutions involved in managing the conflict.

1.4 Justification

Sustainable development in rural agriculture requires the prevalence of peaceful co-habitation among crop farmers and cattle herders. The disruption of agricultural productivity, as a result of resource use conflict hampers development and as well may lead to intensification of poverty. The Conflicts have led to grave consequences like death, starvation, poverty, social unrest and unquantifiable losses among the citizens of different nations (Olabode and Ajibade 2010). Therefore, there is need to study and understand the principles and processes of conflict and to find out appropriate strategies for negotiating and amicably resolving them.

This study sought to provide the information that can be used to formulate practical policies that would be of assistance towards reducing the senseless destruction of crops, cattle, property and human lives. The destruction of crops, killing of cattle and human beings take place in the study area as a result of resource use competition. This killing

and destruction could be settled amicably through the promotion of positive values. Understanding the socio-economic characteristics and production system of both groups will assist in proffering meaningful solutions to the incessant and terrible conflict between cattle herders and farmers.

The study provided information about the respondents' socio-economic status and their perception on the performance of the institutions involved in managing the conflict and made some suggestions to guide policy formulations on the issues

The study complemented similar studies by Alhassan (2014) which had dealt extensively with cause, repercussions and resolution in North-Eastern Nigeria and Adeboye and Olaniyi (2008) that also dealt with causes, effect and resolution of conflicts between farmers and herders in Delta State.

Theoretically, the study used the relative deprivation theory, which reason that a group of people who fail to get a desired improvement in life conditions, justice, equality, and infrastructural development are deprived. Relative deprivation theory indicates that, if natural resources or fertile land becomes scarce as a result of increased in the population of people, cattle and desertification, people who relied on the resources as their source of livelihood would probably become increasingly discontented and frustrated by their inability to grasp their own share in the scrabble for available resources. And as such, Conflict between the competing groups would erupt (Godswill, 2007). Other studies by Adebayo and Olaniyi (2008), Ofuoku, and Isife (2009) used the interactionist mode, Kehinde (2011) used conflict theory and Abubakar (2012) used political economy model to explain the problem.

From the foregoing, it is discernible that there is a compelling need to continue to find lasting solutions to the frequent problems posed by crop farmers and cattle herders conflicts that displaces crop Farmers and cattle Herders as well as claiming human lives, crops and animals.

1.5 Hypothesis

Ho: There is no significant factor responsible for resource use conflict between the crop farmers and cattle herders

CHAPTER TWO

LITERATURE REVIEW

2.1 Causes of Crop Farmers and Cattle Herders Conflict

The genesis of conflicts over access, use and management of land resources between cattle herders and crop farmers is as diverse as the nature of the conflicts themselves. 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. In Nigeria, the most frequent causes of conflicts between the nomadic pastoralists 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 (Abubakar 2012).

In a research conducted by Saidu (2013), he summarize the cause of conflict as inadequate legal and regulatory instrument used in implementation of resettlement; the lack of institutional learning to deal with complexity of the conflict that follow resettlement; lack of opportunities for restoring and improving leaving standards; lack of political will on the part of the government and lack of a number of procedural and financial aspects. 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 (Aboki, 2003). Aboki further links conflicts in Taraba, Benue and Nasarawa

States, Osun (Modakeke/Ife), Anambra State, (Umuler, Agulen), Delta State (Ijaw-Itsekiri) with the type of land policies in use. He further stresses that cases of violent clashes have continued to be reported between the nomadic pastoralists and sedentary farmers resulting in the colossal loss of lives and property.

Another common source of conflict is crop damage (Wolfgang and Water-Bayer 1987). Access to land is a major cause of conflicts in the Benue Valley region pastoralists and farmers have existed since the beginning of agriculture and increases or decreased in intensity and frequency depending on economic, environmental and other factors for example, increases in the heard sizes, due to improved conditions of the cattle, compelled the pastoralists to search for more pastures beyond their limited range. Climate change has constituted a great threat by putting great pressures on the land thus provoking conflicts between them. However, improvements in health and population have enhanced a much greater pressure on land. Since the 1980s therefore, there has been a marked expansion of cultivation f the fadama (reverine and vally-bolteon) areas. This means that both the farmers and pastoralists have engaged in fierce struggles for access to such valuable lands, which, more often than not, result in increased conflicts and violence.

Climate change can also cause conflict Okeke (2014), opin that, one of the drivers of conflict in Nasarawa state between Farmers and Fulani is migration as a result of climate change. The effect of climate change in far northern Nigeria has assumed such magnitude that the minimum vegetation cover in Katsina, Sokoto, Zamfara, kebbi, Kano, Jigawa, Bauchi, Yobe, Maiduguri, Taraba, and Adamawa states respectively, has already fallen below 10% as against the ideal requirement of 25% ecological cover

recommended by UNEP to support fulani and their herds. Therefore encroaching desert as a result of climate change has affected the ecology of northern Nigeria in terms of inadequate productive land for food and cash crops, greener pastures for animal grazing, decline in water availability and often led to conflict over marginal and fragile arid ecosystem.

The most frequent causes of conflict between farmers and herdsmen in the Atebubu and neighbouring is destruction of crops by cattle. This is often a result of herdsmen leaving cattle unattended t and thus making them wander unto cultivated fields. Cattle may ago go on the rampage and destroy seed crops or consume food items stored in barns. This is particularly the cases during the planting season and the post-harvest period. In Many settlements, herdsmen have their grazing areas near to fields reserved for farming thus raising the likelihood of cattle entering cultivated fields. The increasing cultivation of bush farms by migrant farmers has also contributed to the destruction of crops by cattle. During the farming season, herdsmen have to meander though farmers to obtain access to grazing fields and cattle are prone to tramping on farmers crops. In the pre-harvest period, cattle frequently destroy or eat ripened crops as they are led from the fields into their kraal (Tonah 2006).

(Abbas and Usman 2008)The underlying causes are related biased and insensitive public policy and the ill feelings that herders and farmers hold for another and the transfer of control of key resources from traditional to state authorities. All other causes can be seen as the manifest causes for instance, grazing lands are considered as national lands, which could be taken over at any time for any other development purposes by the government or some individuals. Informer times, the pastoral Fulbe roamed with their

cattle from one place to another as nomads and only settle temporarily where there was abundant pasture. Nowadays they are more sedentary practicing transhumance due to population pressure; which has reduced the grazing land. The settlement of grazers raises a number of conflicts, first of all within themselves since they find it difficult to give up their extensive grazing habits and secondly with local communities, who claim to be first settlers thus imposing a superiority complex and rights over land.

According to De Haan (2002), 'destruction of crops by cattle and other property (irrigation equipment and infrastructure) by the pastoralists 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 pastoralists'.

Conflicts can arise as a result of externally-induced changes. If grazing reserves are established in areas where farmers claim land rights and are not adequately compensated, herder-farmer tensions will increase. In a research conducted by Adebayo and Olaniyi (2008), the result revealed that the predominant manifest causes of conflict are the crop damaged by the pastoralist and blockage of water points by the farmers.

Baba (1986), observed that several process with the agriculture sector in particular, have considerably narrowed the resource base at the disposal of pastoral nomads in the past few decades, thus increasing the frequency and severity of open clashes between crop growers and grazers in the study area. according to him, these processes include the expansion of cropped land due to population growth and technical changes, the development of large scale government arable farming projects in the past colonial

times, rapid rise of new breed operation within the agriculture sector and the change within the traditional farming system, for instance the change from seasonal to perennial cultivation under modern irrigation projects, are some of the important factors for the evaluation of a land use conflict between sedentary crops growers Fulani cattlemen.

2.2 Effects of Crop farmers and Cattle Herders Conflict

In Nigeria, various violent conflict over land resources have lead to decreased agricultural production and hunger, the clashes between various ethnic, occupational and resident groups usually result to destruction of farmland. With the destruction of farm crops and in some cases retaliation by the farmers to killing livestock owned by the herdsman hampers the overall food production, both in crops and meat, which implies increased hunger, disease and malnutrition. Adebayo and Olaniyi (2008) belief that, Conflict usually leads to disunity, violence, disagreement and bloodshed because parties involved try to reach their objective. It is a form of social interaction in which the actors seek to obtain scarce by weakening or eliminating other contender.

The incessant resource conflicts witnessed in the tropics have resulted in loss of lives, properties and environmental degradation as also witnessed in some developed countries such as Balkans (Tenuche and Ifetimehin 2009). Junaidu (2009), observed that persistent conflict over land resources have caused population displacement, which, as a result, changed the fabric of custom and habitual behaviour in the northeast Nigeria. This led to low agricultural output, which resulted in malnutrition and disease; and by inducing people to leave, economic decline may erode confidence in the national purpose and also upset the traditional balance of economic and political authority between ethnic groups in the area.

Moreover, farmers' displacement and low-yield of crops are also of the effects of resource use conflict between the farmers and cattle herders. For instance, Olabode and Ajibade (2010) conducted a research on environment induced conflict in Kwara state and observed that (60 : 7%) of farmers were displaced as a result of the destructions inflicted on their crops by cattle, while only 39 : 3 per cent of the respondents were not displaced. This resulted in a very low yield of crops in the study area. Joseph (2011) found that, in a border between Nasarawa and Benue states, nomadic pastoralists and farmers' conflict left not less than 50 persons death, over 10 villages sacked and over 200,00 persons both nomads and farmers were displaced. However, it must be noted that conflict has both positive and negative. Consequences of the resource use conflict between farmers and Fulani for instance, Blench (1997) indicates that resource use conflict is often a major stimulus to the evolution of intricate interlocking patterns of exploitation. The grazers also suffer from material damages when the farmers inflict physical injuries on the cattle by using cutlasses, spears or guns or by poisoning the cattle. In Santa Sub division in Pinyin in 1994 a grazer lost his entire herd as a result of attack on the cattle by farmers Open confrontation results in rural insecurity and out migration. In the event of a conflict, properties and lives are destroyed leading to misery and hardship.

