



PROJECT MANAGEMENT CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department



ASSESSING HABITATS OF VULNERABILITY IN AFRICAN CITIES: A CASE OF POVERTY HOUSING IN IBADAN METROPOLIS, NIGERIA

R.O. Salami¹, J.K. Von Meding¹ and H. Giggins¹

¹School of Architecture and Built Environment,
University of Newcastle, Australia

2016 Project Management Symposium

[HTTP://PMSYMPOSIUM.UMD.EDU/](http://PMSYMPOSIUM.UMD.EDU/)

Introduction

- The impacts of climate change, rapid urbanization, urban growth, tenure insecurity, and poor quality shelters are intensifying poverty and vulnerability among city dwellers(IFRC, 2010;UNISDR, 2009).
- A range of different challenges and solutions are best understood through careful analysis of the local dimensions of impacts of climate change and hazards on urban systems & residents (World, 2010).

Introduction (Contd)

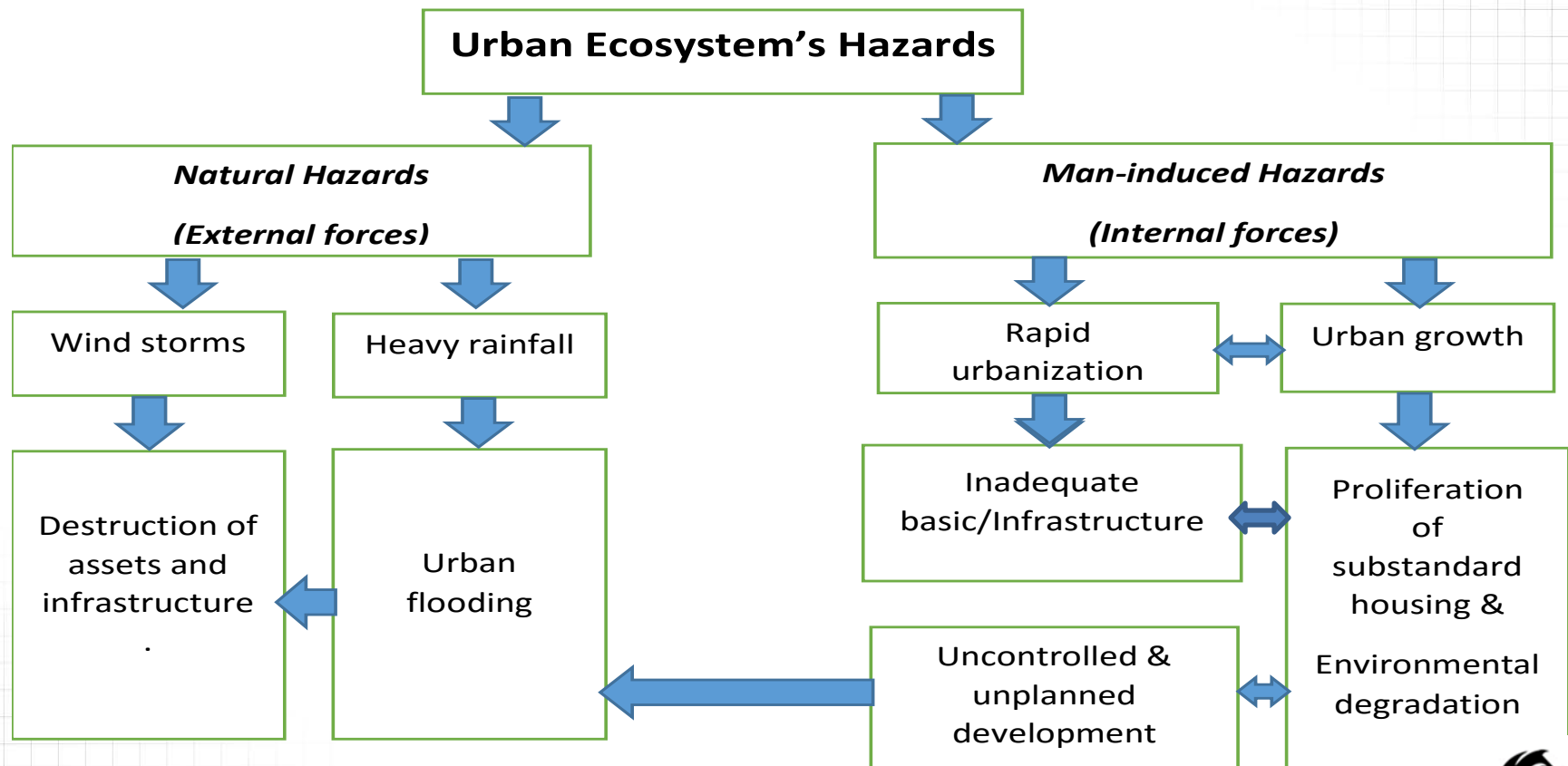
- Cities are vulnerable to many disaster risks especially in low- and middle-income countries (World Bank, 2010).
- Those who are most vulnerable to environmental hazards, disasters and CC are dwellers of poor quality housing in low-income settlements that lack basic infrastructure and services (UN-Habitat, 2011)
- This paper assesses the housing and urban vulnerability of Ibadan metropolis to natural and man-induced hazards so as to provide policy recommendations on how to mitigate disaster risk and reduce vulnerability.

