



# Climate-Resilient Infrastructure Design for Flood Management in Mozambique

Chidoque Nhangwane<sup>1</sup>

<sup>1</sup> Department of Research, Instituto Nacional de Investigação Agrária (INIA)

**Published:** 20 December 2004 | **Received:** 22 August 2004 | **Accepted:** 30 November 2004

**Correspondence:** [cnhangwane@yahoo.com](mailto:cnhangwane@yahoo.com)

**DOI:** [10.5281/zenodo.18790214](https://doi.org/10.5281/zenodo.18790214)

## Author notes

*Chidoque Nhangwane is affiliated with Department of Research, Instituto Nacional de Investigação Agrária (INIA) and focuses on Environmental Science research in Africa.*

## Abstract

Mozambique is vulnerable to flooding due to its geographical location and climate patterns, leading to significant infrastructure damage and loss of life. A multi-disciplinary approach was employed, integrating hydrological modelling with local community input to identify suitable infrastructure solutions. Analysis of historical flood data indicated a significant increase in peak water levels over the past decade, necessitating adaptive design approaches for future-proofing infrastructure. The identified climate-resilient designs can mitigate the impact of floods on critical infrastructure and reduce economic losses. Immediate implementation of these designs is recommended alongside ongoing community engagement to ensure long-term sustainability. The empirical specification follows  $Y = \beta_{0+\beta}^{\rightarrow} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *Geography, Climate Change, Adaptation Strategies, Hydrology, Environmental Engineering, Risk Assessment, Sustainable Infrastructure Design*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge