

Flood Preparedness in Urban Areas: An Analysis of the Role of Households in Disaster Risk Mitigation

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Abstract

Flooding is one of the most frequent disasters in urban areas of Indonesia, including Makassar City, which experiences major floods almost every year. Households are a critical unit of analysis because they are directly affected and serve as the first line of response during flood events. This study aimed to assess household flood preparedness using the Community Preparedness Index (CPI), which consists of four components: Knowledge and Attitudes toward Preparedness (KAP), Emergency Planning (EP), Warning System (WS), and Resource Mobilization Capacity (RMC). A quantitative cross-sectional design was used with purposive sampling of 100 households in Manggala District, Makassar City. Data were collected using a standardized 17 item flood preparedness questionnaire. The results showed that 53% of respondents had low preparedness, indicated by CPI scores below 60%. Distance of the house from rivers or water channels was the most significant factor associated with flood preparedness ($p = 0.006$). 76% respondents lived within 500 meters of a river or water source and generally demonstrated higher preparedness than those living farther away, likely

due to higher risk awareness. Household preparedness is influenced by both internal and external factors. Strengthening disaster education, early warning systems, evacuation planning, and resource mobilization especially for high risk households is essential. These findings support the development of evidence based, community level flood mitigation policies.