Impacts of CC on urban residents & ecosystems are significant...

Disaster events occurred	No of cases
Flooding	1501
Storm and cyclones	899
Earthquake	228
Extreme temperature	173
Mass movement (Landslide, Avalanche)	167
Drought	133
Volcano	53
Storm surge	25
Tsunami	19

Source: EM-DT, OFDA/ CRED, 2011

Analysis of housing & urban vulnerability to hazards in Ibadan



Conceptual framework for assessing housing and urban vulnerability

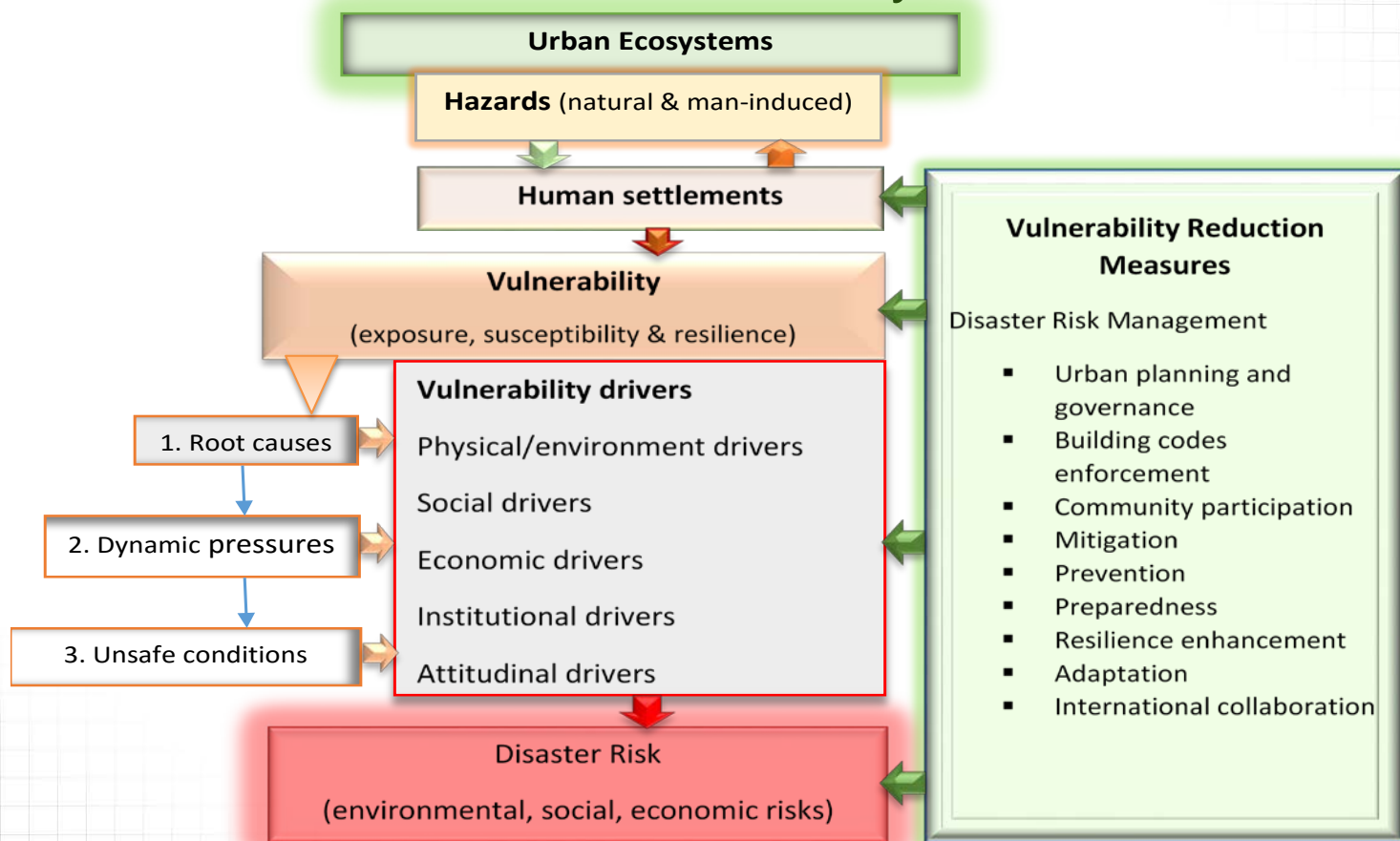


Figure 2: Conceptual framework

The study area : Ibadan metropolis, Nigeria

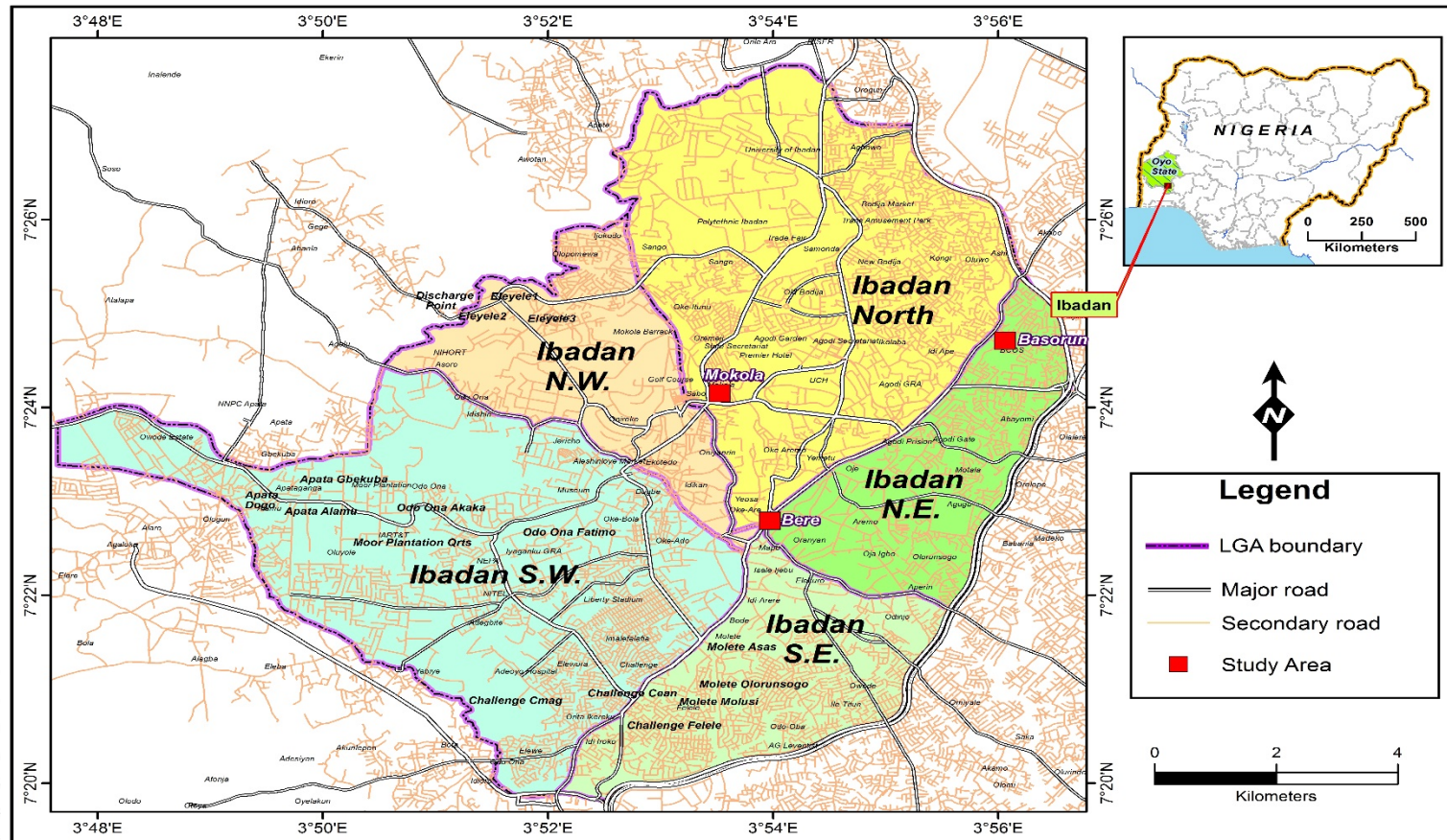
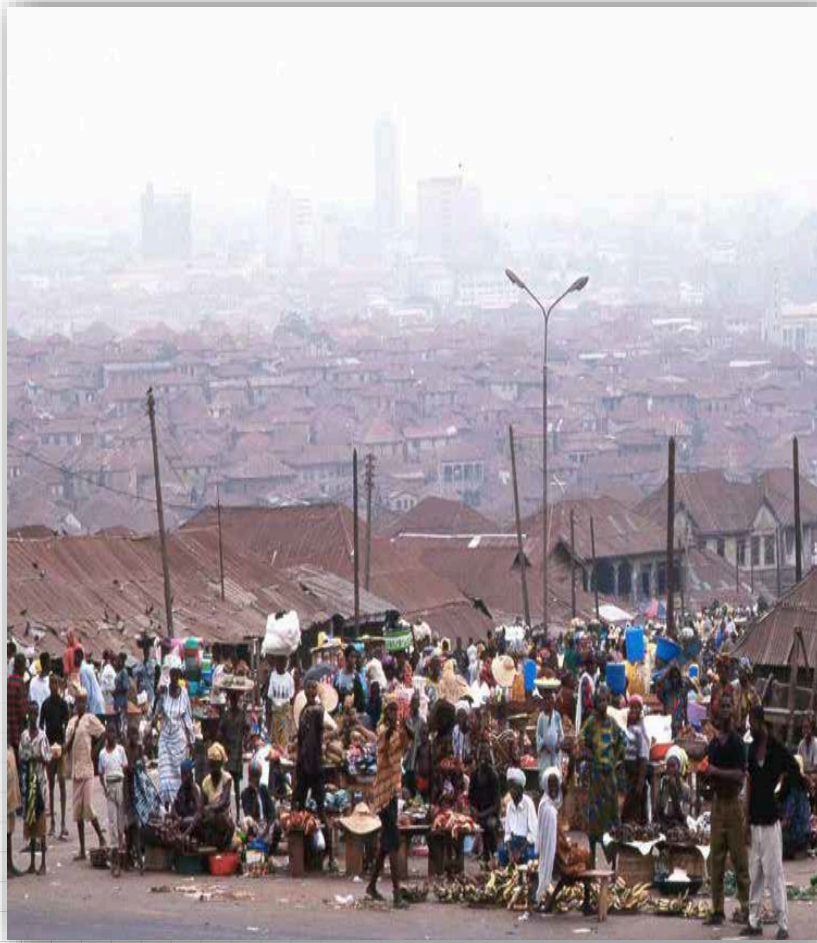


