Issue 9 January 2013

EuroGeoSurveys NEWS

Index

- **EGS Announcements**
- Going underground – 3D bedrock geology map goes national p. 1
- New challenges in the domain of raw materials: EuroMed Workshop on Raw Materials p. 2
- Regions in the forefront: Raw Materials & Tourism 2012 p. 2
- Extraction of shale gas in Ukraine - Interview with Mr Oleg Proskuriakov p. 3
- New EuroGeoSurveys President p. 4
- New EuroGeoSurveys Treasurer p. 4
- Successful GEO-IX Plenary in Brazil p. 5
- 7th International Symposium ProGEO on the Conservation of the Geological Heritage "Geoheritage: Protecting and Sharing" p. 6
- Interview with José Brilha and Lars Erikstad - President and Executive Secretary of ProGEO Association p. 7
- New way to discovery geology p. 8
- Annual Report 2011 p. 8
- **EGDI Corner** p. 9
- **Message from the Expert Groups**
  - Spatial information Expert Group p. 11
- **National Geological Surveys**
- Interview with Morten Smelror - Managing Director, Geological Survey of Norway (NGU) p. 12
- Interview with Dr. Ştefan Marincea, General Director of the Geological Survey of Romania (GIR) p. 14
- **ETP SMR Corner** p. 15
- **Agenda** p. 16
- Secretariat's agenda
- EU agenda
- **Upcoming Events** p. 19

EUROGEOSURVEYS European Geoscience for Society

The Geological Surveys of Europe

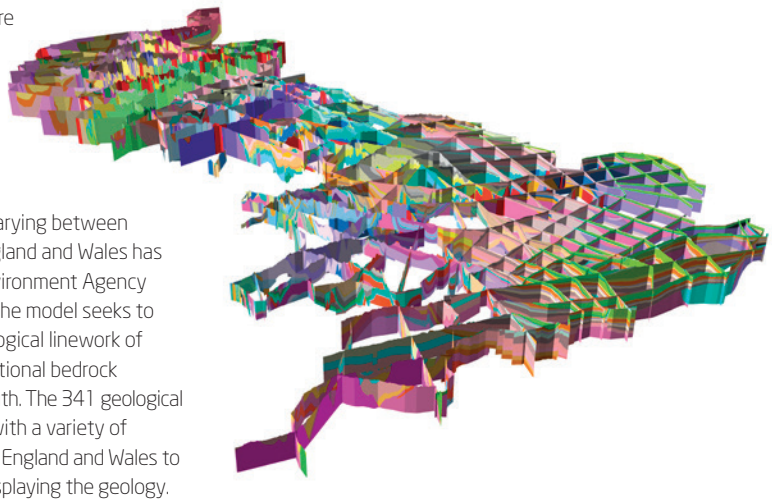
Going underground – 3D bedrock geology map goes national

The geological map of Great Britain has been extended into the third dimension with the release of GB3D by the British Geological Survey (BGS). This model of the geology beneath our feet is made up of a network of cross-sections through the earth's crust of Great Britain. This new way of visualising national-scale geology will benefit all seeking to understand its relationship to landscape and resources (such as water, oil, minerals, coal and gas), and for educators and the public.

The current national-scale geological map of Great Britain represents the rocks found at the surface in two-dimensions. Only a small amount of information is presented at this scale for the geology in the third dimension i.e. that underground. Most geological maps have a single cross-section, which represent a slice through the earth's crust, which shows the relationship of the different rock layers in the ground underneath the area of the geological map.

The new GB3D model has taken newly created digital cross-sections of the bedrock geology across Great Britain and joined them up in a 'fence diagram'. The individual cross-sections were created using the geological modelling software, GSI3D which uses information on the geology at depth from existing models, cross-sections, boreholes and geophysical surveying.

The model covers the onshore area of Great Britain (England, Scotland and Wales) and the Isle of Man and comprises 121 cross-sections with a total linear length exceeding 20,000 km built to depths varying between 1.5 - 6 km. The model of England and Wales has been part funded by the Environment Agency of England and Wales (EA). The model seeks to be compatible with the geological linework of the BGS 1:625 000 scale national bedrock mapsheets, UK North and South. The 341 geological units have been attributed with a variety of hydrogeological properties in England and Wales to create alternative ways of displaying the geology.



Professor John Ludden, Executive Director of the BGS, said: "This new 3D model of Great Britain clearly shows the sub-surface structure of the most important aquifers. Improving the understanding of the 3D geometry of these aquifers will help to safeguard these nationally important water resources. It will also provide a foundation for those seeking to develop new resources such as shale gas and to explore the potential for geothermal heat sources."

Stephanie Bricker, Hydrogeologist at the BGS said: "To manage our water resources effectively, particularly against a backdrop of climatic uncertainty, we need a good understanding of geology at low resolution. We are using GB3B in the Thames Basin to highlight to decision-makers where water is stored and to demonstrate how future predictions about water availability are best made using a model that links all water resources in the river catchment."

