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INSPIRE Natural Risk Zones Data Specification

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INSPIRE Directive (2007/2/EC) defines Natural Risk Zones theme as: "Vulnerable areas characterised according to natural hazards (all atmospheric, hydrologic, seismic, volcanic and wildfire phenomena that, because of their location, severity, and frequency, have the potential to seriously affect society), e.g. floods, landslides and subsidence, avalanches, forest fires, earthquakes, volcanic eruptions."

This specification is the work of the Natural Risk Zones thematic working group. A multinational team of experts volunteered from the community of SDICs (Spatial Data Interest Communities) and LMOs (Legally Mandated Organisations) of INSPIRE.

The data specification has been compiled using reference material submitted by SDICs and LMOs and the responses to a user requirements survey. The team themselves have had to draw on their own expertise and that of their organisations and other groups to develop agreed use cases in a selection of areas pertinent to Natural Risk Zones.

The scope of the Natural Risk Zones data specification is potentially very large and this presentation will demonstrate this fact. Natural Risk Zones also involves significant engagement with other thematic areas from INSPIRE. This involvement stems from the nature of hazard, exposure, vulnerability and risk. Several other thematic areas input attributes vital to understanding the nature of hazard, yet others are vital in the understanding of exposure. In working on the scope of the Natural Risk Zones theme four use cases have been created for; Floods, Landslide, Forest Fire and Earthquake. These will be used in the presentation to demonstrate the use of the data specification.

The approach taken to model Natural Risk Zones is generic in its treatment of each of hazard, exposure, vulnerability and risk, with a core model, whilst allowing extensibility to be more specific where possible and required. Flood risk is significantly more precisely defined than other hazards, due in part to the development of the Floods Directive (2007/60/EC). In collaboration with Floods Directive personnel, we have been able to demonstrate the extensibility of the model, providing an example application schema specifically targeted at floods.

One of the main purposes of hazard and risk maps is to inform in a clear way thus supporting effective communication between modellers, data providers, policy makers and the citizen. We hope that this data specification can play a part in making this communication better.