Figure 3: Map of Ibadan metropolis (2016)

The study area : Ibadan metropolis, Nigeria



- Represents the pinnacle of pre-colonial urban development in Nigeria.
- Its land total area is 3123km².
- Home of 1,338,659 residents (NPC, 2006)
- It has one of the highest population densities in Nigeria.
- Approximately 2889 people per square kilometer.
- Ibadan has no established master plan leading to uncontrolled urban growth.
- It has unprecedented cases of flood disasters in 1902, 1924, 1956, 1963, 1978, 1980, 2011 and 2013 (Agbola, Ajayi et al. 2012).

Vulnerability profile of the study site : Bere, Ibadan

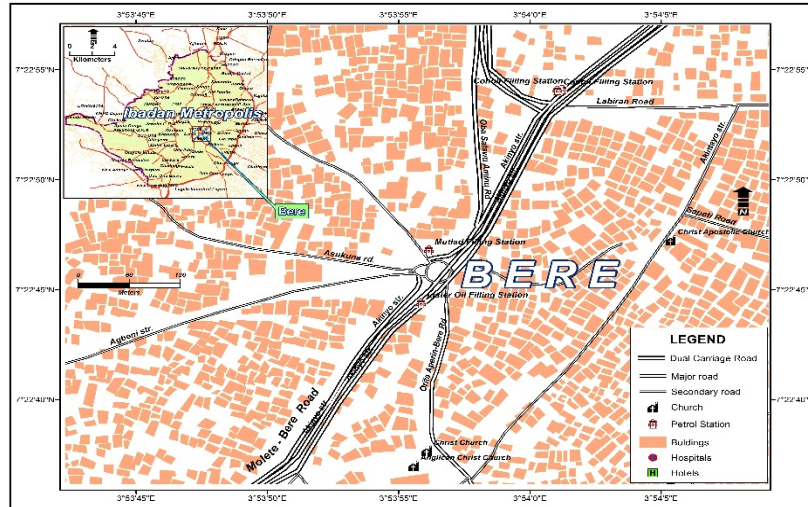


Figure 4: Map of bere community



Plate 2: View of derelict houses in Bere

- Low income residential area.
- Crowded slums within traditional core area of Ibadan metropolis.
- Over 300 persons per hectare.
- Located on hilly areas
- Lowest-quality and the high- density residences of the city.
- Houses are closely built without adequate ventilation poor environmental sanitation, drainage and access roads.
- Poor sewage disposal which has contributed immensely to flooding.

The characteristics of housing vulnerability in Nigeria

Features	Nature of housing vulnerability
Unsustainable land use	Land degradation, Flooding, Unsafe settlements
Poor urban planning	Inappropriate zoning/building codes, Inadequate shelters
Tenure insecurity	Lack of access to shelter solution, social conflict, land grabbing.
Weak land administration	Poor governance, weak land dispute resolution, weak institutional capacity.

