

Natural and human-made disasters

Worldwide, the frequency, scale and cost of natural and human-made disasters – ranging from floods and fires to industrial accidents – is on the rise. What's more, developing countries and, particularly, the urban poor are bearing the brunt of these calamities. In the new "urban millennium", natural and technological disasters are likely to have their greatest impact in cities where half of humanity is expected to reside. The UN-HABITAT report *Enhancing Urban Safety and Security: Global Report on Human Settlements 2007* shows how unchecked rapid urban growth creates and exacerbates disaster risk.

Disasters on the increase

- From 1975 to 2005 the number of major natural disasters in the world grew from 100 to more than 400 per year. The growth rate has been highest for Africa, where a threefold increase in such disasters has been experienced in the last decade alone.
- The three individual years with the highest number of recorded disasters occurred in the current decade, with 801 disasters in 2000, 786 in 2002 and 744 in 2005.
- Patterns of climate change have contributed to a 50 per cent increase in extreme weather events from 1950s to the 1990s.
- Economic losses associated with disasters have increased fourteen-fold since the 1950s and, during the last decade alone, disasters caused damage worth US\$ 67 billion per year, on average.
- Human-made disasters have seen a tenfold increase from 1975 to 2006, with the greatest rates
 of increase in Asia and Africa.

Urban poor, women and children hardest hit

- 98 per cent of the 211 million people affected by natural disasters annually from 1991-2000 were located in developing countries.
- In Manila, Philippines informal settlements at risk of coastal flooding make up 35 per cent of the population; in Bogota, Colombia, 60 per cent of the population lives on steep slopes subject to landslides; in Calcutta, India, 66 per cent of the population is located in squatter settlements at risk from flooding and cyclones.
- In poorer countries, women and children tend to be most affected by disasters. Following the 2004 Indian Ocean Tsunami, in four villages in Indonesia's hardest-hit North Aceh district, females accounted for 77 per cent of deaths.
- A school child in Katmandu, Nepal is 400 times more likely to be killed by an earthquake than a school child in Kobe, Japan, and 30 times more likely than a school child in Tashkent, Uzbekistan.

Floods, earthquakes and tsunamis nature's biggest killers

- Flooding is both the most frequent and the most costly natural disaster type worldwide, with 1,310 recorded events from 1996-2005 resulting in 90,237 people being killed, 1.3 million people affected, and economic damage estimated at US\$ 208 billion.
 - **Earthquakes and tsunamis** are the deadliest natural disasters, with mortality from 297 recorded events in 1996-2005 estimated at 391,610 people. The 2004 Indian Ocean Tsunami alone accounted for 230,000 deaths.

Where disaster strikes

- Asia is the most disaster-prone region, with the highest incidence of avalanches/landslides (112), earthquakes/tsunamis (171), floods (472), windstorms (340) and industrial accidents (361) from 1996-2005. Central Asia is exposed to losses from the greatest number of hazard types.
- Africa is the most rapidly urbanizing continent with 174 million people still affected by drought and famine from 1996 -2005.
- Africa and Asia have most technological disasters and the highest number of people killed as a result. From 1997-2006, 1,493 technological disasters were recorded in Asia and 952 in Africa, compared with 392 events in the Americas, 284 in Europe and 11 in Oceania.
- Between 1996 to 2005, Europe suffered the greatest economic loss (US\$ 24 million) associated with volcanic eruptions, but no people were killed or affected. By contrast, the 2003 heat wave resulted in 35,000 premature deaths across the continent.
- Oceania records the lowest incidence of disasters for any region and hazard type, with the exception of volcanic eruptions.
- Manila, Tokyo, Kolkata, Osaka–Kobe–Kyoto, Jakarta and Dhaka are considered high-risk cities, all being agglomerations with over 10 million inhabitants and with high exposure to at least two different kinds of natural hazard.
- Twenty-one of the 33 cities which are projected to have a population of 8 million or more by 2015 are located in coastal zones, according to the Intergovernmental Panel on Climate Change (IPCC). If sea levels rise by just one metre, many coastal megacities, such as Rio de Janeiro, New York, Mumbai, Dhaka, Tokyo, Lagos and Cairo, will be under threat.
- In Japan, a one meter sea-level rise would expand areas at risk 2.7 times, to 2,339 km² and increase population and assets at risk to 4.1 million and 109 trillion Japanese yen, respectively.
- In Egypt, a 50 cm sea-level rise would affect 2 million people and 214 jobs, and result in the loss of US\$ 35 billion in land value, property and tourism income.
- In Poland, a one meter rise would cause US\$ 30 billion worth of land lost to the sea, and put US\$ 18 billion of assets and land at risk of flooding. It is estimated that coastal protection would cost US\$ 6 billion.
- The **2000 floods in Mozambique killed at least 700 people**, displaced 650,000 and affected 4.5 million. More than 70 per cent of all flood-related deaths occurred in urban areas.
- In Vietnam, 12,000 hectares of mangroves planted by the International Red Cross and Red Crescent Movement to protect 110 km of sea-dikes cost US\$ 1.1 million, but has reduced the costs of dike maintenance by US\$ 7.3 million per year, in addition to protecting 7,750 families living behind the dikes.
- US\$ 1 invested in safe construction saves US\$ 40 if the building has to be rebuilt after an earthquake; US\$ 1 invested in retrofitting saves US\$ 8.

GRHS07/dis/bk/3