POOR COMMUNITIES AFFECTED BY FLOODS AND RAINSTORMS IN THE CITY OF ILORIN, NIGERIA

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INTRODUCTION (2/3)

- In Nigeria, the principal causes of urban vulnerability include
  - rapid and uncontrolled urbanization,
  - widespread urban and rural poverty,
  - degradation of the environment resulting from
    - the mismanagement of natural resources,
    - weak socio-economic infrastructure and
    - inefficient public policies.

INTRODUCTION (3/3)

- In most Nigerian cities, the combination of physical development on unsuitable lands such as wetlands, slopes, flood plains and other environmentally sensitive areas, and over-crowding, all exacerbate environmental degradation and vulnerability to environmental and anthropogenic hazards.

THE RESEARCH PROBLEM (2/3)

- In Nigeria, too little attention has been given to the vulnerability of urban populations to climate change, particularly as it relates to their livelihood systems – and especially to the vulnerability of their low-income populations.
- A cursory look at the situation in Nigeria reveals that most of the recent disasters in urban areas are weather related.
- Prominent among these disasters are flooding and rainstorm.
- Floods and rainstorms affect households each year in Ilorin affecting the poorest and most vulnerable people in the city and contributing to endemic poverty in most parts of Kwara State.

THE RESEARCH PROBLEM (3/3)

- Practical methods for minimizing negative impacts of flood and rainstorm can be found by building on actions that families are taking and designing interventions in a way that they accommodate the changing socio-economic and natural dynamics.

- It is in this regard that the study examines more closely the vulnerability and adaptation to climate change using the experiences of flood and rainstorm victims in Ilorin metropolis.

THE STUDY AREA (1/3)

- Ilorin, the capital city of Kwara State, Nigeria, is the setting for this study.
- The city is located on latitude 8^0 10'N and longitude 4^0 35'E marking a divide between the southern forest Zone and the Northern grassland of Nigeria.
- The vegetation, in most parts, is guinea savanna interspersed by trees of different species.
- The dominant streams are Asa, Aluko, Okun, Amule, and Agba.

