

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: -www.journalijar.com</p> <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</p> <p>Article DOI:10.21474/IJAR01/11926 DOI URL: http://dx.doi.org/10.21474/IJAR01/11926</p>	 <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407 Journal Homepage: http://www.journalijar.com Article DOI:10.21474/IJAR01/11926</p>
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RESEARCH ARTICLE

A GIS TOOL FOR THE MANAGEMENT OF THE NATURE OF INSURGENCY IN BORNO STATE

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Manuscript Info

Manuscript History

Received: 27 August 2020

Final Accepted: 30 September 2020

Published: October 2020

Key words:-

Insurgency, Nature, Spatial Pattern, GIS, Borno State

Abstract

The various activities carried out by the fundamentalist group called Boko Haram have created fear among the populace and the international communities. This group was the first set in Nigeria to be labeled as an insurgent organization by the United State of America and its associates. Since 2009 to date the group has carried out so many violent activities in the North-eastern Nigeria through Kidnapping, suicide bombing, attacks on innocent citizens and robbery. The study explores the usefulness of Geographical Information System (GIS) in understanding the various pattern and nature of insurgency in Borno State. In other to achieve this aim, the study provided the following objectives which include updating the existing database of insurgency activities in Borno State; showing the pattern of the nature of insurgency in Borno state from 2009 to 2017 and identifying the area with the highest and lowest insurgency activities in the state. Secondary data were utilized from Armed Conflict Location and Events Data (ACLED) 2018 version, and security records. ArcGIS was employed for the analysis of the spatial pattern of the nature of insurgency. The result shows that suicide bombing was the commonest nature of insurgency in the study area with 505 incidence, while attacks on foreigners was the least with 9 incidence. It further shows that Maiduguri had the highest insurgency incidence throughout the period of study. The study therefore recommended that adequate security measures should be employed, rollout counter violent extremism programs and emphasized the humanitarian dimension of international aid.

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Introduction:-

A noteworthy section of the empirical research on insurgency has focused on where insurgency is likely to occur within a geographical space, but the growing trend has been on the distribution of insurgency; that is, once an insurgency erupts, how and where will it diffuse over time. Africa as a continent has witnessed so many forms of insurgency ranging from the mass killing in Darfur, the civil war in Sierra Leone, Paramilitary violence in Democratic Republic of Congo (DRC) where civilians were specifically targeted (Johnston, 2008). Example of these prominent insurgency activities in Africa was the involvement of Islamic Jihadist in Egypt, an explosion mission outside the U.S embassies located in Tanzania, Nairobi and Darul Salaam.

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Nigeria has its share of attacks by an Islamic extremist group commonly called Boko Haram now known as the (Islamic State of West Africa). Its mission and agenda have been stated to be: "The Eradication of Western Ideology in Nigeria and the realization of Sharia Law in the Country". The sect was found to have emanated from an orthodox teaching slightly resembling that of the Taliban in Afghanistan and Pakistan who considers anything western as an aberration or completely un-Islamic as such should not be practiced. Furthermore, they believe that western education is the cause of exposure of the people, corruption, inequality and injustice bedeviling the society which must be stopped no matter the cause (Akubor, 2011; Bamigbose, 2011; Nwanegbo & Odigbo, 2013). This group have engaged in various forms of insurgency ranging from suicide attacks, kidnapping, attacks on security and civilians (Duru & Obonnya, 2010).

The location, distribution and management of the various nature of insurgency is very complex and requires a systematic and structured methodology that will allow for a comprehensive analysis of the modes of attack and the degree of vulnerability of specific areas. Advances in the areas of Geographic Information Systems (GIS) and other information technology such as remote sensing (RS) and Global Positioning System (GPS) have opened a new set of opportunities for its use in the mapping of nature of insurgency, control and prevention. In Iraq, GIS was used to analyze the spread of insurgency activities, and it showed the spatial distribution of where insurgency occurred over a period of time (Brown et al., 2004). In Pakistan an integration of GPS and GIS were used to identify where the various form of insurgency have taken place and the impact it has caused on the environment (Chainey & Ratcliffe, 2005).

