



Hit by Disaster

OVER THE past few decades, a growing number of natural disasters have taken an increasingly devastating toll on human lives, livelihoods, and physical infrastructure in countries across the globe. Scientists believe that this long-term upward trend is the result of more frequent disasters, a growing global population that continues to expand its economic assets and often lives in increasingly vulnerable areas, and continued environmental degradation.

According to the International Federation of Red Cross and Red Crescent Societies, the number of reported natural disasters more than doubled, from 1,100 in the 1970s to 2,742 in the 1990s, and the number of people affected swelled from just over 700 million to nearly 2 billion. The estimated costs stemming from damage to physical infrastructure show a

similar upward trend. The one bit of good news is that, between the 1970s and the 1990s, deaths from natural disasters (see box below, left) fell from 2 million to under 800,000—thanks, in large part, to better disaster preparedness. But these figures mask the fact that, outside Africa and Europe, disaster fatalities have risen over the past 20 years.

The incidence of “great” natural disasters alone (see box below, right) more than quadrupled, from 20 in the 1950s to 89 in the 1990s. It is estimated that these disasters accounted for \$652 billion in material losses in the 1990s, a more than fifteenfold increase from the 1950s. Of this amount, only \$123.2 billion was insured.

During the past ten years for which comprehensive data are available (1992–2001), Asia experienced the greatest number of natural disasters—1,057, or about 40 percent of all events worldwide. Flooding accounted for the majority of events, both in Asia and worldwide, followed by windstorms. The loss of human life was worst in Asia, where more than 420,000 people died, primarily from drought/famine—representing 80 percent of the death toll worldwide from all natural disasters.

What is a natural disaster?

The Brussels-based Center for Research on the Epidemiology of Disasters (CRED) defines a natural disaster as a situation or event that overwhelms local capacity, necessitating a request for national or international assistance. For a disaster to be entered into CRED's Emergency Events (EM-DAT) database, at least one of the following criteria must be fulfilled:

- 10 or more people reported killed;
- 100 people reported affected;
- a call for international assistance; or
- a declaration of a state of emergency.

People are considered to have been affected if they require immediate assistance during a period of emergency to fill basic survival needs, such as food, water, shelter, sanitation, and immediate medical assistance.

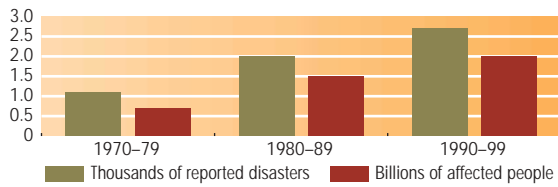
The estimated damage inflicted by a disaster usually consists of direct damage (for example, to infrastructure, crops, housing) and indirect damage (for example, loss of revenues, unemployment, market destabilization). EM-DAT's estimates relate only to direct material damage and do not include any valuation of costs of human life.

What is a “great” natural disaster?

Munich Re, a reinsurance company that specializes in disaster business, classifies natural catastrophes as “great” if the ability of the region in which they occur to help itself is distinctly overtaxed, making interregional or international assistance necessary. This is usually the case when thousands of people are killed, hundreds of thousands are made homeless, or a country suffers substantial economic losses, depending on the economic circumstances generally prevailing in the affected country.

This “Picture This” is based on “Globalization and Natural Disasters: An Integrative Risk Management Perspective,” a paper by Professor Torben Juul Andersen (George Mason University School of Management).

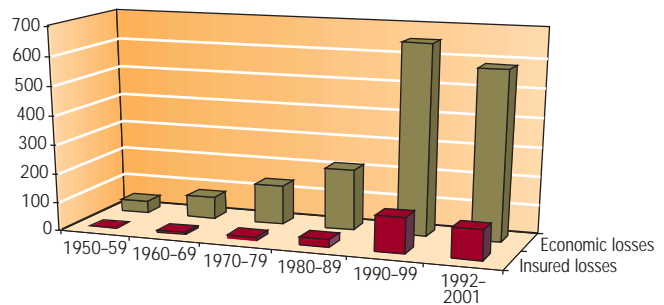
Over the past 30 years, both the number of reported disasters and the number of people affected have more than doubled.



Source: Center for Research on the Epidemiology of Disasters.

Economic losses from great natural disasters are increasing, but insured losses are barely keeping pace.

(billion dollars, 2001 prices)

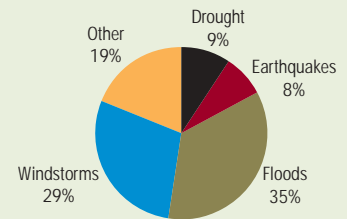
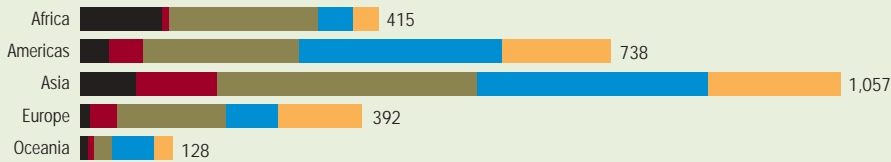


Source: Munich Re Group, *Topics, Annual Review: Natural Catastrophes 2001* (Munich, Germany: Munich Re Group), p. 15.

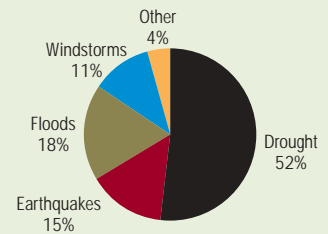
A DECADE IN REVIEW (1992-2001)

Legend: Drought (black), Earthquakes (red), Floods (green), Windstorms (blue), Other (orange)

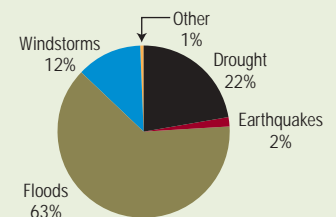
2,730 natural disasters



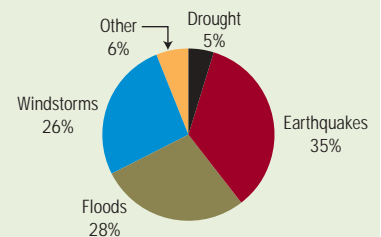
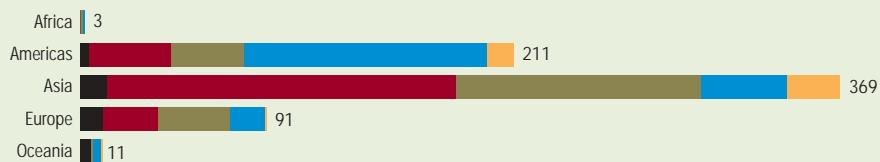
535,416 reported fatalities



2 billion people affected



\$684 billion in estimated damages (2001 prices)



Source: Center for Research on the Epidemiology of Disasters.