WHY TOGETHER

Co-operation between Bavaria, Catalonia and Emilia-Romagna

In 1992, the **Regional Geological Surveys of Emilia-Romagna, Catalonia and Bavaria** launched a project of collaboration: their common objective was to develop an integrated approach to applied Earth Sciences and to increase the reliance on information systems for management of geo-environmental issues. This close working partnership, which became official with the signature of an agreement protocol in December 2004, led to the organisation of several editions of the **"European Congress on Regional Geoscientific Cartography and Information Systems"**. Conferences in Bologna (1994, 2003), Barcelona (1997, 2006) and Munich (2000) resulted in close co-operation between the Regional Geological Surveys across Europe and brought together numerous participants from many European countries, as well as from North Africa and Asia.

Spontaneous co-operation between European regions has proved to be a very effective way to bridge the gap between different traditions and methodologies and to begin sharing territorial and geo-environmental information at European level. To support this objective, the European Commission and EuroGeoSurveys participated in the Organizing Committee of the Congresses.

Topics like climate change, soil conservation, quality and quantity of groundwater, extent of natural hazards, access to energy and mineral resources and popularisation of geological knowledge represent our common interest and are of the utmost importance for Europe's growth and sustainable development.

An integrated and multidisciplinary approach to applied Earth Sciences today is necessary in order to meet society's growing demands for information and data on geo-environmental matters. Reliable data and eays-to-use information systems are mandatory for policy making, sustainable use of our natural resources, environmental conservation and for protecting populations from natural hazards.

The "**6th European Congress on Regional Geoscientific Cartography and Information Systems - EUREGEO 2009"** with the subheading "Earth and Man", will be held in Munich (Bavaria) on June 9-12, 2009. Again, it should serve as an outstanding opportunity to progress towards these goals. The aim of the Congress is to stimulate discussion between the geoscientific community and its stakeholders in order to provide data and services, at all scales from local to european, for policy making, land planning and sustainable growth.

www.euregeo2009.bayern.de

See you at

planetearth International Year of Planet Earth 2007 – 2009

6th European Congress on Regional Geoscientific Cartography and Information Systems - EUREGEO 2009

earth AND man

● Munich | Bavaria, Germany | june 9th - 12th 2009

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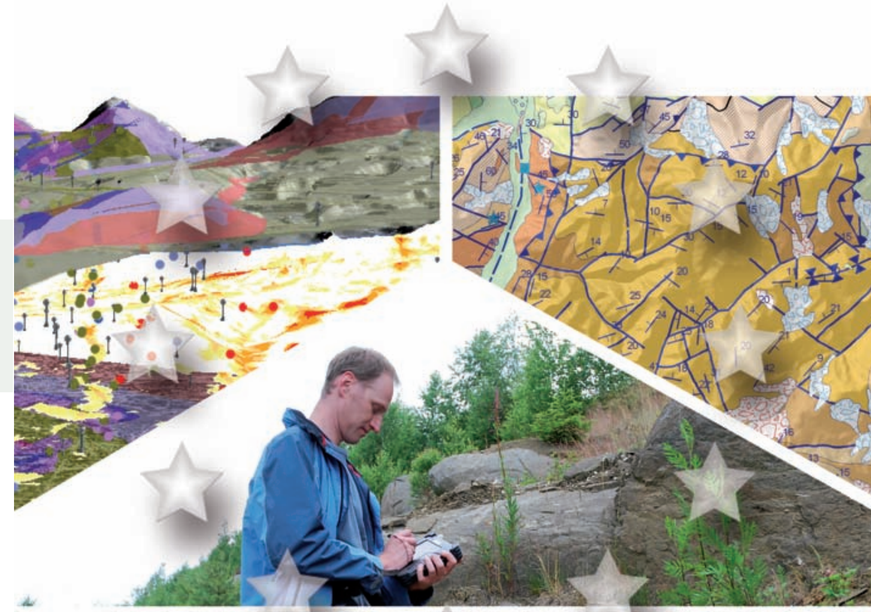
European Regions for Earth Sciences



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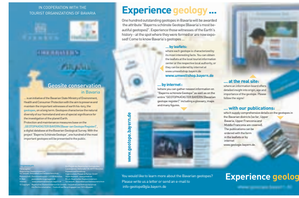
The **Internet** is the most widely used and accepted medium for delivering information fast to a wide community. On **our web sites** you will find geological maps, general geological data and information on many geoscientific questions, such as the origins of the Earth, the evolution of life, natural resources, geo-hazards and our geological heritage.