A visual analytical system was proposed by Wang et al. (2008) that focuses on depicting one of the most fundamental concepts in investigative analysis, the five W's (who, what, where, when, and why) to better enable investigators in understanding insurgency activities. With the descriptive approach, an investigator can interactively explore insurgency activities efficiently and discover reasons of attacks (why) by identifying patterns temporally (when), geo-spatially (where), between multiple insurgency groups (who), and across different methods or modes of attacks (what).

The research aimed at exploring the usefulness of Geographical Information System (GIS) in understanding the various pattern of the nature of insurgency in Borno State. In other to achieve this aim, the study provided the following objectives which include updating the existing database of insurgency activities in Borno State; showing the pattern and trend of the nature of insurgency in Borno state from 2009 to 2017.

The study covers the geographical area of Borno State with specific focus on the various natures of insurgency activities from 2009 to 2017. The period is selected due to the fact that most of the activities of the insurgents are seems to be within this period. An in-depth analysis on spatial pattern of the nature of insurgency activities was performed using simple descriptive statistics and maps.

Material and Methods:-

The study area

The study was conducted in Borno State in the Northeastern part of Nigeria which comprises of twenty seven (27) Local Government Areas (LGAs) with Maiduguri as the capital city of the state. The northern LGAs have a lower population due to the harsh climatic conditions and lack of basic social infrastructure. Freedom of religion is proclaimed, and the residents are primarily Muslims. The state lies between Latitude 10°N and 13°N and Longitude 12°E and 15°E (Ijere and Daura, 2000; Online Nigeria, 2003). The geographical area covers about 69,435 sq km. the state has a population of 5.7 million (adjusted for 2016) (African Masterweb, 2016). Borno State is seen as the area where most of the activities of insurgency have occurred over the years. The population within the state is mostly farmers consisting of arable farmers, herdsman and fishermen.

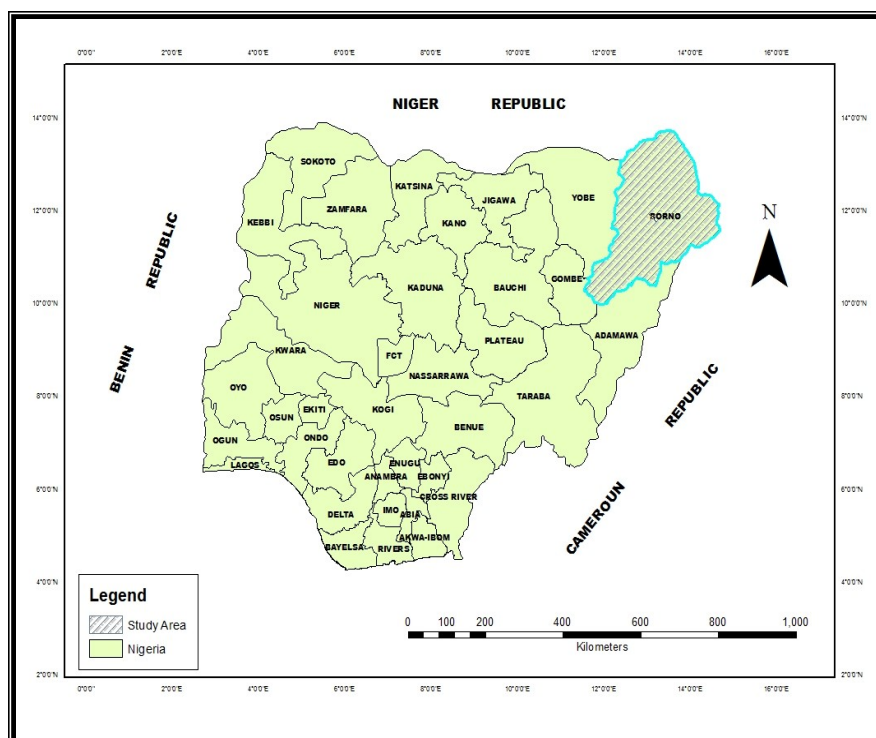


Fig 1:- Nigeria showing study area.

Source: Department of Geography, NDA, Kaduna (2017).