2.3 Crop Farmers and Cattle Herders' Conflict Management

The method used in resolving conflict depends on the nature and the magnitude of the conflict. For instance, Conflict management should first seek to eliminate the conditions that create an environment of conflict and rise to situations that are likely to undermine good relationship (Imobighe 2003). This means at first level of conflict prevention and peace promotion, conflict managers should concentrate at putting in

place the building blocks for societal peace and harmony through system re-examination and system correction. In all cases where conflict has been occasioned by crop destruction and where the offending pastoralist admit guilt; interpersonal agreement may be reached, depending on the extent of the damage, compensation (varying in amount) is often demanded and paid where minimal crops have been destroyed. This is a situation where pastoralists and crop farmers have co-habited for a long time. In such cases, the herdsmen speak the local language very fluently, thereby enhancing social integration and neighbourhood. There are other instances where pastoralist –crop farmers interpersonal relationship is not very cordial, conflict arise in such situation are not usually resolved by personal intervention. The village head and the head of herdsmen (Ardos) are usually involved in settling the dispute (Adebayo and Olaniyi 2008).

Momale (2003), suggest that government should provide policy guidelines and ensure their effective implementation to guarantee the rights of access to resources for marginalized group. He also believe that, other strategies to eschew violent conflicts between nomadic Pastoralists and Sedentary farmers include: pastoralist institutions should be strengthened and use as media for englightening pastoralists to eschew violence; farmers institutions should also be enhanced and use as a media for enlightening farmers to embrace peace, locally based consultative meetings between farmers and pastoralists should be encouraged to serve as avenues for the resolution of differences and disputes; both pastoralists and farmers should be reminded of the complimentary role of their economic activities; issuance of and use of trans-human certificate should be promoted.

Baba (1986) believes 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 keeping. Different ways were given as control mechanisms for the conflicts. This research work will emphasize on the structures that manage the conflicts so as to find out the most appropriate institution to manage the conflict in the study area.

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 following is the principle to conflict resolution according to Kehinde (2011),

i. take shared responsibility for the conflict
ii. recognize and appreciate differences among individuals
iii. Preserve individual dignity
iv. Listen carefully and with empathy, listen to understand, communicate , do not debate
v. Be calm... don't give to emotional outbursts or reactions
vi. Vulnerability is a key to successful resolution, therefore, open up and share your feelings.
vii. Don't assume people are being difficult intentionally
viii. Choose a safe place or persons with whom you can vent and clarify the issues for yourself
ix. Generate solutions... find agreement
x. Follow-up to assure resolution and modify as necessary

2.4 Nature of the Resource Use Conflict between Crop Farmers and Cattle Herders

The conflict between the Fulani and the Farmers is violent and distractive in nature. Conflicts in general manifest in various ways, ranging from the mild and non-violent forms such as avoidance, ridicule and verbal exchanges, to the violent and destructive forms such as riots, assault, terrorist attack and war. Although not much has been written on the nature of cattle herders and crop farmers' conflict, scholars have made some efforts to give some dimensions of the conflicts.

Yahaya (2008) observes that, nomads'/farmers' conflicts are violent, destructive and short. In some instances, the conflicts take place in the night when the nomads move to a farmland before harvest. However, the conflict between Tubu farmers and Fabi herders occurs at public wells and boreholes, in the context of water scarcity (Herrero, 2003). This shows that the period of the conflict outbreak varies, depending on the environment. Khan (2007) States that the conflict has an element of ethnicity. It is always a conflict between the Fulbe (Fulani) and the sedentary farmers. He further explains that the conflict sometime degenerates to ethno-religious conflicts. This is because in some parts of this country, like Benue and Plateau, the majority of the farmers are Christians while nomadic activities are dominated by the Muslims. The situation of the conflict degenerating into ethno religious conflict may not likely happen in Katsina State because both groups are Muslims.

In a research conducted by Ingawa (1999) in the Core National Fadama Development States, it was found that the conflicts have been a recurring social problem for many decades, occurring mainly during the dry season when the animals are moving southwards, and sometimes at the beginning of wet season when they are moving back.

It further explains that, in recent years, the activities of nomads who move with arms usually in large groups and who commit intentional crop damage has added another dimension to the conflict. This shows that the conflicts are fought with arms. For instance, the Bauchi State Agricultural Development Programme report (1997) shows the emergence of militant pastoralists, the "Udawa" and "Bokoloji" who have introduced a violent and fatal dimension to the conflicts. Generally, according to the report, they are young, militant, heavily armed with guns and arrows and seem to enjoy the assistance and protection of local godfathers and bandits, and have no respect for law (BSADP, 1997). In essence, the report shows that the conflict in Bauchi is also violent in nature.

2.5 Arable Cropping System in Nigeria.

According to Alhassan (2013), 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 peoples. 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, and vegetables and so on.

In Nigeria, production of arable crops is essentially the prominent feature of agricultural activities. Indeed, almost all farmers in Nigeria cultivate one or more arable crops for food and income. According to Fayinka (2004), Nigerian agricultural production is dominated by rural-based small-scale arable crop producers, who account for about 80% of total food requirement. In a study on production of some major arable crops in Nigeria, revealed that

the average farm size in arable crop production was 4.58 ha. Central Bank of Nigeria, CBN, (2005) reported that 36.25 and 82.41 million hectares of arable crops were cultivated in 2004 and 2005 respectively. The CBN report further stated that production of arable crops increased from 88.3million tones in 2001 to 111.8 million tones in 2005. By far the most widely grown arable crop in Nigeria is maize, accounting for 6.6 and 7.5 million hectares in 2004 and 2005 respectively. Maize is grown almost in every part of the country. 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 The Cattle Herding System in Nigeria

Cattle herding is dominated almost entirely by the Fulani tribe in Nigeria. Iro (1994) gave a vivid documentation of the herding system of the Fulani in Nigeria, and most of what is presented hereunder was derived from his account. According to him, herding is a daunting task, and contrary to widespread belief, it is not the delight of the Fulani- they herd not as a matter of choice but as a necessity. Iro (1994) found that about 75% of the sampled nomadic pastoralists maintained that cattle herding is not only toilsome, but also becoming increasingly strenuous. The optimum Fulani cattle herd size lies between 80 and 100. With a preponderance of female over male at ratio 4:1, the Fulani maintains a balanced functional species composition that is made up of 'beefers, milkers, breeders, carriers, and stock beautifiers'. Iro (1994) also stated that the slow-maturing Sokoto Red cow and the lyre-horned White Fulani cattle are the mainstay of the pastoral Fulani holdings. White and Wickens (1976, cited by Iro, 1994) disclosed that the White Fulani, though less hardy, has higher milk and beef yield compared with the Sokoto Red. Cattle

belonging to individual family members are usually herded together, with male family members assuming automatic rights to all cattle, making it difficult to determine cattle ownership by female family members. Fulani men possessing less than twenty cows are seen as poor, while women having six cows are considered as rich (Iro, 1994). Women, however, own most of the small ruminants and all of the poultry. Though most Fulani men herd cattle well pass the middle age, herding is dominated by the youths, while decisions about grazing are mainly made by the elderly family members. The Fulani herdsman makes excellent use of sign language, the cane and verbal command to drive the animals, with faster animals occupying the front rows. During migration, a typical herd consisting of several family units move in a column of up to five meters wide and two kilometres long. And by the time it passes any given point, 'everything that stands at that point is destroyed' (Fricke, 1979; and Vengroff, 1980 as cited in Iro, 1994). Describing the annual herding cycle of the Fulani, Iro (1994) stated that the herding season begins with southward movement of the herd and 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. These thus increase southward movement of the herds. 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 (Riesman, 1977, as cited in 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.

2.7 Fulani Social Organizations

Omokore (2005) gave colourful account on the social organizations of the Fulani tribe at various levels such as family units, religious beliefs, taboo and customs. Most of what is presented hereunder was derived from his account. According to him Traditional, cattle production involves the resources of labour in the management of family herds, pasture and water. In the same way, livestock products are produced through communal effort of the household or family unit as the case may be. The family unit consists of a man, his wife or wives and their immediate children. It is a social and economic system of inter-relationship through which pastoral activities are carried out. But domestic unit begins when the male children within a family become matured and take wives for themselves. When a married male child has separate family unit of his own by rule, he is still subjected to the authority of his father in terms of decision on economic, political and social matters, which the father believes will affect the cohesion and viability of the domestic unit.

A household also known as Wuro in Fulani language is the residential cattle compound of household recognized as the leader. The leader is often known as Ardo. A large household may however, be grouped into manageable units (secondary household) headed by man known as Wakili. Essentially, a household is a cattle-owning unit. There is division of labour within the family units. The head of a household is usually responsible for the herds' safety, maintenance and other problems relative to cattle

production. He provides a communication link between his people and the local government authorities. It is also his responsibility to negotiate with farmers for demarcated grazing land and cattle track right which are maintained from year to year.