MAP OF KWARA STATE SHOWING ILORIN

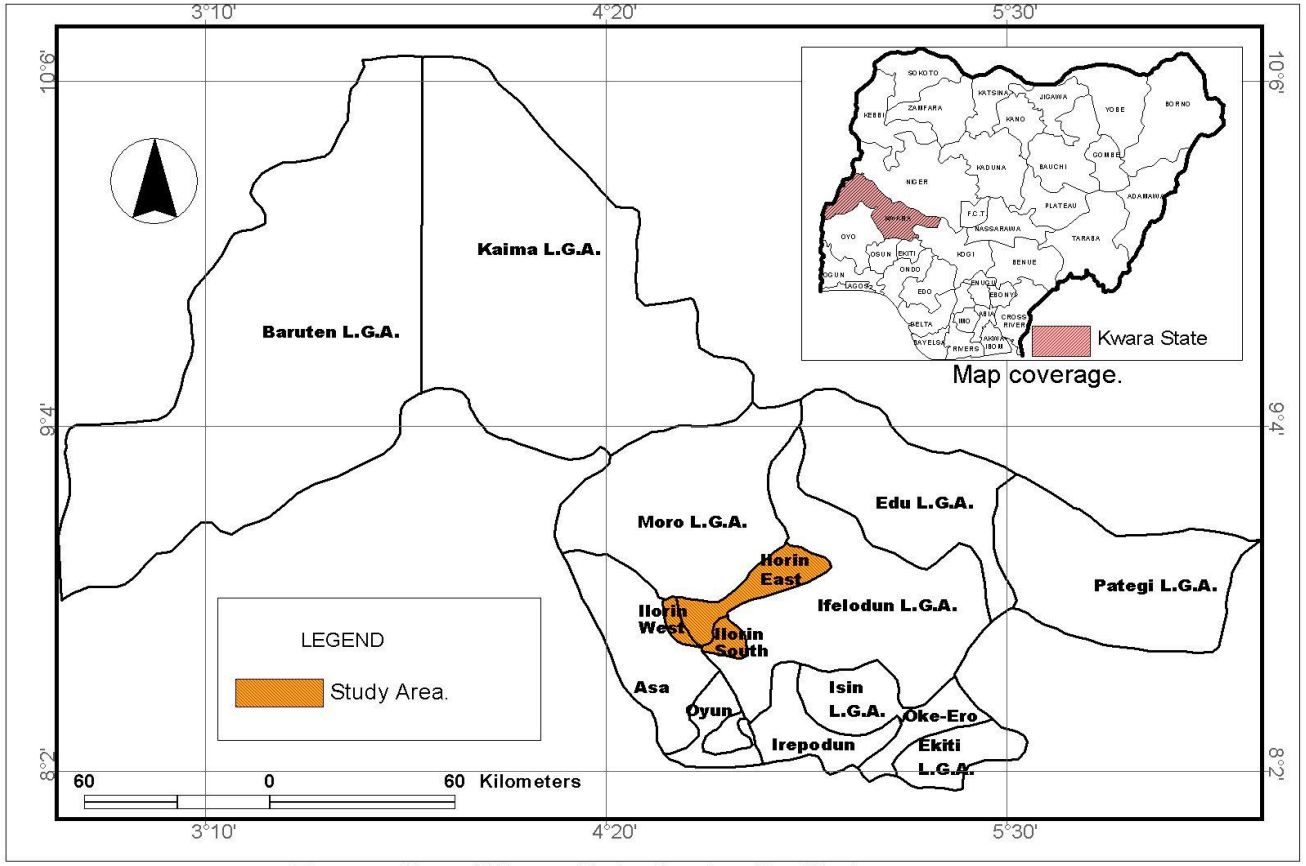

Fig. : Map of Kwara State showing the Study area.

THE STUDY AREA (3/3)

- Frequent rainstorms and flooding in Ilorin has made it one of the most vulnerable cities in Nigeria in the recent past.
- The number of such incidents has been on the increase in the last few years.
- Apart from the fact that the number of incidents has increased, so also has the severity which translates into extensive damage to properties and the livelihoods of the people.

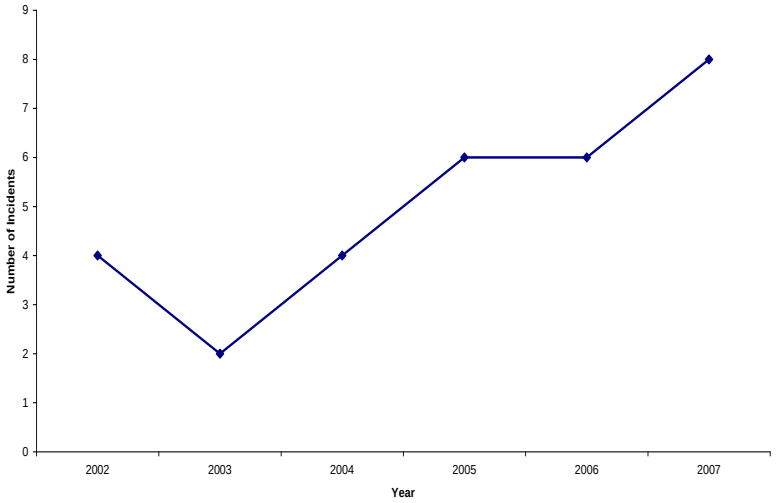

Fig 3: Number of Rainstorm/Flooding Incidents in Ilorin (2002-2007)

DATA AND METHODS (1/2)

- The study utilized both primary and secondary data. The secondary data were collected mainly from the National Emergency Management Agency, Kwara State office.
- The data collected include the details of various disaster incidents in the State between 2002 and 2007.
- Aside this, data were collected on properties destroyed by rainstorms and floods in Ilorin and the affected victims.
- Data on relief materials distributed to the victims were also collected from NEMA office.

RESULTS AND DISCUSSIONS

- Socio-economic characteristics of respondents
- The results of the analyses show that males constituted the highest percentage of respondents (74.55%). This is not surprising considering the fact that most households in the city are male headed due largely to socio-cultural and religious factors.
- More than two thirds of those interviewed are married (86.37%).
- The largest proportions of the respondents (40.0%) are above 50 years of age. 16.37% have no formal education while only 14.57% have tertiary education.
- Most of the respondents are artisans (38.22%), 28.21% farmers and another 20.02% are traders.
- With respect to the household size, close to 80% of the respondents have more than 4 people in the household.

SPATIAL PATTERN OF FLOODING/RAINSTORM INCIDENTS IN ILORIN

- An analysis of the Data obtained from NEMA office shows that the impacts of the flooding/rainstorm disaster incidents were more in the traditional, core areas of the city going by the number of properties damaged.
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- The traditional, core areas of the city are characterised by high population and the people in these areas are most at risk of all environmental emergencies.

- The existing situation has increased the anxiety on the part of the people that future incidents will continue to have higher impacts.

