

IMPACT OF HERDERS AND CROP FARMERS CONFLICTS ON RURAL LIVELIHOODS IN SELECTED RURAL COMMUNITIES IN OGUN STATE, NIGERIA

By

^{1*}ADENIYI, Adekunle Adisa

&

^{2**}Wahab, Tajudeen

^{1*} Department of Adult and Development Education

^{2**} Department of Economics

Tai Solarin University of Education, Ijagun, P.M.B 2118,
Ijebu Ode, Ogun State, Nigeria.

Email Address: akunleniyi@gmail.com

Telephone No: +234 8035030151- Nigeria

Abstract

This study examined impact of herders and crop farmer's conflicts on rural livelihoods in selected communities in Ogun state, Nigeria. A descriptive survey design was adopted, and purposive sampling method was used to select two hundred and eighty-seven respondents for the study. An adapted instrument "Herders-Crop Farmers Conflicts and Rural Livelihoods Scale (HCFCLS)" with Cronbach Alpha internal consistency of 0.73 was administered. Data were analysed using descriptive statistical tools and correlation matrix at 0.05 level of significance. Correlation analysis showed that there was negative significant relationship between herders and crop farmers conflicts and productive assets ($r = -0.703$), productive activities ($r = -0.831$), income ($r = -0.795$), social assets ($r = -0.804$) and capability ($r = -0.616$) respectively. It also showed that there was a negative significant relationship between herders and crop farmers conflicts and livelihoods ($r = -.8635$) in the study area. Therefore, the two null hypotheses were rejected at 0.05 level of significance. It was concluded that herders and crop farmer's conflicts have caused significant negative impact on the livelihoods of victims. It is recommended that the government should regulate herders and crop farmer's activities, improve access to ownership of land resources for any agricultural productive activities.

Word count: 194

Keywords: Impact, Herders, Crop Framers, Conflicts, Rural, Livelihoods

Introduction

Nigeria's rural communities are inhabited by about 96,460,000 people i.e 53 percent of the total population (International Fund for Agricultural Development, 2021). About 70 per cent

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

of rural dwellers are subsistence smallholders' herders and crop farmers who produce about 90 percent of Nigeria's foods, contributing to agriculture's 21 percent input to Gross Domestic Product in 2015. To achieve this, the herders also known as pastoralists produce livestock such as sheep, goat, cattle, and other animals as the major sources of animal protein and industrial use while the crop farmers cultivate crops on small or large scale for local consumption, industrial uses and exports. However, the rural environment does not support desired increment in acreage for herders and crop farmers productive activities, it is also bedevilled with problems of inaccessibility, low-income level, high incidence of poverty, conflicts, and poor livelihoods (Oladoja and Adeokun, 2009; Balogun, Adeoye, Yusuf, Akinlade and Sanni, 2012). With the need for improved livelihoods being tied to increased productivity of the herders and crop farmers in the rural communities, it is worrisome to note that this desire has become more intense due to emerging natural and man-made disasters like climate change, conflicts, banditry, and insurgence causing internal displacements of herders and crop farmers from the crises ridden areas to relatively safer areas in southern parts of Nigeria. Ofuoku and Isife (2010) stated that herders migrate to middle belt and southern states with longer raining season in search of pasture and water for the benefit of their livestock. This movement, settlement and resettlement has led to increased human and livestock population and has triggered series of struggle for control and ownership of water, land and other natural resources for farming and grazing activities (Eyekpimi, 2016).

The problem is that this struggle for control and ownership of land resources by the herders and crop farmers has degenerated to intense conflicts which has become incessant and is having serious impacts on the productivity, income, and livelihoods of inhabitants of several rural communities in southern parts of Nigeria and in Ogun state. Ikezue and Ezeah (2017) reported that these increasing conflicts between herders and crop farmers has become fiercer, heightening the level of insecurity, loss of lives, animals, crops, and properties with high possibility of causing food crisis. Based on this, review of past studies has shown that several authors have carried out studies on herders' farmers conflicts, for instance, Oli, Ibekwe and Nwankwo (2018) conducted a study on prevalence of herdsmen and farmers conflict in Nigeria while Okoro (2018) research was on herdsmen/farmers conflict and its effects on socio-economic development in Nigeria. However, not much has been done on the herders and crop farmer's conflicts and rural livelihoods. Therefore, there is the need for this study on impact of herders and crop farmer's conflicts on rural livelihoods in selected communities in Ogun state, Nigeria.