The GB3D geological model for Great Britain is available for free as a digital download (either as a 3D PDF, as a Google Earth layer or as part of a free BGS map viewer) from www.bgs.ac.uk/research/ukgeology/nationalgeologicalmodel/gb3d.html.

For additional information please contact Steve Mathers Team Leader for the National Geological Model at sjma@bgs.ac.uk.

New challenges in the domain of raw materials: EuroMed Workshop on Raw Materials

On the 15th and 16th October 2012, the EuroMed Workshop on Raw Materials was organised by DG Enterprise and Industry. This workshop aimed to provide a forum for the EU and sixteen Southern European, North African and Middle Eastern countries' experts to engage around a number of common issues and challenges in the domain of raw materials.

The meeting was opened by Mr Mattia Pellegrini (Head of the Materials, Metals, Minerals and Forest-based Industries Unit, DG Enterprise and Industry) and it was divided into five sessions: Governance; Recycling/Waste Management; Decadmiation of Phosphate Fertilisers; Geological Knowledge/Cooperation; and Investment and Infrastructure.

Mr Luca Demicheli (Secretary General, EGS) presented the 'Opportunities for geological cooperation' under the session 'Geological knowledge and cooperation'. He explained how EuroGeoSurveys (EGS) offers the opportunity to work in joint scientific programmes and he mentioned several examples such as: Geo-Seas, whose goal is to harmonise and spread data from 26 marine, geological and geophysical data centres; EMODNET (European Marine Observation and Data Network), a programme funded by DG MARE, whose goal is to assemble all fragmented marine data; GEMAS (Geochemical Mapping of Agricultural and Grazing Land Soils); EOMINERS(Earth Observation for Monitoring and Observing Environmental and Societal Impacts of Mineral Resources Exploration and Exploitation); and AEGOS (African-European Georesources Observation System).

Mr Demicheli comments during his presentation that there is an equivalent of EGS in Africa, the Organization of African Geological Surveys (OAGS). He also commented that geological maps are a basic tool for countries to take stock of their resources and to attract investors. He added that every Euro invested in geological mapping would yield a return of 12 Euros.

More info: link to the EC website
http://ec.europa.eu/enterprise/policies/raw-materials/international-aspects/euromed_en.htm

Regions in the forefront: Raw Materials & Tourism 2012

With the support of the Geological Survey Department (GSD) and Mines Service of Cyprus, Euromines - the European Association of Mining Industries Metal Ores & Industrial Minerals - organized an international conference entitled 'Regions in the Forefront: Raw Materials & Tourism 2012' with high level participation from the European extractive industry, governmental institutions, geological surveys and academia across Europe. The conference took place on 30th and 31st October in Limassol (Cyprus) and it was an official conference of the Cypriot Presidency of the Council of the European Union. The Conference was under the auspices of the Minister of Agriculture, Natural Resources and Environment of Cyprus, Mr. Sofoklis Aletraris.

The main aim of the conference was to demonstrate that mining and tourism industry can be developed simultaneously for the benefit of European regions. The conference presentations did provide several examples of active mines in Europe and around the world that can be found close to national parks.

In total more than 60 delegates attended this event; Mr Nikolaos Arvanitidis, Chair of the EuroGeoSurveys Mineral Resources Expert Group presented EuroGeoSurveys – Sustaining and promoting the mining heritage of Europe . Also the Director of the GSD made a presentation on Troodos Ophiolite – mining potential of Cyprus – Restoration of the Asbestos Mine – case study.

Nikolaos Arvanitidis
Chair of the EuroGeoSurveys Mineral Resources Expert Group

For more information please visit the conference web page: www.euromines.org/conference/regions-forefront-raw-materials-tour.

Extraction of shale gas in Ukraine

Interview with Mr Oleg Proskuriakov, Minister of Ecology and Natural Resources of Ukraine

The beginning of the extraction of shale gas in Ukraine marks the start of an energy independence from Russia and the end of importing gas that, according to a statement by Foreign Minister Konstantin Grichtchenko and calculations of SHELL, are expected around the year 2030. Is this a concrete result or just a hypothetical goal that has yet to be attained?

The State Geological and Subsurface Survey of Ukraine (SGSSU) was established by the Decree of the President of Ukraine of December 9, 2010 No. 1085/2010 and then its functions and tasks were defined by the Decree of the President of Ukraine of April 6, 2011 No. 391/2011. Furthermore, on April 21, 2011 Ukrainian Parliament has approved the Law of Ukraine on the national program to develop sustainable raw material base of Ukraine up to the year 2030. Coupled together, these legislative documents define the SGSSU strategy and tasks where one of the major points concerns the energy resources. Providing that Ukrainian economy does strongly depend on the fossil mineral fuels, we have indeed to get more and more diversified sources of the conventional fuels, and especially we have to pay even advanced attention to the unconventional energy sources.

