

# Analysing Institutional Capacity for Flood Risk Reduction at the Community Level

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**Abstract:** Flood related risks have compounded across the globe in the last few years. This is largely due to increasing vulnerability caused by changing climate and rapid urbanisation. This has resulted in making the poor and marginalized sections of society, especially those inhabiting hazardous topographies, more vulnerable to disasters. Although there have been efforts to shift from a response centric approach to a more proactive approach towards disaster risk reduction, institutions continue to face hurdles in implementing disaster related initiatives. To identify these challenges faced by institutions while responding to disasters, the present research collected primary data through field visits, personal interviews and focus group discussions with officials engaged in managing disasters from national to local level in India. The affected community was also surveyed. It is suggested that policy makers must consider factors like institutional arrangements, human resources, policy and plans, financial, technical, leadership, perception and awareness programs for enhancing the current state of readiness of institutions to respond to flood disasters.

**Keywords:** community, disaster management, flood, institutional capacity, disaster preparedness.

Delhi is one among the three megacities in the world which at high risk of floods (IPCC, 2014). The situation in Delhi is aggravated by high density of settlements, habitation in floodplains, impenetrable concrete surfaces, poor drainage system and lack of proper waste management system (Douglas et al., 2008). As a result, risks, vulnerabilities and impacts induced by hazards are on a rise in Delhi, as it is worldwide (Gaillard and Texier, 2010). Such impacts include loss of life, houses, possession, livestock, and livelihood and an increased vulnerability to diseases (Fox, 2014). This has significant

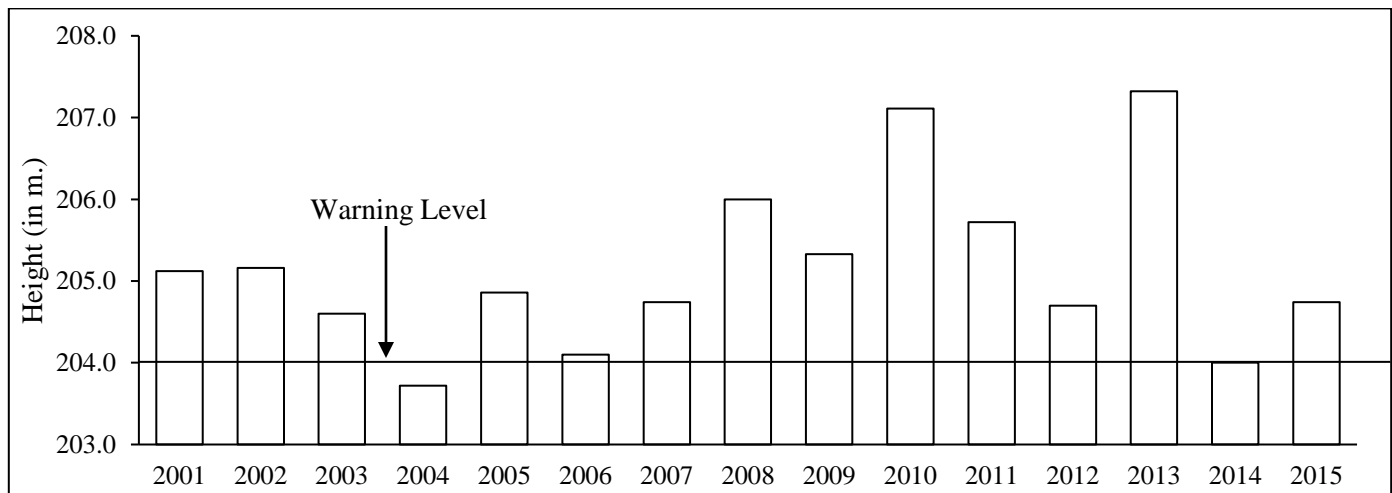
impact on the wellbeing of the community and acts as a huge burden on the local institutions managing disasters. Although existing literature stresses the significant role played by local governments in undertaking disaster risk reduction (Kusumasari, 2010; Pearce, 2003), limited attention has been given to the ability and willingness of local governments to meet people's expectations and responsibilities (Kusumasari et al., 2010).

Institutions play an active role in disaster management (Perry and Mushkatel, 1984) due to familiarity with local conditions, communities and culture (Herman, 1982, Stewart et al., 2009; Kusumasari et al., 2010). Institutions can thus also help in identifying needs and capacities of communities for reducing their vulnerability to disasters. Recent disasters have brought forward the non-existent disaster management chain of command and mistakes that local governments can make such as rigid institutional beliefs, ignoring complaints, difficulty in handling multiple sources of information and the tendency to minimize danger or risk. Further, the relationship between local authorities and individual community influences the latter's capacity to prevent future hazards. Thus, developing collective capacities of communities and institutions with the necessary skills and resources helps position these two for providing better support in time of disasters (Madan and Routray, 2015).

The present research work collected primary data through field visits, personal interviews and focus groups discussions with officials engaged in managing disasters from national to local level in Delhi, India. The research work also surveyed the affected community living alongside River Yamuna and attempted to identify the range of challenges faced by institutions which limits their ability to manage flood related risks and meet the needs of the community during such disasters. This is particularly important since River Yamuna crosses the warning water level almost every year thereby threatening to cause floods in low-lying areas (Fig. 1). The data

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**Figure 1.** Highest height of water level reached by River Yamuna in Delhi in the last 15 years (Source: GNCTD, 2016; cf. Singh, 2012).

generated indicates that although existing institutional setups are well coordinated at the district level, they need enhancement and improvement at the local level. The data further highlights that disaster risk reduction needs to focus greatly towards inclusivity of urban local bodies. In order to overcome the wide variations in disaster awareness and perception among officials handling disasters, awareness and training programmes should be conducted more frequently. Further, for effective community participation, it is important to address the social and economic problems being faced by respective communities. This is because otherwise such issues are being observed to overshadow attempts made for reducing disaster risks in flood prone communities in Delhi (Madan and Routray, 2015).

This study recommends the adoption of strategies based on identified needs and existing gaps in managing disasters by disaster management institutions. In order to ensure greater involvement of local authorities for flood risk reduction, more power and resources need to be allocated to local authorities. Decentralization of decision making and responsibilities and budget allocations for programmes on reducing disaster risk at local level need to be made more significant. Preparation of disaster plans should be undertaken through participatory planning involving community stakeholders and the local government. Thus both, local institutions and the community together need to develop direct linkages following a participatory approach for reducing risk from disasters.

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