



Urban geohazards

A European perspective

by Andrew Howard, *Keywordh*

Very few hazards are truly 'natural'. Many are triggered, or at least worsened, by man's interaction with the natural environment. This is especially true in cities, which greatly increase the incidence of hazards and amplify their effects. Cities concentrate population, economic assets and heritage into small areas. To function, they depend on a complex and interdependent infrastructure of services, utilities and transport networks. Cities and their inhabitants are therefore highly vulnerable to the effects of natural hazards. Furthermore, with the globalisation of the world's markets, the effects of a 'local' disaster may no longer be isolated to a single city. It has been speculated, for example, that the domino effect of a catastrophic earthquake affecting Tokyo could lead to 'meltdown' of the global economy.

Despite the wide reporting of major natural disasters, statistics on the associated human and economic costs in Europe are surprisingly hard to find. The best figures relate to 1993, when natural disasters cost the lives of 500 Europeans, with geohazards accounting for 400 of these. In the same year, the total economic losses due to natural disasters in the EU was 3 billion euro, mostly counted in cities. The frequency and impact of hazards are continuing to grow. In 1990–96, losses due to landslides and floods in Europe were 4 times those of 1980–89 and over 12 times those of 1960–69. Globally, the number of people affected by natural disasters rises by 6% every year.

These statistics cover only the major disasters that make the news, but other less 'spectacular' hazards may have a far greater, cumulative economic cost. In the UK alone, for example, property damage caused by shrink-swell of clay soils accounted for 700 million euro of insurance claims per year in the

early 1990s. Tens of thousands of properties in France were damaged by shrink-well during the same period.

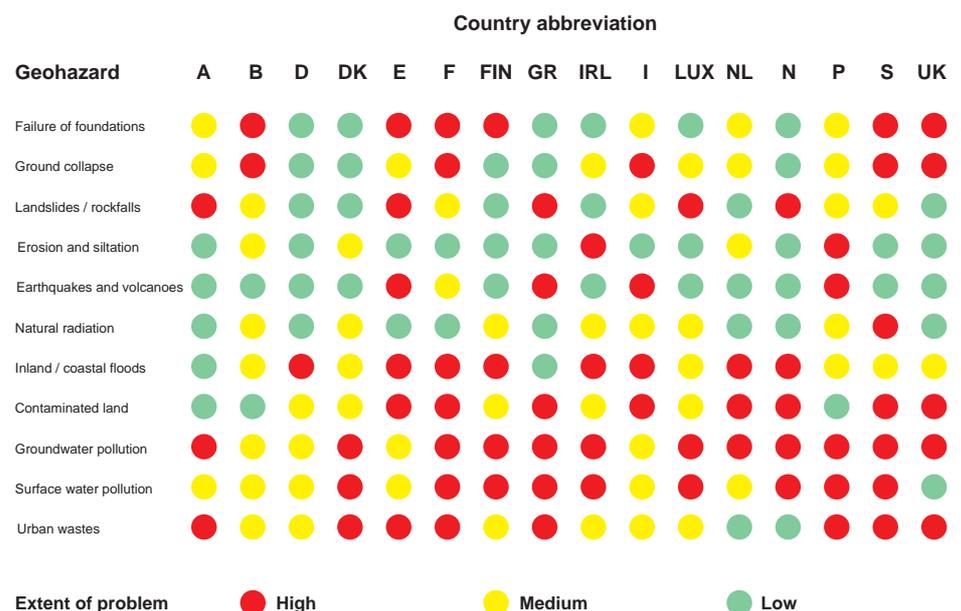
The national geological survey organisations of the 15 member states of the European Union, together with Norway, collaborate in the non-profit association EuroGeoSurveys, which provides advice and information on geoscientific issues to the European Commission, the European Parliament and other EU institutions. Since 1996, EuroGeoSurveys has been comparing the wide range of geohazards affecting Europe's cities and has prepared an inventory of their effects.

EuroGeoSurveys is currently seeking EC funding to establish EU-wide guidelines and best practice for mapping the extent of geohazards in Europe's cities and assessing the associated risks. In partnership with cities across the EU,

this project will also develop a prototype geohazard risk assessment GIS, designed to support the decision-making, planning and development control functions in municipal governments across Europe.

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More than two thirds of Europeans now live in cities, and the proportion is continuing to grow, especially in southern Europe. Despite their enormous social, economic and environmental diversity, all cities face the common challenge of minimising the costs of natural hazards. The information provided by EuroGeoSurveys will enable city governors and planners to assess the risks posed by geohazards and manage them effectively, in balance with other priorities. This is a key objective of 'the sustainable European city', and will provide the urban dwellers of the future with a safe, healthy and economically competitive environment in which to live and work.



Modified from *Geoproblems of urban areas in the EU and Norway*, EuroGeoSurveys, 1998

Breakdown of main geohazard types by European country.