



Communicating landslide hazards data via the Spatial Web - a case study from New Zealand

S. Schmitz (1), G. Dellow (2), T. Glade (1) and K. Greve (1)

(1) Dep. of Geography, University of Bonn, Germany; (2) Institute for Geological and Nuclear Sciences Ltd. GNS, Lower Hutt, New Zealand (thomas.glade@uni-bonn.de/+49-228-739099)

Within the risk governance process, the communication of information between several actors involved is crucial. This is in particular true for risk governance processes addressing natural risks. Often, communication approached via web-based information systems is restricted due to limited accessibility of data or lack of interoperability between several datasets. Driven by the Open Geospatial Consortium (OGC), a new paradigm for building solutions to geospatial problems has evolved - the Spatial Web. Herein, OpenGIS Web Services (OWS) such as the Web Map Service (WMS) are the backbone of the Spatial Web. Based on landslide data compiled by the New Zealand GeoNet project, this study investigates whether OWS provide a better means to communicate natural risk information between multiple actors than conventional web-based solutions.

First, requirements imposed onto the NZ GeoNet project by several involved parties are elaborated. Conventional web-based solutions and those embracing the paradigm of the Spatial Web are then validated against these requirements. Secondly, both different approaches to communicating geospatial data via the WWW are applied to landslide data compiled by the NZ GeoNet project. OWS technology in both cases proves superior to conventional web-based solutions. New Zealand landslide data is published as a WMS and can be integrated with other WMS in any WMS client. It is recommended to implement a Web Feature Service (WFS) as defined by OGC in order to provide more detailed access to the data itself.

When inferring from the results of the case study to a more general scope, a wide perspective of natural hazards data and information on related risk being communicated through the Spatial Web arises. This procedure will contribute to a better informed and

thus more effective natural risk governance. This perspective is enhanced through current OGC initiatives towards Sensor Web Enablement and Web Processing Services, which hold vast potentials for spatial information gathered from monitoring natural hazards and for processing natural hazards data across formerly existing boundaries.