

Effects of Boko Haram and Environmental Hazard on the People of Borno and Adamawa State, Nigeria

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Abstract

This study focuses on the effects of environmental hazards and Boko harams on the people of Borno and Adamawa State. Environmental hazards and Boko haram disasters especially, those that occur as a result of natural phenomena as one of the greatest threats to humanity and economic development. Causes and the effect of Boko Haram and the Environmental hazard were studied. Man-made disasters such as conflicts, crisis and wars also use to take human lives in some instance. While examining this, researchers use to forget millions that are not killed during such events, but who suffered deadly risks of environmental hazards. This study focused on the mode of survival of the people who are left behind after the occurrence of man-made disaster. Primary data were obtained from the people of the states by selecting local government areas from each state and administering questionnaires. The study involved a sample size of 200 respondents and 8 Focus Group Discussions (FGDs): the local government areas were Guyuk, Michika, Monguno, and Kukawa. The result also reveals that The Boko Haram members are mostly youth of either school age or economically active group who were not able to go to school because of the economic situation of the country or unemployed parents. The study further recommended the need to establish more schools for children who left their schools after displacement. A proper sewage disposal system should be made in the town artery houses should have toilets and public toilets should be provided in marketplaces and other places where people lives.

Keywords: Environment, man-made disasters, hazard, public health infrastructure, survival strategies

INTRODUCTION

Environmental hazard and Boko haram activities are the most serious problems facing northern Nigeria with direct economic consequences for the national development. Borno and Adamawa State are mostly affected by the effects of the two. Environmental hazards are unexpected events of a size that necessitate outside help. It can also be described as any incident, usually unexpected, that damages the environment, results in fatalities, deteriorates health and health services, and surpasses the capacity of the impacted community to the point that outside help is needed [1]. Hazards are uncommon or severe occurrences in the natural or man-made environment that have a negative impact on people's lives, property, or activities to the point where they lead to Boko haram. It is crucial to distinguish between

Boko harams and hazards, and to understand that the impact of the former on the latter is simply a gauge of the vulnerability of society.

Natural disasters can significantly affect food security and the economy, particularly for lower-income people. The frequency of natural disasters, the number of impacted people, and the magnitude of financial losses have all clearly increased during the past three decades. Every time Boko Haram strikes, millions of victims become homeless, and impoverished households lose more relative assets, both material and social, which makes their poverty

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Received Date: December 20, 2024
Acceptance Date: January 07, 2025
Published Date: January 17, 2025

Citation: Buba Kefas. Effects of Boko Haram and Environmental Hazard on the People of Borno and Adamawa State, Nigeria. International Journal of Climate Conditions. 2025; 2(1): 29–34p.

worse. Such losses of assets are sometimes critical to an extent that some households can be trapped in chronic poverty and food insecurity. Risk assessment, prevention, mitigation, and the creation of early warning systems are some ways that Boko Harams can occur [2].

STATEMENT OF THE PROBLEM

Environmental hazard and Boko haram activities have negative effects in Borno and Adamawa State because it usually led to low level output among others. It is then to consider what environmental hazard is and to understand its effect on agricultural production in the study area [3]. Following the crisis, rehabilitation, reconstruction, and the start of a new cycle of assessment are given more importance. By combining the lessons learned from the previous cycle, the research work is developed. It is against this background that the researcher wants to identify the problems faced by the people of Borno and Adamawa State in the affected areas and find solutions to the problems.

AIM AND OBJECTIVES OF THE STUDY

The main aim of the study is to investigate the causes and effects of Boko haram and environmental hazard on the people of Borno and Adamawa State, Nigeria. The study will examine the following specific objectives:

1. Examine the causes of Boko haram and its effect in Borno and Adamawa State,
2. Identify the consequences of environmental hazard on the people of Borno and Adamawa State, Nigeria
3. Provide the necessary policy recommendations to guarantee land conservation and protection against environmental hazards and Boko haram.

RESEARCH QUESTIONS

1. What are the causes of Boko haram and its effect in Borno and Adamawa State?
2. What are the consequences of environmental hazard on the people of Borno and Adamawa State?
3. What are the policies that are needed to ensure the conservation and protection of land from Boko Haram and environmental hazard?

LITERATURE REVIEW

Factors Leading to Environmental Hazard

When human systems, the built environment, and the natural environment come together, vulnerability results. Location or proximity to hazard-prone areas, such as coasts, floodplains, seismic zones, potential pollution sites, etc., is the most evident element influencing community vulnerability. The physical sensitivity of locations is determined by the physical exposure characterized by the beginning event's characteristics (magnitude, length, frequency, impact, and quickness of onset). For instance, compared to settlements inland, those on barrier islands are physically more susceptible to flooding and hurricane-related losses. Using a combination of statistical and GIS-based modeling techniques, the hazards and Boko haram communities have conducted extensive research on the demarcation and likelihood of physical exposure [4].