According to Omokore (2005) and Iro (1994), there is clear role differentiation in the household (Division of labour). The men are responsible for cattle breeding, management, movement and general welfare. They provide leadership and teach adolescent to become good herdsmen. But the adult female is a wife and mother with responsibility of milk processing and marketing in addition to domestic work. She fetches water, wood, prepare meals trains girls to become future good wives. The female children and adolescents are diary maids in addition to apprentice to the mother. The male children are potential herdsmen in training although they help they help with the house chores up till the age of about 7 years when they begging regular herding. They learn to survey and locate new pasture and watering points. The younger children learn rope making and the art of cattle husbandry from the older ones. With respect to culture and moral, Omokore (2005), noted that the pastoralist were polite and respect the elders. Young people do not call their elders by name. The herdsmen were generally of cheerful disposition and very receptive to visitor. He also found that western literacy is practically non-existence among headsmen. The pastoralists were not very devoted to religious beliefs. Many of them were however Muslim. The herdsmen's favourite food include tuwo chinkafa (mashed rice), tuwo masara (mashed maize, fresh or fermented milk mixed with cooked cereal (fura da nono) and guinea corn flour. The favoured drink is kunu. The notable customs of the herdsmen include the game of soro (also known as sharo), marriage and inheritance. The game of sharo is an annual Fulani game that has to do with marriage. The game is popular among various ethnic groups of Fulani

herdsmen. It is a test of self-control in which youths of approximately equal strength are marched.

2.8 Theoretical Framework

The contemporary society is characterized by different schools of thought, each analyzing social phenomenon from its own orientation. For the purpose of this study, Relative Deprivation theory will be adopted to explain cattle herders and crop famers' conflicts in Misau local government area, Bauchi State.

2.8.1 The theory of relative deprivation

The concept of "Relative Deprivation" was introduced by Samuel Stouffer and his co-workers in their classic social psychological study. "The American soldier in 1949; it was also used by Robert k. Merton in his standard text "social theory and social structure in 1949; and was widely used by sociologists in the 1950s (Marshal, 1998). Relative deprivation is defined as the conscious feeling of a negative discrepancy between legitimate expectations and presents actualities (Schaefer 2000). Relative deprivation as theoretical concept has been used to analyse contexts perceived injustice and inequality, and is frequently used within the social sciences (Manzi, 2007). Relative deprivation theory claims that a person would feel relatively deprived if he or she (i) lacks an object, (ii) desire it, (iii) sees some other person(s) with that object, and (v) thinks it is feasible to obtain that object(Lopez, 2002).

Manzi (2007) also argued that. Relative deprivation is the perceived difference between the material and social conditions that individual's think they should achieve, and the conditions they believe they would achieve which causes relative deprivation. Relative

deprivation can be managed by a gradual elimination of inequality, which causes value expectation and value capability to coverage thus avoiding socio economic upheaval. Jibrin (2008) attributed the ethno-religious conflicts in Kaduna as a feeling of relative deprivation by the southern Kaduna indigenes who are mostly Christians.

The decreasing availability of physical, environmental and land resources such as clean water, good agricultural land for arable and animal husbandry could create a condition of "simple security" "group identity" and "deprivation" in the area, (Shetima and usman 2008), which could provoke violent conflict of high magnitude due to population movement and the scramble for available resources.

The theory of Relative Deprivation is seen as a gap between just wants and the satisfaction expected wants. Relative deprivation is therefore, the difference between what we need and what we get. A group of people who fail to get a desired improvement in life conditions, justice, equality, and infrastructural development are deprived. In addition to that, if they are poor, and feel society is morally obliged to provide them with basic necessities, the gap between a just want they can generate irritation, anger, frustration and conflict. Thus, the idea of relative deprivation has been used either to measure fairness, inequality, social justice, or to explain grievance, social hostility or aggression (Godswill, 2007).

The foregoing discussion provides us with an understanding of the conflicts between the Cattle herders and the crop farmers in Misau local government, Bauchi state, especially their causes and management. Relative deprivation theory indicates that, if natural resources or fertile land becomes more scarce as a result of increase in the population of

people and cattle and desertification, people who relied on the resources as their source of livelihood would probably become increasingly discontented and frustrated by their inability to grasp their own share in the scrabble for available resources. And as such, Conflict between the competing groups would erupt. The complaints of the Fulani are a summation of want, Aspiration, desire, discontentment, deprivation, and the poverty that are prevalent among them compare to farmers. The grievances that were made clear and know may be as a result of the increase in the awareness of the nomads through the nomadic education and weekly program (DON MAKIYYA ARUGA) dedicated for the enlightenment of the nomads on radio Nigeria Kaduna. Many nomads have now realized that they are denied their rights. And these rights can be back to them.

The cattle herders claimed that farmers monopolized the whole land area which was hitherto free with little or no space left for the grazing of their flocks. The most frustrating part of the relationship is that the cattle tracks were neglected by the government and blocked by the crop farmers (Yahaya, 2008 and Awogbade, 1983). The blockage of the cattle routes made pastoralists that were historically mobile new prisoners of limited spaces. The modern state system has rendered Fulani vulnerable to the vagaries of social and natural land scarcities. In Misau local Government area, Bauchi state, the cattle herders are also denied right and access to land. This frustrates the nomads and makes them violently attack the farmers (Adamu, 2007).

The high rate of scare resource is seen as the factor responsible for the grievances of cattle herders and subsequent attacks on crop farmers. Essentially, the cattle herders are aggrieved because their demands are not met even though they deserve them as Nigeria. The continued deprivation of the nomads from pasture made them more aggressive and

conflict prone. The provision of grazing reserve and equal distribution of environmental resources will not solve the problem but relationship between the groups.

Although there is no theory that is considered hundred percent adequate, the relative deprivation theory gives a better understanding in the explanation of cattle herders and crop farmers' conflicts in Misau Local government area, Bauchi state. The theory shows that the cattle herders failed to get what they desired much. (Grazing land and access to water point because of path encroachment). And it is the lack of the adequate grazing land that may have resulted in their anger and frustration to invade crops to feed their animals and as a result, conflict erupts. However, farmers feel frustrated when their farms are invaded by the cattle herders, which may consequently result in their poverty. This might make them to attack the cattle herders for rendering them hopeless.

The Relative deprivation theory also states that when a group of people compare itself with others and realize that they are better off than them then conflict continues. The Relative deprivation which leads to conflict according to Lopez-Turley (2002) can be reduced or managed by a gradual elimination of inequality which causes value expectation and value capability to coverage, thus avoiding socio-political upheaval. This shows that, if relative equal access to pasture was given to both groups as Awogbade (1983) said that it used to be before the advent of colonialism in Jos, and then the symbiotic relationship enjoyed by the groups before would be restored.

2.8.2 Conceptual framework

A model refers to representation of relationships existing among variables. These relationships might be schematically or mathematically depicted. Theoretical model is a

broad system of explanation that is founded largely on untested and unproved assumption about social realities. (Ekong, 2003).