Materials and Methods:-

The research adopted purposive sampling in the selection of the study area. This was due to the fact of the high concentration of insurgency in the area. The study utilizes secondary data from Armed Conflict Location and Event Data (ACLED) 2018 version. Data selected for inclusion in this study was extracted from the ACLED based on the event code criteria. The June 2018 version was used, which includes all ACLED incidents from 1970 to 2017. ACLED remains one of the largest and widely used open source databases available in the study of insurgency Forest (2012). The ACLED provides detailed information of each event captured in the database. This information includes States, LGAs, Date, Month, year, event types, target types, and outcome information. Event type (nature), location, and incident date are the most critical attributes in this study. Insurgency events in the study area are aggregated from 2009-2017 since that is the focus of the study.

The administrative boundary map of the study area was scanned and imported into ArcGIS 9.3 and geo-referenced. The Map was then converted to Universal Transverse Mercator (UTM) projection system with World Geodetic System (WGS) 84, 32N Minna datum for easy analysis of the nature of insurgency in the study area.

Results and Discussion:-

The result revealed a total number of 1,461 incidences of insurgency in Borno state from the period of 2009-2017 (table 1). Maiduguri recorded the highest incidence of insurgency within the period of the study. This was as a result of the frequent incidence experienced in the area. This nature of insurgency recorded in the study area ranges from Kidnapping; suicide bombing; attacks on security, civilians, foreigners, infrastructure, and robbery. From the result suicide bombing was seen as the highest with a total of 505 incidence. The high rate of suicide bombing was that in most of the incidence of insurgency in the area an Improvised Explosive Device (IED) was utilized. The high rate of suicide bombing has caused a lot of damages in the area which include loss of lives, effect on farming activities, and destruction of government installations. The lowest nature of insurgency was the attack on foreigners with a total of nine incidence within the time frame of the study.

Table 1:- Nature of insurgency activities in Borno State (2009-2017).

S/no	LGA	Kidnapp	Suicid	Attacks	Attacks	Attacks o	Robbe	Attacks	Tot
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		ing	e_ bombi ng	on_ security	on_ Civilians	n_ infrastruct ure	ry	on_ foreigner s	al
1.	ABADAM	1	9	8	3	1	0	1	23
2.	ASKIRA/UBA	3	19	7	15	1	0	0	45
3.	BAMA	17	39	32	43	3	6	3	143
4.	BAYO	0	0	0	0	0	0	0	0
5.	BIU	4	14	17	13	2	4	0	54
6.	CHIBOK	6	11	2	8	1	1	0	29
7.	DAMBOA	15	34	27	25	4	2	1	108
8.	DIKWA	3	12	7	6	1	0	0	29
9.	GUBIO	0	3	1	1	0	0	0	5
10.	GUZAMALA	0	5	3	13	0	0	0	21
11.	GWOZA	19	44	28	39	9	5	1	145
12.	HAWUL	3	11	6	13	2	0	0	35
13.	JERE	3	9	4	3	0	0	0	19
14.	KAGA	4	14	3	6	1	0	0	28
15.	KALA/BALG E	4	8	2	7	2	1	0	24
16.	KONDUGA	9	27	11	26	3	0	0	76
17.	KUKAWA	8	14	2	11	2	1	0	38
18.	KWAYAR- KUSAR	0	0	0	1	0	0	0	1
19.	MAFA	4	13	5	20	0	0	0	42
20.	MAGUMERI	3	11	2	18	0	0	0	34
21.	MAIDUGURI	33	169	48	124	19	17	3	413
22.	MOBBAR	0	8	9	9	0	0	0	26
23.	MONGUNO	4	3	6	8	1	0	0	22
24.	MARTE	2	9	3	10	0	0	0	24
25.	NGALA	7	11	9	19	0	0	0	46
26.	NGAZAI	0	4	8	11	1	0	0	24
27.	SHANI	0	4	1	2	0	0	0	7
TOT AL		152	505	251	454	53	37	9	146 1

Source: Research Compilation, (2018).

Spatial distribution of the various nature of insurgency in Borno State

Kidnaping incidence in Borno is not evenly distributed across the area as seen in figure 2. This shows that Maiduguri had the highest incidence of kidnapping within the time frame of the study with 20-33 incidence. This was as a result of high incidence of insurgency experienced within the area. Insurgency cannot thrive without kidnapping people who are later killed or used to acquire operational tactics, and also to carry out their operational activities. A case of point was the kidnapping of Dr. Shettimat Ali Monguno, a Borno Elder state man and a onetime Minister of Petroleum who was kidnaped on 3rd May, 2013. There was also the carting away of over 250 children of Government Girls Secondary School, Chibok that occurred on 14th April, 2014. On the other hand the least incidence of kidnapping was experienced in the North and South western part of the State with less than two incidence.

