

Study shows smaller cities in developing world often unprepared for disaster

September 1 2015

While many planners focus on the threat of natural disasters to major metropolises around the world, a new study from the University of Colorado Denver shows smaller cities are often even less equipped to handle such catastrophes.

"Small cities are often far away from where decisions get made and struggle to insert themselves into the agenda of decision-making bodies," said study author Andrew Rumbach, PhD, an assistant professor at the CU Denver College of Architecture and Planning, a major center of timely, topical and relevant research. "When considering small cities beyond those in the immediate vicinity of large urban centers, distance is perhaps the key characteristic that makes them uniquely challenging for disaster governance."

But while distance is a major problem, Rumbach said, there are other factors influencing the vulnerability of smaller cities, defined by the United Nations as those with less than 500,000 people.

"Smaller cities often have not had the experience of [major disaster](#) and don't have the infrastructure to deal with it," he said. "At the same time, they may also lack redundant systems - basic infrastructure, transportation, critical facilities - making them very fragile."

Rumbach said the problem is widespread across the developing world, where the epicenter of urbanization is in smaller cities. In India, where his study was focused, the number of people living in such cities grew

from 170 to 227 million over the past 20 years.

But that hasn't prompted disaster planning experts to focus on how to safeguard these cities from the risk of floods, earthquakes, mudslides and tidal waves. Many of those threats, Rumbach said, are even greater now due to climate change.

According to the study, which appeared this week in the journal *Habitat International*, climate change is expected to hit mountain cities especially hard. In the Darjeeling District of India, Rumbach said increased precipitation could trigger more landslides while higher temperatures could impact glaciers leading to increased runoff and unstable mountain slopes. Finally, tropical cyclones in the Bay of Bengal are expected to increase with enough strength to trigger heavy rains in the Himalayan foothills.

Yet none of these potential natural hazards have been adequately planned for, the study said. In the case of the Darjeeling District, the state disaster plan contain no specific recommendations or actions generated by local planners.

"As a result, the plan displays a poor understanding of local conditions and needs," the study said. "Landslide hazards, which are a major threat to lives and property in the small cities of the Darjeeling district are a case in point."

The study notes that landslide threats are described in a single paragraph with no reference to their contemporary or historic impacts on the state of West Bengal.

"Without a clear analysis of local hazards, vulnerabilities and risk, the plan itself is not an effective mechanism for guiding policy-making or allocating national or state funds to effectively manage risk," Rumbach

said.

Creating disaster plans in places far from they are to be implemented may itself be a disaster in the making.

Rumbach said decentralization or moving away from planning that originates in the major cities might help improve disaster readiness in small cities.

"One obvious recommendation is a more gradual decentralization of governance and funding, with significant support for capacity building at the local level," he said. "Another recommendation would be to strengthen the role of non-governmental organizations and the private sectors, actors who are virtually absent from the existing [government] disaster management infrastructure in India."

Provided by University of Colorado Denver

Citation: Study shows smaller cities in developing world often unprepared for disaster (2015, September 1) retrieved 25 April 2024 from <https://phys.org/news/2015-09-smaller-cities-world-unprepared-disaster.html>

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