Objectives of the study

The objectives of this study are to identify the causes of herders and crop farmers conflicts, find out whether there is any significant relationship between the herders and crop farmers conflicts and productive assets, productive activities, income, social assets, and capability; and determine whether there is any relationship between herders and crop farmers conflicts and rural livelihoods in the communities under study.

Research question

Therefore, this study will provide answers to the following research questions: What are the causes of herders and crop farmer's conflicts in the communities under study? Is there any significant relationship between the herders and crop farmer's conflicts and productive assets, productive activities, income, social assets, and capability in the communities under study? Is there any significant relationship between herders and crop farmer's conflicts and rural livelihoods in the communities under study?

Hypotheses

The null hypotheses of this study are:

H₀₁: there is no significant relationship between herders and crop farmer's conflicts and productive assets, productive activities, income, social assets, and capability in the communities under study.

H₀₂: there is no significant relationship between herders and crop farmer's conflicts and rural livelihoods in the communities under study.

Literature Review

About 70% of 96,460,000 people living in Nigeria's rural areas are farmers. This vast population are herders and crop farmers whose productions are majorly subsistence. While herders keep livestock like cattle, goats, and sheep, grazing their livestock on natural grassland and making a living from them, the crop farmers raise field crops and are mainly subsistence cultivators. Herders move from the northern part southward to the middle belt and coastal zones in Nigeria, in search of greener pasture and fresh water for their cattle. This is due to longer rainy season and ability of the soil to retain moisture for long in the middle belt and southern parts of Nigeria (Ofuoku and Isife 2010; Oli, Ibekwe and Nwankwo, 2018; Oghuvbu and Oghuvbu, 2020).

With these transhumance movements, the herders and the crop farmers have been co-existing for centuries, have developed interdependent relationships through reciprocity, other exchanges, support and have been carrying out productive activities to make a living, even though they both depend largely on the available natural resources for the activities (Moritz, 2010, World Bank, 2020; IFAD, 2021). It is surprising that what used to be co-habitation of these people has turned out to be disastrous and causing calamity nationwide.

In the assertion of Oli, Ibekwe and Nwankwo (2018) the herders and crop farmers' conflicts have been recorded in several communities over "cattle destruction of crops, farmers' encroachment on grazing reserves and indiscriminate bush burning by herders which normally has resulted in loss of crops, deaths, homelessness, and displacement of citizens." This is further affirmed by Adebo and Olotu (2018) that the herders' migration southwards to graze their cattle has caused more harm than good by escalating conflicts and confrontations between

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

the herders and the indigenous crop farmers of the areas they migrated to, leading to death of many crop farmers in Ekiti, Oyo, Ondo, and Ogun states in southwest Nigeria.

Several authors have stated that whenever these conflicts occur, loss of lives and properties are recorded. It has also been noted that herders and crop farmer's conflicts have serious implications on the livelihoods of both the herders, crop farmers and other community inhabitants. This has led to the intellectual discourse on identifying the importance of livelihoods and its link to such elements as productive assets, productive activities, income, social assets etc and its usage as a determine of poverty level and wellbeing of people has led to its adoption as an approach in development studies, consequently attracting severally definitions. Adeniyi (2015) stated that livelihoods are means through which households gain their living by drawing on capabilities and assets to develop strategies composed of a range of activities. It is also categorized as the different types of assets and entitlements which households have access to. It examines the different factors in the local and wider environment that influence household living security.

According to Aderinoye-Abdulwahab, Nwachukwu, Salawu and Popoola (2015) ‘‘livelihoods are means of making a living, the various activities and resources that allow people to live. The nature of these livelihoods activities depends on the availability of assets, resources, labour, skills, education, social capital, seasonality, agro-climate/agro-ecology, and gender’.

Herders and crop farmers carry out their productive activities in the rural areas because that is where land that constitutes the major resource is available. In this regard, their means of making a living occurs in the rural areas, hence, it is rural livelihoods. Hennayake (2011) defined rural livelihoods as:

The capabilities, assets (including both material and social resources) and activities required for a living in the rural areas. It is sustainable when it can cope with and recover from stresses and shocks, maintain, and enhance its capabilities and assets, while not undermining the natural resources base...
(p.5)

Consequently, Matthews-Njoku and Nwaogwugwu (2014) identified that generally rural livelihoods in households where herders and crop farmers dwell are sourced from agricultural and non-agricultural activities.