Methodology

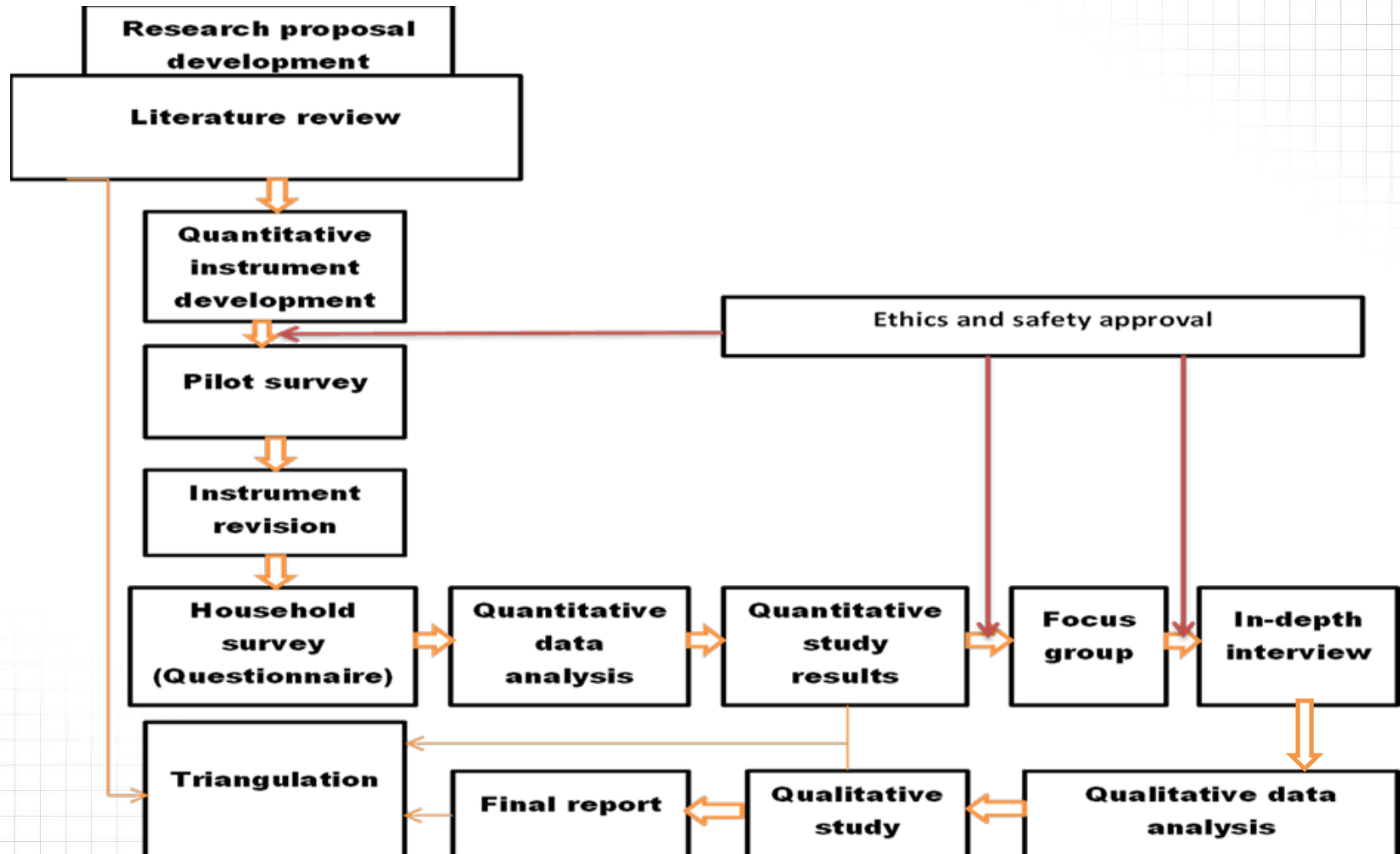
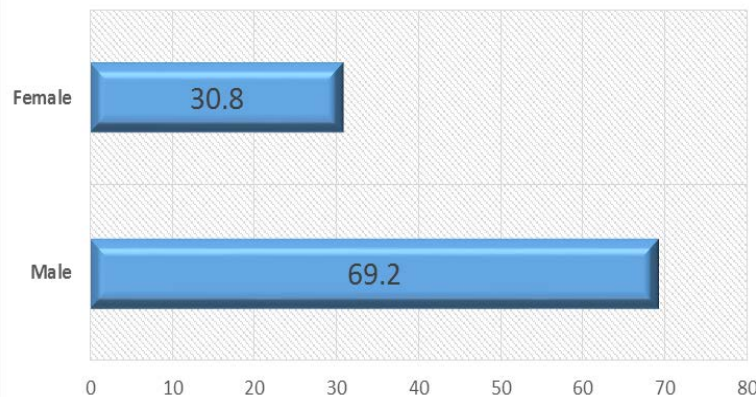