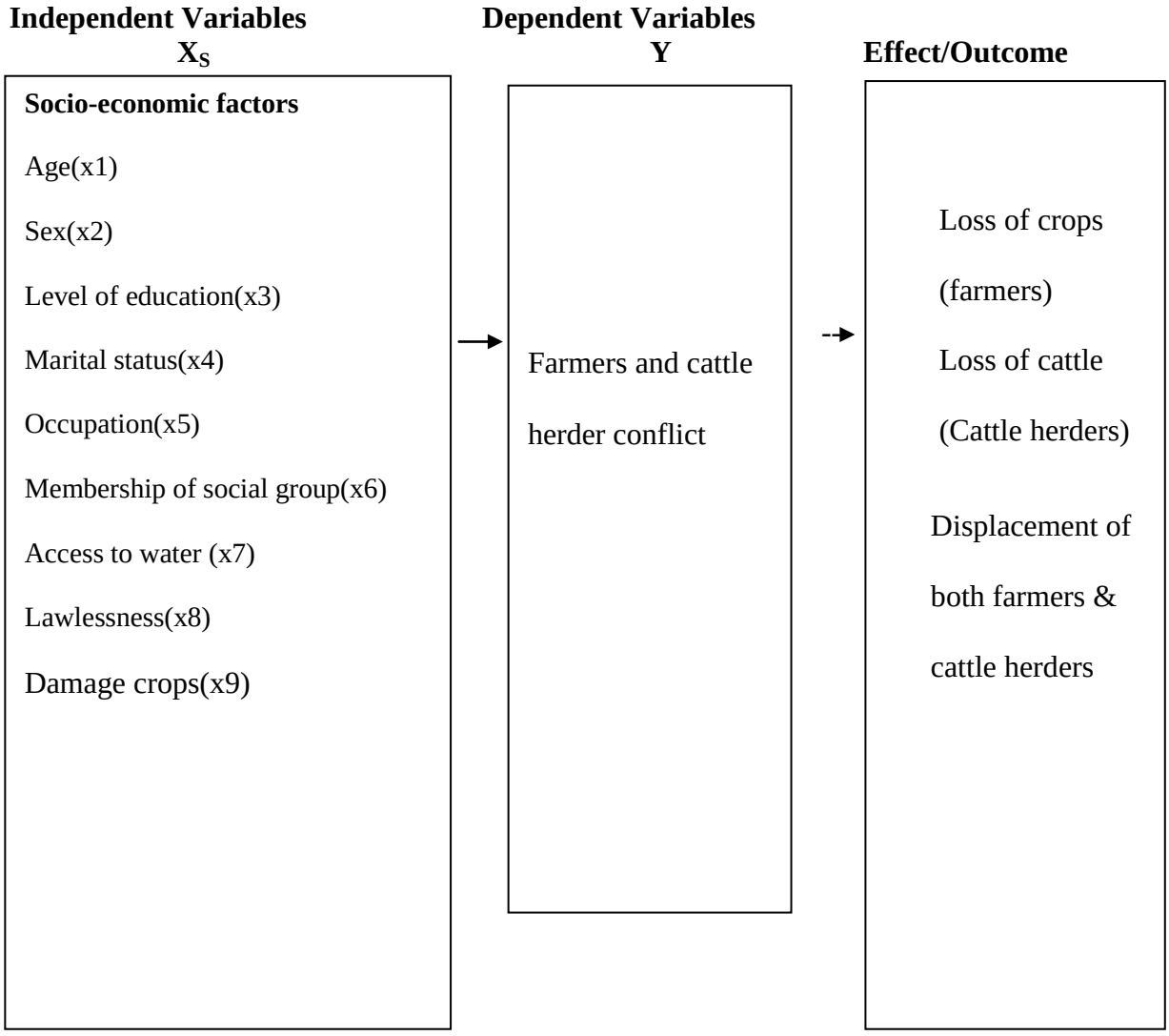


Figure 2.1: Model-showing socioeconomic factors affecting resource use conflict and its effects on crop farmers and cattle herders.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Description of the Study Area

Misau is one of the 20 local government areas of Bauchi state, Nigeria. Misau's headquarters is in the town of Misau. Misau is located between Latitude 11.32^0 N and Longitude 10.47^0 E and has a total land area of $1226km^2$ and a projected population of 291,518 as at 2015. The Local Government is situated in central senatorial zone and boarders with Giade LGA in the west, Dambam LGA in the east, Darazau LGA in the south and Katagun LGA in the North.

The local government is agrarian and well suited for the production of crops. Both rain-fed and irrigation farming are practiced in the local government area. Farming is the main occupation of the people with emphasis on the cultivation of cereals like sorghum, millet, maize and legumes like cowpea, soya beans and groundnut, which are either irrigated or rain-fed. On the irrigation land, vegetables crops like tomatoes, pepper, carrots and cabbage are grown. Some of the farmers are involved in the livestock keeping but Fulani herdsmen dominate the rearing of livestock in the area. They rear different types of livestock including cattle, sheep and goats. The major sources of water include Rivers Maladumba, Afayayawo, Ladin baran and bande. Rain mustly starts from May and last until September. The major ethnic groups are Hausa and Fulani, others includeni, Kanuri, and Karekare.

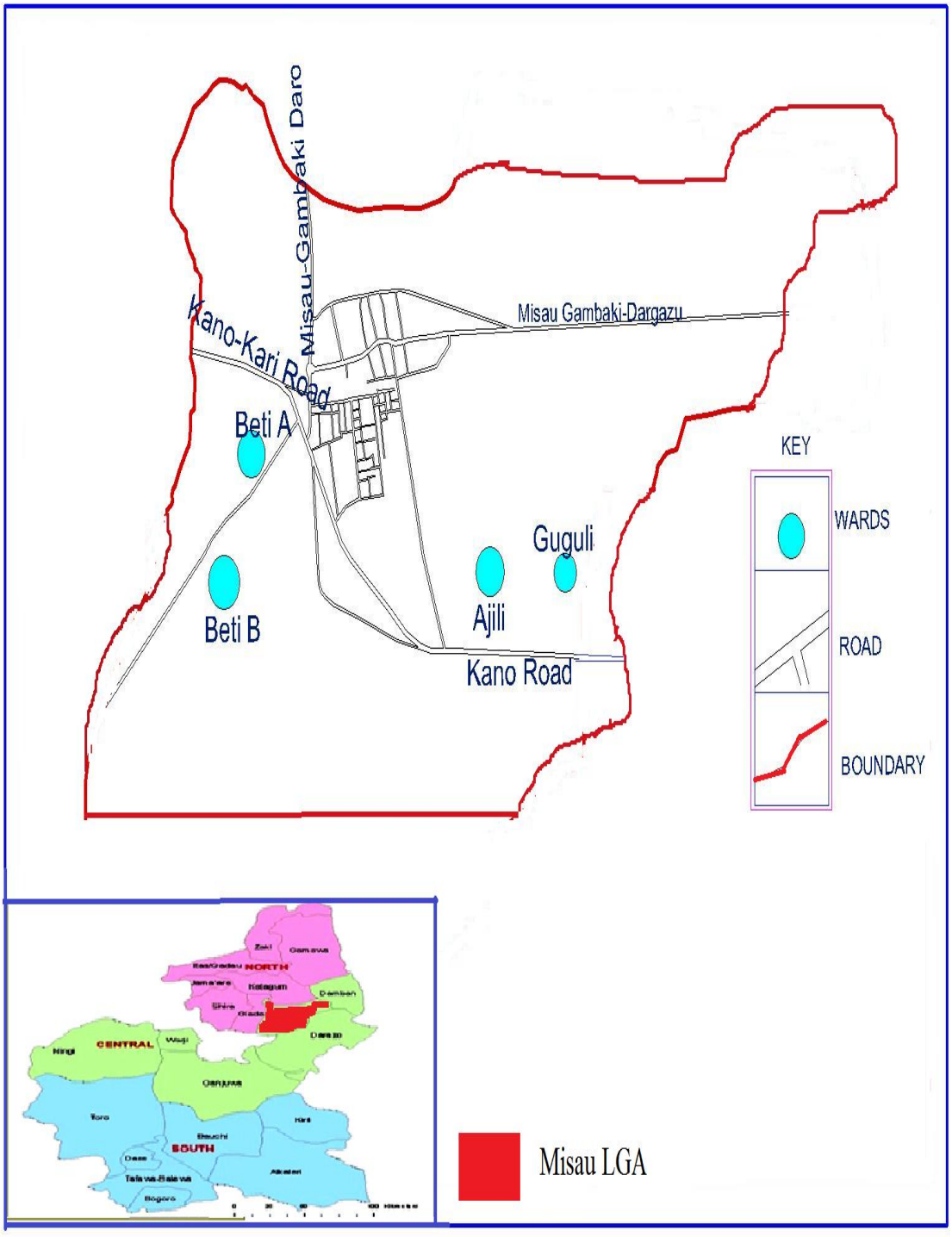


Figure 3.1: Map of Misau LGA showing the research sites

3.2 Sampling procedure and Sample Size

A multi stage sampling procedure was adopted for this study. In the first stage, 4 villages were purposively sampled from a population of 16 villages that made up the study area. The purposive selection was made because the sampled areas consist of the villages where farming and cattle rearing were most famous and the areas where crop farmers and cattle herders' conflict occurred frequently. The selected villages for the study were Ajili, Gugulin, Beti A and Beti B. In the second stage, a list of all household heads was compiled with the help of the village heads. Random sampling technique was employed to select 21 crop farmers in each village for enumeration. However, there was no adequate (exhaustive) list of the cattle herders, which will be used as a sample frame; the researcher used a snowball sampling technique to select 13 cattle herders from each village selected for enumeration. In this sampling, the researcher tried to get one or more of his target respondents, the first respondent later led him to other respondents who experienced the conflict. A total of 136 questionnaire were administered but 129 were retrieved. The in-depth interview (IDI) was equally employed to corroborate the finding of the empirical results. Eight people were interviewed One traditional leader who is more closed to the people who experienced the conflict in each village was interviewed, one official of farmers association, one PRO of Miyetti Allah Cattle Breeders Association and one Police officer who handled issues regarding crop farmers/cattle herders conflict were also interviewed.

3.3 Method of Data Collection

Primary data were collected for the purpose of this study. Primary data were obtained through field survey using structured questionnaire. A total of 34 questionnaires were

administered to each cluster making the sampling of the research to be one hundred and thirty six (136) respondents.

Quantitative and qualitative methods of data collection were used in carrying out this research. In the quantitative method, a survey questionnaire was administered to both crop farmers and cattle herders. In the qualitative method on the other hand, in-depth interview was used to get necessary supportive data from other people who are directly or indirectly affected such as traditional leaders, leaders of associations and the police.

