



Climate-Resilient Infrastructure Design for Flood Management in Mozambique: An Intervention Study

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Abstract

Climate change has exacerbated flood risks in Mozambique, necessitating innovative infrastructure solutions for effective flood management. A mixed-methods approach was employed, integrating environmental impact assessments with stakeholder consultations to identify suitable locations for the proposed infrastructures. The preliminary analysis indicated a need for at least 60% of identified sites to be equipped with levees and drainage systems to effectively manage flood waters. This study provides critical insights into climate-resilient infrastructure design, emphasising the importance of site-specific assessments in flood-prone areas. Communities should prioritise early warning systems alongside physical infrastructures to ensure comprehensive flood management strategies. climate resilience, Mozambique, flood management, infrastructure design The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Geographical Indicators, Climate Change Adaptation, Ecosystem Services, Biodiversity Conservation, Participatory Planning, Social-Ecological Systems, Integrated Watershed Management*

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