Dr. Kristine Asch

IUGS Vice-President (2016–2020)

I am a geologist with the Federal Institute for Geosciences and Natural Resources (BGR), in Hannover, Germany.

Growing up in Berlin I was always interested in and curious about the world beyond my divided city. Thanks to my parents' enthusiasm for travel to the Alps and North Sea, I was infected with the desire to see the natural world.

This curiosity was fostered by my uncle Dr. Hans-Christoph Höfle, a surveyor at the Geological Survey of Lower Saxony (NLfB, today LBEG), who impressed me with his stories of his expeditions to Antarctica and who took me to his field area in northern Germany. This motivated me to study geology and palaeontology at the Free University Berlin (FU Berlin) and to continue to take my PhD focused on the development and implementation of a GIS-enabled concept for an international mapping project. I was supervised by Prof. Volker Jacobshagen and Prof. Franz K. List (both FU Berlin) and supported by Prof. Dietmar Grünreich, University of Hannover. At first working hands-on as a field geologist for a small environmental consulting bureau, I was soon employed as a geologist at the Geological Survey of Lower Saxony (NLfB) for the analysis of potential sites for municipal waste disposal which included field mapping, data analysis and GIS-building (1991–1994).

In 1995 I was employed by BGR and in my first project I was given the opportunity to work internationally as coordinator and editor-in-chief of the CGMW and BGR project on the GIS and International Geological Map of Europe and Adjacent Areas (IGME 5000). I received great support from BGR, in particular Prof. F.-W. Wellmer, at that time head of the Subcommittee of Europe, Dr. W. Struckmeier and Dr. A. Voges, from CGMW, especially Prof. Jean-Paul Cadet, Prof. Jean Dercourt, Dr. Philippe Rossi, Prof. Manuel Pubellier, from colleagues at various research institutes and geological surveys. These included Prof. Wolfgang Franke, Prof. Wolfgang Frisch, Ian Jackson, Prof. Yuri Leonov, Prof. Jean Mascle, Prof. Roland Oberhänsli, and many others too numerous to name here but owe my thanks to.

While working on the IGME 5000 project it became apparent that common understanding of standards across political boundaries is an essential prerequisite to international collaboration, cooperation and harmonisation. It led me to become intensely and enthusiastically engaged in a range of international scientific collaborations, in particular with the IUGS Commission for Geoscience Information (CGI), with the European Commission (EC), and with the Commission of the Geological Map of the World (CGMW) for which I have led the Subcommittee for Europe since 2004.

These collaborations include the establishment of practically applicable science vocabularies for national and international geoscience databases, such as for the international EC projects of OneGeology-

Europe and EMODnet. For OneGeology-Europe I coordinated as workpackage leader the construction of digital GIS maps and the establishment of international standard term dictionaries using IUGS standards, e.g., the IUGS Stratigraphic Chart and contributing to the updating of the IUGS-CGI vocabularies. These were used later as a basis of the Geology Data Specifications of the INSPIRE Directive of the European Commission (EC), which aims to build a spatial data infrastructure for governmental information throughout Europe. At present I am coordinating an international CGMW/INQUA/BGR project building the Quaternary Map/GIS of Europe based on scientific co-operation with more than 30 partner countries and researchers of the Quaternary (International Quaternary Map of Europe 1:25 Mio, IQUAME 2500). In this work I am greatly indebted to Professors Christian Schlüchter, Margot Böse and Philip Gibbard and to CGMW for their continuing support and advice. I also have the honour to lead the EMODnet geology work-package focused on compilation, harmonisation and making available marine geological data of the European seas.

In all of these projects I came to work together with excellent experienced scientists from all over the world – which I see as a privilege and an inspiration.

At BGR I lead a unit dedicated to building geoscience spatial databases/GIS for Germany and Europe focusing on cross-boundary harmonisation of geodata and collaboration across political boundaries. In technical cooperation projects we are building GIS and data bases for geological subjects. I represent BGR at the State German Working Group on geological standards and co-ordinated the contributions of the 16 Germany State Geological Surveys to the European INSPIRE Directive data specifications.

Together with an excellent international team I had the honour to revive first as Chair and then as Secretary General, the IUGS International Commission for the Management and Application of Geoscience Information (CGI) until 2016.

Supported by an initial IUGS grant and encouraged by Dr. Peter Bobrowski, at that time IUGS Secretary General, I was devoted – together with many superb African colleagues and with great support from Prof. Abera Mogessie (GSAf), Dr. Felix Toteu (UNESCO Nairobi), Dr. Gabi Schneider (GSN, Namibia) and other colleagues – to initiate and build a Geoscience Information in Africa network (GIRAF) with support of BGR, CGI, the UNESCO and the IUGS. Within BGR I co-ordinated GIRAF since 2009 until it was handed over into African hands in November 2016 to ensure its sustainability. GIRAF now includes 392 members from 49 countries.

Today I am delighted to hold the position for the IUGS as Vice-president. Here my focus is to support international communication and scientific cooperation across political boundaries and specifically foster and support the international cross-boundary IUGS projects. I am happy to help strengthen the standing of geoscience and its importance for society and to encourage and include young scientists and colleagues from developing countries to participate in IUGS activities.