



Seismic microzoning applications for urban technological risk assessment in the city of Merida (Venezuela)

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Adverse events of human or natural origin (that have affected hazardous materials storages) during last decades reveals that many cities have a limited capacity to estimate and to respond in an integral way to technological risks scenarios.

Although some industrial accidents (Séveso 1976, Bhopal 1984, etc.) have promoted in the past years the adoption of methodologies for urban technological risk characterization and treatment, today some elements suggest that it is necessary to understand that growing complexity of urban spaces demands from city disaster and emergency planners some technological risk management efforts, even in urban spaces where industrial facilities cannot be located.

Additionally, it has also been recognized how urban technological risk is arising by simply counting the frequency of situations in which events of natural origin like floods, landslides and particularly earthquakes usually set off emergencies of technological type (fires, toxic materials leaks, explosions, etc.) that can end up, at very local urban level, in consequences as serious than those associated to the initial "trigger" event.

This contribution shows some of the most important advances and experiences accumulated by the Disaster Risk Management Research Centre (CIGIR by its Spanish acronym) about the characterization of this kind of co-seismic risk (usually referred as Natural Hazards Triggering Technological Disasters or NATECH) in the city of Mérida (Venezuela), emphasizing how the combination of urban seismic microzoning studies, Building Rapid Visual Screening, field inventory of hazardous materials and geospatial modeling of potential damages have been promoted in order to strengthen institutional and social response capacities.