

# Towards a common approach to identify landslide risk areas in Europe in the context of EU policies: First developments

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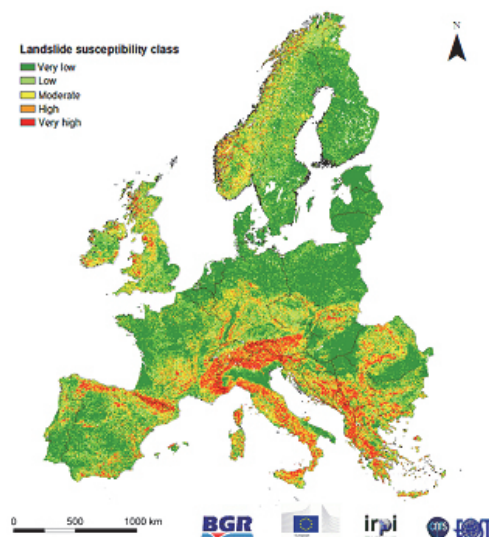
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In the context of the EU Soil Thematic Strategy and the associated proposal for a Soil Framework Directive, and the INSPIRE Directive specifications on Natural Risk Zones, a number of recommendations and developments have been made for common approaches and practices to identify and map landslide risk areas in Europe.

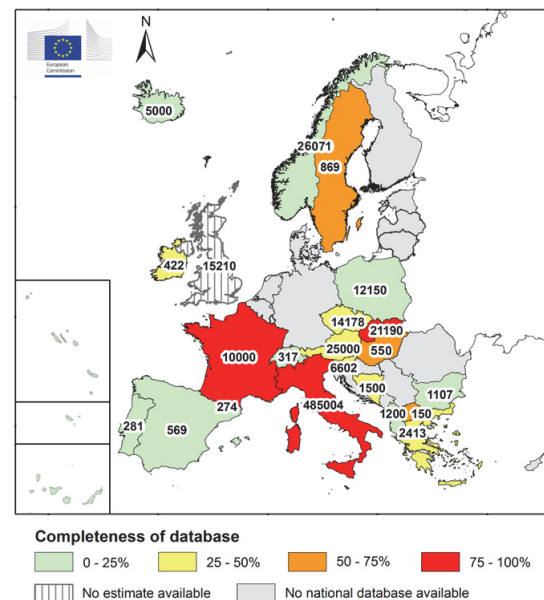
First, recommendations have been issued for mapping landslide susceptibility areas based on geographically-nested, Tier approaches by collaborative work of the European Landslide Expert Group hosted by JRC (<http://eusoiils.jrc.ec.europa.eu/library/themes/Landslides/wg.html>; Hervás et al., 2007). Further to these recommendations, a first version of the 1 km resolution (1:1M scale) European Landslide Susceptibility Map (ELSUS 1000 version 1) has been recently published (Fig. 1; Günther et al., 2013). The map was produced by spatial multicriteria evaluation modelling using pan-European slope angle, lithology and land use datasets and the location of over 102,000 landslides throughout Europe. The map can be downloaded from the European Soil Data Centre (ESDAC; <http://eusoiils.jrc.ec.europa.eu/library/themes/Landslides/#ELSUS>).



**Fig. 1:** Classified European Landslide Susceptibility Map (<http://eusoiils.jrc.ec.europa.eu/library/themes/Landslides/#ELSUS>).

Given the relevance of landslide data to identify risk areas, a comparative analysis of national and regional

landslide inventories in Europe (e.g. Fig. 2) permitted to propose improvements in landslide databases to perform national-scale landslide zoning and to achieve interoperability and harmonisation in agreement with the above-mentioned EU policies (Van Den Eeckhaut and Hervás, 2012). Work is now in progress to refine the European Landslide Susceptibility Map.



**Fig. 2:** Number and estimated completeness of landslide locations in national landslide inventories in Europe (updated from Van Den Eeckhaut and Hervás, 2012).

## References

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- Van Den Eeckhaut M, Hervás J, 2012. State of the art of national landslide databases in Europe and their potential for assessing landslide susceptibility, hazard and risk. *Geomorphology*, 139-140: 545-558.