

**INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON  
CONFLICT RESOLUTION BETWEEN FULANI HERDSMEN AND FARMERS IN  
NORTH-CENTRAL, NIGERIA**

**BY**

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**Abstract**

*This study determined the influence of information and communication technology on herdsmen/farmers conflict resolution in North-central Nigeria. Employing a descriptive survey research design, the study adopted a population of 115,992 farmers and 49,664 nomadic Fulani across 36 conflict-prone Local Government Areas. A sample size of 500 respondents using a Stratified sampling technique was used. A validated 4-point scale questionnaire served as the primary data collection tool. The instrument's reliability was confirmed through a Cronbach alpha test, yielding a coefficient of 0.79 through a pilot study. SPSS version 25 facilitated the analysis, using descriptive statistics and inferential statistics. The findings obtained revealed unanimous agreement among the respondents on information and communication technology. It was concluded that the collective significance of public enlightenment strategies be adopted in promoting conflict resolution between herdsmen and farmers. It was recommended among others that an integrated approach involving government, communities, media, and education is needed to be strongly adopted to resolve herdsmen-farmers conflict through conflict prevention, adaptation, communication, and public awareness. The study provides valuable implications for policymakers, community leaders, and ICT practitioners to collaboratively address herdsmen/farmers' conflicts in North-Central Nigeria to promote sustainable peace and coexistence.*

**Introduction**

Over the years, there had been a mutual understanding between herdsmen and farmers in North-central Nigeria. The activities of nomadic herdsmen which involve the movement of cattle from one place for grazing made them depend on farmers' unused farmlands by taking advantage of shifting

cultivation and crop rotation system of farming by the farmers while farmers gain from compound manure deposited by the herdsmen animals for soil fertility so as to bumper their harvest, The longtime cordial and stable relationship between Fulani herdsmen and farmers' enables them to work side by side with mutually interdependent with each other for their survival. The herders graze on farmers' land and their cattle provides compound manure needed to bumper their harvest. The interdependency has led to an increase in the production of both crops and animals for human consumption, which serves as a major source of raw materials for industrial and economic development of the region (Duru, 2018). This explains why Monod (2018) reported that the survival of the pastoralists and farmers is as a result of mutual understanding and interaction among themselves.

Regrettably, the longtime cordial relationship with mutual understanding and benefits that existed between the two parties over the years had been truncated with many disputes across the regions as a result of population growth, environmental degradation, increase in the activities of farmers and herdsmen, livelihood interference and scarcity of grazing land (Dimelu, et al, 2017). The dire need of Fulani herdsmen to provide pasture to their animals in unfavorable conditions has led to encroachment into farmland and subsequently destroying their crops, in a bid to protect their farm from being destroyed by the Fulani herdsmen there were misunderstandings which led to serious conflict between them. The situation has led to a series of conflicts between the two groups of people in the zone.

The incidents of Fulani herdsmen and farmers conflicts are not new in Nigeria even globally, it is on record that Fulani herdsman and farmers conflicts accounted for 35 percent of conflicts in Nigeria in

the past three decades. Conflicts over access to and control of natural resources are common phenomena in areas where farming and pastoralism co-exist (Yagana, 2016). While farmers accused the Fulani herdsmen of the destruction of their crops and contamination of community water points, while fulani Herdsmen accused farmers of denying them access to grazing areas and occasionally rustling their cattle (Uhembe, 2015). In a bid for the farmers to protect their farms from herdsmen, the longtime mutual relationship and peaceful co-existence between the two parties came to an end in some parts of North-central Nigeria as conflict became the order of the day (Ibrahim and Chaminda, 2017, Bagu and Katie, 2017). The persistent misunderstandings have led to a series of intergroup conflicts in North-central Nigeria. Conflict is defined as a state of disharmony between or among people/persons, institutions, communities, societies and nations with opposing ideas, views, values, goals, visions and missions (Mohammed 2015).