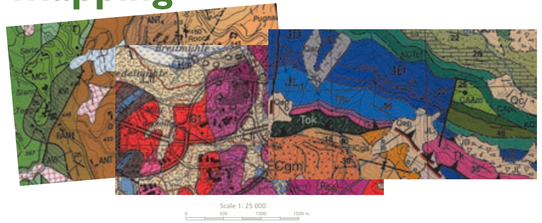
Interactive tools make geological information easier to understand. Information technologies allow, for instance, the

data contained on a traditional paper map to be combined with interactive guides and with other information using attractive and user-friendly visualisation formats. The **interactive geological map of Catalonia** (1:50.000), the interactive web site offering direct access to the **geological and soil maps of Emilia-Romagna** and the multimedia CD **Bavarian geological map 1:500.000** are just few examples of how geological information is made available to the public.

Our geological heritage represents one of the most important, yet overlooked, treasures of Nature. Hence, Bavaria, Emilia-Romagna and Catalonia promote their geological heritage by fostering greater environmental awareness and responsibility. The programme **Experience Geology** reveals to the public 100 Bavarian geotopes representing major steps of the geological history. Emilia-Romagna is engaged in the census of the regional geoheritage and has published the **Map of the geological landscape** (1:250.000). And in Catalonia, the consortium **Geo-Campus** raises public awareness of the origins and history of the landscape of the Pyrenees.



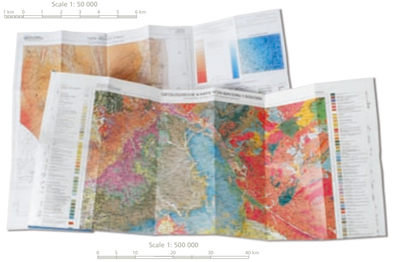
mapping



Scientific maps at various scales are very important tools for economic development and sustainable use of natural resources. Their geological contents provide valuable information on the conditions and treasures of the surface and underground.

Through **basic geological maps** on a scale of **1:25.000**, Bavaria, Catalonia and Emilia-Romagna condense the geology of their territories. These detailed maps are

essential for land planning and sustainable management of human activities within the territory. The long-term objective is to produce basic geological maps using common standards and methodologies, as a first step towards the creation of a common geo-scientific database.



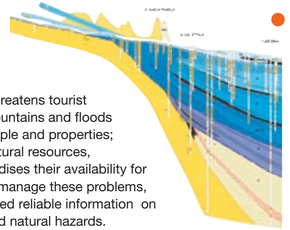
Geological maps display, store and transfer geoscientific knowledge on occurrences, properties and formation of rocks. Catalonia and Emilia-Romagna publish their general geological maps on a scale of 1:250.000 while Bavaria adopts a scale of 1:500.000. Catalonia and Bavaria also produce 1:100.000 scale maps. Additionally, Emilia-Romagna and Catalonia are involved in the respective Italian and Spanish Projects on Geological Mapping on a scale of 1:50.000.

Digital databases enable us to store, process and transfer geological knowledge and facilitate the production of general and thematic geological maps at different levels of resolution. The digital geo-database of Catalonia contains the information related to the 1:50.000 scale maps and is linked with other geographical databases. The digital Bavarian Soil Information System is used as a tool for all soil conservation purposes by scientists and the public alike. The system contains about 25 million single data from more than 125.000 geo-objects and 1000 geoscientific maps of different subjects. Emilia-Romagna has created a digital geo-database containing the information related to the 1:25.000 scale regional maps and, just for the Appennines, to the 1:10.000 scale maps. Established in 1976, the Emilia-Romagna Soil Information System stores a great amount of information on regional soils allowing the production of soil maps on 1:250.000, 1:50.000 and 1:10.000 scales.

hazard evaluation

Natural hazards can cause serious injury to the population and great damage to buildings and infrastructure, entailing high economic losses and human casualties. Intensified utilisation of areas formerly considered uninhabitable increases risks. Assessing hazards and minimising risks is one of the main aims in order to enhance sustainable development and quality of life.

Loss of soil due to degradation and erosion destroys agriculture; coastal erosion threatens tourist areas; landslides in mountains and floods in plains endanger people and properties; over-exploitation of natural resources, including water, jeopardises their availability for future generations. To manage these problems, planning authorities need reliable information on geological settings and natural hazards.



Bavaria, Catalonia and Emilia-Romagna implement technologies and methodologies, providing knowledge for natural hazard assessment to support planning policies. The role of our Geological Surveys is to collect data in the field, to process data through information systems according to scientific evaluation procedures, to present the results in **hazard maps** and to make knowledge available to society.

Natural hazard mapping is the basis for integrated risk evaluation, for defining monitoring activities and implementing mitigation policies. Natural hazard thematic maps are powerful tools for the management of hydrological and other natural risks. They are useful for many applications such as to prepare land, urban and emergency plans, to project specific prevention measures and to provide information to the general public.