Citizens and cities facing new hazards and threats

30th November to 4th December 2020

SESSION 9: NATURAL HAZARDS AND CLIMATE CHANGE

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

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Map showing Chittagong location (Where is map, 2019)

Chittagong is known as the Port City of Bangladesh and is a major coastal city and financial centre in southeastern Bangladesh. The city has a population of more than 8.4 million in 2016, making it the second-largest city in the country.

EARTHQUAKE RISKS FOR CHITTAGONG CITY

The Chittagong city is one of the major urban areas in Bangladesh, experiencing physical vulnerabilities like, informal or unplanned settlements, poor infrastructures, existence of vulnerable built environments and so on. Rapid urban growth is causing deterioration and increasing the vulnerability of human lives, economy and infrastructures. If a strong earthquake hit the Chittagong city which may result damages and destructions of massive proportions and may create disastrous consequences for the entire country (Reja and Shajahan, 2011).

SOCIAL IMPACT IN CHITTAGONG CITY DUE TO EARTHQUAKES

- BUET carried out the HAZUS analysis 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 levels are described as follows;

- Level 1: Injures will require medical attention but hospitalization is not needed.
- Level 2: Injures will require hospitalization but are not considered life-threatening.
- Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Level 4: Victims are killed by the earthquake.

SOCIAL IMPACT IN CHITTAGONG CITY DUE TO EARTHQUAKES

- 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.

SOCIAL IMPACT IN CHITTAGONG CITY DUE TO EARTHQUAKES

Chittagong : Case 3					
		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	254	44	12	183
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	186	30	7	172
	Industrial	555	93	21	465
	Other-Residential	32,314	5,565	1,405	24,658
	Single Family	26,375	4,818	1,353	14,976
	Total	59,684	10,550	2,799	40,453
2 PM	Commercial	17,821	3,213	899	12,376
	Commuting	0	0	0	0
	Educational	2,448	426	106	1,873
	Hotels	36	6	1	33
	Industrial	4,173	734	169	3,370
	Other-Residential	10,939	2,143	530	7,413
	Single Family	9,333	1,950	519	4,706
	Total	44,751	8,473	2,224	29,771

- 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.

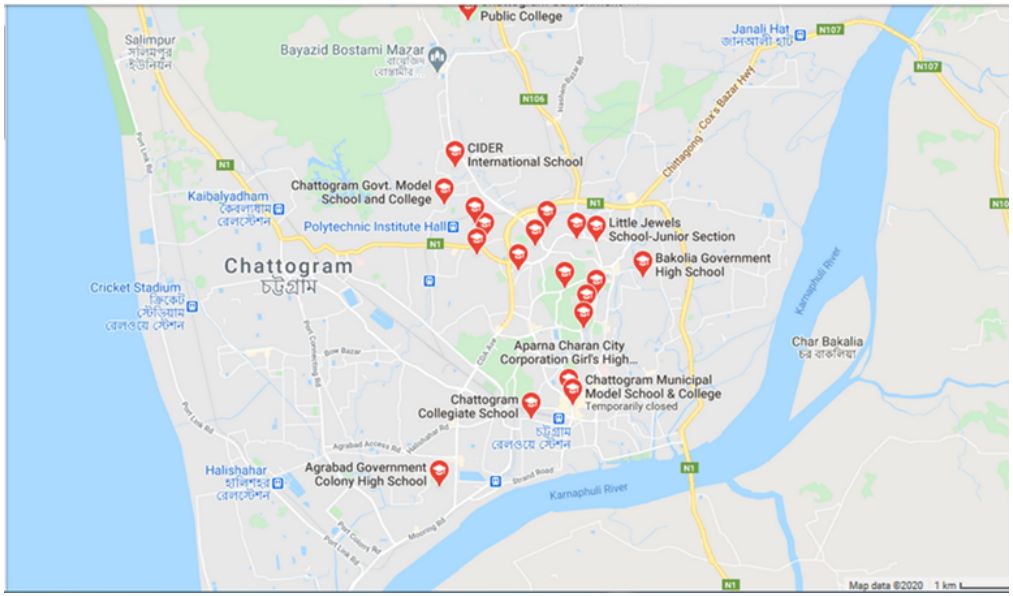
ADAPTIVE MANAGEMENT ON DISASTER MANAGEMENT FOR COMMUNITY AWARENESS AND RESILIENCE

- CIRDAP in collaboration with BUET will co-organize stakeholder consultation meetings to plan for selecting 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.

ADAPTIVE MANAGEMENT ON DISASTER MANAGEMENT FOR COMMUNITY AWARENESS AND RESILIENCE

- 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.

ADAPTIVE MANAGEMENT ON DISASTER MANAGEMENT FOR COMMUNITY AWARENESS AND RESILIENCE



- A total number of about 10 schools/communities as indicating in the map will be selected as project pilot areas for implementing adaptive management process.

ADAPTIVE MANAGEMENT ON DISASTER MANAGEMENT FOR COMMUNITY AWARENESS AND RESILIENCE

- Expected benefit gained
  - It is expected that about 2,000 school children, 200 teachers and 100 community leaders will engage in stakeholder consultation meetings to plan and to conduct adaptive management on multi-hazard disaster management, preparedness and response.
  - They will be able to generate in particular their local operational plans for earthquake management, preparedness and response which can mitigate impacts on life and property of their schools and communities.

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