Figure 5: The flow chart of the research process

Demographic characteristics of HHs' Head

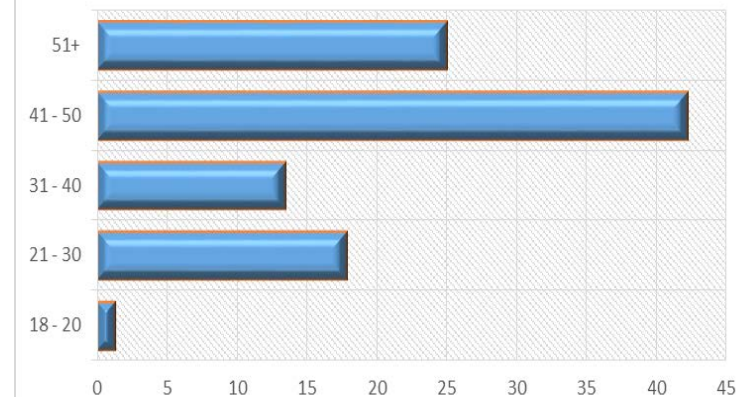
Heads of Household	Frequency	Percentage (%)
<i>Male</i>	108	69.2
<i>Female</i>	46	30.8
Total	156	100

Gender



Source: Field survey, (2015)

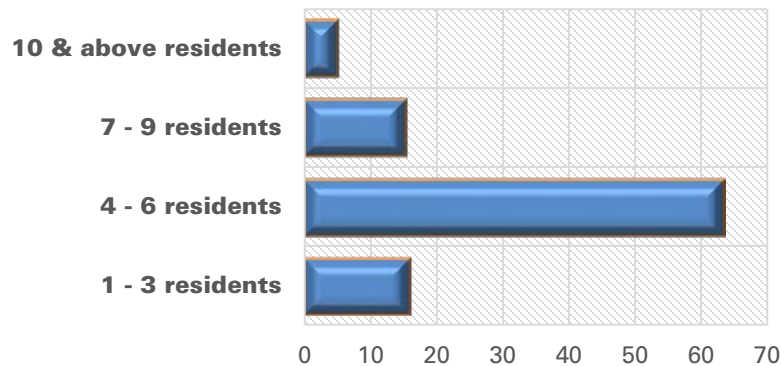
Age of households' head



Source: Field survey, (2015)

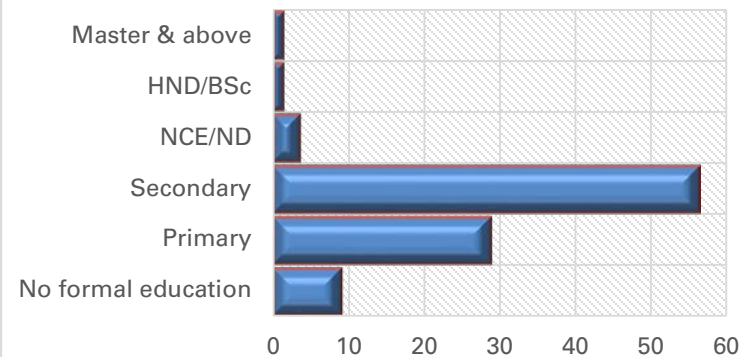
Socio-economic profile of HHs' Head

Households' size



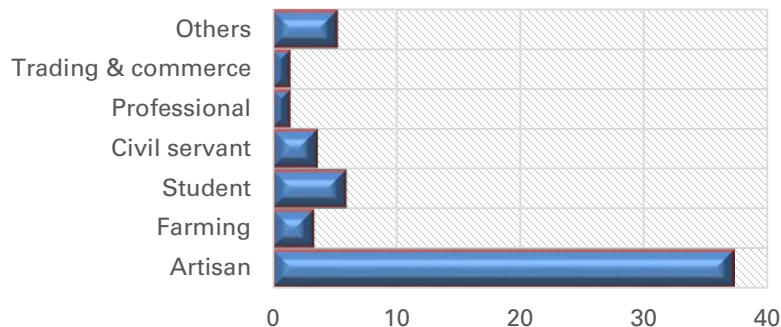
Source: Field survey, (2015)

Level of Education



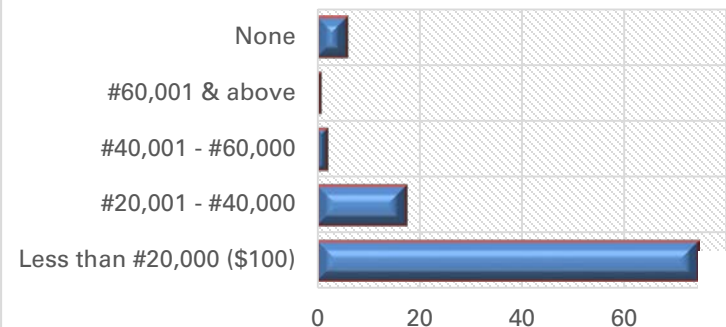
Source: Field survey, (2015)

