CLIMATE CHANGE AND FORCED MIGRATION FROM MAI ADU'A LOCAL GOVERNMENT AREA IN DESERT PRONE FRONT LINE STATE KATSINA, NIGERIA

By

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Abstract

This study examined the climate change impact and one of the effects, force migration, and its associated problems. Purposive sampling technique was adopted in sampling 250 respondents who were mainly family members of out-migrants from Mai Adu'a Katsina State, Nigeria. The results revealed that climate change leads to climatic variation over the space with numerous effects on the environment such as intermittent droughts, desertification/deforestation. Many people in the study area either migrated to South-Western Nigeria especially Lagos, Oyo states, etc., to serve as security guards and other low-skilled workers or petty trading leaving all or some members of their families at home. Majority of respondents (58%) indicated that the head of the households migrated as a result of poor harvest due to diminishing or fluctuating rains/drought and/or drying of river. It is recommended that inter basin water transfers should be embarked upon in the study Area.

Keywards: Climate, Drough, Migration, Mai Adu'a, Desert

Background of the study

Climate change is already impacting on population and ecosystems around the globe and threatens to set back development efforts by decades, profoundly affecting all. The major challenge of the 21st century is to combine attainment of a rapid reduction in poverty and inequality as well a rapid reduction in global greenhouse emission. In this regards there is need for knowledge of how the size, structure and dynamics of human populations are influenced by, our changing climate.

Climate change has significant implication on socio-economic variables such as the standards of living, health, and population dynamics, including migration, urbanization, changes in age structure and composition. These impacts, in turn, have potential implications on climate change and environmental sustainability. Unmanaged urbanization very often tends to outpace the development of infrastructure and environmental safeguards leading to high pollution and carbon dioxide emission, which impacts on climate change. (Nicholson 2001)

The threat of Climate Change, manifested in the increase of extreme weather condition such as drought, deforestation and flood, has been recognized as global priority issue (Sabine2004). The effects of climate change will vary among regions, and between different generations, income groups and occupations as well as between women and men (Odjugo2010). Due, to their lower adaptive capacities, developing countries and people living in poverty are likely to experience a significant impact (Salick *et al*., 2007).

The consequences of climate change on migration present humanity with an unprecedented challenge where the number of storm, droughts and floods have increased threefold over the last 30 years with devastating effects on vulnerability communities, particularly in the developing world(Halliru 2015)

Protracted and severe drought may drive farmers from rural areas to cities to seek for a new livelihood (UN 2005). Renaud *et al*. (2007). Define the term "a forced environmental migration as a person who has to leave his/her place of normal residence because of an environmental stressor". International Organization for Migration (IOM) (2007:1), on the other hand define the term as persons or groups of persons who for compelling reasons of sudden or progressive change in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.

The concept of environmentally induced migration adopted in this study is derived from El-Hinnawi (1985) and IOM (2007:1). In this regard environmental migration is the processes by which persons or groups of persons are compelled to migrate due to reason of sudden or progressive changes in the environment as a result of climate change that adversely affect their lives or living conditions

Aim and Objectives

This paper aim at investigating how climate change and its effects such as droughts in the Mai Adu'a area impact and operate to increase the temporary and permanent forced migration.

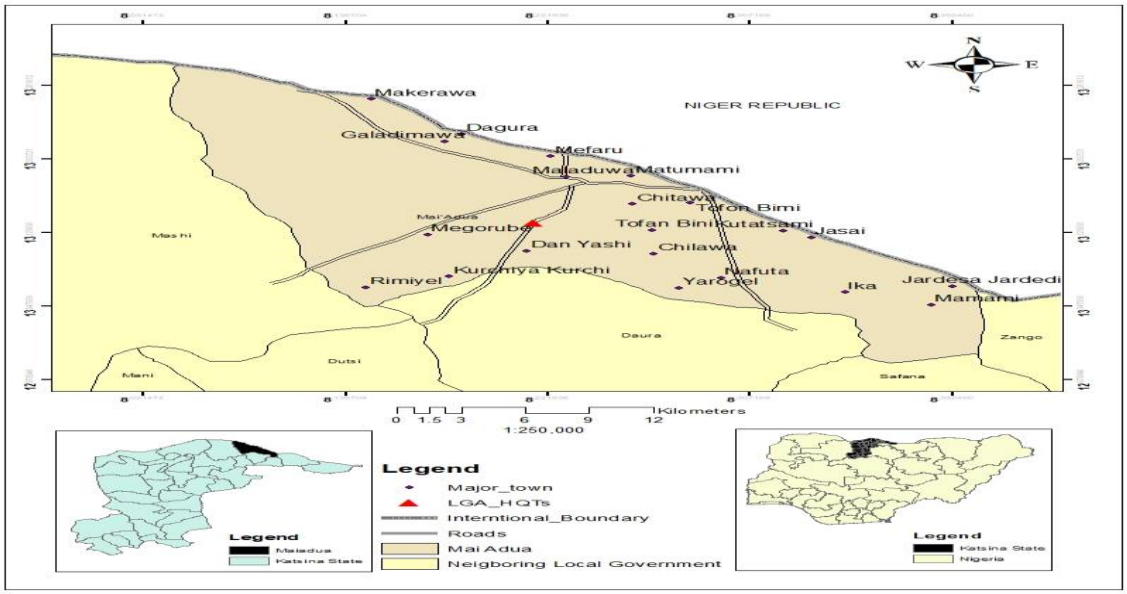
The aim would be achieved through the following specific objectives:

1. To study the demographic, socio cultural, and economic background of the respondents.
2. To study groups who have migrated to other parts of Nigeria and their destinations as a result of climate change.
3. To examine the causes of force migration in the area due to climate change.
4. Suggesting some methods for drought adaptation and mitigation in the desert prone front line states in Nigeria.

Materials and Methods

Description of the Study Area

Figure 1 below illustrates the map of Mai Adu'a local government area in Katsina State showing the study area of the research. Geographical information revealed the region enjoy a extreme tropical continental climate with high temperature ranges, lower annual and single maximum rainfall and a longer dry season. Agricultural activities are the major economic activities of the inhabitants in the area. Mai Adu'a lies on latitude 13^0 11'26''N and longitude $8^0$12'42''E. and share borders with Republic of Niger to the North, to the east Zango local government area, Mashi and Dutsi local government in the west and Daura local government to the south, Mai'adua LGA has a land size of about 528 km^2 with a population of 201,178 as at 2006(NPC 2006).



Source : Geography Department FCE Kano (2015)

Methodology

A total number of 250 copies of the questionnaire were in all purposively administered, who were mainly family members of out-migrants from Mai Adu'a Katsina State. A snowballing technique was used to identify the eligible persons for the survey (family members of emigrants). A questionnaire/interview schedule was administered to any adult in the house, male or female who volunteered to answer the questions. Therefore sample size of the study consisted of 250 respondents purposively selected. A snowballing technique was in some cases used to identify the affected families. The data was collected through "interview schedule" coupled with field observations and supplemented with secondary data. The data were analyzed using percentages which were viewed alongside conclusions drawn from reviewed.

Result and Discussion

The demographic characteristics of respondents' shows that majority (78%) were parents of the migrants. Thus, only about 22% of them are relatives, friends of the migrants. Over two-thirds of them are having no or low education and are farmers or engaging in other unskilled labor work and other lower level white collar jobs. Sixty-nine percent of the respondents are living in nuclear families' houses. In terms of religious, all the 250 respondents in the study were found to be Muslims. The majority of the respondents (88%) were found in their youthful and working age group of 40–60 years. Most of them (62%) were capable or likely to become capable enough to purchase their own properties and live in their houses and about 65% of the respondents are married females (spouses) of

the migrants. The remaining 40% are either parents or other relatives. They were made up of males (20%) and females (80%). In reviewing the relationship between climate change impact and forced migration various evidence gotten from the field indicate that certainly most of the emigration (80%) took place as a result of that change.

Destinations of the Migrants

Migrants' destinations cut across all states in Nigeria. They travel over 500 km in most cases. 40% of the migrants are said to have migrated to the Southern Nigeria

