

Asch, Kristine¹; Stojakowits, Philipp¹; Müller, Alexander¹; Reitner, Jürgen²

The International Quaternary Map of Europe and Adjacent Areas: Based on a plethora of detailed regional mapping results

¹Bundesanstalt für Geowissenschaften und Rohstoffe (BGR), Deutschland;

²GeoSphere Austria;

Kristine.Asch@bgr.de

Having started in 2011 at the INQUA congress in Bern, the project of the International Quaternary Map of Europe project (IQUAME 2500) now encompasses participants from around 40 countries of Europe and adjacent areas. It is a major international endeavor coordinated by BGR, the Federal Institute for Geosciences and Natural Resources, Germany, supported by the International Union of Quaternary Research (INQUA) and the Commission of the Geological Map of the World (CGMW, Sub-Commission Europe). The IQUAME project is compiling information on numerous aspects of the European Quaternary, which include the geochronological age of Quaternary geological units, lithology, genetic features, direction of ice movement, maximum extent of the Weichselian/Würmian ice sheets, extent of permafrost and Arctic sea ice, active faults and other aspects such as key localities of geological and anthropological interest. The project is based on international cooperation and is encompassing information from more than 40 partner institutions and also presents off-shore map information (in cooperation with the EU EMODnet Geology project) as the geology does not end on the shoreline.

Consequently, the IQUAME is based on hundreds of regional mapping campaigns all over Europe. For example the mapping of Late Glacial moraines in the Eastern Alps in Austria indicating extensive multiple glacier advances after the breakdown of the Last Glacial Maximum ice cap which occur in a high alpine environment with peaks of 3000 m altitude and steep slopes.

Another example comes from the area of the Osterseen (Bavaria, southern Germany) showing landforms, which evolved during the Würmian ice decay. In this area kettle holes, kames, kame terraces as well as eskers occur. Further to the west and northwest a huge drumlin field (= so-called Eberfinger drumlin field) exists, consisting of more than 350 drumlins.

Participation of the numerous international partners and the many different topics requires considerable data harmonization (semantics, structure and geometry). To achieve this aim, common standards and guidelines were set up and used by all participants: structured vocabularies to describe the IQUAME's contents, a common topographic base map, technical procedures to include the map data and guidelines to aid the partners to submit their data to the project. The harmonization is still in progress. This presentation aims to show the path from regional mapping campaigns in the field such as the mentioned examples from Carinthia, Austria and Bavaria, Germany to an overall harmonized.

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