Therefore, following this strategy, we have to make more or less reliable assessment of the unconventional fuel resources available as well as the ways forward to develop these resources effectively and properly. The shale gas, in the broad sense, comprises one of the most reliable and affordable direction where we expect fast development and advantages based on the world experience. I would say that this is rather practical than theoretical goal as far as the major international companies are involved in the process and the promising calculation of Shell and other companies are based on their huge practical experience and the data available through the valuable works of Ukrainian geologists.

It is appropriate to say «at full throttle in Ukraine», the country which seems to have triggered a veritable "gold rush", with major energy multinationals (Eni, Chevron, ExxonMobil, Shell) immediately ready to invest in gas production from non-traditional sources in the region. So, can we say all these benefits are a direct result of the extraction of unconventional gas?

I guess we probably can conclude that the worldwide experience attained by the major energy companies provides the good basis for the shale gas development although unconventional gas extraction does actually achieved in some regions only so far. Industrial development of many countries does strongly depend on the energy resources, thus sooner or later the world society will tightly turn to unconventional energy resources, as the common ones will become progressively decreasing. Perhaps, by these reasons the major companies, with their very solid resource base and project portfolios, look far forward nevertheless and currently undertake advanced efforts in this field. Obviously, any additional site of shale gas extraction will strengthen this given direction and we believe that Ukraine will become this point very soon.

There is potential negative aspect to all of this, i.e the environmental impacts that arise from fracking. How can Ukraine avoid or minimize these impacts?

If you take a look at any project for mineral deposit exploitation or the annual report of the mineral extractive company, you will definitely find the strong separate module therein concerned environmental issues. This is an obligatory portion of the modern extractive industry since any mining or petroleum activity brings potential negative environment impact. Nevertheless, since the pre-historic times the mankind goes more and more into mineral exploration and extraction, simply because the minerals are vital for any society, even those who looks "non-industrial" at the first glance.

Mr Oleg Proskuriakov
Minister of Ecology and Natural Resources of Ukraine (former Head of the State Geological and Subsurface Survey of Ukraine)

Environmental aspects should be properly respected anywhere and anytime in the mineral activities, and in Ukraine, the shale gas licenses and permits do normally contain very strong obligations of the companies, including major ones who already have considerable experience in the relevant environmental solutions.

If this particular type of extraction will proceed, the worldmap of energy supply will be revolutionized. The U.S. Department of Energy has published a study performed in 48 regions of the world that draws the distribution of potential reserves of unconventional gas. These reserves would be widely distributed outside of traditional areas, such as Russia and Iran. The primary countries outside of the Ukraine would be: Brazil, South Africa, Poland, Australia and China. In your opinion, what would be the main effects of this revolution and how it would change the relationship between these countries?

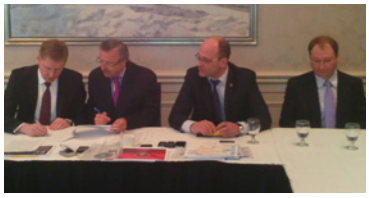
I have to say that the worldmap of mineral extraction and energy supply is very dynamic and it was the XX century when the patterns were changed frequently, sometimes revolutionary indeed, with development of more minerals consumed by the industry.

EGS Announcements

The growth of petroleum regions was probably most prominent although we can find many similarities in other minerals as well especially concerning the base and rare metals. The industry demands in various regions of the world sometimes grow more rapidly than respective mineral supply whereas the latter somewhere may exceed the local industry demands providing considerable export potential. It is difficult to say in what extent the revolutions in mineral supply are fruitful for the global economy and it looks likely sustainable mineral development may give better results.

We suppose the situation in Ukraine is predictable and the mentioned national program of mineral resource base development will be able to balance domestic supply and demand, and this is actually the major goal of this program, as well as the major task for the SGSSU in the coming decade. In some respect, the mineral updates in Ukraine allow production increasing trends, including shale gas in the energy sector, which may become encouraging for the European market. We therefore look forward for the growing interaction with the EU partners and consider the EuroGeoSurveys to be the most suitable platform for extending cooperation between the geological surveys. In the global context, the expertise and research provided by the geological surveys, as the major national geological data holders, will be always in the range of national priorities while the global integration of the mineral studies seems to be vital for the sustainable development of the world economy, the industries and societies.

Shale Gas Meetings - Brazil 2012



Shale Gas Meetings - Canada 2012

Shale Gas Meetings - London 2012

New EuroGeoSurveys President

Since January 2013 Dr. Mart van Bracht, Director of the Geological Survey of the Netherlands and Head of TNO Energy, is the new President of EuroGeoSurveys.

New EuroGeoSurveys Treasurer

Since January 2013 Dr. Josip Halamic, Director of the Geological Survey of Croatia (CGS), is the new member of the Executive Committee of EuroGeoSurveys, covering the function of Treasurer.

Dr. Peter Seifert, Director of the Geological Survey of Austria, has become the new EGS Vice-President.

New Vice-President of the International Union of Geological Sciences (IUGS)

Dr. Marko Komac, Director General of the Geological Survey of Slovenia and EGS President until 31st December 2012, has been appointed Vice-President of the International Union of Geological Sciences (IUGS). Dr. Komac, who has been key in advancing EGS during his mandate, will continue serving EGS as the representative of Europe in the OneGeology Steering Committee.

