



The GeoScour dataset comprises two different tiers of geographical information system data containing seven different data layers. Each tier represents a different scale of assessment, from a high-level catchment to subcatchment data.

What is included in this dataset

Tier 1 dataset provides a summary overview of the catchment characteristics, typical response type, and evolution. It can be used to provide a high-level overview for incorporation into catchment management plans, national reviews and catchment comparisons.

Tier 2 datasets are available as smaller catchment areas and focus on providing data for more detailed catchment management, natural flood management and similar uses. It analyses geological properties such as flood accommodation space, geological run-off potential and geomorphology types, as well as additional summary statistics for worst, average, and best-case scenarios for underlying surface scour susceptibility.

Tier 3 datasets provide detailed riverine information that is designed to be incorporated into more complex river scour models. It provides the baseline geological context for river scour development and identifies important factors that should be considered in any scour model. Factors such as material mineralogy, strength and density are key properties that can influence a river's ability to scour. In addition, an assessment of river fall, sinuosity and flood accommodation space are also provided. These datasets are of use to those assessing the propensity for river scour for any given reach of a river across Great Britain and can be used as an input into hydraulic/hydrodynamic models.

What is GeoScour used for?

GeoScour provides a national-scale, geologically-influenced, scour susceptibility map for Great Britain by using a nested framework model to determine a 3-tiered data provision allowing increasing levels of understanding at different resolutions from catchment to local (channel/reach) scales.

This is designed to feed into decision support tools and hydrological modelling. GeoScour will be useful for stakeholders, especially when used in conjunction with river velocity, dynamics, etc. to advise asset owners or managers (responsible for bridge infrastructure e.g. local authorities) on whether they need to undertake further work on the threat of scour. This will also be transferrable to owners/advisors of other infrastructure assets that are situated on or close to rivers. As well as bridges and the utilities that cross them, this includes infrastructure proximal to rivers such as road, rail, transmission towers and communications.

