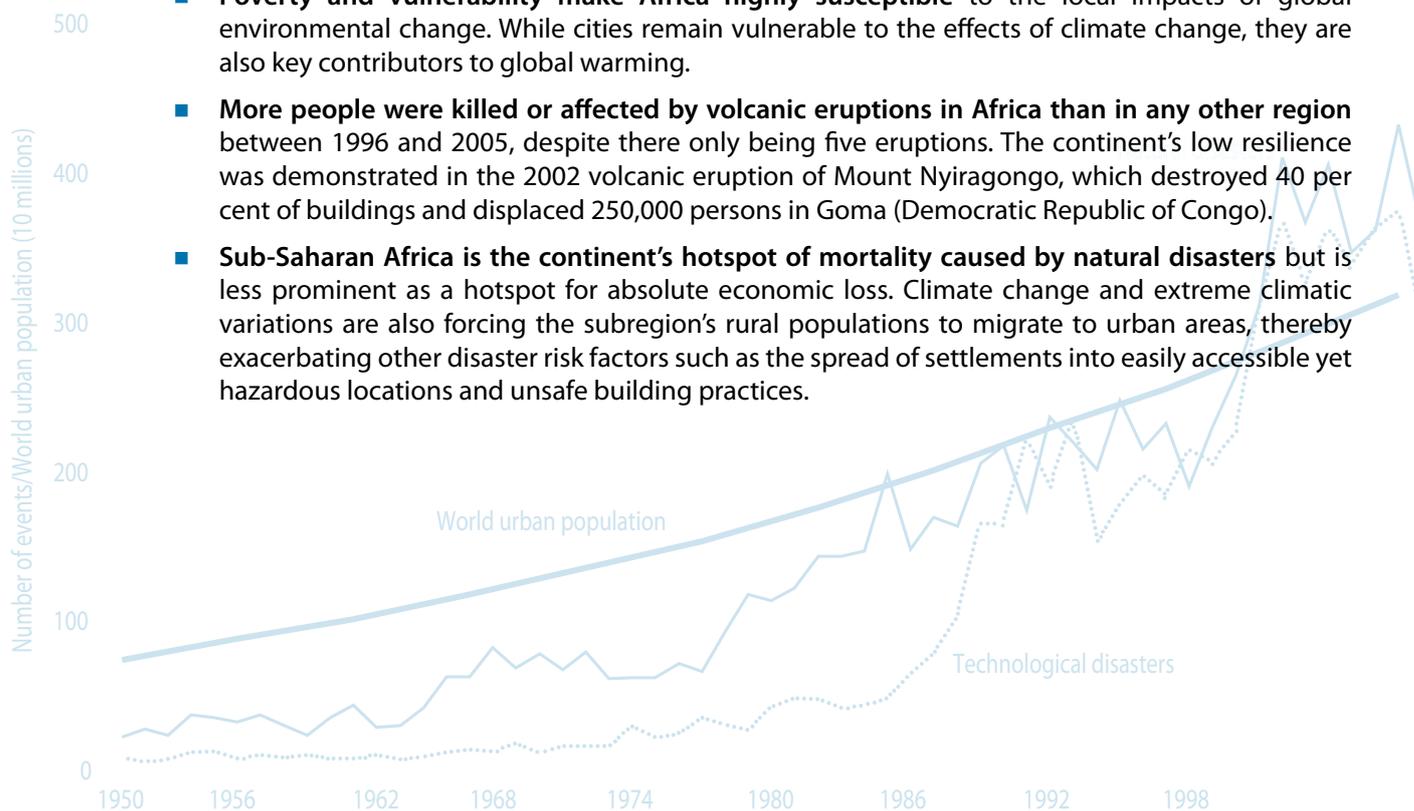


DISASTER *facts & figures*

Africa

Africa, the world's second-largest and second most-populous continent is home to 900 million people, accounting for approximately 14 per cent of the world's population. Africa is the fastest urbanizing region in the world, exposed to risks associated with chaotic urbanization. In 2005, urban populations were recorded at 39.7 per cent in Africa and are projected to increase to 53.5 per cent by 2030. Cities generate the potential for substantial losses from single large disaster events, creating new challenges for risk management. The region's vulnerability is further aggravated by poverty, conflict, chronic disease and weak governance.