SPATIAL PATTERN OF FLOODING/RAINSTORM INCIDENTS IN ILORIN

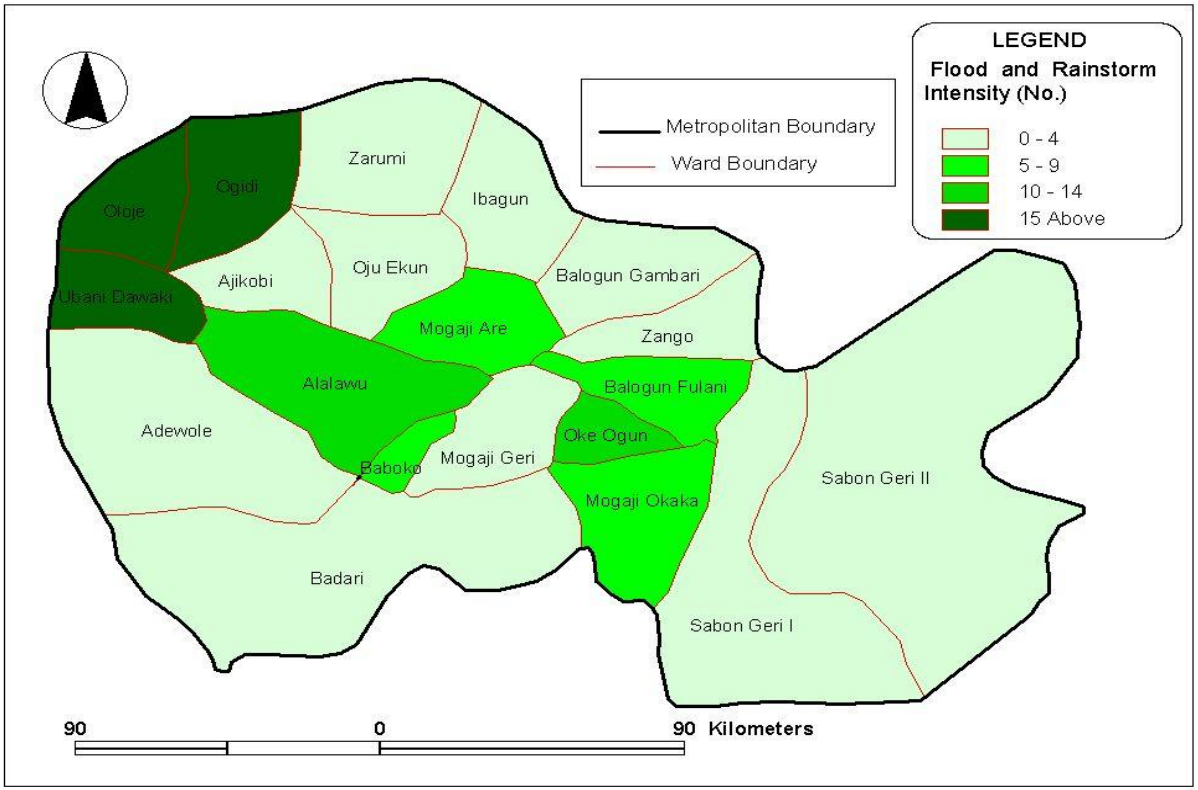

Fig. : Map of Ilorin Metropolis showing the Severity of Flood and Rainstorm intensity.

CHARACTERISTICS OF AFFECTED BUILDINGS

- The results show that more than half (60%) of the houses are more than 30 years of age
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- More than one third (37.3%) constructed with mud bricks.
- About 64.6% roofed with metal sheets which have turned brownish and fragile over the years.
- More than two third of the houses have their floor made with earthen floor, out of which about 12.7% are not plastered at all.
- The houses are mostly multi family house (35.5%). The implication of this is that more people are exposed to risks when ever disasters strike in the area, especially the core/indigenous areas.
- The result of the multiple linear regression model tested to see the determinants of the vulnerability of houses to rainstorm and flooding shows that the contribution of house characteristics and neighbourhood quality contribute significantly to vulnerability to rainstorm and flooding.

IMPACT OF FLOODING/RAINSTORM ON LIVELIHOOD SYSTEMS (1/2)

- Pauperisation and health problems appear to be the major dimension. For instance, as lamented by some respondents, the incidents generally caused destruction of electricity in some areas for months, trading, one of the major occupation of the victims staled, and crops washed away on farms, especially among those in the suburban.

- It should be noted that when electricity supply is unavailable for some time, it slows down economic activities among the traders and the artisans which, incidentally, constituted the highest proportions of those affected.