Figure 3 depict the spatial pattern of suicide bombing incidence in Borno state. This shows that Maiduguri experienced the highest with 40-110 incidence. This is not surprising because in almost all the incidence of insurgency activities an Improvised Explosive Device (IED) is been used. Areas with similar high incidence are areas include Damboa, Konduga, Gwoza, and Bama with 20-44 incidence while the least were experienced at the central area which include (Monguno, Guzamala, Gubio, and Ngazai) and south western part (Shani, Bayo, and Kwayar kusar). In addition, to the nature of insurgency are the attacks on the security agencies, civilians, infrastructure and foreigners (See figure 4, 5, 6, and 7) Maiduguri experienced the highest in all the attacks within the period of the study. Attacks on the security were concentrated at the central to the southern part of the area. This

was due to the fact that most of the security outfits in the state are located within these areas. In the attack on the civilian, almost all the LGAs in the state witnessed the incidence. However, Gwoza and Bama recorded high frequency after Maiduguri but areas located at the southwestern part had few incidences of attacks on civilians. Another nature of insurgency is the attacks on infrastructure, this aspect witnessed a high incidence around the central to the southern part while the northern part witnessed low incidence. Furthermore, attacks on foreigners were low within the period of the study compared to the other attacks in the state. However, Bama experienced 2-3 incidence of attack on foreigners, and an incidence of attack on foreigners in Damboa, Gwoza and Abadam.

Lastly among the nature of insurgency in the study area is robbery (See figure 8) robbery has witnessed low incidence within the time frame. This may be as a result of less interest of the insurgent in this aspect. They only engaged in robbery has a result of raising funds for their operations and to acquire food for their supporters.

The study further reveals that Maiduguri recorded the highest incidence of the various nature of insurgency in the study (see fig. 10). The high rate of the activities within Maiduguri was as a result of the daily frequencies of insurgency activities earlier recorded from the inception of the activity to 2013. At that time, the insurgents were operating as a religion fundamentalist seeking people support and sympathy as well as causing crisis with those that goes against their ideology.

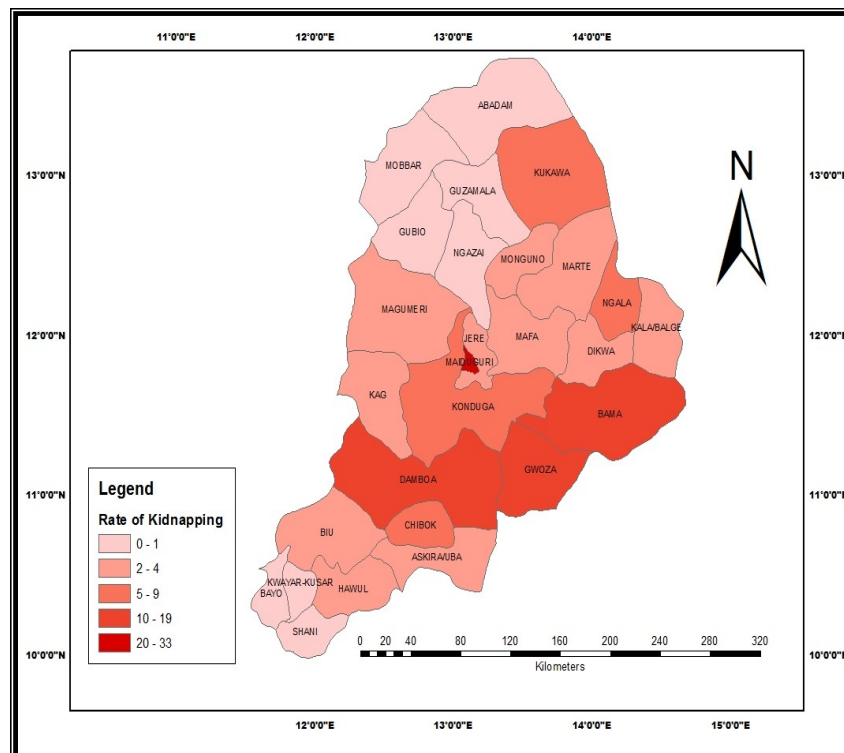


Fig. 2:- Kidnapping incidence in Borno state.

