

# Flood Risk Governance Process for Participatory Disaster Risk Reduction

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## Abstract

Public participation in flood and disaster risk management operates on several levels. At the lowest level, the community may be targeted with relevant information (e.g., about how risk estimates were made). However, studies show that providing information, while essential, is not enough. Therefore, members of the community may be selected to take part in exercises meant to provide them with a certain degree of decision making authority. Moreover, the community, as a stakeholder, may actually implement countermeasures such as location choices, house mitigation, and evacuation decisions. Implementing disaster risk management often requires wide ranging stakeholder involvement. Various stakeholders with differing sets of alternatives will be asked to help find an implementable community solution, known as a “socially viable solution.” The “risk governance” idea and planning framework have begun to gain popularity among researchers, planners, and practitioners as a way of developing socially viable solutions. However, few risk governance studies have comprehensively tackled flood risk issues in the context of active community participation. Relevant studies have also been limited to the developed and developing regions of Asia. Therefore, developing and empirically examining a comprehensive flood risk governance framework are urgent tasks.

This study first conducts a comprehensive literature review to understand the need for public participation in flood risk management, the gaps in existing practices, and the critical issues that require incorporation into flood risk governance. Based on the literature review, a comprehensive conceptual framework for flood risk governance is proposed. This study then obtains empirical validation of the proposed risk governance framework, particularly for diverse cultural and social settings, by examining three public participation exercises in flood management conducted in a developed country (Japan) and a developing country (India). These exercises represent not only the diverse socio-cultural and economic connotations of risk and its management but also the three levels of public participation: participatory flood risk management for policy formulation at the prefecture level (Shiga, Japan), community based flood risk management for developing a flood mitigation action plan (Muraida, Japan), and community led flood risk management action plan development (Mumbai, India).

Data collected from the three public participation workshop exercises were systematically analyzed by using a ‘concerns table’ and by applying the SWOT issue and strategy analysis and Yonmenkaigi System Method (YSM) tools to examine the methods and components of flood risk governance frameworks such as concern assessments, scoping, and planning.