



STRENGTHENING CLIMATE CHANGE AND DISASTER-  
RELATED STATISTICS: NEEDS, PRIORITIES, AND ACTION:  
AFRICA, LATIN AMERICA AND THE CARIBBEAN

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## INTRODUCTION

- Cities only occupy 3% of the world's land area, yet they accommodate almost 60% of the world's population.
- By 2050, almost 70% of the population in the world will be living in cities and almost 90% of this increase will be from Asia and Africa (United Nations, 2019).
- Over one billion people are currently living in informal settlements across the world and by 2050, this number has been projected to rise to three billion (United Nations, 2022).

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## INTRODUCTION (CONT'D)

- Informal settlements in Africa and Zambia in particular are mainly located in sensitive and fragile environments such as flood plains and wetlands (Mahabir et al., 2016; Abunyewah et al., 2018)
- Floods have been projected to increase both in frequency and intensity due to climate change (Myhre et al., 2019; Cardona et al., 2004). This will adversely affect the poor
- The urban poor are more vulnerable to floods because of their poor socio-economic characteristics, high population density, institutional marginalization and where they live.

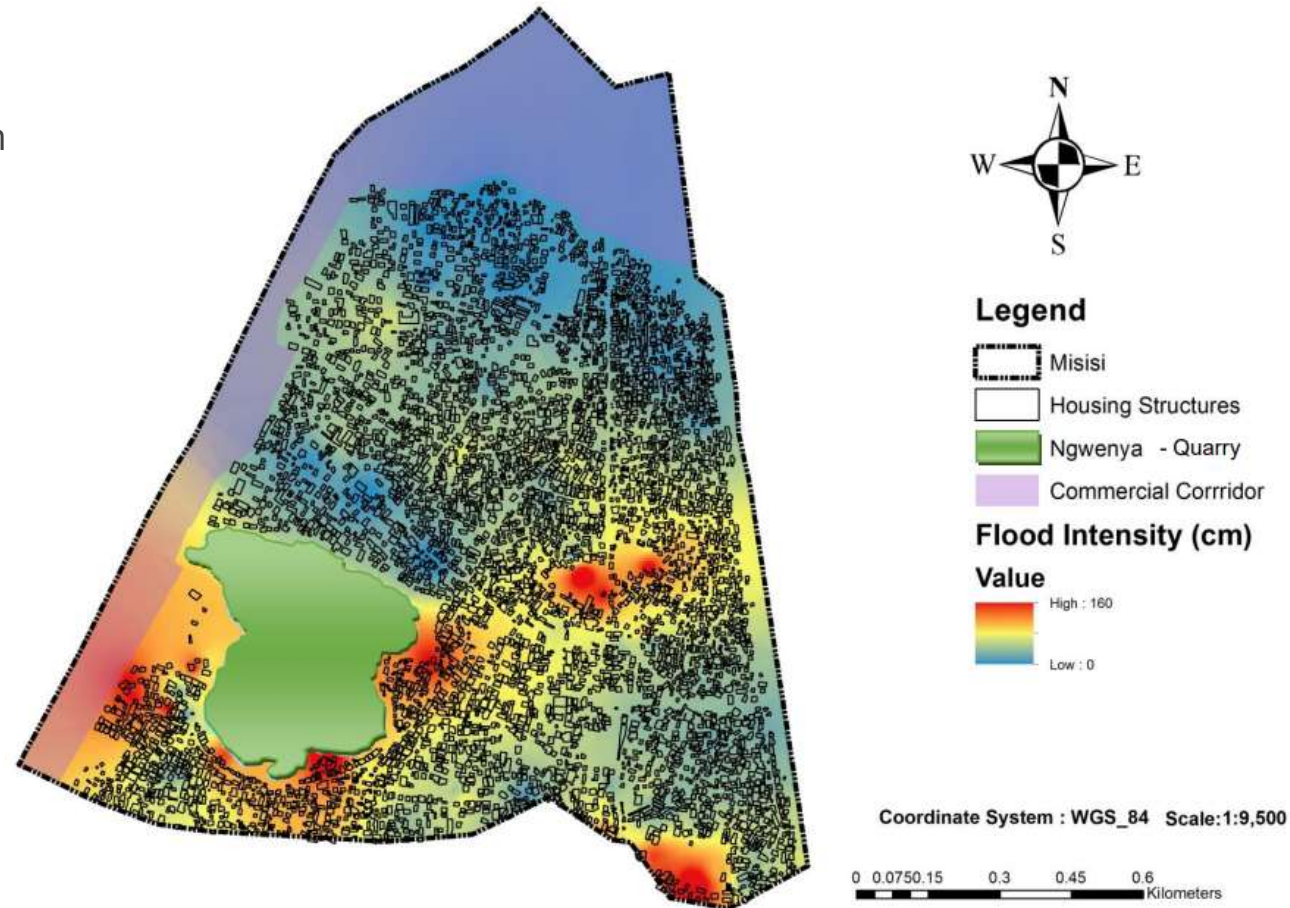
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## INTRODUCTION (CONT'D)

- Therefore, the need for statistics showing the areas vulnerable and number of households vulnerable to flood hazards and where they are located has become important.
- Having statistics on flood vulnerability is important for decision-makers because it helps to visualise levels of vulnerability in a particular geographical area (Hoque, Tasfia [32])
- It also helps to understand the factors responsible for causing vulnerability in an area [44,48,49].
- The statistics of flood vulnerability in a particular areas also help to produce management and strategic plans aimed at preventing and reducing flood impacts.

# FLOODING IN INFORMAL SETTLEMENTS

- A study conducted in 2022 in one of the informal settlements in Lusaka called Misisi, found that almost 40% of houses in the settlement were high-risk areas. (This was after mapping 4,965 houses),
- The study also found that there was no assistance from local or central government



## ADAPTATION STRATEGIES

- People in the informal settlements are not sitting idle, they are adapting to floods using different strategies:

- Use of Sand Bags

“When it starts to rain, the majority of us use bags filled with sand which is very costly to buy that we place them around our houses to prevent the water from entering. This works when the rainwater is not much, but when it rains heavily and the water from the Ngwenya starts to enter our houses we end up leaving our houses”  
(Community resident)



Use of Sand Bags

## ADAPTATION STRATEGIES (CONT'D)

- Raised House Foundations

Most of the flood-affected houses in Misisi were observed to have been built on raised foundations



Raised House Foundations

## ADAPTATION STRATEGIES

- Raised Doorsteps

Door steps in most households were raised to about 30cm and the pit latrines were raised to about one meter above the plinth level.



Raised Doorsteps



## ADAPTATION STRATEGIES

- Digging of Small drainages

Household interviews conducted in the settlement showed that some households in the community individually and sometimes come together to dig small drainages that were used to channel the storm water away from their houses



Digging of Small drainages

## ADAPTATION STRATEGIES

- Placement of Properties on Stones

“Life in Misisi during the rainy season is tough especially when it starts to rain heavily. We are forced to place our household properties on higher surfaces of stones, concrete blocks and cardboards to prevent water from destroying them especially when floodwaters start to enter our houses” (Community resident)



Digging of Small drainages

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## CONCLUSION

- The adaptation strategies being used in most informal settlements in Zambia, are inadequate.
- The statistics of highly and moderately vulnerable in the informal settlements in non-existent
- Therefore, there is a need for more studies on flood vulnerability to not only produce latest statistics but also produce map that depict the spatial distribution or patterns and levels of vulnerability (low, medium or high).
- This will help to identify people or asserts that are more vulnerable to floods in particular geographical areas as well as ensure that statistics for flood vulnerability are used for decision-making and policy intervention.



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