Successful GEO-IX Plenary in Brazil

Around 350 people including 68 delegations, in representation of the GEO member countries and participating organisations, attended the GEO IX Plenary Meeting, hosted by the Government of Brazil in the city of Foz do Iguacu, the 22th and 23th of November 2012. The plenary, which was preceded by technical and preparatory meetings, was centred on the sustainable continuation of GEOSS at the end of the 10-years Implementation Plan after 2015. GEOSS (Global Earth Observation System of Systems), aims to achieve comprehensive, coordinated and sustained observations of the Earth system in order to improve monitoring of the state of Earth, increase understanding of the Earth processes, and enhance prediction of the behaviour of the Earth system. The contributing systems range across the processing cycle, from primary observation to information production on the specific Societal Benefit Areas (SBAs) - disasters, health, energy, climate, water, weather, ecosystem, agriculture and biodiversity - to the achievement of targets which will allow to confirm the need for such a programme in future years.

Leonel Fernando Perondi, the Director of Brazilian National Institute for Space Research - INPE (INPE) opened the session in the presence of several special guests such as Ms. Kathryn Sullivan, the first American woman to go on a space walk and take part in the mission that deployed the Hubble Space Telescope.

During the meeting all the GEOSS SBAss (disasters, health, energy, climate, water, weather, ecosystem, agriculture and biodiversity) were thoroughly discussed and the actions to be taken to address them for the next year .

Most of the topics require intervention by the Societal Benefit Implementation Board (SBIB), mainly for the development of synergies and the need for instance of more participation at all levels., Also important is the need to find an integrated approach to Tasks in the Task & Component sheets, a better organization of cross-communities interaction workshops, and better communication of GEO activities across related national institutions + support of international policy meetings, COPs of international conventions, UNFCCC, UNCBD, etc. and an expansion of GEO tasks' activities to developing countries.

Great attention was given to Africa. «CBERS for Africa», is an important joint programme Brazil-China, which will provide free images for Africa's countries. In this framework EuroGeoSurveys has informed the Plenary on the fundamental activities that are being carried out by its International Cooperation and Development Task Force., This Task Force is working to improve the cooperation with the Organisation of African Geological Surveys (OAGS), and also aims to unlock the geological data of Africa held by the Geological Surveys of Europe, making them available.

Regarding the GEOSS infrastructure the mains suggestions have been to facilitate efforts to establish a network and leverage investments for in-situ data collection (including joint governance, harmonized observations, common data management practices and unified data access)., Also, to encourage all providers to make datasets accessible online, flag them where possible, and actively contribute to the GEOSS Common Infrastructure development, clarify and confirm contributions and participation in components and tasks, identify areas where crowd-sourcing could significantly support GEO applications and prototype solutions for integrating crowd-sourcing data in GEOSS.

A new Executive Committee composed of African countries (Republic of South Africa and Nigeria) CIS (Russian Federation), Europe (European Commission, Estonia, United Kingdom), Americas (United States, Argentina and Canada) and Asia/Oceania (China, Korea, Japan and New Zealand) will serve GEO for the next period.

Several side events also took place. Mr.Luca Demicheli, Secretary General of EuroGeoSurveys (EGS), presented at the EC side event the activities carried on to build a European Geological Data Infrastructure (EGDI), which is aimed at serving GEOSS too. Several EGS projects (OneGeology, EMODnet-Geology, GEO-Seas, PanGeo, GEMAS, EO-miners, Promine, I2Mine, EuroGeoSource and EGDI-Scope) were thoroughly described raising considerable interest from the audience.

Switzerland offered to host the next GEOSS Ministerial Conference in Geneva inNovember 2013.

Foz do Iguacu waterfalls

7th International Symposium ProGEO on the Conservation of the Geological Heritage "Geoheritage: Protecting and Sharing"

Professionals, researchers and students dealing with geoconservation, geotourism, education, land-use planning and other topics related to the theme of «geoheritage» met in Bari (Apulia, Italy) on September 24th to 28th at the seventh edition of the International Symposium ProGEO on the Conservation of the geological heritage, promoted by SIGEA (The Italian Society of Environmental Geology) and ProGEO (the European Association for the Conservation of the Geological Heritage) (Fig. 1).

The Symposium has been structured in a plenary session and four thematic sessions: 1. Geosites, to discuss the recent developments in geodiversity assessment methodologies and geosites inventories in Europe and, also, to discuss the legal framework supporting geoconservation strategies; 2. Geological heritage and land-use planning, to discuss land-use planning, threats and constraints and to promote the best practices and lessons learned in regional and local land use planning; 3. Geoparks and Geotourism, to encourage a possible convergence between geoconservation and geotourism and to discuss sustainable management policies and geosites exploitation within geoparks; 4. Cooperation and Education; to improve international cooperation and local initiatives for the education and divulgation of science and to establish links between geoconservation specialists, mainly in Mediterranean area.