3.4 Analytical Techniques

Descriptive statistics and Logistic regression model were used to achieve the objectives of the study.

i. Descriptive statistics such as frequency counts, means and percentage was used to achieve the objectives i, iii and iv. To achieve these objectives, the process involved the codification of responses. Code sheet was used to filter and sort the data using computer readable materials; Special Package for Social Sciences (SPSS). On the other hand, the qualitative data gathered from the in-depth interview was transcribed to support the data from the quantitative method.

ii. Logistic regression model 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:

The relevant logistic expressions are given as:

Prob (y* =1) =1-F*$(\Sigma xi\beta j) = \frac{e^{\Sigma xi\beta j}}{1+e^{\Sigma xi\beta j}}$ 2

Prob (y* =0) =F*$(\Sigma xi\beta j) = \frac{e^{-\Sigma xi\beta j}}{1+e^{\Sigma xi\beta j}} = \frac{1}{1+e^{\Sigma xi\beta j}}$ 3

Where:

F = the cumulative distribution function for μ_i

Prob ($Y_i = 0/\beta_j X_i$) = F$(-\Sigma xi\beta j)$

Prob ($Y_i = 1/\beta_j X_i$) = 1-F$(-\Sigma xi\beta j)$

The likelihood function is given by;

L = Π {F$(-\Sigma xi\beta j)$} Π {1-F$(-\Sigma xi\beta j)$} 4

y_i=0 y_i=1

while the log likelihood function for the expression is:

H(β) = log L(β) = $\sum_{i=0}^{n} yi \log$

1-F[(-$\sum X_i$ 'β_i) + (1-y)logF(-$\sum X_i$ 'β_i)]

Where

Y = Conflict (crop farmers=1; cattle herder=0)

μ_i = a logistic cumulative distribution in F

X_1 = Age (Years)

X_2 = Sex (Male=1, Female=2)

X_3 = Educational level (Qur'anic =1, Primary=2, Secondary=3, Tertiary=4)

X_4 = Marital status (Single =1, Married =2)

X_5 = Major occupation (Crop farmer=1, Cattle herder =2, Crop farmer and Cattle herder=3)

X_6 = Membership of association (Yes=1, No=2)

X_7 = Access to water (Yes=1, No=2)

X_8 = Lawlessness (Yes=1, No=2)

X_9 = Damage to crop by cattle (Yes=1, No=2)

β_i = The coefficients for the respective variables in the logit function

The probability of a household participating resource use conflict and the corresponding change in probability due to unit change in a variable X_1 are given as:

prob ($y_i = 1/\beta X_i = \frac{e^{\ddagger}}{1+e^{\ddagger}}$)

e = error term

3.5 Definition and Measurements of the Variables

An important characteristic of social research is the search for causal connection, which establish between variables (Abubakar 2012). To achieve the set objectives of the study, two types of variable, namely: dependent and independent variables were considered.

3.6.1 Dependent variable

3.6.1.1 Conflict

Cattle herders and farmer conflict is the dependent variable. Conflict represents a disharmony, antagonism or hostility in a relationship that could arise due to incompatibility of the goals being pursued or incompatibility of the means used in pursuing the chosen goals. if farmers experience conflict with herders 1, otherwise 0

3.6.1.2 Independent variables

3.6.1.3 Age

This refers to the number of years an individual attained from birth. It is believed that, maturity is associated with age. Therefore, the older the respondent become, the less likely he is expected to be involved in conflict. This was measured in years.

3.6.1.4 Sex

This means the male or female category of respondent. This was measured in terms of sex (Male or Female) of the respondent belongs. Male 1, female 2

3.6.1.5 Level of education

This refers to the higher level of education by the respondent. Qur'anic was scored 1, Primary 2, Secondary 3 and Tertiary 4. The higher level of education, the less respondent is likely to involve in conflict.

3.6.1.6 Marital status

This refers to whether the respondent is married or single. It is believed that single respondent is more likely to be involved in conflict. It was measured as dummy. Single scored 1 and married 2.

3.6.1.7 Major Occupation

This refers to the work of respondent (farming or cattle rearing). Farming was measured 1 while cattle rearing was measured 2.

3.6.1.8 Access to water

It is the ease with which water or can be found or accessed in the study area by a respondent**.** The availability of water a respondent has access to is expected to cause conflict if they are in short supply as a result of competition that may arise from unsatisfying humans and animals. Yes 1, no 2

3.6.1.9 Damage of crops by cattle

This refers to the destruction of crops by animals or cattle herders as a result of conflict. It was measured by hectare(s) of crops damaged.1-2 hectares, 3-4 hectares, and more than 5 hectares.

3.6.1.10 Lawlessness

There is need for the law that will guide both farmers and cattle herders on the use of resources in the area; it is believed that lack of laws will contribute to conflict in the study area.

3.7 Expected Outcome

3.7.1 Loss of crops

This refers to the destruction or damage in the expected yield of crops due to conflict between the farmers and cattle herders.

3.7.2 Loss of cattle

It refers to deficit in the number of cattle owned by the cattle herder before the conflict between farmers and cattle herders. It would be measured by the number of cattle the cattle herders lost as a result of conflict. 1-5, 6-10, 11-15 and more than 16.

3.7.3 Displacement of both farmers and cattle herders

This refers to the loss of shelter as a result of the conflict between the two groups. It was measure in terms of the number of times the respondent was displaced. Once, twice, 3 times and more than 3 times

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Socio-economic Characteristics of Crop Farmers and Cattle Herders

Results of the socio-economic characteristics of the respondents presented in Table 4.1 revealed that majority (48.1%) of the respondents were 31 years of age and above while (45.0%) were in the age range of 21- 30years. Only a few (7.0%) of the respondents were 20 years of age and below. It could therefore be inferred that farming and rearing of animals were predominantly, carried out by middle-aged people, who were energetic and productive in the economic sector. In addition, it could be seen that majority (76.0%) of the respondents (both crop farmers and cattle herders) were males. This explains the fact that most of those crop farmers and cattle herders were mostly matured males. This finding agrees with Nformi et al (2014), who found that Most of those who practice crop farming or were engaged in grazing of animals were mostly matured males.

The study found Age as a factor that could cause conflict because the respondents were matured to claim their rights, since the majority involved in crop farming and herding of livestock were male, they were also self-centred hence they could cause conflict at any pointing time.

However, the women were engaged in crop farming and rearing livestock, but when there is a conflict it is the men who carried out the attack or go to courts. According to Olaleye (2000), reported the activities of women as helpers or suppliers of labour in light form operations such as planting, weeding, processing and marketing .The table also revealed that most (86.0%) of the respondents were married while only (14%) were not. This

corroborates with the assertion of Jibowo (1992), that vast majority of the adult population of any society consist of married people. It is found that the singles that were unmarried could easily cause conflict because they lacked family commitment.

Table 4.1: Distribution of the respondents on their socio-economic characteristics

Variable	Frequency	Percentage
Age (years)		
20 below	9	7.0
21-30	58	45.0
31 and above	62	48.1
Mean	**21**	
Marital status		
Married	111	86.0
Single	18	14.0
Sex		
Male	98	76.0
Female	31	24.0

N=129

The Table 4.2 also shows that majority of the respondents (37.2%) had 6-10 children, (31.0%) had 11-15 children and the least (8.5%) had 16 and above children. These are peculiar situations in rural areas as most of these families lack the basic resources for development and consider land or cattle their only source of livelihood. Also most of these crop farmers and cattle herders believed that it is better to have more children who would work on the farm or help in grazing the herd than hiring external labour. The polygamous nature of the community, which allows a man to marry more than one woman, could be another reason why they have more children.

The research also revealed that Most of the respondents (50.4%) had Qur'anic education while (21.7%) had primary education, only (14.0%) of the respondents had secondary education while (6.2%) of the respondents attained tertiary institutions. This goes to

show that education amongst the cattle herders was not considered as priority because they were known for their nomadic life style, which makes them to constantly keep migrating from place to place. Also the low level of education amongst the cattle herders is a product of several factors in the society. Many of them live in remote and enclave areas where schools were not available. So also the parents preferred going to the farm with their children to help them believing that if their children go to school they would have nobody to help them. This finding is supported by the finding of Nformi et al (2014), who found that majority of their respondents had no formal education.

Table 4.2: Distribution of the respondents on their socio-economic characteristics

Variable	**Frequency**	**Percentage**
Number of children		
Less than 5	9	7.0
6-10	48	37.2
11-15	40	31.0
16 and above	11	8.5
No response	21	16.3
Mean	**8**	
Major Occupation		
Farming	61	47.3
Cattle rearing	32	24.8
Farming and cattle rearing	23	17.8
No response	13	10.1
Highest educational attainment		
No education	7	5.4
Qur'anic education	65	50.4
Primary	28	21.7
Secondary	18	14.0
Tertiary	8	6.2
No response	3	2.3

N = 129

Furthermore, almost half (47.3%) of the respondents were members of farmers association, (32.4%) were members of Meyetti Allah while (18.9%) were members of cooperative society. Reason of most farmers to be members of farmers association and cooperative society could be their desire to get credit and fertilizer at ease and at government price, while the Fulani joined the Meyetti Allah to protect their interest. It was also revealed by table 4.3 that majority (48.7%) of the respondents' ethnicity were Hausa, (29.5%) were Fulbe while (22.5%) formed the others who were mostly Kanuri and crop farmers. This is to say that most of the Hausas by tribe and the Kanuri were famers while the Fulani were the cattle herders

Table 4.3: Distribution of the respondents on their socio-economic characteristics

Variable	Frequency	Percentage
Membership of social group		
Member	74	57.4
Non member	55	42.6
Association affiliated with		
Farmers association	36	48.7
Meyetti Allah	24	32.4
Cooperative	14	18.9
Ethnic group		
Hausa	62	48.0
Fulbe	38	29.5
Others	29	22.5

4.4 Socio-economic Causes of Crop Farmers and Cattle Herders Conflict

4.4.1 Causes of conflict between crop farmers and cattle herder on the socio-economic characteristics

The maximum likelihood estimates for the logit model are presented in Table 4.4. The result of the analysis shows that the Chi square of the regression is 99.13 found to be

statistically significant at 1% level. The model has a high negative Log likelihood of -189.66; this shows that the explanatory variables in the estimated logit model significantly explain the likelihood of a respondent participating in the conflict between the crop farmers and cattle herders. The results showed that pseudo R^2 is 0.62 and it is significant at 1% level of probability. The estimated percentage correct prediction was 84.5%, which shows that the model predictions are correct in the cases and hence is reliable. Out of 9 independent variables tested, 6 were statistically significant in predicting the outcome, which is the crop farmer-cattle herder conflict.

