



Towards a cross-domain interoperable framework for natural hazards and disaster risk reduction information

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The vast amount of information and data necessary for comprehensive hazard and risk assessment presents many challenges regarding the lack of accessibility, comparability, quality, organisation and dissemination of natural hazards spatial data. In order to mitigate these limitations an interoperable framework has been developed in the framework of the development of legally binding Implementing rules of the EU INSPIRE Directive^{1*} aiming at the establishment of the European Spatial Data Infrastructure. The interoperability framework is described in the Data Specification on Natural risk zones – Technical Guidelines (DS) document^{2*} that was finalized and published on 10.12. 2013. This framework provides means for facilitating access, integration, harmonisation and dissemination of natural hazard data from different domains and sources.

The objective of this paper is twofold. Firstly, the paper demonstrates the applicability of the interoperable framework developed in the DS and highlights the key aspects of the interoperability to the various natural hazards communities. Secondly, the paper “translates” into common language the main features and potentiality of the interoperable framework of the DS for a wider audience of scientists and practitioners in the natural hazards domain.

Further in this paper the main five aspects of the interoperable framework will be presented. First, the issue of a common terminology for the natural hazards domain will be addressed. A common data model to facilitate cross domain data integration will follow secondly. Thirdly, the common methodology developed to provide qualitative or quantitative assessments of natural hazards will be presented. Fourthly, the extensible classification schema for natural hazards developed from a literature review and key reference documents from the contributing community of practice will be shown. Finally, the applicability of the interoperable framework for the various stakeholder groups will be also presented. This paper closes discussing open issues and next steps regarding the sustainability and evolution of the interoperable framework and missing aspects such as multi-hazard and multi-risk.

1*INSPIRE – Infrastructure for spatial information in Europe, <http://inspire.ec.europa.eu>

2*http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/INSPIRE_DataSpecification_NZ_v3.0.pdf