The European Landslide Expert Group

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http://eusoils.jrc.ec.europa.eu/library/themes/Landslides/
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Group’s main objectives

• Provide scientific and technical advice and support to EU services (e.g. DG Environment, DG Research, DG Development, EEA…) on landslide-related policy making, with main emphasis on the EU Soil Thematic Strategy, and hence to produce or contribute to EU and other international landslide organisations/associations publications, including maps

• Liaise and build partnerships with other international organisations and associations dealing with landslides (e.g. EuroGeoSurveys, CERG, ICL, IAG…)

• Promote and participate in international initiatives and research projects regarding landslide prevention and mitigation, and landslide information systems together with other partners
Group’s membership*

**JRC (EC):** Javier Hervás and Miet Van Den Eeckhaut

**National Geological Surveys**
- BGR (Germany): Andreas Günther
- BGS (UK): Claire Dashwood (Foster) and Peter Hobbs
- ISPRA (Italy): Alessandro Trigila
- IGME (Greece): Eleftheria Poyiadji

**Research organisations**
- CNRS-IPGS (France): Jean-Philippe Malet
- CNR-IRPI (Italy): Paola Reichenbach and Fausto Guzzetti (CNR-IRPI Perugia) and Alessandro Pasuto (CNR-IRPI Padua)

**Universities**
- University of Granada (Spain): José Chacón

* Red: Core members for Pan-European landslide zoning
Group’s brief history and activities

• Expert Group established by JRC in 2007

• 2 plenary meetings at JRC Ispra
  • 1st meeting: Guidelines for Mapping Areas at Risk of Landslides in Europe, 23-24 October 2007

• 5 meetings of the Group’s landslide zoning core members
  • 2 meetings at JRC, Ispra
  • 1 meeting at BGR, Hannover
  • 1 short meeting at EGU assembly, Vienna

• Contribution to the International Consortium on Landslides (ICL) – International Programme on Landslides (IPL) project “Tier-based harmonised approach for landslide susceptibility mapping over Europe” (sponsored by UNESCO, UN-ISDR and other UN agencies and programmes)

• Contribution to EU environmental policy documents and databases (e.g. ESDAC: European Soil Data Centre, hosted by JRC)

• Scientific publications
**Policy support:**

### OBJECTIVES
- Soil protection against degradation
- Preservation of soil capacity to develop its functions:
  - Ecological
  - Economic
  - Social
  - Cultural

### SOIL THREATS
- Erosion
- Organic matter decline
- Contamination
- Salinisation
- Compaction
- Soil biodiversity loss
- Landslides
- Flooding

### EU POLICY DOCUMENTS AND LEGISLATION
- COMMUNICATION COM(2012) 46 on implementation of the Soil Thematic Strategy and ongoing activities
Main actions proposed for the following soils threats: erosion, soil organic matter decline, salinisation, compaction and landslides

- **Identification of priority areas**: based on the use of common elements or criteria to be driving forces for the different threats, as well as common methodologies across Europe

- **Establishment of national programmes of measures** in the identified priority areas for risk reduction and restoration of degraded soils so as to preserve their functions
Policy support:

Schematic approach to address erosion, organic matter decline, salinisation, compaction and **landsides**

- **COMMON CRITERIA** set in Directive
- Landslide controlling factors
  - Model or empirical MONITORING
  - Member States establish RISK ACCEPTABILITY
  - Risk Area IDENTIFICATION
  - Member States establish a **TARGET** for Risk Area
  - Member States adopt **MEASURES** to achieve target
  - **REPORT** to Commission

**Priority areas:**
Landslide susceptible areas

The European Landslide Expert Group formulates and develops a Tier-based (geographically-nested) approach, as suggested by the Soil Information Working Group of the European Soil Bureau Network (Eckelmann et al., 2006)

(European Commission, 2006)
Common elements or criteria for identification of areas at risk of landslides included in the Directive Proposal

- Soil typological unit (STU) (soil type)
- Occurrence / density of existing landslides
- Bedrock
- Topography
- Land cover
- Land use (including land management, farming systems and forestry)
- Climate
- Seismic
Main current focus:

Harmonised landslide susceptibility modelling over Europe by

- Developing hierarchically ordered, geographically nested approaches (“Tiers”)

- Producing a 1:1 M scale Europe-wide landslide susceptibility map (Tier 1) using common thematic datasets and a harmonised approach in order to identify highly landslide prone areas where more accurate, higher-resolution susceptibility assessment (Tier 2) is needed
Journals


EU reports


Conference proceedings


European Commission’s publications related or referring to the Group’s work

Includes Hervás et al., 2007. Recommendations on a common approach for mapping areas at risk of landslides in Europe

Excerpt from The implementation of the Soil Thematic Strategy and ongoing activities [COM(2012)46, Brussels 13.2.2012]
European Soil Portal

http://eusoils.jrc.ec.europa.eu/library/themes/Landslides

European Landslide Expert Group

Online publications