Source: Fieldwork, 2019.

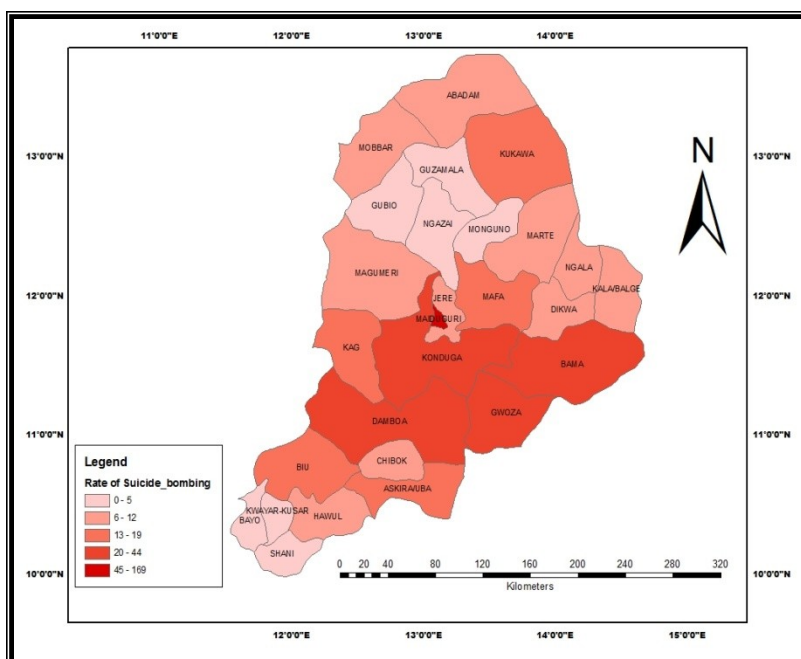


Fig. 3:- Suicide Bombing incidence in Borno State

Source: Fieldwork, 2019.

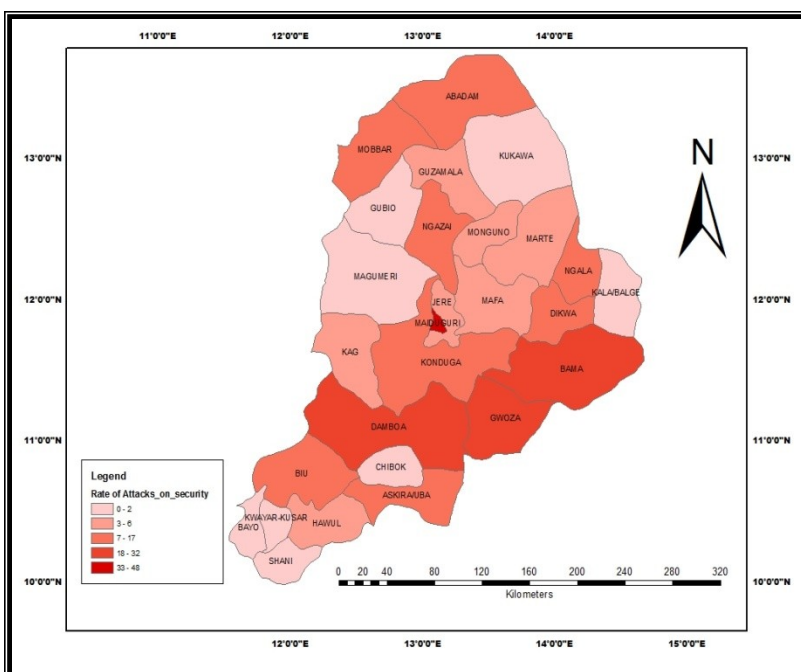


Fig. 4:- Attacks on security incidence in Borno state.

Source: Fieldwork, 2019.