The Fulani herdsmen and farmers conflict in North-central Nigeria portends a very great threat to security, peaceful co-existence, unity, and socio-economic development in Nigeria. The study conducted by Amaza (2016) reported that North-central Nigeria witnessed 371 out of 389 incidents of Fulani herders and farmers' conflicts that took place between 1997 to 2015, the situation led to a series of atrocities and a loss of trust between the two parties (Chinweizu, 2015); Abiodu, 2016; (Idakwoji, et all 2018). A study conducted by Oli, Ibekwe and Nwankwo (2018) has shown that between 2013 to 2016, North-central Nigeria witnessed not less than 50 fulani herdsmen and farmers crises. For example, the incidence of herder's/farmer conflict in some villages in Nasarawa state in January 2013 led to the killing of 10 people and displacing over 5000 people.

The study conducted in Kenya by Chepchirchir and Mberia (2019) maintained that radio and television are the most important means of communication in Africa that lower literacy, driving forces of change and play significant roles as conciliators and a promoter of peace. This therefore indicated that media house; Emerging information technologies have significant roles in promoting peace and resolving conflicts between groups of people. This pointed to the need to investigate the influence of Information and communication technology on conflict resolution between fulani herdsmen and farmers in north-central Nigeria,

### **Statement of the Problem**

Fulani herdsmen and farmers have for decades been leaving in an uninterrupted peace as obtained in other Nigerian communities due to absence of dominating tendency, cultural tolerance; non-dichotomy; respect for one another, avoidance of destruction of farm produce by the herders. Adequate grazing resources for Fulani and their cattle. This ensure peaceful coexistence between the two communities for a decade. However, around early 90s problems erupt as a result of expansion of agriculturist population and cultivated land at the expense of pasture land: deteriorating environmental condition, Desertification and soil degradation as opined in the book called climate change by Gail Herman (2018) this lead to a misunderstanding which resulted to conflict that claim life of highest magnitude, houses where raised down, and Arable crop were also destroyed.

It has been alluded that due to the Fulani herdsmen and farmers conflict, there are cases of possession of illegal arms and weapons among the members of the conflicting communities resulting to increased rate of crime, tension and state of insecurity; thwarted commercial activities in the area; increased lawlessness and social vices; high level of distrust among members of conflict ting

communities; and increase in internally displaced persons. Empirical evidence shows that traditional rulers, information and communication technology plays an important role in conflict resolution especially in communal conflict. This assertion pointed to the need to investigate the influence of traditional information dissemination, information and communication technology on conflict resolution especially among the Fulani herdsmen and farmer's in North-Central geo-political zone, Nigeria

### **Aim and objectives of the studies.**

The aim of the study is to determine the influence of Information and communication Technology on herdsmen/farmers conflict resolution in North-central Nigeria. Specifically, the study intends to:

1. What is the influence of ICT on conflict resolution between herdsmen and farmers in the North-Central geopolitical zone, Nigeria?
2. What is the influence of video (cinema) awareness programme on herdsmen/ farmers conflict resolution in North-Central Nigeria?

### **Literature Review**

#### **Concept of Conflict**

Conflict, otherwise known as violence is a misunderstanding that affects two or more people or groups of people that may involve destruction of properties, loss of lives and displacement of people. Nnoli (2003) defined conflict as a misunderstanding arising from two or more groups of people as a result of behavioral change, phenomenal or believe. Rahim (2010), conflict is opposition among social entities directed against one another, it is distinguished from competition defined as opposition among social entities independently striving for something of

which the supply is inadequate to satisfy all. Similarly, Chaturvedi (2012) considers conflict as a disagreement between two or more forces that may lead to fighting and destruction of properties. Equally, Madu (2015) consider conflict as the state of disagreement between two or more parties. According to Adeniyi (2016), conflict is a strike or clash arising due to disagreement. Shittu (2020) defined conflict as friction, disagreement or discord between a group of people when the actions or behaviour of some of the members of such groups are unexpected or restricted by some or other members of the group, especially in a fierce or bloody manner.

### **Fulani herdsmen and farmers Conflicts**

Conflicts between headers/farmers in Nigeria according to Hussein (1998) are conflicts that occur as a result of ethnic, interest, resource disputes, political action, evictions, killings, farm encroachment, crop destruction, cattle raiding and cattle rustling. Hagmann (2007) is the conflict that occurs as a result of the destruction of farms, crops and other valuable things which leads to the use of weapons and other dangerous things between the two parties. He maintained that herder-farmer conflicts are usually conflicts between nomadic or transhumant livestock keepers that arise between receiving groups over their territory's resources and incoming groups searching for water and pastures, and cattle raiding. Okoro and Okechukwu (2012) opined that violence that occurs between peasant farmers or subsistence cultivators and nomadic or transhumant livestock keepers is a result of encroachment of farms, destruction of crops and killing of animals.

