

COURSE : DISASTER MANAGEMENT (MA/ MSc PART I)

Paper : VII

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Topic : Urban Disasters

INTRODUCTION

Over half of the world's population now lives in urban areas – a percentage that is expected to increase in the coming years. As more people live in cities, more urban residents will be affected by natural hazards. Moreover, the frequency and severity of natural disasters is increasing.

Not only will more people live in cities, but they will live in areas more prone to natural hazards. Globally two-thirds of the world's cities with populations over five million are at least partially located in coastal zones – areas susceptible to coastal flooding and to the effects of climate change-induced sea level rise. Poorer people moving into cities are also likely to live in poor neighborhoods located on marginal land in urban areas. Currently, more than 1 billion persons, or about 14 percent of the world's population live in slums – a figure which is also likely to increase.

URBAN DISASTERS :

Almost 890 million people globally live in cities that lie in at least one major natural disaster zone—related to events such as flooding, drought, cyclones or earthquakes—according to a study by the United Nations.

Among the 450 urban areas having a population of at least one million in 2011, almost 60% are exposed to the risk of a natural disaster, the UN said in its report titled 2011 Revision of the World Urbanization Prospects, released on Thursday. Asia is home to two-thirds of these cities, according to the report.

The five most populated cities globally—Tokyo, Delhi, Ciudad de Mexico, New York-Newark and Shanghai—are all located in regions exposed to the risk of at least one major natural hazard, according to the study.

Tokyo lies in a region with a high risk of flooding and cyclones; Delhi has a high risk of flooding and medium risk of droughts; Ciudad de Mexico has a high risk of flooding; the region of New York-Newark has a high risk of flooding and medium risk of cyclones; and Shanghai, too, is at a high risk of flooding.

The most frequent natural disaster is reported to be flooding, which affects 633 urban agglomerations. At least 233 cities are located close to regions with a high risk of flooding, which affects almost 663 million people, according to the report. Drought is the second-most frequent hazard, affecting 132 cities, followed by cyclones affecting 68 cities.

The world's rapidly growing cities are increasingly at risk of natural disasters, ranging from catastrophic fires to landslides, massive floods, and tidal waves. This is alarming, given evidence that such events are on the rise. According to the Center for Research on the Epidemiology of Disasters, "the number of people reported affected by natural disasters" rose astronomically between 1900 and 2011, from a few million early in the twentieth century to a peak of 680 million in 2000 (hovering around 300 million today). To be sure, much of this rise is attributable to evolving reporting standards and a growing global population. But alongside these changes has been a growing global awareness of and unwillingness to tolerate the extreme suffering of "natural" disasters.

The confluence of rapid urbanization and natural disasters has been on display many times over the past decade. Haiti's crowded, squalid, capital, Port-au-Prince, surrounded by slopes denuded of trees, suffered repeated, catastrophic flooding even prior to the devastating 2010 earthquake that killed between 200,000 and 250,000 Haitians and caused an estimated \$8 to \$14 billion in damage. More recently, disastrous floods in Manila were exacerbated by the lack of trees and soil to absorb torrential rainfall.

Indian cities have vastly expanded – 377 million, or 31% of Indians now live in urban areas, up from 217.18 million and 26% 20 years ago, according to census data – increasing their vulnerability. The December 2015 Chennai flood claimed 270 lives and inflicted an economic loss of more than Rs 15,000 crore. On its heels, on January 4, an earthquake of 6.7 magnitude shook Manipur and the Northeast, unravelling India's lack of disaster preparedness.

As many as 38 cities are located in zones with seismic susceptibility in the government's vulnerability atlas of India. Categories vary from "very severe intensity zone" (Zone V), which includes the most-vulnerable cities of Guwahati and Srinagar, to "severe intensity zone" (Zone IV), such as Delhi, and "moderately severe intensity zone" (Zone III), such as Mumbai and Chennai. The entire Northeast Region is marked as a "very high" vulnerability zone, prone to earthquakes, floods, and storms.

Poor land-use planning, indiscriminate approvals of building plans (often in violation of environment and municipal bye-laws), and the absence of disaster-risk assessment in urban design have resulted in what experts term concentrated concretisation, predisposing cities to disaster risks. Abating destruction-risk requires a mainstreaming of disaster planning. To do that, the nodal agency – the Urban Local Body, whether municipal corporation, or nagar panchayat (town council) – is key.

By 2030, the urban population of India is expected to almost double to nearly 600 million, according to a 2010 McKinsey report, and the number of million plus-cities is expected to expand from 53 to nearly 80. Urban disasters are inevitable.

We are seeing two distinct but intertwined trends becoming readily evident in the 21st century.

The first is urbanization. 2008 marked the first time in history where more people lived in urban centers than outside of them (see Chart 1). Drawn to economic, educational, and social opportunities, the migration towards cities is undeniable and irreversible. According to the United Nation's (UN) Population Division's projections, nearly all of the world's population growth in the next few decades will be in urban areas in low-and middle-income countries. By 2030 this number will swell to almost 5 billion (see Chart 2). Most of this urban growth will be concentrated heavily in Africa and Asia.

The second trend we see in the 21st century is the increasing numbers of disasters and the increasing numbers of people affected by those disasters (see Chart 3). From the Indian Ocean tsunami of 2004 to the Pakistan floods of 2010, disasters are affecting significantly more people now than they did 50 years ago.