Numerically based hurricane wind predictions, storm surge models, probabilistic and deterministic seismic risk techniques, and plume exposure models for hazardous chemicals are examples of improvements in our understanding of the physical processes that contribute to vulnerability and potential exposure. Similarly, to manage their financial risks, the private sector—particularly the insurance industry—uses catastrophe modeling, which combines actuarial estimates of exposure with the hazards. The position and closeness to the source of the threat or hazard are also factors that affect how vulnerable the built environment is. Commercial and industrial development, poorly maintained public infrastructure, poorly built buildings and infrastructure, and certain housing stock types (e.g., manufactured homes) all enhance the vulnerability of the built environment in communities.

Another element that increases community vulnerability is the built environment's density, which increases exposure and, thus, the possibility of harm. Communities particularly depend on public

infrastructure and lifelines (roads, bridges, water, and sewers) since the loss of these vital resources can leave smaller communities, which sometimes lack the funds to reconstruct, with an unmanageable financial burden. The community's economic well-being, which is strongly linked to commercial and industrial development, is equally significant [5]. Communities with a more varied economy are less vulnerable than those that depend only on one economic sector (such as tourism) for their livelihoods. Recovery from a Boko haram attack is frequently slower in these vulnerable communities.

Lastly, certain communities are more vulnerable than others due to the demographic and sociological traits of their inhabitants. Age, gender, race, financial position, non-English speaking immigrants, seasonal visitors, and special needs populations (homeless, mentally or physically handicapped, and transients) are the most commonly recognized social indicators [6]. Other factors have already been listed elsewhere. The social vulnerability of communities stems from disparities that impact housing choice and location, political marginalization of impoverished residents, access to resources and information, and the capacity to withstand the effects of hazards and Boko harams without governmental interventions. One of the main reasons for New Orleans' varying levels of readiness, impact, and response to Hurricane Katrina is social vulnerability [7].

THEORETICAL FRAMEWORK

Theory of Environmental Hazard

Environmental hazards are those risky actions that have an impact on the environment. Because of these potential risks, we may find that the man-machine-environment setup is not always suitable for the safe completion of the task [8]. Inherently desirable turning impacts on the environment on the machine may have negative effects on man as operator, and human impacts on the machine may have negative side effects and feedback reactions to the device. The assumption is correct that machine impacts on the environment may have negative secondary environment type reactions and side effects that may be harmful on their own for both the environment and man [9]. Unwanted alterations to the man-machine set are constrained by factors. Threatening external environmental forces, such as the technological realm of infrastructure, internal destructive processes, and human control faults (operator, decision maker) are among the variables affecting the man-machine set [10]. forcing factors that negatively alter the states of system components, either collectively or independently. It includes unfavorable conditions that are indicative of exposure, posing a risk to both humans and machines, both individually and collectively, for this system as a whole. They originate from both internal and external pushing factors, such as age, wear and tear, and environmental and atmospheric conditions. By risk, we mean destructive phenomena brought on by man or by natural causes. The threat arises from the possibility that the particular element that causes the conflict or the item may cause harm and loss to people, things, and the environment.

The Theory of Boko haram Insurgency and in Nigeria

The Hausa term “boko” (book) and the Arabic word “haram” (illegal) are combined to form the nomenclature “Boko haram.” When used together, Boko Haram signifies that “western education is unlawful.” Outsiders gave the movement the moniker “Boko Haram” by shortening a phrase that the late Yusuf had repeated on video discs, which forbade not only the colonial European literacy format but also any cooperation with the neo-colonial government [11]. Preferred the term “western culture is forbidden” above the label “western education is unlawful.” “Culture is broader, it includes education but not determined by western education,” a senior group member clarified. A contrast between makarantaboko, or schools offering “western” education, and makarantanaddini, or schools for religious instruction, or makarantanallo, or schools of the slate, which are thought to be Koranic schools, is frequently made in northern Nigeria. Evangelical Christians' attempts to convert Muslims who are afraid of the economic and political dominance of the South are still associated with Makarantaboko in northern Nigeria [12].

What Makes Communities Resilient to Hazards and Boko harams?

Communities' traits that render them vulnerable and those that increase their resistance to dangers and Boko harams share certain similarities. But we shouldn't conclude that a group lacks resilience just

because it is susceptible. There are several well-defined traits of resilient systems in the literature on Boko Haram and dangers such as:

- Relevant risks are identified and comprehended.
- Risky communities are aware when a hazard occurrence is about to happen.
- Risky individuals are shielded from hazards in their homes and places of employment.
- After a hazard event has passed, communities that are resilient to Boko Haram encounter the least amount of interruption to their lives and economies.

A popular word used to characterize resilient systems or communities is elasticity, often known as the capacity, to recover or bounce back. Decentralized and distributed networks (economic, social, etc.) as well as connection and decentralization as key traits of resilient cities in their historical study of devastated cities that re-emerged after Boko Harams. They offer some resilience characteristics that are helpful in comprehending reconstruction after Boko Harams. These consist of Resources outside of the impacted areas support resilience, monuments and remembrances fuel resilience. Resilience is more than just rebuilding; it is site-specific and capitalizes on the power of location; it views opportunism as an opportunity; and it does not lead to significant changes in public policy or urban structure.

RESEARCH METHODOLOGY

Description of the Study Area

The population of the study includes residents of Borno and Adamawa State, encompassing both urban and rural communities. The study will concentrate on comprehending the effects of environmental hazards and Boko Haram. A cross-sectional research design will be used in this investigation. This design allows for data collection from a specific point in time, and it will suite for effects of Boko Haram and environmental hazard.

Data Collection

We'll use data from both primary and secondary sources. Structured questionnaires will be used in a survey as the main source of data. These surveys are intended to collect data on a range of topics impacted by environmental hazards and Boko Haram. Eight Focus Group Discussions (FGDs) and a sample size of 200 respondents will be used in the study. Stratified random sampling will be the sample method used. This method will guarantee that both rural and urban areas within the states are represented.

Data Analysis

Data analysis will involve the use of the chi-square test, a statistical tool that can help assess the relationship between variables and determine if there is a significant association between population growth and its impact on various factors within the stated areas.

Expected Outcome

This research work is expected to find out the effects of Boko Haram and Environmental hazard on the dwellers of Borno and Adamawa State, and also find possible solutions to the problems.

RESULTS AND DISCUSSION

Based on the responses to this research, most of the Boko Haram (BH) members are youths. Information on the causes of BH was attributed to unemployment among youths. The individuals joining BH come from a variety of socioeconomic backgrounds. The reason for establishing BH, according to respondents, indicates that the majority (37%) of them believe that unemployment is the major cause of BH in Northeastern Nigeria. These youths are either school-age youths or working-class individuals who were forced to leave schools due to brainwashing and insurgency, as most of the schools were either destroyed or burnt down. The bulk of other respondents said that BH was formed because of poor governance, accounting for about 34%. Those who said that lack of education is the major cause of BH accounted for 25%, while respondents who believe that lack of parental care causes BH accounted for 4%. This coincides with the Focus Group Discussion (FGD) result which reveals that

Table 1. Causes and effect of BOKO Haram Insurgency in Borno and Adamawa State.

Status	Frequency	Percentage (%)
<i>Causes of BH</i>		
Unemployment	74	37
Poor governance	68	34
Lack of education	50	25
Lack of parental care	8	4
Total	200	100
<i>Sex of respondents</i>		
Male	126	63
Female	74	37
Total	200	100

the BH members are mostly youth of either school age or economically active group who were not able to go to school because of the economic situation of the country or either unemployed as a result they form BH and became easy for them to initiate others to join the BH group.

The respondents were also asked information related to their sex as there is perception of having higher number of female BH, the responses indicate higher number of male BH with 63%, as shown in Table 1. While based on the questionnaire distributed the responses reveals that female BH members are less than the men with 37%. The respondents were randomly selected from 4 LGAs. FGD in Kukawa also narrated that: The BH are caused as a result of poor governance where some people because of bad government are preaching to young men and women to join the BH, especially young people, to tell them about some of the gaps within democratic institutions.

Consequences of Environmental Hazard on Borno and Adamawa State

However, due to human activities such as domestic, commercial, industrial, and agricultural pursuits, the environment has become dirty, polluted, and unsightly, as well as a potential source of infection. This is compounded by the rapid advancement of technology and urbanization, which has led to environmental hazards.

According to the respondents as shown in Table 2, the majority of homes in the research region have toilets (42%) but the only problem is waste disposal of their household and industries must the waste are disposed anywhere, which lead to increase in the environmental hazard in the study area. However, in the study area, there was a subpar and insufficient system for waste disposal 30%. This paper has been able to examine the environmental hazard thus far, the potential risks and consequences to health, and the related dangers. It is abundantly evident that everyday experiences that people have, from communicable to non-communicable diseases to trauma, are either directly or indirectly caused by their unclean surroundings which lead to environment hazard in Borno and Adamawa States. This illustrates even more how important the environment is to the survival of plants, animals, and people. Additionally, 28% stated that there is an insufficient water supply due to environmental problems, particularly during the dry season. This leads individuals to drink contaminated water, which can result in illnesses such as cholera and typhoid. The locals have a negative attitude towards environmental hazards. However, because individuals do not respond to monthly sanitation, collaboration alone will not be enough to keep the environment clean.