During the Symposium, important contributions have been presented by Luca Demicheli (EuroGeoSurveys General Secretary) on boosting the EU economy: geology and the tourism sector, Patrick De Wever (IUGS GeoHeritage Working Group Coordinator, Museum National d'Histoire Naturelle, France) on the Geoheritage in France from inventory to geotourism, Mario Panizza (University of Modena and Reggio Emilia, Italy) on Geoheritage and Geodiversity: concepts, methods, examples and management and Cristina Giovagnoli (ISPRA, Italy) on the Geositi project: an inventory for promoting a better knowledge of Italian geological heritage, Lars Erikstad (Norwegian Institute for Nature Research, Norway) on Geoconservation in land use planning, Francesco Geremia (SIGEA, Italy) on the role of the Environmental Geology in the development of Geoconservation management strategies, Gianvito Graziano (President of National Council of Geologists in Italy) on valorization of geological heritage: which opportunities for geologists, José Brilha (University of Minho, Portugal) on geoconservation education, research and outreach: the experience of the University of Minho and Alexandru Andresanu (University of Bucharest, Romania) on learning earth science outside the classroom.

"Protecting and Sharing the Geological Heritage" is a very important point, which follows the phase of individuation, assessment and evaluation. It should be aimed at identifying the most appropriate strategies to ensure the conservation of most significant geosites and all the geodiversity.

We have talked about it and more with José Brilha, Professor of University of Minho (Portugal) and new President of ProGEO, and Lars Erikstad, Researcher at Norwegian Institute for Nature Research (NINA, Norway) and Executive Secretary of ProGEO.

Fig. 1: Symposium poster presentation

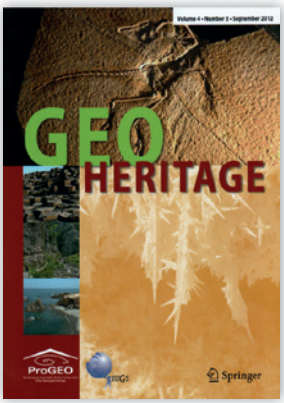


Fig. 2: Geoheritage Journal cover

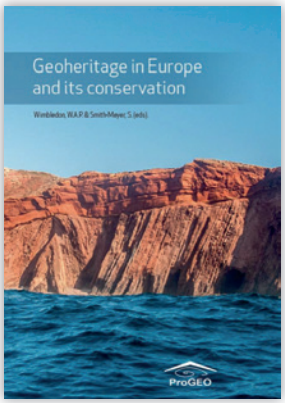


Fig. 3: "Geoconservation in Europe and its conservation" manual cover

PROGEO

ProGEO is the European Association for the Conservation of the Geological Heritage. It is a NGO officially registe red in Sweden since 2000. Nevertheless, ProGEO was formally constituted in 1993, as a consequence of the first European meetings that have started in 1988 in The Netherlands. Today, ProGEO operates through national groups in the majority of the European countries, together with some members located in other continents. It is an association open for everyone to be a member.
The membership fee can be linked to a prescription of the journal GEOHERITAGE. In addition to the Journal, ProGEO issues a newsletter (ProGEO NEWS) 4 times a year and have a lot of information about geoconservation available on its website: **www.progeo.se**.

ProGEO is an affiliate IUGS member, as well as an IUCN member.

Included in the objectives of ProGEO are the promotion of the conservation of Europe's rich heritage of landscape, rock, fossil and mineral sites, to inform a wider public of the importance of this patrimony, and of its relevance to modern society, to advise, in our countries and in Europe as a whole, those responsible for protecting our Earth heritage and to achieve an integrated approach to nature conservation, promoting a holistic approach to the conservation of biological and physical phenomena.

This year a comprehensive study of geoconservation in Europe has been published (Wimbledon & Smith-Meyer 2012. Geoheritage in Europe and its conservation. ProGEO). This book has information from 37 European countries and is the easiest way to get a comprehensive overview over this field in Europe. More information about the book will be found on the ProGEO website (Fig. 3).

Interview with José Brilha and Lars Erikstad

President and Executive Secretary of ProGEO Association

Mr. Erikstad, the ProGEO is deeply engaged in the recognition, categorisation and documentation of sites of geological interest on a unified basis so as to define those sites whose conservation is a matter of European concern. Could you introduce the concepts of "geodiversity", "geoheritage" and geoconservation"?

Simply speaking geodiversity is the diversity of the abiotic elements of nature. It is a term that during the last 10-15 years has been widespread as it clearly has been a need to supplement the term biodiversity with the diversity of the abiotic world. The most widespread definition of geodiversity comes from the textbook "Geodiversity – valuing and conserving the abiotic nature" by Murray Gray: "The natural range of geological rocks, minerals, fossils, geomorphological forms and processes as well as soil features. It includes their assemblages, relationships, properties and systems." Thus Geodiversity together with biodiversity forms the diversity of nature that is so important to us!