Occupation



Source: Field survey, (2015)

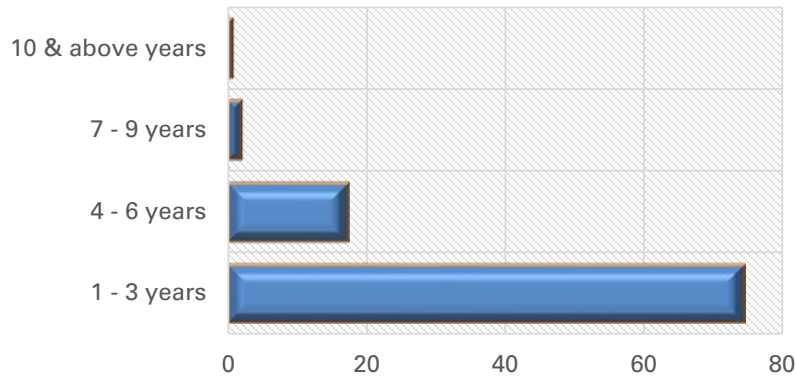
Monthly Income



Source: Field survey, (2015)

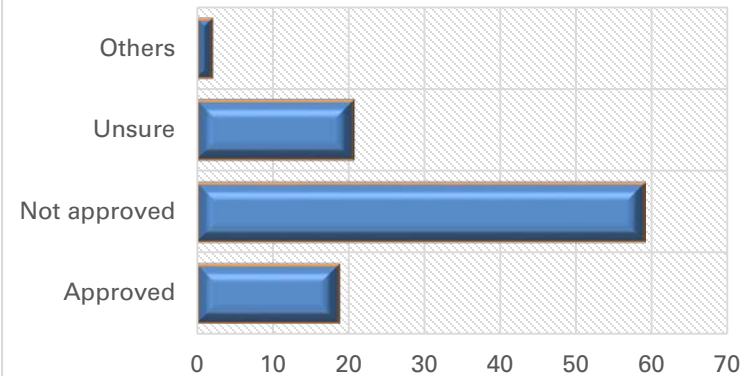
Physical/Structural characteristics of HHs' Head

Age of the building

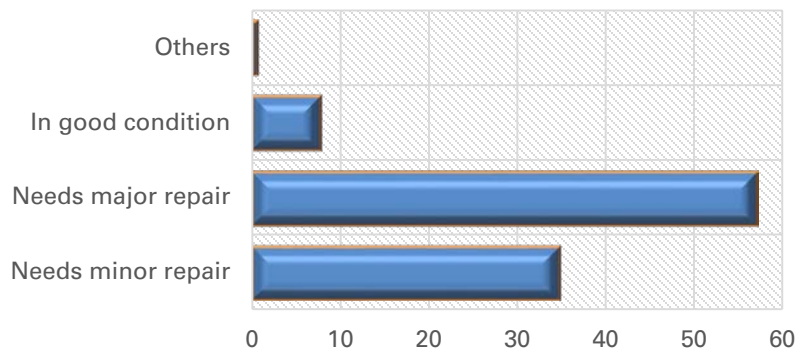


Source: Field survey, (2015)

Status of tenure security

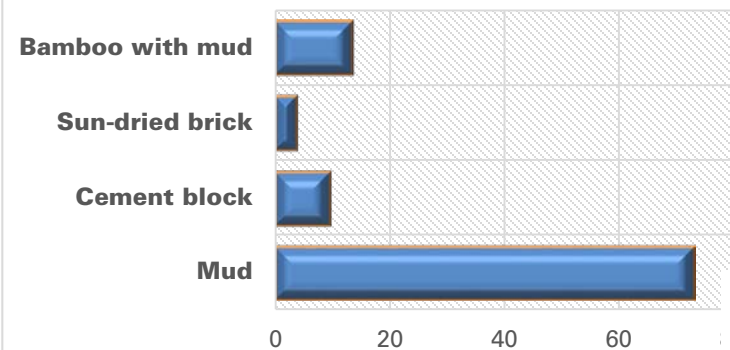


Structural conditions



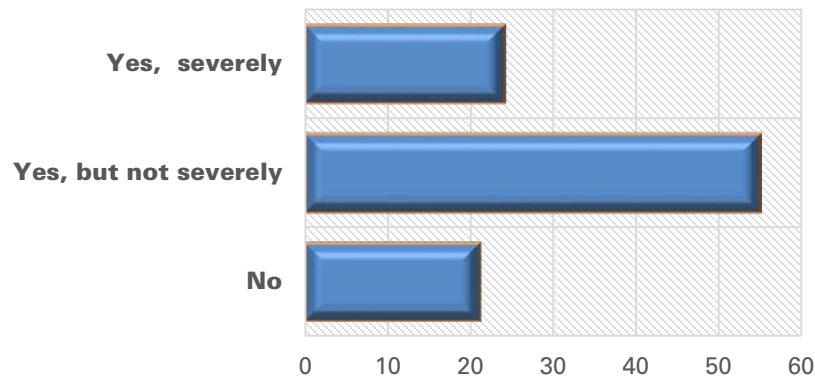
Source: Field survey, (2015)

