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EPOS-Norway – Integration of Norwegian geoscientific data into a common e-infrastructure

Jan Michalek¹, Kuvvet Atakan¹, Christian Rønnevik¹, Tor Langeland², Ove Daae Lampe², Gro Fonnes², Svein Mykkeltveit³, Jon Magnus Christensen³, Ulf Baadshaug³, Halfdan Pascal Kierulf⁴, Bjørn-Ove Grøtan⁵, and Odleiv Olesen⁵

¹University of Bergen, Faculty of Mathematics and Natural Sciences, Department of Earth Science, Bergen, Norway
(jan.michalek@uib.no)

²NORCE Norwegian Research Centre AS, Bergen, Norway

³NORSAR, Kjeller, Norway

⁴Norwegian Mapping Authority, Hønefoss, Norway

⁵Geological Survey of Norway, Trondheim, Norway

The **European Plate Observing System** (EPOS) is a European project about building a pan-European infrastructure for accessing solid Earth science data, governed now by EPOS ERIC (European Research Infrastructure Consortium). The **EPOS-Norway** project (EPOS-N; RCN-Infrastructure Programme - Project no. 245763) is a Norwegian project funded by National Research Council. The aims of EPOS-N project are divided into four work packages where one of them is about integrating Norwegian geoscientific data into an e-infrastructure. The other three work packages are: management of the project, improving the geoscientific monitoring in the Arctic and establishing Solid Earth Science Forum to communicate the progress within the geoscientific community and also providing feedback to the development group of the e-infrastructure.

Among the six EPOS-N project partners, five institutions are actively participating and providing data in the EPOS-N project – University of Bergen (UIB), University of Oslo (UIO), Norwegian Mapping Authority (NMA), Geological Survey of Norway (NGU) and NORSAR. The data which are about to be integrated are divided into categories according to the thematic fields – seismology, geodesy, geological maps and geophysical data. Before the data can be integrated into the e-infrastructure their formats need to follow the international standards which were already developed by the communities of geoscientists around the world. Metadata are stored in Granularity Database tool and easily accessible by other tools via dedicated API. For now, there are 33 Data, Data Products, Software and Services (DDSS) described in EPOS-N list.

We present the Norwegian approach of integration of the geoscientific data into the e-infrastructure, closely following the EPOS ERIC development. The sixth partner in the project – NORCE Norwegian Research Centre AS is specialized in visualizations of data and developing the **EPOS-N Portal**. It is web-based graphical user interface adopting **Enlighten-web** software which allows users to **visualize and analyze cross-disciplinary data**. Expert users can launch the

visualization software through a web based programming interface (Jupyter Notebook) for processing of the data. The seismological waveform data (provided by UIB and NORSAR) will be available through an EIDA system, seismological data products (receiver functions, earthquake catalogues and macroseismic observations) as individual datasets or through a web service, GNSS data products (provided by NMA) through standalone files and geological and geophysical (magnetic, gravity anomaly) maps (provided by NGU) as WMS web services or standalone files. Integration of some specific geophysical data is still under discussion, such as georeferenced cross-sections which are of interest especially for visualization with other geoscientific data.

Constant user feedback is achieved through dedicated workshops. Various use cases are defined by users and have been tested in these workshops. Collected feedback is being used for further development and improvements of the EPOS-N Portal.