

Storm Surges Congress, Hamburg, Germany
13–17 September 2010
SSC2010-17
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Emerging Issues & Challenges in Storm-Surge Mitigation in Coastal Areas of Bangladesh and China

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Abstract:

The threat of climate change have been already acknowledged in most countries of the world and there is greater awareness about the natural hazards and disasters among governments, NGOs, donors but tangible data and information, as well as the level of public awareness, remain below. Considered the climate change, coastal regions throughout the world are more vulnerable than other places of the earth due to the frequent visits of natural phenomenon like, tidal surges, cyclones, tsunamis, floods, erosions etc. And also the man-made disruption through economic agglomeration in coastal cities aggravates the degree of vulnerability. Coastal areas in Asia are full of attraction for industrial agglomeration due to cheap labor, convenient freight transport especially in China, Bangladesh, and India etc. More people living in Asia either want to or have to migrate to these coastal areas for the well-being of their lives. Thus, as a result, coastal areas in Asia are taking more pressures resulting from population growth, environment pollution, and conflicts of interests and extrapolations of resource, as aggravate the damage and loss in the aftermath of the above natural phenomena.

In addition to that the present disaster mitigation approaches the developing nations are struggling to adequate infrastructural and technical supports as well as the financial one, although only a sustainable mitigation planning in accordance with addressing the vulnerability issues can be long-term strategies for improving the livability of the coastal areas in those countries. Taking these into account, this paper attempts to find out the challenges of sustainable disaster mitigation planning both in Bangladesh and China. It is clear that China has more population and larger areas comparing to Bangladesh, whereas Bangladesh is the most densely populated country in the world. One may think how to draw a comparison between both countries in heterogenic point of view. Consequently, one may also think, a severe cyclone may cause huge damages and loss in both countries. Vulnerability issues of livelihood regarding the internal and external resources, accessibility and institutional supports and its process as well as mechanism may be different, but the challenges to fight with a cyclone at individual level may show the capabilities of human-being, which depends on age, gender, culture, physical strength and supports etc. And also at the community level, it reflects the community resilience as well at institutional level the institutional or organizational capabilities. Keeping such contradictions of ideologies, strategies and methods of mitigation in mind, this paper starts to provide a discourse for both countries, actually questioning about: what are the existing approaches to reply a storm-surge event at individual, community and national level, how the event is perceived and reacted by individual, community and institutions being affected, and where posses the existing mitigation planning considerations in both countries?

Addressing the disasters and consequences triggered by storm surges focuses not solely on the magnitude and

frequency of the hazard event per se, but also the vulnerability of the affected society and its natural environment. In this paper, SWOT analysis approach is used to find out the existing challenges and prospects of both of Bangladesh and China on the basis of secondary information on different storm surges event management, its mitigation measures; and several experts interview as primary resources are used in the analysis. Findings show that there exists similarity in managerial bureaucracy at national level, whereas the local and individual level exist cooperation and fellow-feelings for overcoming the damages and losses. In both countries, the main risks of coastal areas are floods, cyclones, inundation, storm surges, and extreme temperature. It also finds that the local stakeholders are the critical part of the mitigation and adaptation process, community level adaptation strategies should be taken and proposed to enhance resilience in both countries.