

## Household Perspectives and Resistance to Preventive Relocation in Flood Prone Areas: A Case Study in the Polwatta River Basin, Southern Sri Lanka

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**Abstract :** Natural disasters, particularly floods, pose severe challenges globally, affecting both developed and developing countries. In many regions, especially Asia, riverine floods are prevalent and devastating. Integrated flood management incorporates structural and non-structural measures, with preventive relocation emerging as a cost-effective and proactive strategy for areas repeatedly impacted by severe flooding. However, preventive relocation is often hindered by economic, psychological, social, and institutional barriers. This study investigates the factors influencing resistance to preventive relocation and evaluates the role of flood risk information in shaping relocation decisions through risk perception. A conceptual model was developed, incorporating variables such as Flood Risk Information (FRI), Place Attachment (PA), Good Living Conditions (GLC), and Adaptation to Flooding (ATF), with Flood Risk Perception (FRP) serving as a mediating variable. The research was conducted in Welipitiya in the Polwatta river basin, Matara district, Sri Lanka, a region experiencing recurrent flood damage. For this study, an experimental design involving a structured questionnaire survey was utilized, with 185 households participating. The treatment group received flood risk information, including flood risk maps and historical data, while the control group did not. Data were collected in 2023 and analyzed using independent sample t-tests and Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was chosen for its ability to model latent variables, handle complex relationships, and suitability for exploratory research. Multi-group Analysis (MGA) assessed variations across different flood risk areas. Findings indicate that flood risk information had a limited impact on flood risk perception and relocation decisions, though its effect was significant in specific high-risk areas. Place attachment was a significant factor influencing relocation decisions across the sample. One potential reason for the limited impact of flood risk information on relocation decisions could be the lack of specificity in the information provided. The results suggest that while flood risk information alone may not significantly influence relocation decisions, it is crucial in specific contexts. Future studies and practitioners should focus on providing more detailed risk information and addressing psychological factors like place attachments to enhance preventive relocation efforts.

**Keywords :** flood risk communication, flood risk perception, place attachment, preventive relocation, structural equation modeling

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