Respondents also reveals that, it is of interest to not that there are various environment laws as promulgated in Nigeria but be need to ask ourselves as to what extent these have been implemented. All hands must be on deck to make our environment conducive to health and the greater challenge is for the public health nurse inclusive. It is unfortunate to note that public health nursing is no longer

Table 2. Distribution of Respondents based on various amenities.

Variable	Frequency	Percentage
Availability of toilets	84	42%
Insufficient system for waste disposal	60	30%
Insufficient water supply	56	28%
Total	200	100%

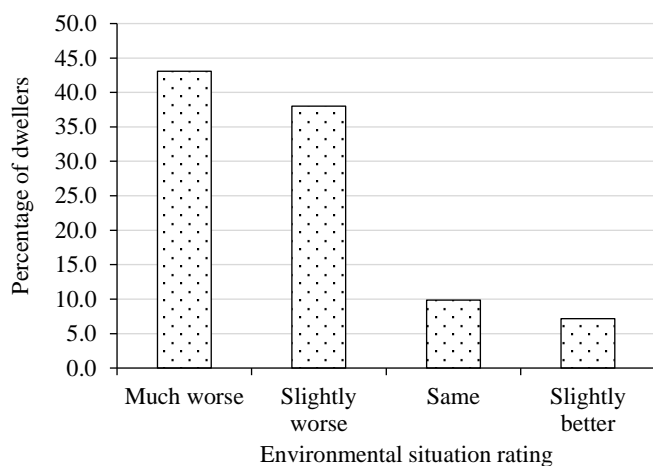


Figure 1. The respondents’ environmental situation (problem) after BH crisis.

what is used to be as the impact community is hardly felt. These days, the town is home to public health nurses who are aided by environmental health officers, which has significantly increased the threat (e.g. heaps of refuse, poor drainage etc.). This is the time to act positively so that, life will be meaningful to all human beings. This supports an assertion that environmental issues have taken a serious turn in northeastern Nigeria, which is not an exception to the new horizon of not just protecting against natural hazards and Boko haram, but also managing environmental health issues and enforcing the law. The dumping of hazardous and poisonous waste materials in Borno and Adamawa State may be the primary cause of Nigeria's recent fast paradigm shifts.

Most of the dwellers of the study area have encountered different problems related to their economy which have to do with BH or environmental hazard. The responses reveal that their ‘household situation has become much worse by 43% as indicated in Figure 1. This is because most of the people left their properties, farms and everything at home and migrated to other places as a result of BH or environmental hazard (as one of the respondents explains, that most of the IDPs are farmers and businessmen and women, while 38% indicates that the situation is slightly worse. After BH crisis the situation of all the dwellers from all the zones become much worse, more especially the situation of Borno state with 42% as shown on Figure 1 probably because they are the most affected by the crisis. The highest percentage of people whose situation has become slightly better was also recorded among Adamawa state people with 13% of the responses.

ENVIRONMENTAL POLICY

In Northeastern Nigeria, environmental policy refers to the set of laws that protect living things, including humans, from the harm that human activity may inflict on them or their species, as well as on the environment and habitats that they depend on. The entire ecosystem—including people, plants, animals, forests, shrubs, garbage, bacteria, diseases, and insects—is covered by environmental legislation.

It is crucial to restate that Nigeria has a comprehensive and wide-ranging environmental strategy. It includes issues with waste management, water and land management, air pollution, hazardous

substances, forestry (wildlife and protected natural areas), land use and soil conservation, and the workplace (occupational health and safety). Water pollution, air pollution, vehicle emissions, noise pollution, planning and land degradation, afforestation and deforestation, and desertification are some of the main sources of pollution and pollutants. The federal and state governments have the authority to pass legislation that either directly or indirectly regulates and protects the environment in a federal framework like Nigeria [13].

RECOMMENDATIONS

- The government should provide job opportunities to educated people in order to reduce the cases of unemployment.
- There is a need to establish more schools for children who left their schools after displacement.
- A proper sewage disposal system should be made in the town artery houses should have toilets and public toilets should be provided in marketplaces and other places people lives.
- People should be educated on how to dispose refuse in proper way Government should try to provide enough dustbins of collection of refuse and provide incinerator for proper care of the environment

CONCLUSION

In conclusion, this study highlights the significant impact of both environmental hazards and Boko Haram-related disasters on the people of Borno and Adamawa States. While many have lost their lives due to these crises, a larger number have suffered from the long-term effects, particularly the deadly risks posed by environmental hazards. The study underscores the resilience of the survivors, focusing on their modes of survival after these man-made disasters. It is evident that Boko Haram members largely consist of youth from disadvantaged backgrounds, often deprived of education due to economic hardships. Based on the findings, it is recommended that more schools be established for children displaced by conflict and that proper sanitation infrastructure, including sewage systems and public toilets, be developed to improve living conditions in affected areas. These steps are crucial for the recovery and future well-being of the communities impacted by these disasters.

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