Construction materials

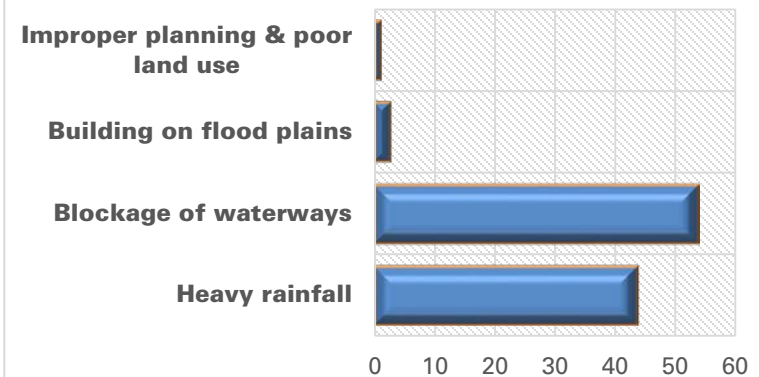


Risk perception and coping/adaptation strategies

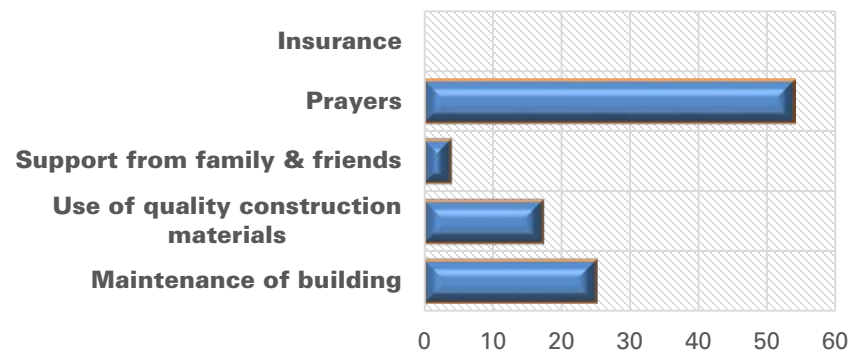
Flood disaster experience



Causes of floods



Adaptation / coping measures



Source: Field survey, (2015)

Key findings

- Bere are slum dwellers living in informal settlements, characterized by low-quality housing, lack of basic infrastructure and poor sanitation.
- They are vulnerable to flooding, heavy rainfall, windstorms and fire hazards.
- They are vulnerable due to:
 - Uncontrolled urban growth/physical development, ineffective planning & bad governance.
 - Low income & insufficient resources.
 - Substandard shelter with poor disaster resistance.



References

Agbola, B. S., Ajayi, O., Taiwo, O. J., & Wahab, B. W. (2012). The August 2011 flood in Ibadan, Nigeria: Anthropogenic causes and consequences. *International Journal of Disaster Risk Science*, 3(4), 207-217.

EM-DAT, OFDA/CRED International Disaster Database, (2011).

IFRC (International Federation of the Red Cross-crescent Societies). (2010). World Disasters Report 2010-Focus on Urban Risk. *Geneva: International Federation of Red Cross and Red Crescent Societies*.

UNISDR, (2009), *Risk and Poverty in a Changing Climate: The 2009 Global Assessment Report on Disaster Risk Reduction*, Geneva, UNISDR.

UN-Habitat. (2009). *Global report on human settlements 2009: Planning sustainable cities*. Earthscan: for UN-Habitat.

UN-Habitat. (2011). *Cities and Climate Change: Global Report on Human Settlements 2011*: United Nations Human Settlement Programme (UN-Habitat).

WORLD BANK (2010). 'Climate change, disaster risk, and the urban poor: cities building resilience for a changing world', Washington, DC, The World Bank.



PROJECT MANAGEMENT CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department

Salami, Von Meding and Giggins
UMD Project Management Symposium
May 12-13, 2016
Slide 18

Questions ?

rafiuolugbenga.salami@uon.edu.au



THANK YOU

[HTTP://PMSYMPOSIUM.UMD.EDU/](http://PMSYMPOSIUM.UMD.EDU/)