Coefficient obtained for age was significant at 1% level of probability and had inverse the Relationship with conflict between the crop farmers and cattle herders. Most of crop farmers and cattle herders are within their frame age, therefore, they are vibrant, agile and full of vigour. It implies that as age increase, the conflict between the crop farmers and cattle herder decreases. Age is a factor that could cause conflict because the respondents are matured to claim their rights, since the majority involved in crop farming and herding of livestock are male, they are also egocentric hence they could cause conflict at any pointing time (Adebayo and Olaniyi, 2008).

Coefficient obtained for educational level was significant at 1% level of probability and had positive relationship on the conflict between the crop farmers and cattle herders. It implies that as educational level increase, the conflict between the crop farmers and cattle herders increases. Education is another factor which could lead to conflict because education enlightens people and they have access to information as regards their existence and treating them as inferior could lead to conflict (Adebayo and Olaniyi, 2008).

Coefficient obtained for major occupation was significant at 1% level of probability and had negative relationship on the conflict between the crop farmers and cattle herder. The negative coefficient for major occupation. Farming is the major occupation of crop farmers while rearing of animals is the major occupation of cattle herders, therefore anything that will threaten their sources of livelihood will not be taken lightly by both groups hence increase the conflict between the crop farmers and cattle herder, the implication is that conflict render victim jobless and lead to poverty. Conflict led to irreplaceable losses of employment, etc. Some survivors permanently lost all they laboured for in their lives. As a result, one can safely argue that the aggregate of such instances negatively impact on the overall economy of these communities and by extension, the rest of the country (Garba *et al.* (2015).

Coefficient obtained for access to water was significant at 1% level of probability and had positive relationship on the conflict between the crop farmers and cattle herder. It implies that as access to water decreased, the conflict between the crop farmers and cattle herder increases. Blockage of water points by the farmers could cause conflict. These findings corroborate with the findings of Abbass (2012), who found that clashes generally centre on access to and competition for grazing and water. As pasture land shrinks, sequel to taking over of such lands by farmers, conflicts become inevitable. According to De Haan (2002), blockage of stock routes and water points by crop encroachment are important direct reasons cited by the cattle herders which is often accompanied by violence. This situation was not acceptable to the cattle herders. During an in-depth interview, a cattle herder said

> ‘‘You see, water point for our livestock is very important but the farmers will plant their crops in all corners of the river. Some years back, there are places reserved for Nomads to graze their animals and enough cattle routs (Labi) where to pass with their animals, but today

> we are prisoners in our own country due to the lack of cattle routs (burtali), as the tradition rulers start to cave out the cattle routs and sale it to the farmers and our people know well that the place is cattle routs, so they push their cattle and pass through that place''

Coefficient obtained for lawlessness was significant at 5% level of probability and had positive relationship on the conflict between the crop farmers and cattle herder. It implies that as lawlessness increase, the conflict between the crop farmers and cattle herder increases. Implies that the law of the land was not strictly adhered in the area by crop farmers and cattle herders which also result to conflict due to desire for vengeance. Farmers could be compensated for crop damage but that the conflicts still continues in the area. This finding disagrees with the findings of Ofuoku et al. (2009) who reported that the conflicts were resolved by the payment of compensation to the offended party in each case. One police officer in and in-depth interview said

> "The problem is that the people do not want to report any case to the Police they prepared to resolve the case themselves or with the assistance of their traditional rulers in the area and they will be complaining that noting has been done"

Coefficient obtained for damage to crop was significant at 1% level of probability and had negative indicator on the conflict between the crop farmers and cattle herder. It implies that as damage to crop increase, the conflict between the crop farmers and cattle herder also increases. Conflict led to socio-economic losses, which could be that of crop etc. Solagberu and Oluwasegun (2010) revealed that persistence of crop farmer- cattle herders conflicts portend grave socioeconomic consequences in northern Nigeria. Garba *et al.* (2015) reported that major losses incurred due to conflicts include destruction of crops, body injury, loss of Livestock, destruction of houses and loss of lives among others. abbas, (2011) reported that village incidence of Nasarawa Local Government

Area, turned bloody with more than 30 people dead, with many houses, crops and other properties set ablaze. The cause of the violence was due to the destruction of rice farmlands by cattle. Gefu, (1990), and Adebayo *et al*. (2008), in related studies identified damage of crops by herds as the most critical factor responsible for conflict between crop farmers and cattle herders. The reason is that it touches on the livelihood of the farmers and Fulani more than any other thing. For instance, one of the leaders of crop farmers said

> ‘‘Farmers will not take it lightly when the source of their living is taken away, the cattle herders do not wait until the farmers harvest and take their produce home before they introduce their cattle to the farms. People do what they like in the country and even when they are caught (the Fulani) they may not be punish, so farmers attach the Fulani whenever there is any damage or destruction of farm produce’’.

Test of hypothesis

The null hypothesis which stated that there is no significant factors responsible for resource use conflict between the crop farmers and cattle herders was tested using the result of Table 4.4. From the results, 5 variables out of 9 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 resource use conflict between the between crop farmers and cattle herders accepted.

Table 4.4: Logistic Regression estimate on the Causes of conflict between crop farmers and cattle herder on the socio-economic characteristics

Variable	Coefficient	Standard error	T-value	Marginal cause
Constant	-20.256	11784.06	-0.002	0.0000
Age	-0.074***	0.028	-2.643	0.929
Sex	23.176	11784.06	0.002	1.16E+10
Educational level	1.875***	0.729	2.572	6.519
Marital status	0.111	0.665	0.167	1.118
Major occupation	-1.111***	0.363	-3.061	0.329
Membership of association	-0.502	0.601	-0.835	0.605
Access to water	2.601***	0.87	2.990	13.483
Lawlessness	1.198**	0.591	2.027	3.313
Damage to crop	-3.479***	0.967	-3.598	0.031
Number of observation	129			
Log likelihood function	-189.66			
Pseudo R Square	0.62			
Chi-square	79.13			
P-value	0.00			
Overall % prediction	84.5			

***P<0.01, **P<0.05

4.5.1 Socio-economic Effects of Conflict on crop farmers and cattle herders

4.5.2 Loss of expected yield because of conflict

Findings in Table 4.5 shows that majority (55.0%) of the respondents experienced loss of crop as a result of conflict while (45.0%) did not lost any of their crops as a result of conflict. The table also revealed the crops that are mostly loss in the conflict. Sorghum was most lost crop (40.8%), then Millet (29.6%), Maize (12.7%) and other crops (17.0%). Sorghum were the most affected crop this has to do with the fact, it is the most produced crop and also harvested last, other crops which were lost include vegetables which was

planted closed to the watering points such as cabbage, carrot, tomatoes onion etc

Table 4.5: Distribution of respondents on whether they loss crop and the type of crop

Variable	Frequency	Percentage
Loss of expected crop		
Yes	71	55.0
No	58	45.0
Crop lost		
Sorghum	29	40.8
Millet	21	29.6
Maize	9	12.7
Others	12	17.0

N = 129

4.5.3 Loss of cattle and the number of cattle lost

Findings in Table 4.6 revealed that (24.0%) of the cattle herders lost their cattle at various time while (17.1%) said they did not lost any cattle to conflict. The study also revealed that more than half (58.1%)of the respondents who are all farmers did not answer the question because it is not applicable to them, Moreover, (50.0%) of the cattle herders loss three to four cattle.

In an interview with the informant, also agree with the table. For instance, the PRO of Meyetti Allah said:

> "Our people loss cattle every time there is conflict, sometimes the farmers kill our cattle out of jealous not because they eat their crops, apart from the one they still"

Table 4.6: Distribution of response on whether one lost cattle or not and the number of cattle

Variable	Frequency	Percentage
Loss cattle for conflict		
Lost	32	24.8
Not lost	22	17.1
No response	75	58.1
How many livestock		
1 – 2	7	21.9
3 – 4	16	50.0
> 5	9	28.1

Mean = 1.5, N = 129

4.5.4 Displacement of cattle herders and/or crop farmers as a result of conflict

Table 4.7 revealed that more than half (69.0%) had been displaced at different times while (31.0%) were not displaced. The findings also revealed that more than half (51.7%) were displaced once, (29.2%) of the respondents were displaced two times, (12.4%) were displaced three times while (6.7%) of the respondents were displaced more than six times. This research found that the conflict led to displacement of both crop farmers and cattle herders in the area.