- Furthermore, the disasters are associated with a number of health problems including bodily injuries as well as the attendant psychological trauma. According to one of the victims, “when one’s health is affected by disaster incidents, it becomes difficult, if not impossible, to continue with one’s means of livelihood”.

- The post disaster adjustment would have been easier if relief comes from government and non-governmental organisations on time.

IMPACT OF FLOODING/RAINSTORM ON LIVELIHOOD SYSTEMS (2/2)

- A number of women in the inner city and Frontier Native areas depend on irrigate vegetable farming around the flood plains of Asa, Aluko and Amule- the three dominant streams that flow in most parts of the metropolis.

- During flood events, vegetable farms are washed away and the land remain flooded for a long time after.

- Women are rendered unemployed for upwards of three months when they can start all over. To worsen this situation, poor urban women's economy is not diversified and thus entrenching the regime of poverty.

COPING MECHANISMS EMPLOYED BY VICTIMS

- By and large, support from friends and relatives and personal savings accounted for the way large proportion of the victims cope with the immediate impacts of the disaster.

- Even though government support came for most of them, many of the victims said the support did not come on time and it did not measure any closer to the degree of impacts suffered by the victims.

ADAPTATION MEASURES (1/4)

- There are two categories of adaptation measures currently employed by respondents. These are the short term and the long term measures.
- Immediate, short term measures include
- improvement in the waste collection system and in the core areas,
- introduction of waste collection system to avoid drainage blockage.
- Secondly, drainage channels in the modern parts of the city have to be opened to allow free flow of water during heavy rainfall.
- But in the core, indigenous areas, drainage channels would have to be constructed because they are currently non-existent.

ADAPTATION MEASURES (2/4)

- Furthermore, some of the victims especially those who are traders and artisans have decided not to keep too much of their goods in stock during the raining season to avoid heavy losses.
- Some also have decided to imbibe banking culture by keeping their money in the banks.
- There is, however, no mention of insurance among the respondents. It’s something that is strange to more than 70% of them.

ADAPTATION MEASURES (3/4)

- The long term measures proposed by the victims include:
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- reinforcement of the houses in the indigenous areas or complete rebuilding of some of the houses.

- However, when asked if the victims would be willing to relocate from their present areas especially those in the worse hit areas, many of them said that they have never contemplated such as move. This was especially true among the old.

ADAPTATION MEASURES (4/4)

- As easy as some of these adaptation measures may seem, the existing level of poverty may hinder any of such measures.
- This is why government at the state and local level must come in. government need to put in place measures to reduce the remote factors that excercebate the intensity and impacts of flooding and rainstorm.
- Such measures include construction of drainage channels in all parts of the city, improved waste collection system in the city.
- The government would need to support both the victims and the non victims in reinforcing the existing weak structures in most parts of the city and especially in the indigenous area.
- But more importantly, there is need for government to enforce building regulations and to improve on city governance.

SUMMARY AND CONCLUSIONS (1/3)

- The study reveals that the indigenous coping mechanisms employed by the poor may become less effective as increasingly fragile livelihood systems struggle to withstand disaster shocks.

- Also, many of these long-term trends are rendering indigenous coping strategies less and less effective and thus are increasing the vulnerability of the poor.

- There is some evidence to support the argument that disaster management response in the city, just like in other areas in Nigeria, should shift away from this traditional response approach to focus increasingly on addressing the causes of vulnerability in order to mitigate the effects of disaster.

- However, the approach tends to address only the visible signs of vulnerability, such as poor access to services, and generally fails to make a deeper analysis based on the maintenance of sustainable livelihoods by vulnerable people.

SUMMARY AND CONCLUSIONS (2/3)

- Vulnerability is seen as a physical problem which can be addressed mainly through technical solutions such as infrastructure development which may not even be provided at the appropriate time.

- However, this approach generally fails to take into account the views, capacities, knowledge and priorities of local people and is thus limited in effectiveness in truly reducing vulnerability.

SUMMARY AND CONCLUSIONS (3/3)

- The climate change and variability are likely to worsen the prospects for poverty eradication unless action is taken to become response-capable.
- This requires a focus on reducing vulnerability, achieving equitable growth and improving the governance and institutional context in which poor people live.
- Strategies to reduce vulnerability should be rooted in vulnerability analysis and greater understanding of both household-level and macro response options that are available to decrease the poor's exposure to climate risk.
- Increasing the response-capability of Nigeria will require information on seasonal forecast to enable the preparedness to climate variability as well as longer term climate prediction data to ensure that strategies to reduce vulnerability also reflect the underlying longer-term climate trends.

THANK YOU FOR YOUR ATTENTION