



*This scene is one similar to what occurred in Baden-Baden, Germany, on October 28, 1998. While many of Europe's reinsurance managers were meeting reinsurers for their annual pre-renewal gathering to secure the following year's treaties, a flood in Baden-Baden damaged many cars. This was not the only cause of headaches for European reinsurers battling with the issue of flooding.*

## *Flood in Europe: A Peril Not to be Ignored*

*by Jonathan Conway*

Flood in Europe happens—and it is becoming ever more frequent and expensive. Hardly a European country can claim to be immune from the problem, yet very little dialogue occurs between countries on how to deal with, and provide insurance for, flood.

To date European property coverages have excluded or limited floods in the Netherlands as well as stormflood (or sturmflut) in Germany. Two-thirds of the Netherlands, a sophisticated land in terms of industrial and agricultural infrastructure containing high exposed values, lies below sea level. A catastrophic sea inundation in 1953 in which 1,850 people drowned, led the Dutch, at great expense, to develop exceptional expertise in flood protection and land reclamation.

The Netherlands' extensive dyke system is constantly re-evaluated and strengthened where appropriate. These protections theoretically offer a higher level of

protection than the Thames Barrier in London. Yet no insurer or reinsurer seems willing to grant the cover freely.

However well-protected the Netherlands is, the sheer accumulation of potential loss to that almost unthinkable 10,000-year sea event forces prudence and caution. Those markets willing to grant the cover (usually non-Dutch), spread their available capacity sparingly across their clients. Flood loss potential is assessed cautiously, especially for Business Interruption. Who can predict the effect on a national business when large sections of a country suffer such a flood? To what extent will the dykes, so carefully managed to hold water out, now hinder the ebb of the flood waters? While the dyke systems are well documented, modeling of various sea and river flood events that overflow the dykes is still dependent on finding sponsorship or funding.

Germany has its own set of problems. Stormflood is a sea-surge that inundates the northern coast of Germany, leading to a surge through Hamburg and inland along the river Elbe. The 1953 catastrophe in the Netherlands had an equally dramatic effect in Hamburg. As a result, Hamburg put flood defenses in place. The northern coastline remains highly susceptible to stormflood. Hamburg, however, has dyke systems offering protection well above the highest-ever recorded water levels. Many industrial risks in the port of Hamburg have, therefore, to some insurers and reinsurers become more insurable. So while the treaty exclusions are likely to remain, a controlled facultative solution to stormflood may well be a possibility.

Germany also has many river-related flood problems. The following table shows a recent summary of losses:

River	Year	Total Losses to Society (in U.S.millions)	Total Insured Losses (in U.S.millions)
Rhine	1993	\$2,000	\$800
Po	1994	\$9,300	\$300
Rhine	1995	\$2,000	\$780
Oder	1997	\$5,275	\$785

Flood cover is not always available in Germany. Those who do not need the cover naturally do not buy it. Those seeking the cover do so because they face a likely event – this gives rise to a level of anti-selection traditionally unacceptable to the market. Certain parts of Germany hang on to former state-monopoly-style compulsory insurance for flood, but there is no national pool available. There are many initiatives by water authorities, universities, engineers, insurers and reinsurers, aiming to better map-out flood areas. There is now, however, at least one major insurance-sponsored system that has identified three levels of flood hazard in Germany for rating and accumulation to the 50-year event, which will lead to cover being available to more of the population.

These efforts at qualifying risk are not easy – the river Rhine, for example, is changing its behavior. Navigational changes and deforestation in the South have led to more frequent and severe flooding following the spring snow-melt in Switzerland. In addition, a successful project to “reclaim” a flood-exposed meadow for building merely increases the pressure downstream. The lack of a cohesive strategy within Germany and with its neighboring Rhine-countries, Switzerland and the Netherlands, serves to compound the problem. There are many picturesque cities and towns along the Rhine, whose old quarters are typically near the river and virtually every

year under considerable threat from flooding. Many are considered exposed to a five-year event. Industries reliant on water are also located in abundance on the Rhine. Many are built either on higher ground or have significant defenses, however, an insurer must exercise caution when faced with such risks.

Great Britain suffers from both inland and coastal flood. Inland losses result usually from heavy rainfall, and as such, the areas prone to these losses are usually unpredictable. Coastal flooding is well-researched, and there is good information at post-code level available from the Association of British Insurers. Various natural hazard analysts are also attempting to improve the accuracy to a per-building level. The 1953 sea surge also hit Britain’s east coast, causing 300 deaths and damage to 24,000 houses and 200 industrial sites. The west coast has suffered 4 major events since 1980, albeit the level of damage has not been as great as that on the east coast. The east coast also includes the River Thames and London. The Thames Barrier was completed in 1984 to protect London against a repeat of the 1953 event. It is designed to protect to the 1,000-year event. Over time, the barrier will need to be raised to offset the “sinking” (one foot per century!) of southeast England. In addition to the regular monthly test-closing of the barrier, it has been closed 25 times since completion because of the sea-surge threat. The UK market has

traditionally given flood cover freely; only the most exposed risks receive special attention from the insurers. As a consequence many of the insurers are looking more closely at their east coast accumulations and seeking protection as appropriate.

The list of flood-exposed countries in Europe goes on: France, with its CatNat pooling system; Italy, where flash-flooding is an ever-present danger in certain well-published zones; Switzerland, whose Elementar Pool provides reinsurance for the primary market; and the Czech Republic and Poland which were equally devastated (109 fatalities, 250,000 homes evacuated) by the Oder flooding mentioned above in connection with Germany. And these are just a few examples.

Flood in Europe is a peril not to be ignored – but enough knowledge and capacity exists to find solutions and make flood an insurable peril.

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