New Multi-Hazard and Multi-Risk Assessment MethodS for Europe

From 2010-10-01 to 2013-12-31, closed project

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tbody>
<tr>
<td>EUR 4 314 417,20</td>
<td>ENV.2010.1.3.4-1 - New methodologies for multi-hazard and multi-risk assessment</td>
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<tr>
<th>EU contribution:</th>
<th>Call for proposal:</th>
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<tr>
<td>EUR 3 395 870,60</td>
<td>FP7-ENV-2010 See other projects for this call</td>
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<tr>
<th>Coordinated in:</th>
<th>Funding scheme:</th>
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<tr>
<td>Germany</td>
<td>CP-FP - Small or medium-scale focused research project</td>
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Objective

Across Europe, people suffer losses not just from single hazards, but also from multiple events in combination. In both their occurrence and their consequences, different hazards are often causally related. Classes of interactions include triggered events, cascade effects, and rapid increases of vulnerability during successive hazards. Effective and efficient risk reduction, therefore, often needs to rest on a place-based synoptic view.

MATRIX will tackle multiple natural hazards and risks in a common theoretical framework. It will integrate new methods for multi-type assessment, accounting for risk comparability, cascading hazards, and time-dependent vulnerability. MATRIX will identify the conditions under which the synoptic view provides significantly different and better results—or potentially worse results—than established methods for single-type hazard and risk analysis. Three test cases (Naples, Cologne and the French West Indies), and a “virtual city” will provide MATRIX with all characteristic multi-hazard and multi-risk scenarios. The MATRIX IT-architecture for performing, analysing and visualising relevant scenarios will generate tools to support cost-effective mitigation and adaptation in multi-risk environments.

MATRIX will build extensively on the most recent research on single hazard and risk methodologies carried out (or ongoing) in many national and international research projects, particularly those supported by DG Research of the European Commission. The MATRIX consortium draws together a wide range of expertise related to many of the most important hazards for Europe (earthquakes, landslides, volcanic eruptions, tsunamis, wildfires, winter storms, and both fluvial and coastal floods), as well as expertise on risk governance and decision-making. With ten leading research institutions (nine European and one Canadian), we also include end-user partners: from industry, and from the European National Platforms for Disaster Reduction.

Related information

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<th>Result In Brief</th>
<th>Improving assessment for multiple natural hazards</th>
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<td>Report Summaries</td>
<td>Final Report Summary - MATRIX (New Multi-Hazard and Multi-Risk Assessment MethodS for Europe)</td>
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</table>
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Subjects
Environmental Protection

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