In the case of herders, Majekodunmi, Fajinmi, Dongkum, Shaw and Welburn (2014) identified that herders' most important source of livelihoods is mostly cattle and other livestock sale. They noted that:

Cattle and other livestock are the most important source of cash livelihood income of herders. Furthermore, the livelihoods of herders (pastoral people) are linked to access to assets such as land, cattle, pasture, water, animal health

services, community networks, markets, credit and education; second, the environment in which these assets are combined for production and consumption, the political, organisational and institutional infrastructure within which they operate, and the dynamic context of risks such as human and animal disease, marginalisation, drought, civil conflict and competition for natural resources etc.

Furthermore, Matthews-Njoku and Nwaogwugwu (2014) identified that crop farmers in rural areas earn their livelihoods from subsistence agriculture, either as small-scale farmers or as low paid farm workers. For both the herders and crop farmers, their access to land (a major input in agricultural enterprises) through various forms of traditional land holdings and the potential of agriculture to earn these livelihoods have become very competitive and is a major cause of conflicts with dire consequences.

Theoretical Framework

Conflict Theory

This study is based on Conflict Theory propounded by Karl Marx (1818-1883). In his proposition, he stated that due to society's never-ending competition for finite resources, it will always be in a state of conflict. His theory of conflict identifies that capitalism breeds inequality and any attempt to change it leads to confrontation and conflicts between two opposing classes. The proposition identifies that conflicts will always occur between opposing groups usually over access to scarce material resources. This theory is relevant to this study because it addresses and clarifies that the attempts by herders and crop farmers to acquire more natural resources for productive activities to secure their livelihoods create struggle and conflicts between them because each group tries to protect the scarce natural resources under its control, hence preventing other groups from gaining access and control over it (Idowu, 2017).

Land is a major resource which supports farmlands, crops, grass/pasture, fresh water etc which are essential for productive activities of the herders and crop farmers for their livelihoods. It is finite, scarce and it is in high demand to support the livelihoods of the two opposing groups in Nigeria. The postulation of this theory conforms with the reality on the ground that struggle over access and control of land by the herders and crop farmers gives rise to encroachment, intrusion, confrontation, and conflicts in form of destruction, killing, maiming, loss of livelihoods, displacement etc.

Methodology

This study is a descriptive survey design. The population of the study is the total number of inhabitants of the communities in the three local government areas i.e Abeokuta North, Odeda and Ifo local government areas, that have recorded incidence of herders-crop farmers conflicts in Ogun state, Nigeria. Multistage sampling method was used for sample selection. First, a purposive sampling method was used to select two thousand and eighty-seven members of the

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

communities under study that have witnessed the herders-crop farmers conflicts in recent times. Second, two hundred and eighty-seven respondents were finally selected using simple random sampling technique. An adapted instrument “Herders-Crop Farmers Conflicts and Rural Livelihoods’ Scale (HCFCRLS)” was designed for the study. This instrument (HCFCRLS) was subjected to Cronbach Alpha test of internal consistency to generate the validity index of the instrument. The reliability of this instrument was done using the test-retest method within an interval of sixty days. Subsequently, it was subjected to Cronbach Alpha test of internal consistency, which yielded 0.73.

Focus group discussion was used to generate additional data from participants that were carefully selected in conjunction with the contact persons in the study areas. The FGD sessions were facilitated by the researcher with the assistance of a note-taker trained for the purpose. The discussions in the sessions lasted at most 45 minutes and these were recorded on tape. Data generated were analysed using descriptive and inferential statistical tools like frequency count, percentage and correlation matrix and structural equation model at 0.05 level of significance.

Data Analysis

Table 1: Demographic Data.

S/N	Demographic Variables	Frequency	Percentage
	Gender		
1.	Male	195	67.9
2.	Female	92	32.1
	Total	287	100
	Age		
1.	21-30	23	8.0
2.	31-40	31	10.8
3.	41-50	103	35.9
4.	51-above	130	45.3
	Total	287	100
	Level of Education		
1.	No formal Education	18	6.3
2.	Islamic/Arabic Education	37	12.9

3.	Primary School Education	72	25.1
4.	Secondary School Education	135	47
5.	Tertiary Education	25	8.7
		287	100
Year of Living in the Community			
1.	0-5 years	22	7.6
2.	11-15 years	57	19.9
3.	16-20 years	91	31.7
4.	Above 20 years	117	40.8
		287	100

Source: Field Data 2021

Table 1.0 above shows that the distribution of the respondents in the study area was constituted by male 195(67.9%) female 92(32.1%). It shows that 8% of the respondents were 21-30 years, 10.8% were 31-40, 35.9% were 41-50 years and 45.3% were 51 years above. It reveals that among the respondents 18(6.3%) had no formal education, 37(12.9%) had Islamic/Arabic education, 72(25.1%) had primary school education, 135(47%) had secondary education while 25(8.7%) had tertiary education respectively. This table further reveals that among the respondents 22(7.6%) had been living in the community for 0-5 years. 57(19.9%) for 11-15 years, 91(31.7%) for 16-20 years and 117(40%) for over 20 years.