Geodiversity is a descriptive term covering all variations in nature. When this diversity are classified in groups and valued, i.e. natural value is designated to large or small parts of the total diversity we start to talk about our geological heritage (geoheritage). Geoheritage is an integral part of the global natural heritage – it encompasses the special places and objects that have a key role in our understanding of the history of the Earth - its rocks, minerals and fossils, and landscapes (ProGEO 2011, The protocol: www.progeo.se). The protection, preservation, management, or restoration of wildlife and of natural resources is normally called "conservation".

"Geoconservation is conservation of the abiotic part of nature i.e. the geological heritage in a restricted sense, geodiversity in a general sense. Geoconservation has a long history in Europe and was an important and integrated part of the early nature conservation movement but has later been more forgotten as biodiversity and species diversity has been the main focus point over the last decades. It is therefore important to raise awareness so that this important part of our natural heritage are not forgotten!

Mr. Brilha, the ProGEO aims to promote the public awareness of Geoconservation and of its applications through the holding of meetings and conferences, and the production of publications. What is your last initiative in this field?

Since 2009 that ProGEO and Springer publish the first peer-reviewed journal fully dedicated to geoconservation. The journal Geoheritage (Fig. 2) has 4 issues per year and covers multidisciplinary studies related with geoconservation. So far, 47 original articles, 13 review articles, and 2 conference reports has been published representing the scientific research developed all over the world (Australia, Brazil, Colombia, Egypt, France, Germany, Greece, Ireland, Italy, Laos, Poland, Russia, Serbia, Slovenia, Spain, Turkey, USA, UK, and Vietnam). Two special issues has also published: Geomorphosites and Geotourism (2011) and Geotourism and Geoconservation (2012).

Mr. Erikstad, the IUCN (International Union for Conservation of Nature) has recently adopted in Korea (6-15 September 2012) a resolution called "Conservation of geodiversity and geological heritage". What is going to change?

The IUCN is the world's oldest and largest global environmental organization. This organization is the most important body when it comes to general policy development and priorities within the nature conservation movement both linked to formal country management as well as NGO's. The issue of geoconservation has been raised in IUCN over the last years and in 2008 on the IUCN general assembly IUCN adopted a resolution called: "Conservation of geodiversity and geological heritage". Here it is clarified that IUCN recognizes geodiversity as the natural diversity of abiotic elements of nature and geoconservation as important in its own right as part of a strategy to conserve the planets natural diversity. It is also stressed that geodiversity also is crucial because it underpins biological, cultural and landscape diversity as it forms the abiotic foundation for life. When the new strategies for IUCN were discussed this year it was demonstrated that a firmer link to IUCN strategies was needed. In the general assembly this year in South Korea a new motion was suggested and accepted. Here all members are urged to actually use the terms nature diversity and nature heritage, talking about nature in general so "geodiversity and geoheritage are not excluded the definition of "biodiversity", as referred to in the IUCN Programme 2013–2016 incorporates explicitly the concepts and terms of geodiversity and geoheritage, when dealing with or referring to all cases of natural diversity and/or natural heritage". Enrique Diaz from Spain and the Geological Society of Spain together with ProGEO has been the driving force in this work, which is important as it places Geodiversity and Geoheritage firmly within all the global important tasks of nature conservation and management.

José Brilha
President of ProGEO

Lars Erikstad
Executive Secretariat of ProGEO

EGS Announcements

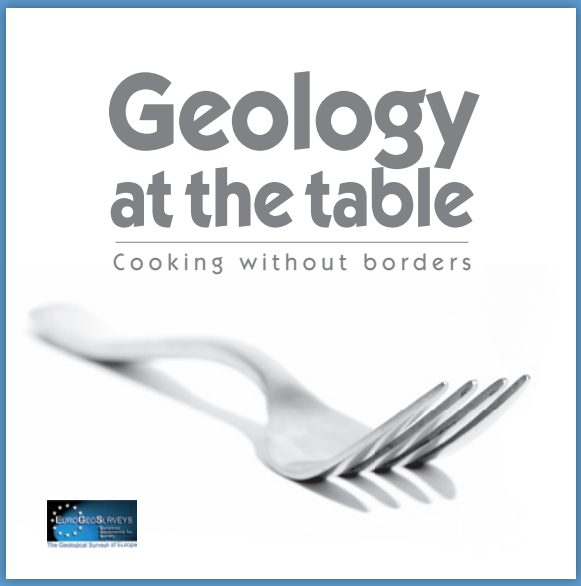
Mr. Brilha, according to your experience on geoconservation management, how do you think ProGEO is contributing to promotion of a co-ordinated European policy for a better management of natural resources?

Geoheritage management in Europe (in fact all over the world) still faces many challenges. In spite of recent developments, there is a continuous need to strength the importance of geoconservation inside relevant international and European institutions (UNESCO, IUCN, IUGS, European Union, etc.). The situation is very different among European countries but for many of them there is an urgent need to promote effective legislation that support the conservation of geological heritage, together with the establishment of national geoconservation strategies supported by active public bodies.
The recent book published by ProGEO ("Geoconservation in Europe and its conservation") clearly demonstrates that there is a heterogeneous situation in Europe. Some countries have already a solid geoheritage inventory and they are now trying to establish common bases to define the geosites with international relevance. ProGEO is engaged in the restart of the Global Geosites Programme in order to promote the inventory of geological heritage of international significance, once an IUGS and ProGEO initiative.

