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OneGeology-Europe

Interoperable, 1:1 million scale spatial geological data on lithology and geochronology for Europe from existing national sources, with progress towards scientific/semantic and geometric harmonisation

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1. INTRODUCTION

Deliverable D3.2, as defined in the OneGeology-Europe Description of Work, comprises “interoperable, 1:1 million scale spatial geological data on lithology and geochronology for Europe from existing national sources, with progress towards scientific/semantic and geometric harmonisation”. As such the deliverable is a dataset and not a report. However, this brief report has been produced to confirm formally that this deliverable has been produced by Work Package 3 of the project.

2 1:1 MILLION SCALE SPATIAL GEOLOGICAL DATA

Work package 3 delivered an interoperable geological spatial dataset (for lithology and age) for onshore Europe at the closest scale to 1:1 million available nationally, based on existing Geological Survey data. This data is being made available by 20 consortium Geological Surveys of the project consortium and will be served to and be viewable and downloadable on the OneGeology-Europe portal. The Geological Surveys are:

- Bundesanstalt für Geowissenschaften und Rohstoffe – The Federal Institute for Geosciences and Natural Resources (BGR)
- Bureau de recherches géologiques et minières (BRGM)
- British Geological Survey (BGS)
- Ceska geologicka sluzba – Czech Geological Survey (CGS)
- Eesti Geoloogiakeskus OÜ- Geological Survey of Estonia (EGK)
- Geološki zavod Slovenije – Geological Survey of Slovenia (GeoZS)
- De Nationale Geologische Undersøgelser for Danmark og Grønland - Geological Survey of Denmark (GEUS)
- Royal Belgian Institute of Natural Sciences (Geological Survey of Belgium (GSB))
- Geological Survey of Ireland (GSI)
- Geological Survey of Finland (GTK)
- Instituto Geológico y Minero de España (IGME)
- Instituto Nacional de Engenharia, Tecnologia e Inovação I.P. - Portuguese Geological Survey (INETI)
- Servizio Geologico d'Italia – Geological Survey of Italy (ISPRA)
- Geological Institute of Hungary (MAFI)
- Geological Survey of Norway (NGU)
- Państwowy Instytut Geologiczny – Polish Geological Institute (PGI)
- Service Géologique du Luxembourg (SGL)
- Geological Survey of Sweden (SGU)
- Štátny geologický ústav Dionýza Štúra - State Geological Institute of Dionyz Stur Slovakia (SGUDS)
- Netherlands Organisation for Applied Scientific Research – Geological Survey of the Netherlands (TNO)

In addition it is probable that up to three other non-consortium Geological Surveys (Austria, Lithuania and Switzerland) will soon serve data to the project portal according to the OneGeology-Europe (WP3) specification.

The data set can be accessed and viewed at the following web address:

<http://onegeology-europe.brgm.fr/geoportal/viewer.jsp>.

Please note that all consortium members have agreed to continue to serve their data after the project and EuroGeoSurveys has agreed to fund the maintenance of the portal and the metadata registry – the data and service will thus be sustained.

3 INTEROPERABILITY AND PROGRESS TOWARDS HARMONISATION

The data model, interoperability and implementation of the datasets, and the web geoportal were delivered by Work Packages 5 (Informatics specification, data model, interoperability and standards) and 6 (Web portal and Registry development and implementation).

Semantic interoperability with progress towards harmonisation was achieved through the development of a scientific-semantic data specification standard for European geological map data (including a dictionary of geochronological and lithological terms, relationships and classifications) by Work Package 3 (see D3.1 Versions 1 and 2).

Comprehensive and detailed work was done on this foundation - a common geological data specification, but in the deployment of this standard across Europe it is inevitable that numerous harmonisation issues were revealed. These can be classified as (a) semantic harmonisation issues, i.e. mismatches in the lithological or stratigraphical description of a geological unit; and (b) geometric harmonisation issues, i.e. displacements of geological units along national boundaries.

These issues were addressed at the Work Package 3 'Geological Harmonisation Workshop' held in Bled, Slovenia on 17-19 May 2010 and progressed in the subsequent months. The results were presented and further discussed at an International Union of Geological Sciences – Commission for Geoscience Information and OneGeology-Europe International Geoscience Language Workshop in Berlin, 25–27 August 2010.

The outcome of the harmonisation process and its progress, the methods applied and recommendations for future harmonisation endeavours of distributed data sets are described in detail in an additional WP3 deliverable - report D3.3 Scientific, Semantic and Geometric Harmonisation of Spatial Geological Data within Europe. The progress with harmonisation to date can be viewed directly as it is reflected in the distributed OneGeology-Europe geological data sets on the project web portal.