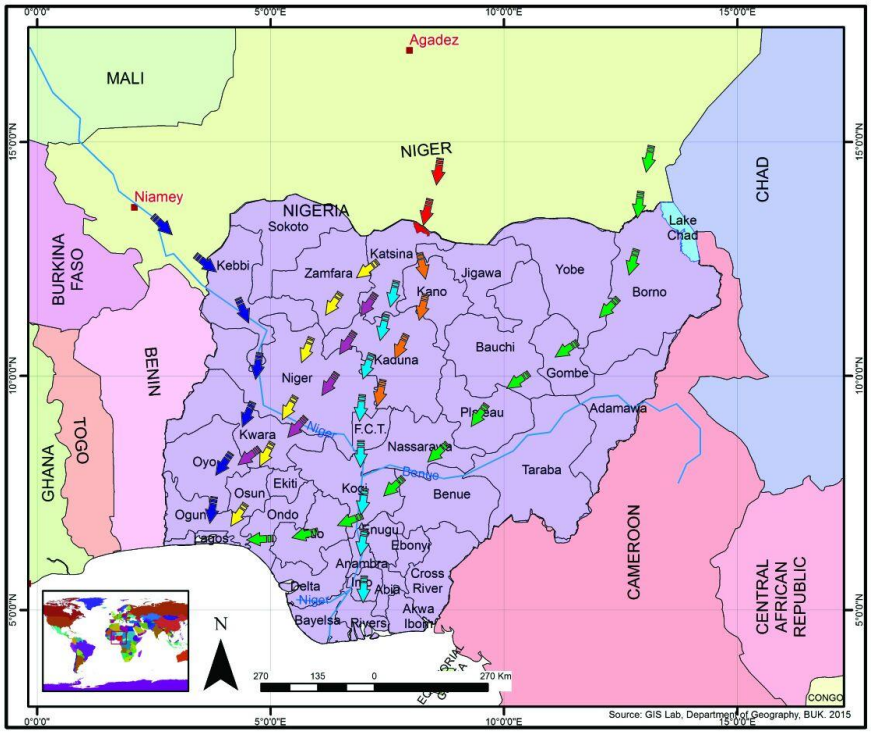


Figure 2: Map of Nigeria showing the direction and movement of migrant from Mai Adu'a to the urban part of the country

Source: GIS Lab. Department of Geography FCE Kano 2015

Key

Direction of migrants flow from Niamey though Sokoto state border

Direction of migrants flow from Niger through Katsina state border

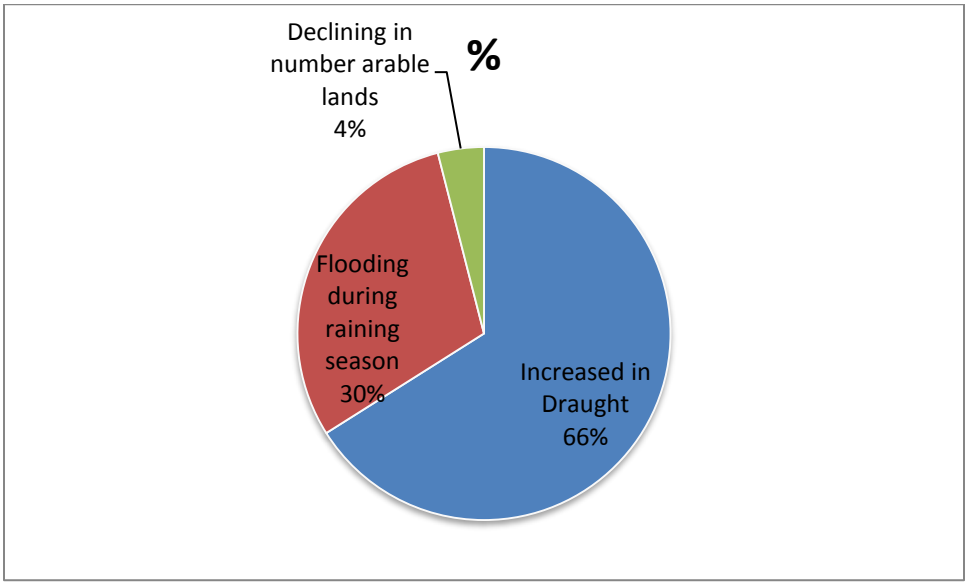
Direction of migrant flow from Chad through Borno State border

Direction of migrant flow into major Nigerian cities

Causes of Force Migration in the Desert Prone front line State

Figure 3 shown the major causes of force migration which include increase in drought with 66%, follows by flooding during raining season 30% respectively this is due to evidence of the manifestation of climate change in the study area (Halliru ,2015)

Figure 1 Causes of force migration



Source : Field study 2016

Conclusion

This paper focuses on the climate change and human migration. It is an assessment on the impact of climate change and its resultant consequences on forced migration. The paper has therefore brought to limelight the reasons given by the families of the migrants in the study area for the migration which are all attributable to droughts. This study concludes by highlighting some of the measures that could help in coping with the effects of the changing climate.

Recommendations

1. The use of shelterbelts and windbreaks is of great importance in this zone. This is because high wind velocities and soil erosion are common features of the zone which cause considerable damage to sown crops. Therefore, effects of high wind velocity and soil erosion could be minimized largely through the use of shelter plantation/afforestation
2. Dry seed planting, information delivery, use of underground water should all be adopted.
3. Diversifying the economic base of the populace with emphasis on reducing overdependence on rain-fed agriculture, practicing multiple cropping, and changing site locally, for example, intensification of agriculture and use of fadama soils.

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