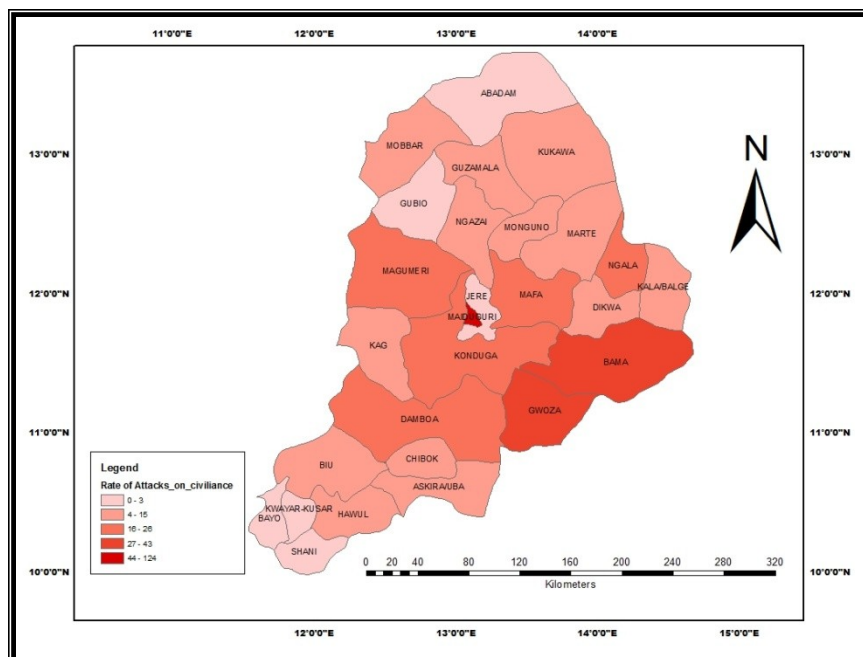


Fig. 5:- Attacks on civilian's incidence in Borno State.

Source: Fieldwork, 2019.

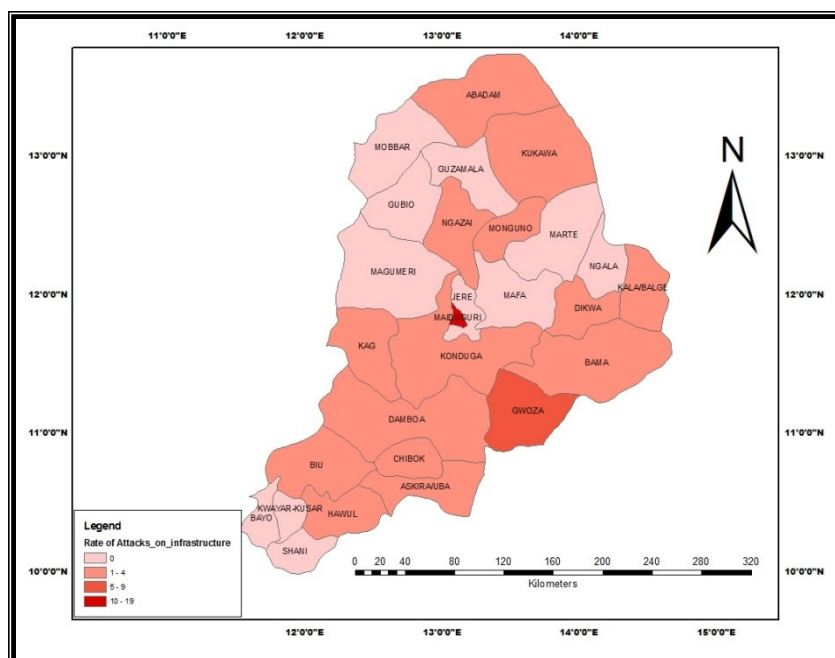


Fig. 6:- Attacks on infrastructure incidence in Borno state.

Source: Fieldwork, 2019.