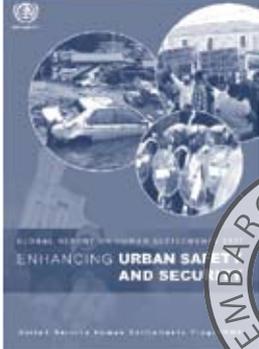
- **Africa has experienced the fastest rate of increase in the incidence of natural disasters over the last three decades.** The number of major natural disasters in the world increased from 100 to more than 400 per year, from 1975 to 2005. The growth rate has been highest for Africa, where a threefold increase in such disasters has been experienced in the last decade alone.
- **Flooding** is the most frequent natural disaster type in Africa, resulting in the highest mortality.
- **Earthquakes, floods and storms cause the greatest economic loss on the continent**, and droughts and famine affect an estimated 174 million people.
- **Economic loss** to disasters, estimated at US\$ 10 billion, is low compared to other world regions, but is high as a proportion of Africa's GDP.
- **Poverty and vulnerability make Africa highly susceptible** to the local impacts of global environmental change. While cities remain vulnerable to the effects of climate change, they are also key contributors to global warming.
- **More people were killed or affected by volcanic eruptions in Africa than in any other region** between 1996 and 2005, despite there only being five eruptions. The continent's low resilience was demonstrated in the 2002 volcanic eruption of Mount Nyiragongo, which destroyed 40 per cent of buildings and displaced 250,000 persons in Goma (Democratic Republic of Congo).
- **Sub-Saharan Africa is the continent's hotspot of mortality caused by natural disasters** but is less prominent as a hotspot for absolute economic loss. Climate change and extreme climatic variations are also forcing the subregion's rural populations to migrate to urban areas, thereby exacerbating other disaster risk factors such as the spread of settlements into easily accessible yet hazardous locations and unsafe building practices.



Americas

The Americas consist of North America and South America with their associated islands and regions. They cover 8.3 per cent of the Earth's total surface area and, with some 890 million people, contain about 14 per cent of the human population.

- From 1997 to 2006, there were 392 **human-made disasters** in the Americas, with 28 deaths, costing US\$83 million. Central America is considered a hotspot in terms of mortality caused by natural disasters.
- **Windstorms** are the most frequent type of disaster, affecting the most people and causing the highest total economic loss. Windstorms can also trigger flooding and landslides.
- Hurricane Mitch devastated Honduras and Nicaragua in 1998, killing some 20,000 people, many of whom lost their lives to landslides. A disproportionate number of victims were street children. Many losses in small regional towns smothered by mudslides or flash floods were caused by deforestation in adjacent agricultural areas.
- **The 2005 Hurricane Katrina alone caused US\$ 81.2 billion in economic damage** in the United States of America, making it the costliest natural disaster in the country's history.
- **Cuba has developed effective procedures for quick evacuation of Havana** and other urban areas in the face of repeated hurricanes.
- La Masica, Honduras, was the only community to register no deaths in the wake of Hurricane Mitch thanks to an early warning system operated by women in the community.
- **In Bogota, Colombia, 60 per cent of the population live on steep slopes subject to landslides.** In 1966, in Rio de Janeiro, Brazil, landslides caused 1,000 deaths. Houses were subsequently reconstructed at the original sites. As a result, 1,700 people were killed the following year.
- **Flooding and landslides in Venezuela in 1999 caused about US\$1.9 billion in damages and killed some 30,000 people.**
- **If sea levels rise** by just one meter, many coastal megacities with populations over 10 million, such as Rio de Janeiro or New York, will be under threat.
- San Francisco and Los Angeles follow Tokyo with the **highest Natural Hazards Risk Index values.** The Index identifies high exposure in cities with large physical assets and commercial interests.
- **About half of all hospitals in Latin America and the Caribbean are located in high-risk areas.** Over the 1980s and 1990s, 100 hospitals and 650 health centres, equating to approximately 5 per cent of all such structures in this region, were destroyed in disasters. In the Pereira earthquake in Colombia in 1999, 74 per cent of the region's schools were damaged.
- **Mexico City**, located in an area at risk from earthquakes, volcanic eruptions and floods, is responsible for around one third of Mexico's GDP.
- **Colombia** has demonstrated regional leadership in urban planning for risk reduction, saving lives from landslide and earthquake hazards.

