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International Cross-Boundary Cooperation and Integration: The Review of the International Quaternary Map of Europe (IQUAME 2500)

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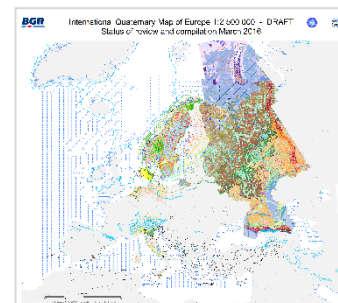
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BGR is leading the review of the International Quaternary Map of Europe (IQUAME 2500) and its transformation into a geographical information system (GIS) under the umbrella of the CGMW and INQUA. The international cooperation within Europe is a long standing policy of BGR as of many other European geological surveys, and particularly well established for projects under the umbrella of organisations such as the CGMW, UNESCO, INQUA, EUG and IUGS. The aim is to build a Quaternary Geological Information system (GIS) of Europe where Quaternary information can be retrieved, combined and used without any political boundary issues. As geology does not know political boundaries, working on geoscience cross-boundary projects poses the specific challenge to display the underlying geology without national border related unconformities.

On the base of the BGR and UNESCO International Quaternary Map of Europe, scale 1 : 2,5 Million (1967 – 1995, a paper map series in 14 sheets), BGR started to rework and digitize the sheets in order to review the information with international experts from European geological survey organisations who had also formerly contributed. BGR developed a pragmatic procedure to classify, deliver and join the reviewed Quaternary data in a uniform way [1]. The project is using the vocabularies and data model of the EC Directive INSPIRE Directive but is creating additional vocabularies and definitions for necessary features such as geomorphology (with the EMODNet project) and glaciogenic elements. An academic scientific advisory board is accompanying the process.

Eventually, the IQUAME will be summarizing the actual status quo of research on Quaternary geology in Europe in form of a digitally available GIS synthesis. Subjects of the map include:

- Geological boundaries and classifications of the Quaternary rocks both unconsolidated sediments and young volcanic extrusions,
- Extension and boundaries of permafrost,
- Last glacial maxima,
- Active faults,
- Genetic descriptions of the rocks;
- Key locations (geologically and palaeontologically interesting sites, anthropologic sites, impact craters etc.);
- More detailed off-shore geology (in cooperation with the EMODnet project).



In addition it is planned to include:

- submarine exhalations of gas hydrates (cold seeps),
- geomorphology/landforms (in cooperation with the EMODnet project),
- submarine currents and their impact on the ocean floor etc.

This presentation will introduce the actual progress but also the challenges of the IQUAME 2500 project, outline the fruitful cooperation with the project partners and advisors and give an outlook on future applications and opportunities linked to such a compilation.

References:

[1] Asch, K et al (2014): Review of the 1 : 2.5 Million International Quaternary Map of Europe. General Information and Guidelines for the Review: BGR