### **Causes of Fulani herdsmen and farmers' conflicts**

There are various causes of herdsmen and farmers conflict in Nigeria. Realistic Conflict Theory suggests that prejudices can arise in competition between groups for scarcely available resources,

power, or territory. This theory states that whenever two groups are seeking the same resources, it will lead to conflict (Baumeister & Vohs, 2007). The theory maintained that resource scarcity, climate, and resource depletion could impact the decision-making of parties. The author stressed that different beliefs prejudice, and discrimination between groups can potentially initiate conflicts between Fulani herders and farmers. Tenuche and Ifatimehin (2009) opined that the untenable grazing of plant resources and nasty devastation of other resources such as fish, water, and crops among others are the causes of persistent herder's/farmers conflicts. This is in congruence with Ofem and Inyang (2014) whose study indicated that burning of range land, pollution of water sources, disrespect for traditional leaders, and destruction of farmland were the major causes of conflict between herders and farmers. Often in the process of burning, fire spreads into adjoining farms destroying farms, stored food produce in the barns and farm implements (Odoh and Chilaka, 2012).

### **Influence of ICT on Conflict Resolution**

The study conducted by Athanas (2011) titled the role of media and conflict resolution in Burundi reported that forgiveness, avoidance of reprisal attacks, involvement of traditional rulers and effective use of media have a positive influence on conflict resolution in Burundi. The study of Asemah and Edegoh (2012) on the role of mass media in conflict resolution was conducted in Plateaus state and also revealed that the media have not been giving objective reports of the Jos crises and this tends to escalate the crises. It was concluded that the extent to which the mass media are used to resolve a crisis in Plateau State is minimal. Another related study conducted by Anyanwu (2013) on the role of the Enugu state broadcasting service in conflict resolution in Enugu

North indicated that Enugu State Broadcasting Service play a significant role in resolving conflicts through its awareness programme

### **Research Methodology**

The study employs descriptive survey design. Descriptive survey design is the type of design that allowed the researcher collect data from the respondents using questionnaire and interview. The researcher considers this design more suitable for the study, because it is quantitative research method that is considered conclusive and it is use to test specific hypothesis and described characteristic of function. Cynthia (2014). In a book research method. The populations of the study encompass Fulani herdsmen and farmers in north central nigeria. The instrument for data collection was structure questionnaire this is based on the assertion of Kabir and Adamu (2019) who opined that questionnaire is the appropriate means of data collection in the survey study. The data was collected by the researcher assisted by three (4) research assistants and analyzed using mean scores and standard deviation.

### **Results Presentation And Analysis Of Data**

The results of the descriptive statistics used to answer the research questions are as presented in table 1 and 2. Table 1 and 2 were for the research question 1, and 2.

**Research Question one: What is the Influence of Information and Communication Technology on Conflict Resolution Between Fulani Herdsmen and Farmers in North Central Nigeria?.**

**Table 1:** Influence of Information and Communication Technology on Conflict Resolution Between Fulani Herdsmen and Farmers in North Central Nigeria.



S/ N O	STATEMENT	TOTAL						M	ST D	R M K
		SA	A	S D	D A	F X	N			
1.	In my experience, using WhatsApp greatly enhances communication between herdsmen and farmers during conflicts.	60 3	22 0	30 0	1 3	12 61	45 5	<b>2.7</b> <b>7</b>	.824	A G
2.	Access to real-time information through GPS navigation systems effectively prevents conflicts between herdsmen and farmers.	21 0	10 1	60 0	1 1	10 28	45 5	<b>2.2</b> <b>5</b>	.776	D A
3.	Online forums on Facebook provide valuable resources for me in resolving conflicts between herdsmen and farmers.	24 0	10 3	80 4	1 2	12 67	45 5	<b>2.7</b> <b>8</b>	.887	A G
4.	Using blockchain technology ensures transparency and accountability in resolving conflicts between herdsmen and farmers, based on my observations.	43 0	20 2	40 0	1 2	12 33	45 5	<b>2.7</b> <b>0</b>	.974	D A
5.	Government investment in broadband internet infrastructure is essential for improving conflict resolution efforts between herdsmen and farmers, as per my perspective.	80 0	20 4	10 1	1 0	12 05	45 5	<b>2.6</b> <b>8</b>	.966	D A
6.	Early warning systems utilizing SMS alerts anticipate and prevent conflicts between herdsmen and farmers, in my opinion.	51 2	30 0	23 0	1 0	11 48	45 5	<b>2.5</b> <b>2</b>	.824	D A
7.	The use of cloud-based 150storage facilitates documentation and tracking of conflict incidents between herdsmen and farmers, from what I have seen.	50 0	28 8	30 0	1 2	12 09	45 5	<b>2.6</b> <b>5</b>	.718	D A
8.	Training programs on using drones for surveillance and monitoring in conflicts between herdsmen and farmers are essential for effective	73 0	20 2	13 0	1 2	11 82	45 5	<b>2.5</b> <b>9</b>	.776	D A

