

Participatory Risk Mapping for Identifying Spatial Risks in Flood Prone Slum Areas, Mumbai

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Mumbai the land of 20 million people is the financial capital of India and the land of opportunity for millions of Indians is vulnerable to various disaster risks exacerbated by High density, extensive unplanned development and persistence of slums and poverty and other. Such recent unexpected phenomena as experienced in 2005 flood took life of hundreds, damaged and destroyed thousands residential and commercial building, roads, household and public properties, paralyzed the suburban railway system, the life line of the city. The city could not afford to lag behind its effort toward risks reduction and risk management; rather the city needs cash and coordinate efforts to promote disaster resiliency in community, sensitive planning and initiatives.

In order to promote disaster resilience in a community, a detailed vulnerability analysis at micro-hotspot is required which will help sharpen and pin-point the prescriptions/solutions in risk management that are feasible to implement. However, it is observed and found that the city government does not have any spatial and socio-economic information at community level; moreover the city government has not paid any heed on people's perception on disaster risks and its reduction in the planning process. Studies and pilot observations show lack of information on spatial & socio-economic characteristics of the people in vulnerable settlements is the major cause for failure of many disaster countermeasures including planning for evacuation during disaster, stop of undesirable land development that exacerbate flood vulnerability, proper drainage, unplanned reconstruction etc.

Involving local communities is a prerequisite to

sustainable disaster risk reduction as because firstly, local communities are both the primary victims and the first to respond to emergencies when disasters strike; secondly, Community-based disaster risk reduction (CBDRR) fosters the participation of threatened communities in both the evaluation of risk and ways to reduce it as well.

'Vulnerability mapping' has been used for a long time in a non-spatial meaning of 'mapping'. But in participatory mapping context, 'vulnerability mapping' specifically refers to the locational identification and analysis of vulnerability in a spatial setting. Community and individual local spatial knowledge has considerable value, as well as supplementary and cross-validating knowledge, for understanding disaster risk situations and designing community-based amelioration.

It is considered and reported that that the participatory risks mapping is well suited to extracting people's local (or indigenous) knowledge which include mapping direct experiences and historical memories of inundations, floods, water-logging etc.

In order to understand the spatial and social vulnerability of the Micro-hotspots in Mumbai, we will conduct participatory risks mapping in two slum settlements in Dharavi. Planning tools like town watching, focus group analysis, mobility chart and participatory mapping etc tools will be used in this study. The data will be collected mainly on four aspects – a) physical features of the site b) built environment, c) landuse and d) critical infrastructure