

Flood Catastrophe Modelling

A major component of the consultancy work undertaken by Hydro-GIS over the past four years has been the development of flood catastrophe models for the re-insurance sector. These models are used as pricing tools for brokering contracts between re-insurance and insurance companies. They are based on a large number of stochastic flood scenarios for an individual country or a region covering a number of countries. Hydro-GIS staff members are particularly experienced in this field having previously worked on the development of coastal and river flood catastrophe models for the UK and river flood catastrophe models for the Czech Republic and Slovakia.



Since formation in 2004 Hydro-GIS Ltd. have developed regional river flood catastrophe models for Central and Eastern Europe, Scandinavia and South-eastern Europe. The models are designed to predict the depth and extent of flooding on a postcode basis per event and the event return period. Large numbers of

events (over 1000) are generated per region, based on the characteristic patterns and magnitudes of historical floods. The models also incorporate the role of flood defences and defence breaching scenarios are included within the event set. Specific hydrological and hydrodynamic modelling routines have been developed within a GIS environment to enable the efficient mapping of flood event scenarios.

