

Case Study

Flood Risk Management in South-west Nigeria: Lagos as a Case Study

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Abstract

Flooding is a significant natural hazard impacting societies worldwide, with increasing severity in urbanized regions. This paper presents a case study of Lagos, Nigeria, examining flood risk management efforts in the city. The purpose is to evaluate the effectiveness of current strategies and suggest improvements for reducing the impacts of flooding. Findings highlight the roles of government and private stakeholders, as well as policy challenges. Recommendations for sustainable flood management practices are provided, with implications for other high-risk areas.

Introduction

Floods pose a major threat to communities in South-west Nigeria, especially in urban areas like Lagos [1,2]. The rapid urbanization, coastal geography, and high population density contribute to increased flood risk. As cities expand, the need for effective flood risk management becomes more urgent. This study aims to explore the challenges faced in managing flood risks in Lagos and assess the measures taken to mitigate these hazards. The analysis draws from various reports and research studies to understand the dynamics of flood management in Lagos.

Case study

Lagos is situated in a low-lying coastal area, with several factors contributing to its vulnerability to flooding. These include poor drainage systems, rising sea levels, and high rainfall intensity. The state government has introduced multiple measures such as membership in international organizations like C40 Cities and the Global Covenant of Mayors [3,4]. However, significant challenges remain in reducing the damage caused by floods. Structural interventions like shoreline protection and tree planting, alongside public awareness campaigns, form part of ongoing efforts.

Discussion

The strategies employed in Lagos show varied effectiveness, with some programs achieving limited success due to resource constraints and inadequate enforcement. Compared with international best practices [4,5], Lagos' approach requires better integration of urban planning and

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community-based initiatives. Limitations include institutional weaknesses and a lack of coordinated response among stakeholders. Recommendations include expanding flood insurance schemes, investing in low-cost drainage technology, and enhancing data-driven decision-making.

Conclusion

Flood risk management in Lagos requires a multifaceted approach, combining government action, stakeholder collaboration, and public engagement. While progress has been made, more needs to be done to protect communities. Effective policies must address not only the symptoms but also the underlying factors of flood risk, with long-term planning and adaptive strategies for sustainability.

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