**Weighted mean= 2.76**

The result of the analysis presented in Table 2 provide answer to research question one revealed the weighted mean score of 2.76 Majority of the mean scores of the items were under the index score of disagreed This suggested that the respondents disagreed that those items on Information and Communication Technology have no influence on herdsmen/farmers conflict resolution in region. The finding therefore shows with the means of disagreed that access to real term information (2.25), block chain technology (2.21), Government establishment in internet infrastructure (2.68), early warning utilizing SMS Alert (2.52), cloud based storage (2.18), Use of drones (2.39), Internet Mobile Networks (1.91), Government initiative to deployed ICT (2.05), The study also revealed that Using WhatsApp (2.77), Online forum on Facebook (2.78), ), Video conferencing platforms (2.79), satellite imagery (2.90), ICT tools (3.91), virtual reality (2.76), helps in addressing headers/farmers conflicts in North-Central Nigeria. This shows that most of the items listed would have no significant influence on addressing the herdsmen/farmers conflicts in North-central Nigeria. The mean scores of 9 of the items in the construct were under the scale of disagreed with mean scores above 2.58. The outcome of the item analysis shows that the respondents Agreed that the ICT tools such as WhatsApp, Internet, cloud-based, Mobile phones among others have no influence on herdsmen/farmers conflict resolution in North-central Nigeria.

### **Research Question two**



*Note: RPS= Total Responses, AG=Agreed, DA=Disagreed, M= Mean, SD= Standard Deviation,  
Rmk=Remark*

What is the influence of video (cinema) awareness programs on herdsmen/farmers conflict resolution in North-Central Nigeria?

The result of descriptive statistics presented in Table 2 indicates the weighted mean score was 2.39 in 14 items listed with standard deviation of .927. this therefore shows that, Majority of the mean scores of the items were under the index score of agreed. This suggested that the respondents agreed that those items listed on the influence of video (cinema) awareness programs on Fulani herdsmen and Farmers conflict resolution in North-Central Nigeria could have a significant influence on conflict resolution between Fulani herdsmen and Farmers. The finding therefore shows with the mean, that respondents agreed that the result indicated the he role of video shows that address the hate speech 2.65, campaigns and awareness 2.82, information of emerging conflict management 2.58, Video shows provide information for conflict resolution 2.82, Video shows help in conflict management 2.78, Video shows focus strategies in conflict prevention 2.60, performance of talk shows in video help in conflict resolution 2.76 Content of video show programme help in preventing conflict 2.80, Video shows broadcasting enlighten people on how conflicts can be resolve satisfactory 2.61, The study also revealed that, Video shows promotes ethical understanding 1.96 Video programme serves as mouthpiece of leaders 1.89, providing timely information, professionalization of information dissemination, strengthen unity, performance talk shows, unity,

togetherness, and enlighten people have influence on herdsmen/farmers conflict resolution in North-Central Nigeria.

### **Recommendations**

Information and communication technology based on the findings of the study should be given less attention in resolving conflict between herders and farmers because most of the items listed have no significant influence on addressing the Fulani herdsmen and farmers conflicts in North-central Nigeria reason being that majority shows less interest or do not have access to information and communication technology gadgets. While in the case of Media houses, much attention should be given in the area of video (cinema) awareness, programs to educate the public about conflict resolution.

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