Table 4.7: Distribution of respondents on whether they are displaced and how many time

Item	Frequency	Percentage
Have you ever been displaced as a result of conflict?		
Yes displaced	89	69.0
Not displaced	40	31.0
How many times displaced		
Once	46	51.7
Twice	26	29.2
3 times	11	12.4
more than 4 times	6	6.7

N = 129

4.5.5 Loss of human lives

Results of Table 4.8 revealed that more than half (68.2%) of the respondents had their household members killed as a result of conflict while (31.8%) respondents' did not loss any of their household members. The study also revealed that more than half (53.4%) of the respondents had at least one member of the household killed during the conflict, (21.6%) had at least two killed persons during the conflict, (14.8%) had 3 person of their household killed, while (10.2%) of the respondents said they loss more than four person. The qualitative data agreed with the data in the table 9. For instance, one of the traditional leaders in Misau local government tells his experience:

> "Many were killed during the conflict I loss one of my sons in the conflict, property were burnt"

Another informant said

> "Our people are killed and our property destroy so I can say it affect us"

Table 4.8: Distribution of respondents on whether they lost household member and the number or not

Variable	Frequency	Percentage
Loss of household member		
Yes lost	88	68.2
Not lost	41	31.8
How many household members you loss		
one person	47	53.4
Two persons	19	21.6
3 persons	13	14.8
More than four persons	9	10.2

N = 129

4.6 Efforts of institutions to settle dispute

Table 4.9 revealed that (33.3%) of the respondents agreed that police settle dispute between crop farmers and cattle herders, (14.7%) of the respondents opined that law court are responsible for dispute between crop farmers and cattle herders, a large proportion of the respondents (48.1%) were of the view that Traditional leaders settle the dispute between crop farmers and cattle herders while (2.3%) of the respondents opined that farmers association settle dispute between the two groups. The qualitative data agrees with the quantitative data, for example one of the informants said:

> "We prepare to settle the dispute at home. If you take the matter to the police or court both parties suffer, so we settle the case with our Traditional Leaders".

From the above the table suggests that dispute is not only resolve with traditional leaders but sometimes go to courts and the Police for reconciliation. The Table also revealed that (42.6%) of the respondents believe that the effort to settle dispute were successful while

(38.5%) said it is not successful. The Table also revealed that (49.9%) of respondents agreed that the effort was successful because of the payment of compensation. The Table further reveals that (44.6%) believed that the effort was not successful because of distrust among the groups responsible for conflict resolution. Contrary to the quantitative data, the qualitative data showed that only government made efforts to manage the conflict.

For instance, one of the police officer had this to say:

> "The government is doing its best it could to bring to end the continuous clash between the Fulani and the farmers not only in Misau but the entire state. The government constituted a committee called farmers / nomads committee saddled with the responsibility of preventing the conflict through awareness campaign. What they usually do is at the beginning of the rainy season, before any agricultural activity, they liaise with the local government and the police to discuss the causes and solution to the problem. The leaders of the nomads and farmers go back to their subjects and enlighten them on the implication of the conflict. So the government is making effort".

Table 4.9 views of respondents on efforts made to settle the dispute

Variable	Frequency	Percentage
Who settle dispute between the crop farmers and cattle herders		
Police	43	33.3
Law court	19	14.7
Traditional Leader	62	48.1
farmers association	3	2.3
others	2	1.6
Were the efforts successful?		
Yes	55	42.6
No	74	38.5
Why is the effort successful?		
commitment of both group leaders	6	10.9
efforts made by traditional leaders	15	27.3
payment of compensation	27	49.1
others specify	7	12.7
Why is the effort not successful		
distrust among the groups	33	44.6
corrupt nature of leaders of both groups	12	16.2
corrupt nature of community leaders groups	21	28.4
Others	8	10.8

N = 129

4.7.1 Perception of Farmers and Cattle Herders on the Performance of Institutions involved in Managing the Conflict.

4.7.2 Performance of the institutions in the conflict resolution

Table 4.10 examined the efficiency and the performance of the stakeholders in conflict resolutions, the study discovered that people had trusted farmers' leaders as (61.1%) of the respondents agreed that farmers' leaders are capable of solving the problems, (23.3%) of the respondents did not believed in the ability of the farmers' leaders in conflict management while (15.5%) were undecided. Having more than half of the respondents believing on the ability of famers leaders might be as a result of the fact that the farmers

report any strange face to the appropriate authority. It may be attributed to the closeness between the community leaders and the masses and as a result of the fact that the community leaders are part of the farmers. Table 4.7.2 also revealed that (61.3%) of the respondents opined that Meyetti Allah was efficient in the conflict management while (20.9%) did not agreed. It can be inferred from this that the nomadic leaders are capable of managing the conflict. This may likely be because they were directly involved in the conflict. Majority of the respondents (43.4%) were undecided and (36.4%) of the respondents agreed that courts were efficient, while (20.2%) of the respondents disagreed. Therefore, findings showed that the courts were not efficient enough to manage the conflict. This may be attributed to the delay and corrupt practices in the judicial system of Nigeria. Findings from the research showed that majority (55.9%) of the respondents said that police were not efficient, while only (27.5%) agreed that police were efficient in conflict management. This shows that the police are not efficient enough to manage the conflict. This may be as a result of the corrupt nature of the police force. Reasonable number (63.6%) of the respondents agreed that the Traditional leaders were efficient in the management of conflict while only (18.6%) disagreed with the ability of the traditional leaders in handling conflict between crop farmers and cattle herders. It can be inferred from the findings that majority believed that the Traditional rulers were capable of managing conflict between the two groups. This may be as a result of the usual intervention of the Traditional leaders in prevent or settling dispute between the crop farmers and cattle herders and their proximity of the people than any other party that was involved in the conflict resolution . The findings agreed with Abubakar (2012) who found Traditional Leaders as the most efficient in conflict management in Katsina State.

Table 4.10: Appraisal of Stakeholders' Level of Efficiency in Managing Conflict

Institution	D	SD	U	A	SA
Farmers leaders are efficient	12(9.3%)	18(14.0%)	20(15.5)	23(17.8%)	56(43.4%)
Meyetti Allah are efficient	15(11.6%)	12(9.3%)	23(17.8%)	49(38.0%)	30(23.3%)
Courts are efficient	13(10.1%)	13(10.1%)	56(43.4%)	27(20.9%)	20(15.5%)
Police are efficient	18(14%)	54(41.9%)	21(16.3%)	20(16.3%)	16(12.4%)
Traditional rulers are efficient	19(14.7%)	5(3.9%)	23(17.8%)	68(52.7)	14(10.9%)

4.8 Possible ways to end the conflict

4.8.1 Possible ways farmers can prevent conflict occurrence

Table 4.11 shows possible ways farmers will prevent conflict occurrence, the results revealed that overwhelming number of the respondents (73.6%) said farmers should not encroach cattle routs, (10.1%) of the respondents said learning how to respect one another will help prevent conflict occurrence. (9.3%) of the respondents said farmers should harvest and pack their crops on time while (7.0%) opined that farmers should report to the authority any suspicious face in the area.

Table 4.11: Possible ways the farmers can prevent conflict

Suggestions	Frequency	Percentage
Farmers should not encroach cattle routs	95	73.6
Learn and respect each other	13	10.1
Farmers should harvest and pack their crops early	12	9.3
Farmers should reports to the authority any suspicious cattle herder in the area	9	7.0
Total	**129**	**100**

4.8.2 Possible ways cattle herders can prevent conflict occurrence

Table 4.12 found that (55.1%) of the respondents opined that if cattle herders stop invading farm land conflict will be minimize, (31.8%) believed that cattle herders should wait till after farmers harvest before they inter the land while (13.3%) said cattle herders should identify open land to graze their cattle.

Table 4.12: Possible ways the cattle herders can prevent conflict

Suggestions	Frequency	Percentage
Cattle herders should stop invading farm	71	55.1
Identify open land for their cattle grazing	17	13.2
Cattle herders should wait till after harvest	41	31.8
Total	**129**	**100**

4.8.3 Possible ways government can prevent conflict occurrence

The findings in Table 4.13 shows the possible ways the government can prevent conflict

occurrence. (24.0%) of the respondents believed that the government can prevents conflict occurrences when they prevent deforestation, provision of more watering points as responded by (24.8%) might solve the problem. (16.3%) of the respondents said when government prevents encroachment the conflict will be minimal, (21.7%) of the respondents said that government can stop the conflict by enforcing the existing law, which is in existence since the colonial masters while (13.2%) of the respondents said government should provide ranch to cattle herders. This is to say that both cattle herders and crop farmers in their various opinion believed that government can prevents conflict occurrence in future by enforcing the laws

Table 4.13 Possible ways government can prevent conflict

Suggestions	**Frequency**	**Percentage**
Government should Prevent deforestation	31	24.0
Provide More watering points for all users	32	24.8
Government should tackle encroachment	21	16.3
Provide ranch	17	13.2
Enforced the law	28	21.7
Total	**129**	**100**

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study titled Socio-economic assessment of resource use conflict between crop farmers and cattle herders was conducted in Misau Local Government Area Bauchi State was set to assess the resource use conflict between crop farmers and cattle herders and evaluate the perception of crop farmers and cattle herders on the performance of institutions involved in managing the conflict in the study area. A total of 136 structured questionnaires were administered and 129 were retrieved. In-depth interview were used to support quantitative data.

The study revealed that the major causes of conflict in the study area were crop damage by cattle, blockage of watering point and encroachment of cattle rout by farmers. The study found that, loss of crop, loss of animal, displacement of people and sometimes loss of lives as a result of the conflict as the major effect of the conflict. The findings also revealed that both cattle herders and crop farmers prefer Traditional leaders' intervention in conflict management to court or police because of corrupt nature and delay in court presiding and also corrupt nature of the Nigeria police.

The results also show majority of the respondents believing on Traditional leaders as capable in managing conflict while majority do not believe in the police as good agent of conflict management.

5.2 Conclusions

It is clear that crop farmers and cattle herder's conflicts in Misau Local Government Area centred on the cattle owners and crop farmers. The population of both crop farmers and Cattle herders is rapidly increasing but land remains fixed. These causes are seen in terms of competition on land and cattle trespass.