New way to discovery geology

EuroGeoSurveys has published a unique new book to promote the variety of geology that can be found across Europe. This geologically flavoured cook-book is believed to be the first of its kind in the world! 28 European Geological Surveys have shown how their own national dishes contain references to our past, to the present, and to the future, which can easily be analysed and explained through geology.

This cookbook offers you a little taste of geology through wonderful recipes from all around Europe!



Annual Report 2011

The EuroGeoSurveys Annual Report 2011 has been published. It is a useful tool to summarise EGS' activities of the preceding year.

The year 2011 marked the 40th Anniversary of EuroGeoSurveys, which has allowed EGS to look back at the past and see its transformation from a network for Geological Survey Directors to a melting pot of joint research and exchange of scientific competences, up to the current umbrella organisation regularly advising the EU Institutions and at the service of the 33 members to facilitate large pan-European actions. Such a transformation has significantly accelerated over the past few years, especially driven by the increasing demand by EU Institutions for both independent advice and geological data and information, in particular driven by the increasing importance of the raw materials supply policy and the attention given to emerging research needs, such as in the field of unconventional fossil fuels (e.g. shale gas).

Interesting conclusions were revealed when comparing the investment data that show the opposite trend between the individual national governments who, mainly due to the financial crisis, had cut their budgets and were forced to reduce the number of geologists employed, and the European Union showing an increasing interest to consider geological surveys as important partners. Great attention was also devoted to the activities of the EGS Expert Groups throughout 2011, which were regularly approached by EU Institutions to provide advice on European policies.

EGDI-Scope Stakeholder Workshop: next steps to an EGDI

Despite one of Belgiums famous train strikes representatives of Geological surveys from over 20 countries traveled to Brussels to prepare and attend the first Stakeholder Workshop of the EGDI-scope project. The EGS secretariat arranged beautiful venues with a good view of the demonstrating train strikers, the royal Palace and – for Brussels in November - unusually clear blue skies (good day for a strike...). Notwithstanding all this entertainment the almost 50 participants did serious work these two days: taking first steps towards the realization of an EGDI (European Geological Data Infrastructure).

To recall EGDI and EGDI-Scope: the increasing importance of geological information for policy and industry at European and international level has been recognized by the European Parliament and the European Commission, who have called for the development of a common (harmonized) European geological knowledge base. The importance for society can be understood from many actual developments and policy issues, such as shale gas exploration (including environmental effects), availability of (rare) mineral resources in a global economy, management and security with regard to geohazards (seismic, droughts, floods, ground stability), quality of (ground-)water and soil, climate change, etc.

The EGDI-Scope project responds to this, aiming to prepare for a pan-European Geological Data Infrastructure (EGDI), under the umbrella of the FP7 e- Infrastructures program. This EGDI will be a cornerstone for the increased co-operation of 34 European geological surveys, who are preparing to develop a European Geological Service in the future, which will be elaborated in their common strategy papers. The EGDI-Scope project will deliver an implementation plan for the concrete realization of a pan-European Geological Data Infrastructure, providing a geological knowledge basis connected to the issues mentioned before, and in addition providing a platform for continuity of portals and datasets from a large number of relevant past, ongoing and future European projects that have geological components.

The main target groups are European policy makers and decision makers from (international) industry, and - more secondary from this perspective - research communities and the general public.

To deliver a solid implementation plan for an EGDI at the end of the project stakeholder involvement is of main importance to organize necessary input and commitment. The EGDI-Scope team prepared two models for stakeholder involvement: a Stakeholder Panel and a Stakeholder Forum. Candidates for the Stakeholder Panel should represent a wide range of relevant 'use cases' (complete chain from data acquisition, management, interpretation and delivery to concrete decision support) and important user communities, and act as an advisory board for the duration of the project, reviewing and delivering input to some main reports and publications. Because we have already a good representation of the European Geological (Survey) "community" through the survey representatives for EGDI-scope and members of EGS expert groups, the objective is to involve as much as possible 'external' stakeholders in the Panel. From this perspective these are candidates with good connections to European policy development (including policy and funding programs), or important stakeholders from industry. As it is very common in projects at the science – policy (or industry) interface a lot of effort is needed to organize such involvement.

And then we are back to this first Stakeholder Workshop under the blue skies of Brussels at 14 November (and a preparatory meeting at 13 November). With much effort – including a very complex meeting scheme with different venues, different overlapping groups of participants and dinners with preceding cocktail meetings for special invitees (obliging some project members to attend at least four different drinking moments on a day...) - the EGDI-Scope project team managed to attract some very relevant Stakeholder Panel candidates: from the EEA (European Environmental Agency), from DG JRC (Joint Research Centre, Unit Digital Earth and Reference Data), from DG ENTR (Enterprise and Industry; connection with Raw Materials Initiative and GMES), from ESA (European Space Agency, with regard to Earth observation programs) and from Insurance Europe (representative body for European Insurance companies).