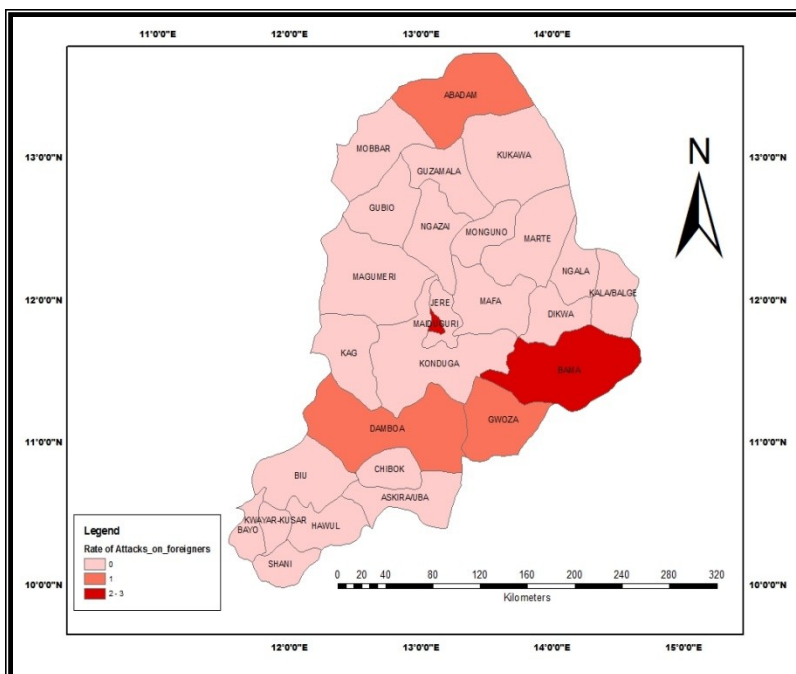


Fig. 7:- Attacks on foreigner's incidence in Borno State.

Source: Fieldwork, 2019.

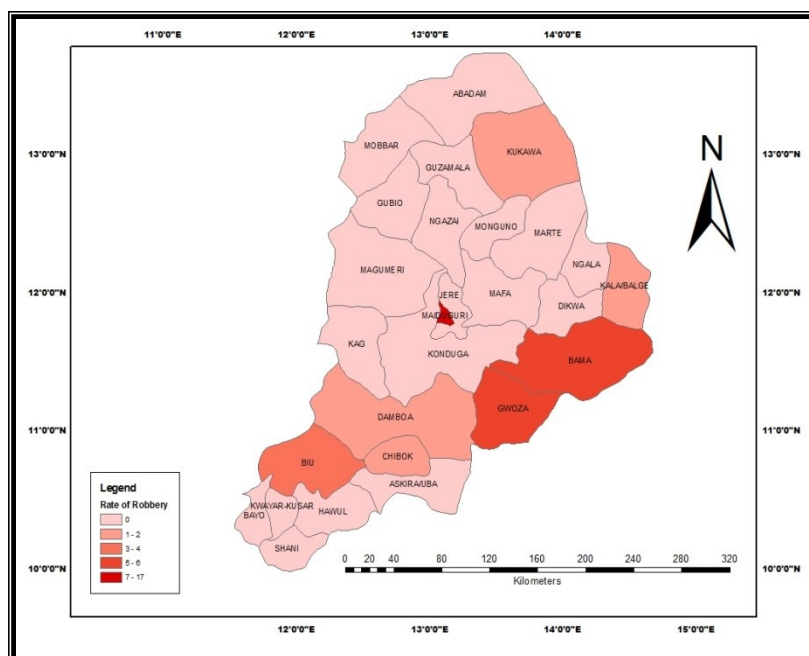


Fig. 8:- Robbery incidence in Borno state.

Source: Fieldwork, 2019.