Table. 2: Causes of Herders and Crop Farmers Conflicts

	Causes of conflicts between Herders and Crop Farmers	Frequency	Percentage	Rank
1	Cattle herds destruction of crops	102	35.5	1 st
2	Disregard for traditional authority	9	3.1	6 th
3	Indiscriminate defecation by cattle on roads	7	2.4	9 th
4	Theft of cattle	5	1.7	10 th
5	Indiscriminate bush burning	42	14.6	3 rd
6	Stray cattle	17	6	4 th
7	Contamination of stream by cattle	75	26.1	2 nd
8	Harassment of herders by host youths	13	4.5	5 th
9	Sexual harassment of women by herders	9	3.1	6 th
10	Zero grazing of fallow land	8	3	8 th
		287	100	

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

Source: Field Data 2021

Table 2 above shows the data and how respondents ranked in descending order, the causes of herders and crop farmers conflicts in the study area. The table reveals that 102(35.5%) respondents ranked cattle herds destruction of crops as the 1st major and most important cause of conflicts. Among the respondents 75(26.1%) ranked contamination of stream as the 2nd most important cause of conflicts, 42(14.6%) ranked indiscriminate bush burning as the 3rd, 17(6%) ranked stray cattle 4th, 13(4.5%) ranked harassment of herders by host community youth's 5th, 9(3.1%) ranked disregard for traditional authority and sexual harassment of women by herders 6th, 8(3%) ranked zero grazing 8th. The table further reveals that 7(2.4%) ranked indiscriminate defecation by cattle on roads 9th and 5(1.7%) ranked theft of cattle as the least important cause of herders and crop farmers conflicts.

i. H₀₁: Relationship between herders and crop farmers conflicts and productive assets, productive activities, income, social assets, and capability in the communities under study.

Table 3:

	Herders and Crop Farmers Conflicts	Productive Assets	Productive Activities	Income	Social Assets	Capability
1. Herders and Crop Farmers Conflicts	1					
2. Productive Assets	-0.703**	1				
3. Productive Activities	-0.831**	-0.558**	1			
4. Income	-0.795**	-0.661**	-0.759**	1		
5. Social Assets	-0.804**	-0.624**	-0.793**	-0.853**	1	
6. Capability	-0.616**	-0.341**	-0.400**	0.448**	0.567**	1

** Significant at .05 level

Table 3.0 above shows that there is a negative significant relationship between herders and crop farmers conflicts and productive assets ($r = -0.703$), productive activities ($r = -0.831$), income ($r = -0.795$), social assets ($r = -0.804$) and capability ($r = -0.616$) respectively. The result indicates that conflicts of the two groups had significant negative relationship on all the dependent variables, therefore; the null hypothesis is rejected. This result is like the finding of Ofuoku and Isife (2010) which identified that herders and crop farmer's conflicts have been causing destruction of productive assets which have led to poor yield, low output and income of the victims. This results also confirms the earlier finding of Ikezue and Ezeah (2017) that many herders and crop farmers who were victims of these conflicts suffered huge losses in form of human, crops and livestock causing frustration and decline in productive activities and

reduced yield which translated into low income negatively affecting their savings, credit repayment ability and national food security. This result further confirm the finding of Dimelu, Salifu, Enwelu and Igbokwe (2017) that herders and crop farmers have negative effects social capital, social relationship and worsens cooperation among the population in affected communities. These results were supported by some of the respondents at the FGD sessions in some of the communities that stated:

herders and crop farmers conflicts lead to destruction/loss of productive assets, reduction in productive activities and income of victims.

Also, some of the respondents at another session of FGD stated:

when herders and crop farmers conflicts occur, it leads to reduction in production, poor income, degrades social capital and social relationship.

H₀₂: Relationship between herders and crop farmer’s conflicts and rural livelihoods in the communities under study.

Table 4.