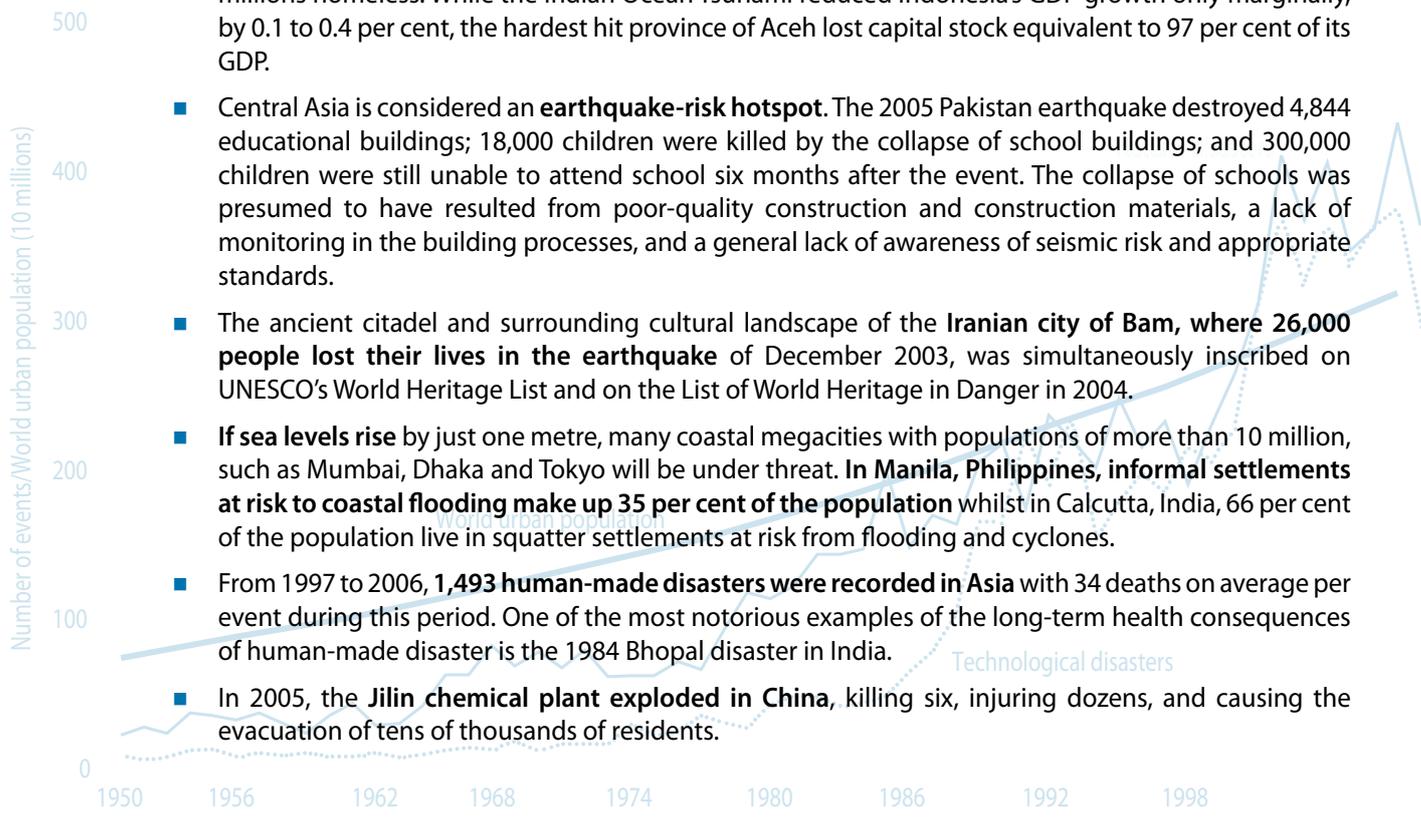


DISASTER facts & figures

Asia

As well as being the world's largest and most populous continent, **Asia is the most disaster-prone region.** It covers 8.6 per cent of the Earth's total surface area and is home to almost 4 billion people accounting for over 60 per cent of the world's population. The region has high economic and population growth rates; will become a major net contributor to global environmental change; and is at high risk from the local impacts of such change. Asia has among the **highest rates of urban growth** – in 2005, urban populations were 39.9 per cent in this region, with a projected increase to 54.5 per cent in 2030 – **indicating that risk will augment in the future as populations grow.**

