

## **ADAPTIVE MANAGEMENT ON EARTHQUAKE AND NATURAL DISASTER MANAGEMENT FOR COMMUNITY AWARENESS AND RESILIENCE IN CHITTAGONG CITY, BANGLADESH**

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### **Abstract**

The Bangladesh University of Engineering and Technology (BUET) carried out social impact in Chittagong City Corporation Area in Bangladesh using HAZUS (<https://www.fema.gov/flood-maps/tools-resources/flood-map-products/hazus>) to estimate the number of people that will be injured and killed by the earthquake. The casualties are broken down into four severity levels that describe the extent of the injuries. The casualty estimates are provided for two time of day: 2:00 AM and 2:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate consider that the residential occupancy load is maximum and the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum. Considering the severity level 4: Victims are killed by the earthquake, at 2:00 AM, the casualties are found in residential, single family, industrial, commercial, hotel at 24,658; 14,976; 465; 183 and 172, respectively. Whereas, at 2:00 PM, the casualties are found in commercial, residential, single family, industrial, education, and hotel at 12,376; 7,413; 4,706; 3,370; 1,873 and 33, respectively. These information provide basis for further planning on future disaster risk reduction in the Chittagong City.

Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) in collaboration with BUET and partners and Bangladesh related interagency departments and organizations will organize stakeholder consultation meetings to plan for selection of the pilot village/school-based areas to conduct adaptive management on multi-hazard disaster management, preparedness and response. This includes processes of village/school selection, establishment of a committee on planning and management of multi-hazard early warning and mitigation systems at each village/school, planning meetings at these villages/schools, development of multi-hazard mitigation, preparedness and response plans, evaluation of the plans, and full-scale exercises. The Consortium will provide scientific data and information as well as tools available such as maps for the planning processes. The scientific information and tools can be integrated with local knowledge to formulate adaptive management plans. The final meeting will be organized to evaluate the village/school plans. These plans can be used for future village/school mitigation, preparedness and response on multi-hazard management. These plans can be applied for other villages and schools in other affected areas. The project strategies are to utilize school as a community learning center and to promote community participation in data collection and planning for disaster early warning, preparedness and response. A total number of about 10 schools/communities will be selected as project pilot areas for implementing adaptive management process.

**Keywords:** Adaptive Management, Earthquake, Multi-hazard disaster management

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