Periodical struggle for scarce resources has degenerated into violent conflicts in Misau local government Area between crop farmers and cattle herders. These conflicts have become more intense, widespread and destructive. Since most of the cattle herders do not own or possess the rights to land, they therefore depend absolutely on open land to feed their cattle. Government policies on agriculture, especially the all-year fadama farming, are threats to cattle herders' 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 cattle herders and crop farmers by government has been ineffective. This has contributed to the frequency of the clashes. All these have instigate insecurity that have 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. Therefore, it is in the interest of the State to end the land encroachment and take concrete steps to address the genuine needs of cattle herders for availability of grazing land, resolve the re-occurring conflicts in the agricultural sector, which currently provides employment to large population of country.

Efforts made by the stakeholders to prevent the conflict have been minimal or ineffective, which may have lead to a perception by some communities that they should take

responsibility for their own security. These have increased the conflict in the study area. However, the government involvement of all the stakeholders has reduced the conflict.

5.3 Contribution of the study to Knowledge

(i) The study revealed that crop damage, blockage of watering points and lack of adherence to the law as the major sources of conflict.

(ii) The result of the study revealed lost of expected yield lost of cattle, displacement of people and loss of human lives as the major effects of the conflict

(iii) The study found that majority (63.6%) of the respondents prepare resolving the issue with the traditional leaders rather than going to court or police station

5.4 Recommendations

i. The findings showed that the destruction of crops and lack of access to water points as the major causes of the conflicts. The study, therefore, recommends that Misau Local Government and Bauchi State in general should formulate a policy that will reclaim the encroached cattle routes and create more. In addition, water points for the cattle should be separated from that of farmers so as to avoid friction.

ii. Laws in the conflicting area are not adhered to, therefore, government should intervene through the Agro pastoral Commissions, which would be charged with the distribution of land and resolution of conflicts. This is to legally redefine and practically demarcate the boundaries between grazing and farmlands. This could be achieved through law enforcement agents to make

sure these boundaries are respected.

iii. Loss of properties and lives were revealed as the highest consequences. The study recommends that the religious leaders, traditional leaders, farmers/cattle herders' associations should make more efforts in preaching the implications of the conflict on the people and the community in general.

iv. The study revealed that both groups prefer resolving conflict locally. Therefore, traditional and leaders of both groups should be well involved in finding solutions to crop farmers and cattle herders' conflict and the government should encourage and equip traditional institutions to properly resolve conflicts.

v. In view of the rapid population pressure and declining farmlands there is the need to adopt improved farming techniques. The farmers should adopt intensive cultivation by using improved seeds and farm inputs.

vi. The pastoralists should adopt a viable and intensive system of grazing in order to cope with the rapid demographic pressure on the Grass fields of Misau. They should embark on fodder production such as growing of Guatemala and Bracharia to feed the cattle in times of scarcity during the dry season.

vii. NGOs should play vital role in the development of rural areas and integration of crop farmers and grazers.

viii. Finally, farmers should be watchful and report any strange face identify to be a cattle herder to the traditional or cattle herders leaders for proper record.

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APPENDIX I: RESEARCH QUESTIONNAIRE

Dear Respondent,

I am a postgraduate student of the Department of Agricultural Economics and Rural Sociology, Ahmad Bello University, Zaria undertaking a research on the topic "Socio-Economic Assessment of Resource Use Conflict between Crop Farmers and Cattle Herders in Misau Local Government, Bauchi State". All information provided will be strictly confidential and for academic purpose only.

SECTION A: socioeconomic characteristics of respondent

1. Cluster/ward…….
2. Age of the respondent (a) 20 below [ ] (b) 21-30 years [ ] (c) 31 above [ ]
3. Marital status of the respondent [ ] (a) married [ ] (b) single [ ]
4. Sex of the respondent (a) male [ ] (b) female [ ]
5. Number of children (a) less than 5 [ ] (b) 6-10 [ ] (c) 11-15 [ ] (d) 16 above [ ]
6. Occupation of the respondent [ ] (a) farming [ ] (b) cattle rearing [ ] (c) farming and cattle rearing [ ]
7. Highest educational attainment (a) Qur'anic school [ ] (b) Primary [ ] (c) Secondary [ ] (d) Tertiary education [ ]
8. Are you a member of any social group? (a) Yes [ ] (b) No [ ]
9. If yes to 8, what groups or associations (a) Farmers' association [ ] (b) Meyetti Allah [ ] (c) Cooperative society [ ] (d) others (specify)…….
10. Ethnic group [ ] (a) Hausa [ ] (b) Fulbe [ ] (c) others specify……

Section B: Causes of Crop Farmers and Cattle Herders Conflict

11. How much do you agree or disagree with the following causes of farmers and cattle leaders conflict

	ITEM	1 D	2 SD	3 U	4 A	5 SA
A	Accessibility of natural resources					
B	Damage of crops					
C	Lawlessness in the society					
D	Thief of livestock					

Key: 1 = Disagree, 2 = strongly disagree, 3 = Undecided, 4 = Agree, 5 = strongly agree

12. How many water points do you have access to?

(a) 1 [ ] (b) 2 [ ] (c) 3 [ ] (d) more than 3 [ ]

13. Did animals or cattle herders ever destroy your crops as a result of conflict?

(a) Yes---------- (b) No ----------

14. If yes to question 16, how many hectare(s) of your crops were damaged? (a) Less than 1 hectare [ ] (b) 2- 3 hectares [ ] (c) 4-5 hectares [ ] (d) more than 6 hectares [ ]

15. Do you think there is a law, which guide the users of the resources in the area?

(a) Yes [ ] (b) No [ ]

16. If yes in question 15, how efficient do you think the law is?

(a). inefficient [ ] (b) efficient [ ] (c) very efficient [ ]

Section C: Effects of Crop Farmers and Cattle Herders' conflict

17. Have you ever loss expected yield because of conflict?

(a) Yes [ ] (b) No [ ]

18. If yes, what crops have you lost?

(a) Sorghum [ ] (b) maize [ ] (c)others (specify)……..

19. How much of these crops have you lost?

a) Sorghum_____ kg bags (b) Maize_____kg bags (c) others (specify)_____

20. Have you ever lost livestock in the conflict?

(a) Yes [ ] (b) No [ ]

21. If yes, how many livestock have you lost? (Please indicate the number of livestock lost)

Cattle _____Sheep_____ Goats_____

22. Have you ever been displaced?

(a) Yes [ ] (b) No [ ]

22. If yes, how many times have you been displaced?

(a) Once [ ] (b) Twice [ ] (c) Three times [ ] (d) more than four times [ ]

23. Have you lost any of your household members in the conflict?

(a) Yes [ ] (b) No [ ]

24. If yes, how many members of your household have you lost?

(a) One person [ ] (b) two persons [ ] (c) three persons [(d) more than four persons []

Section D: Perception of Farmers and Cattle Herders on the Performance of Institutions involved in Managing the Conflict.

25. Who settles disputes between the farmers and the cattle herders? (a) Police [ ] (b) law court [ ] (c) traditional rulers [ ] (d) farmers association [ ] (e) others specify……

26. Were the efforts successful? (a) Yes [ ] (b) No [ ]

27. If no, why do you think the efforts were not successful? (a) Distrust among the group [ ] (b) Corrupt nature of the leaders of both groups [ ] (c) corrupt nature of community leaders [ ] (d) others specify…….

28. if yes, why do you think the effort were successful? (a) Commitment of both group leaders [ ] (b) efforts made by the traditional leaders (c) payment of compensation [ ]

(d) Others specify…….

29. How much do you agree with the following statements

S/NO	ITEM	1 D	2 SD	3 U	4 A	5 SA
A	Farmers leaders are efficient in managing the conflict					
B	Miyyetti-Allah (cattle herders Leaders) are efficient in managing the conflict					
C	Courts are efficient in managing the conflict					
D	Police are efficient in managing the conflict					
E	Local government officials are efficient in managing the conflict					

Key: 1 = Disagree, 2 = Strongly disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree

30. What other measures in your opinion can be taken to end the incessant problems resulting from resource use between the farmers and cattle herders? (a) Establish farmers and cattle herders union [ ] (b) provide education and civic training for both groups [ ] (c) Others specify……

31. Suggest possible way(s) in which farmers can resolve the conflict in the conflict

……

……

32. Suggest possible way(s) in which cattle herders can resolve the conflict in the conflict…….

……

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

……

……

IN-DEPTH INTERVIEW (IDI) SCHEDULE

These questions are intended to be administered those who are directly or indirectly affected by the conflict such as the Traditional ruler in the area, the police and leaders of associations of both crop farmers and cattle herders.

Socioeconomics characteristics of the informants

1. Age of the informant
2. Marital status of the informant
3. Sex of the informant
4. Occupation of the informant
5. Highest educational attainment of the informant
6. Ethnic group of the informant (a) Hausa (b) Fulbe (c) others specify……

Causes of the conflict

7. What the you think are the causes of the conflict between the farmers and the cattle herders

Effects of the farmers' and cattle herders' conflict

8. The conflict is believed to have caused some problems, what will you say?
   What do you think are the effects of the conflict on the farmers?
   What do you think are the effects of the conflict on the cattle herder?

Institutions that intervene to manage the conflict

9. Efforts were made by different bodies such as government to manage the conflict, what is your perception on the efforts?

-What will you say on the efforts made by the community to manage the conflict?

-Do you think the efforts of the above institutions were successful and why?

What are the institutions that managed the conflict in this area?

Solutions

10. Suggest the appropriate or best ways to manage and improve relationship between the two groups
11. What measure do you think government, farmers and cattle herders should each take to prevent the conflict?