

## **ABSTRACT**

### **THE RISK OF FLOODING AND PEOPLES' PERCEPTION OF FLOOD RISK IN THE KABANA RIVER BANK, ADDIS ABABA**

By

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A key element in hazard and disaster management is awareness of how stakeholders perceive risk. The primary goal of this study is to examine flood risk perception and its role in decision-making in relation to hazard and disaster management in the Kabana River Bank, Addis Ababa, Ethiopia. The specific objectives are to: 1) assess the nature of perceived risk at both the local and organizational levels; 2) determine if there is any variation between perceived risk among flood area residents and institutional experts; 3) identify various factors that influence perceptions of risk and decision-making processes at the local level; and 4) examine the variations in flood area residents' perceptions of risk and flood-related issues based on their geographical location.

In order to achieve the objectives of the study, the research methods selected were qualitative in nature. A modified Delphi Process was utilized to solicit subjective, informed judgments from residents and decision makers in the river bank. The Delphi Process involved two methods: 1) face-to-face interviews, and 2) a two-round mail-out Delphi survey. A sample (non-representative) of 42 respondents was divided into two separate groups, Flood Area Residents and Institutional Representatives. Flood Area Residents were divided into Kabana and Bella respondents and Institutional Representatives were divided into Senior, Local, and Non-Government respondents.

The study findings established that while an element of variation in perceived risk between flood area residents and institutional experts does exist, it is not as significant as postulated in the literature. Residents' perceptions were based on subjective factors, but many exhibited a general awareness of objective risk. Perceptions of institutional experts responsible for managing risk involved some degree of value judgments and an element of subjectivity as well. The gap that did appear to exist between the two groups was associated with a lack of

understanding and communication. The study findings also indicated that a number of factors have influenced residents' perceptions of risk. The most notable factors were the geographical location of Kabana and Bella respondents and the influence of large-scale structural mitigation measures. Other influencing factors identified were: past flood experience, uncertainty, and visual presentation of the flood.

The research exemplified that the inclusion of perceptions of risk is pivotal to decision-making processes. For example, a lack of communication to residents regarding policy changes to evacuation procedures since 2006 could have considerable implications for future flood response (i.e. public opposition). Within the Kabana the reduction in physical risk and sense of security afforded by the Floodway has attenuated the perceptions of risk of some respondents and potentially made them more vulnerable to extreme flood events. The Floodway Expansion project may exacerbate this situation by increasing the level of physical protection. In addition, past flood experience heightened the awareness of some respondents and will serve as the context for future perceptions; uncertainty amplified risk-related anxiety for some respondents and could potentially increase stress in future floods; and visual presentation of the flood heightened perceptions of risk for some respondents and in some cases also influenced behaviour.

With an enhanced understanding of risk perception, institutional experts and decision makers will be better able to establish and implement proactive mitigation and preparedness strategies that are sustainable and improve resiliency. One of the keys to this inclusion is a two-way communication process that involves learning on both sides.