	Herders and Crop Farmers Conflicts	Productive Assets	Productive Activities	Income	Social Assets	Capability	Livelihoods
1. Herders and Crop Farmer’s Conflicts	1						
2. Productive Assets	-0.703**	1					
3. Productive Activities	-0.831**	-0.558**	1				
4. Income	-0.795**	-0.661**	-0.759**	1			
5. Social Assets	-0.804**	-0.624**	-0.793**	-0.853*	1		
6. Capability	-0.616**	-0.341**	-0.400**	-0.448*	-0.567*	1	
7. Livelihood	-0.8635*	-0.702**	-0.810**	-0.901*	-0.690*	-0.791**	1

**** Significant at .05 level**

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

Table 4 above shows that there is a negative significant relationship between herders and crop farmers conflicts and livelihoods ($r=-.8635$) in the study area. This result is like the finding of some earlier studies conducted by Adebo and Olotu (2018) that herders and crop farmer's conflicts result to poor livelihoods of the victims.

This result was supported by the responses of some of the respondents at FGD sessions in the study area that:

Occurrences of herders and crop farmers conflicts make life unbearable for the victims. They noted that it usually has negative effects on lives and livelihoods on the people.

Conclusion

The current study explored the impact of herders and crop farmer's conflicts on rural livelihoods in selected communities in Ogun state, Nigeria. This paper will contribute to the existing literature on the causes of herders and crop farmer's conflicts and its negative impact on productive assets, productive activities, income, social assets, capability, and livelihoods of victims. The major analysis indicate that the independent variable has significant negative relationship with the dependent variables, indicating that an increment in the dependent variable produces negative corresponding increment in all the dependent variables in this study. The findings are important and will be an addition to expanding literature because it shows that the various causes of conflicts identified are linked to scarce land resource which is the major input for productive activities of herders and crop farmers. Thus, herders and crop farmer's conflicts have caused several casualties and significant negative impact on the livelihoods of victims in the study area.

For policy perspective, the results that there is the need to address the frequent occurrences of these conflicts to reduce the population of casualties and improve agricultural productivity and livelihoods of herders and crop farmers.

Therefore, there must be a policy regulating herders and crop farmers' activities as well as improving access to ownership of land resources for any agricultural productive activities. The limitation of this study is that it could not cover a larger geographical area of study and population because of scarcity of funds. In any case, this study may be improved in the near future when there is improvement in fund availability. It should be noted that the variables of this study will continue to attract interest of researchers, therefore attempts should be made for further research into the understanding and importance of the variables and their dynamics.

It is recommended that the government must quickly implement creation of farm estates, grazing reserves and ranches to reduce conflicts over land resources between the two groups. Furthermore, herders and crop farmer's commission should be established at the state and local levels with the mandate to prevent incursions to land resources, prevent and resolution of conflict.

REFERENCES

- Adebo., G.M., & Olotu, A. (2018). An assessment of consequences of pastoralists and crop farmers conflicts on rural livelihoods in Oyo State, Nigeria. *Nigerian Journal of Rural Sociology*, 18 (1), 28-34
- Adeniyi, A.A. (2015). Community-driven development variables and rural livelihood in Fadama II communities in Ogun state, Nigeria. A Ph.D thesis in the Department of Adult Education, Faculty of Education, University of Ibadan
- Aderinoye-Abdulwahab, S.A., Nwachukwu, S. C., Salawu., O.L., & Popoola, P. O. (2015). Assessment of livelihood activities of rural farmers in Kwara State, Nigeria. *Ethiopian Journal of Environmental Studies & Management*, 8(2),120 – 129. [Online] Available: <http://www.ejesm>. doi: <http://dx.doi.org/10.4314/ejesm> (October 22, 2021)
- Balogun, O., Adeoye, A., Yusuf, S., Akinlade, R., & Carim-Sanni, A. (2012). Production efficiency of farmers under National Fadama II project in Oyo State, Nigeria. *International Journal of Agricultural Management and Development*, 2(1), 11-24.
- Enwelu, I. A., Dimelu, M. U., & Asadu, A. N. (2015). Farmer - cattle herder conflict: possible mitigation and mediation strategies in NIGERIA. *Nigerian Journal of Rural Sociology*, 16 (2), 84-92
- Dimelu, M. U., Salifu, D. E., Enwelu, A. I., & Igbokwe, E. M. (2017). Challenges of herdsman-farmers' conflict in livestock production in Nigeria: experience of pastoralists in Kogi State, Nigeria. *African Journal of Agricultural Research*, 12(8), 642-650. [Online] Available: <http://www.academicjournals.org>. DOI: 10.5897/AJAR2016.11740 (October 21, 2021)
- Eyekpimi, O. (2016). History of Fulani herdsman and farmers clashes in Nigeria. InfoGuide Nigeria. [Online] Available: <https://infoguidenigeria.com/fulani-herdsmen-farmers-clashes> (November 2, 2021)
- Food and Agriculture Organisation. (2000). Impact of community forestry policy on rural livelihoods and food security in Nepal.(pp: 37-45). Rome: YB Malla – Unasylva.
- Hennayake, N. (2011). Globalisation from within interplay of the local and the global in Sri Lanka. *Journal of Social Sciences*, 33/34, (1 and 2), 1-14
- Idowu, A.O. (2017). Urban violence dimension in Nigeria: Farmers and herders onslaught. *AGATHOS International Review*, 814, 187-206.
- Ikezue, C. E., & Ezeah, P. (2017). Recurrent Conflicts among Migrant Fulani Herdsmen and Indigenous Communities of Southern Nigeria: A Review of Literature. *International Journal of Health and Social Inquiry*, 3(1), 152-169. [Online] Available: <https://www.researchgate.net> (October 21, 2021)
- International Fund for Agricultural Development. (2021). [Online] Available: <https://www.ifad.org/en/web/operations/w/country/Nigeria> (December 18, 2021)
- Karl Marx (1818-1883). Key concepts [Online] Available: https://us.sagepub.com/112413/book_item_112413.pdf (March 21, 2022).

Impact Of Herders And Crop Farmers Conflicts On Rural Livelihoods

Adeniyi, Adekunle Adisa & Wahab, Tajudeen

- Majekodunmi, A.O., Fajinmi, A., Dongkum, C., Shaw, A. P., & Wlburn, S.C. (2014). Pastoral livelihoods of the Fulani on the Jos Plateau of Nigeria. *Pastoralism*, 4, 20. [Online] Available: <https://doi.org/10.1186/s13570-014-0020-7> (December 15, 2021)
- Matthews-Njoku, E. C., & Nwaogwugwu, O. N. (2014). Cultural factors affecting livelihood strategies of rural households in southeast Nigeria: implication for agricultural transformation agenda. *RJOAS*, 12,36. [Online] Available: <https://rjoas.com>. <http://dx.doi.org> (May 21, 2021)
- Mikailu, N. (2016). Making sense of Nigeria's Fulani-farmer conflict. *BBC News*. [Online] Available: <http://www.bbc.com/news> (October 29, 2021)
- Moritz, M. (2010). Understanding herder-farmer conflicts in West Africa: outline of a processual approach. *Human Organization*, 69, 2. Society for Applied Anthropology
- Ofuoku, A.U., & Isife, B.I. (2010). Causes, effects and resolution of farmers-nomadic cattle herders' conflict in Delta State, Nigeria. *Agricultural Tropica Et-Subtropica*, 43(1), 33-41
- Oghuvbu, E. A., & Oghuvbu, O. B. (2020). Farmers-herdsmen conflict in Africa: The case of Nigeria. *Vestnik RUDN. International Relations*, 20 4, 698—706. [Online] Available: DOI: 10.22363/2313-0660-2020-20-4-698-706 (February 3, 2022)
- Okoro, J. P. (2018). Herdsmen/farmers conflict and its effects on socio-economic development in Nigeria. *Journal of Peace, Security, and Development*, 4(1), 143-158.
- Oladoja, M., & Adeokun, O. (2009). An Appraisal of the National Fadama Development Project in Ogun State, Nigeria. *Agricultural Journal*, 4(3), 124-129.
- Oli, N. P., Ibekwe., C. C., & Nwankwo, I. U. (2018). Prevalence of herdsmen and farmers conflict in Nigeria. *Bangladesh e-Journal of Sociology*, 15(2), 171-185. [Online] Available: [http:// www.ijissh.org](http://www.ijissh.org) (October 27, 2021)
- Oruonye, E. (2010). An Assessment of Fadama dry Season farming through small scale irrigation system in Jalingo LGA, Taraba State. *International Journal of Agricultural Science and Soil Science*, 1(1), 014-019.
- World Bank. (2020). where climate change is reality: supporting Africa's sahel pastoralists to secure a resilient future. [Online] Available: <https://www.worldbank.org>. (December 21, 2020)