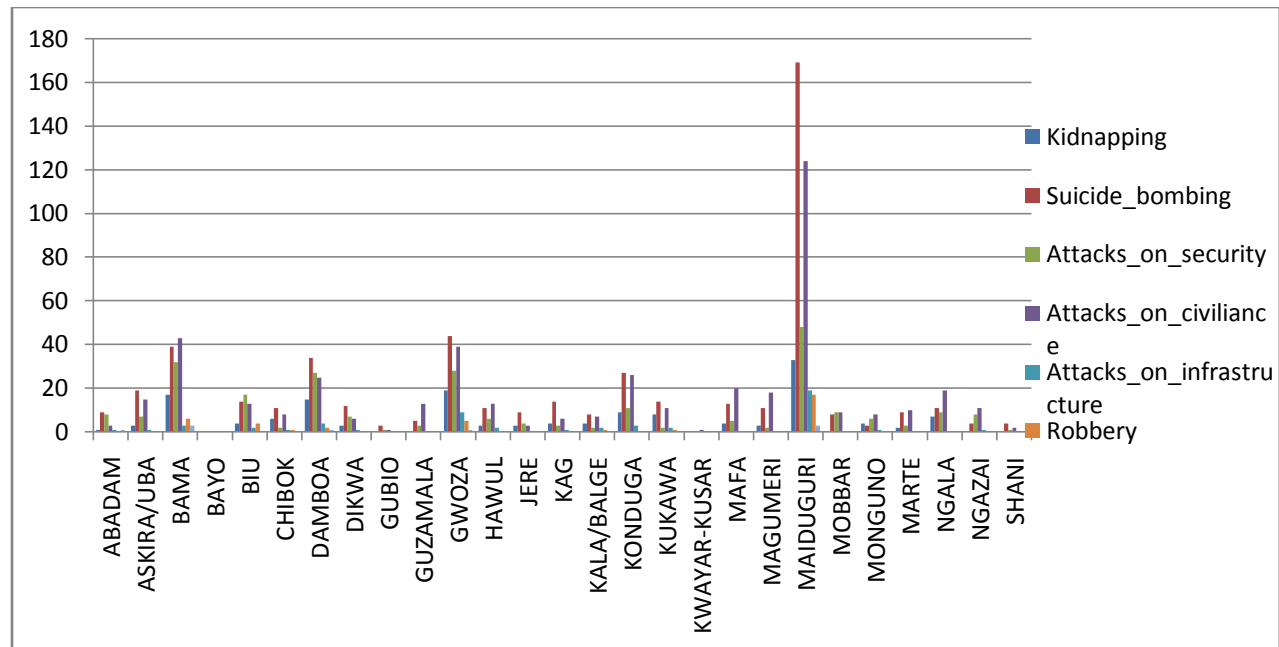


Figure 10:- Nature of insurgency activities in Borno State (2009-2017).

Source: Fieldwork, 2018.

Conclusion And Recommendation:-

From this study, we have been able to establish the spatial pattern of the various nature of insurgency in Borno State through the use of Maps. The aftermath revealed that suicide bombing was the commonest nature of insurgency in the study area within the time frame of the research with 505 incidence, while attacks on foreigners was the least with 9 incidence. Efforts were made to show the different natures of the insurgency in each of the local government areas which indicated Maiduguri experiencing the highest insurgency incidence throughout the period of study. The study therefore recommended that adequate security measures should be employed, rollout counter violent extremism programs and emphasized the humanitarian dimension of international aid.

References:-

1. Akubor, E. O. (2011). Civil unrest in northern Nigeria: Beyond the literal Boko haram, *The Constitution*, 2(4), 71-93.
2. Bamigbose, J. A. (2011). Boko Haram and Democracy in Nigeria's Fourth Republic, *The Constitution*, 11(4), 58-70.
3. Brown, D., Dalton, J., & Hoyle, H., (2004). Spatial forecast methods for terrorist events in urban environments, Springer-Verlag Berlin Heidelberg.
4. Chainey, S., & Ratcliffe, J. (2005). GIS and crime mapping, TJ International Ltd, Padstow, Cornwall.
5. Duru, E.J.C., & Ogbonnaya, U.M. (2010). Globalization, international security and national security challenges, *kogi Journal of Politics*, 1(1), 1-9.
6. Forest, J. J. F. (2012). Global trends in kidnapping by terrorist groups. *Global Change, Peace & Security* 24(3), 311-330.
7. Johnston, P. (2008). The geography of insurgent organization and its consequences for civil wars: Evidence from Liberia and Sierra Leone. In *security studies* 17(1), 107-137.
8. Ijere, J.A & Daura, M. M (2000). Borno State In Mamman, A.B, Oyebanji, J.O, and Peters, S .W (eds) *Nigeria: A People United, A Future Assured*. 2. Millenium Edition.. Gabumo Publishing Company, Calabar: 103-120
9. Nwanegbo, C. J. & Odigbo, J. (2013). Security and national development in Nigeria: The threat of Boko haram, *International journal of humanities and social sciences*, 3(4), 285-291.