- Compared to other regions, **Asia has the highest incidence of disasters** associated with avalanches, landslides, earthquakes, tsunamis, floods, windstorms and industrial accidents. Over the last three decades, Asia, along with Africa, has had the fastest increase in the incidence of natural disasters.
- **Flooding** is the most frequent natural hazard affecting the largest number of people and causing the greatest economic losses. The periodic floods affecting Bangladesh continue to wipe out infrastructure and destroy the agricultural capacity in one of the world's poorest countries. **The 1991 cyclone in Bangladesh killed 138,000 people** and mortality among females over ten years old was over three times that of males of the same age group. Mortality rates for those under 14 and over 50 years of age were more than three times that for those aged 15 to 49
- **Earthquakes and tsunamis** cause the greatest mortality, with the **2004 Indian Ocean Tsunami accounting for around 230,000 deaths.** On top of its huge impact on life, the Indian Ocean Tsunami made 1.5 million homeless, whilst the 2005 earthquake in Pakistan killed 86,000 people and left millions homeless. While the Indian Ocean Tsunami reduced Indonesia's GDP growth only marginally, by 0.1 to 0.4 per cent, the hardest hit province of Aceh lost capital stock equivalent to 97 per cent of its GDP.
- Central Asia is considered an **earthquake-risk hotspot.** The 2005 Pakistan earthquake destroyed 4,844 educational buildings; 18,000 children were killed by the collapse of school buildings; and 300,000 children were still unable to attend school six months after the event. The collapse of schools was presumed to have resulted from poor-quality construction and construction materials, a lack of monitoring in the building processes, and a general lack of awareness of seismic risk and appropriate standards.
- The ancient citadel and surrounding cultural landscape of the **Iranian city of Bam, where 26,000 people lost their lives in the earthquake** of December 2003, was simultaneously inscribed on UNESCO's World Heritage List and on the List of World Heritage in Danger in 2004.
- **If sea levels rise** by just one metre, many coastal megacities with populations of more than 10 million, such as Mumbai, Dhaka and Tokyo will be under threat. **In Manila, Philippines, informal settlements at risk to coastal flooding make up 35 per cent of the population** whilst in Calcutta, India, 66 per cent of the population live in squatter settlements at risk from flooding and cyclones.
- From 1997 to 2006, **1,493 human-made disasters were recorded in Asia** with 34 deaths on average per event during this period. One of the most notorious examples of the long-term health consequences of human-made disaster is the 1984 Bhopal disaster in India.
- In 2005, the **Jilin chemical plant exploded in China**, killing six, injuring dozens, and causing the evacuation of tens of thousands of residents.



Europe

- **Europe is most affected by economic loss, which at over US\$10 billion** is greater than the economic loss suffered by any other world region. This stems from the high level of capital investment in Europe, with disasters typically resulting in low mortality but substantial monetary implications.
- Vulnerability and human loss is highest, compared to other world regions, for extreme temperature events. Between 1996 and 2005, Europe experienced 47 per cent of all extreme temperature events, but 81 per cent of all mortalities. **The 2003 heat wave alone caused around 35,000 premature deaths.**
- Between 1996 and 2005, **floods** were the most common disaster. In 1953, the dikes protecting the southwest of the Netherlands were breached by the joint onslaught of a hurricane-force north-westerly wind and exceptionally high spring tides. **The flood came in the night without warning, and killed 1,835 people. Almost 200,000 hectares of land was swamped, 3,000 homes and 300 farms destroyed, and 47,000 heads of cattle drowned.** Since these floods, the Netherlands have built dikes and invested in institutional and societal learning so as to anticipate future floods.
- In the UK, around 15 per cent of urban land, containing 1.85 million homes and 185,000 commercial properties, is built on land known to be at risk from flooding. Such priority given to local economic development over flood risk management had disastrous consequences demonstrated by widespread flooding in 1998, 2000 and 2007.
- Marmara, Turkey, was hit by a 7.4 Richter magnitude earthquake in 1999. **The quake claimed 18,000 lives and caused direct economic losses estimated at US\$ 8.4 billion.** However, only seven months after the disaster, a downturn in the rate of inflation and declining interest rates for government borrowing indicated that the Turkish economy made a recovery.
- **From 1997 to 2006, 284 human-made disasters were recorded in Europe,** causing the lowest mean number of deaths per event (24 deaths) and also the lowest absolute mortality for this time period.
- **The worst disaster in Europe happened in 1986, a reactor at the Chernobyl Nuclear Power Plant** in Ukraine exploded. The radioactive plume drifted over large parts of western Soviet Union, Eastern Europe, Western Europe, Northern Europe, and Eastern North America. Many areas were badly contaminated, resulting in the evacuation and resettlement of over 336,000 people.

Oceania

- With the exception of volcanic eruption, **Oceania records the lowest incidence of disasters for any region** and hazard type. Overall, the region has the lowest economic losses and absolute number of people killed and affected by all disaster types. Oceania is the only region not to record any industrial accidents from 1996 to 2005.
- Within the region disasters are most commonly associated with **windstorms** which result in the greatest economic losses.
- **Sea-level rise** due to climate change will have catastrophic implications for low lying small island states in the region