



The National Landslide Database and GIS for Great Britain: construction, development, data acquisition, application and communication

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The National Landslide Database has been developed by the British Geological Survey (BGS) and is the focus for national geohazard research for landslides in Great Britain. The history and structure of the geospatial database and associated Geographical Information System (GIS) are explained, along with the future developments of the database and its applications. The database is the most extensive source of information on landslides in Great Britain with over 16,500 records of landslide events, each documented as fully as possible. Data are gathered through a range of procedures, including: incorporation of other databases; automated trawling of current and historical scientific literature and media reports; new field- and desk-based mapping technologies with digital data capture, and crowd-sourcing information through social media and other online resources. This information is invaluable for the investigation, prevention and mitigation of areas of unstable ground in accordance with Government planning policy guidelines. The national landslide susceptibility map (GeoSure) and a national landslide domain map currently under development rely heavily on the information contained within the landslide database. Assessing susceptibility to landsliding requires knowledge of the distribution of failures and an understanding of causative factors and their spatial distribution, whilst understanding the frequency and types of landsliding present is integral to modelling how rainfall will influence the stability of a region. Communication of landslide data through the Natural Hazard Partnership (NHP) contributes to national hazard mitigation and disaster risk reduction with respect to weather and climate. Daily reports of landslide potential are published by BGS through the NHP and data collected for the National Landslide Database is used widely for the creation of these assessments. The National Landslide Database is freely available via an online GIS and is used by a variety of stakeholders for research purposes.