For the other group, the Stakeholder Forum, the approach is a little bit easier: candidates can be everyone who is interested or considered important for the development of an EGDI - either because they represent a potential user community, or because they possess valuable knowledge for the project or because they are potential future suppliers of data and information for the infrastructure. Using these criteria it may be clear that we received a larger group of enthusiastic participants for the Forum than for the Panel, including many of the representatives of the Surveys and expert groups themselves, because they have – for example - valuable experience from relevant European projects. I may put this a little bit comical here, but it shows the confusion that very often arises when organizing stakeholder involvement: demand (users) is hard to catch, suppliers are easily involved; both are relevant, but how to organize the balance?

From this perspective the sessions delivered very valuable and practical experience: participants were from both parts of the supply – demand chain, and everything in between (e.g. data and information providers who also take the role of users). It delivered a clearer view of how different groups with different institutional backgrounds and mandates could be involved in connection with their particular interests in different items of an EGDI. So, this complex process is how stakeholder involvement really looks like, and the challenge for the project team is how to adapt the Stakeholder Panel and Forum approach to this reality in the next stages of the project.

Enough about process, now about content. The morning of the Stakeholder Workshop was spent to introduce EGDI-Scope and its proceedings, and to receive feedback from participants (Stakeholder Panel candidates, survey representatives, expert group members and Stakeholder Forum participants, in most cases representatives from European projects and initiatives).

After a general introduction to the objectives and components of EGDI-Scope, EGS and relevant strategic and policy context, there were presentations about the review of relevant projects (80!) and the connected technical aspects, data infrastructures and architectures. Participants were also introduced to the approach according legal aspects, and the interactive project communication possibilities via intranet. Mr. Slavko Solar from DG ENTR presented an example of a clear and important use case, connected to the need for geological data from the raw materials sector.
The very informative presentations and project reports are now available via the website (www.egdi-scope.eu).

The breakout sessions in the afternoon were the core of the Stakeholder Workshop. The 3 groups were asked to focus on one of the following thematic areas, and to discuss the most important use cases, connected actual geological information sources, and possible requirements for EGDI (functional, technical, legal):

1. Earth resources

2. Geohazards

3. Other thematic areas
   - Soil/ climate/ environment/ health
   - Water/ Hydrogeology
   - Oceanographic/ Marine
   - Environmental chemistry/ geochemistry

It may not be surprising that focus was somewhat problematic in first instance, especially in the third group... However, the outcomes of these sessions and the Workshop as a whole are very valuable for the next phases of the project, where we need to prioritize, elaborate and communicate the most relevant (categories of) use cases and connected functional, technical and legal requirements with regard to relevant datasets, including their governance and funding options (please read this sentence again, it's very informative with regard to the project agenda...). Most of the outcomes can be read from the Workshop report of the breakout sessions (see website), but we describe some (additional) highlights here:

- DG ENTR has quite clear expectations from an EGDI and the cooperation between the European Geological Surveys from the perspective of the EU Raw Materials Initiative and the connected European Innovation Partnership. Cooperation with a number of projects like ProMine, EuroGeoSource, ERA-MIN or EO-MINERS is relevant;

- An EGDI implementation plan includes an EGDI Roadmap;

- Define and organize clear responsibilities between EGDI-providers (e.g. 'scientific quality') and user groups like public agencies (e.g. 'interpretation');

- Insurance companies are relevant stakeholders; they request freely available data, free of charge. Public agencies are responsible for prevention issues, e.g. connected to geohazards. It is not likely that insurance companies invest in the realization in (parts of) an EGDI.

- Clarify harmonisation and standardization issues, probably different per thematic area and user community

- At this stage of the EGDI-Scope project, the following generic requirements for an EGDI can already be derived, as starting point for follow-up analyses:

  - INSPIRE compliance, with regard to EGDI components like: metadata architecture and harmonisation, data storage, sustainability and governance, data delivery, etc.

  - Thematic focus and classification to be decided, connected to relevant use cases at EU or international level, e.g. concerning geohazards and earth resources (shale gas, minerals)

  - Priority datasets:
    - Already available datasets at national geological surveys
    - Datasets and information from relevant European projects and initiatives (list of 80)
    - freely available datasets, in some cases possibly also restricted datasets
    - Ranging from raw data to integrated (decision support) models, depending on what providers can deliver and requirements from different use cases and user communities involved.

- Target groups: EU-policy makers, industry, research community, general public

- Adapt to actual legal frameworks as far as feasible

- Integration with global networks (GEO, GEOSS, OneGeology, etc.) and 'greater' Europe (Russia, Ukraine,...)

- Develop governance and funding scenarios to provide continuity.

Finally, it is important to mention also a closer collaboration in the near future between EGDI-Scope and EPOS, which is the well-known long-term European integration plan for national research infrastructures within the domain of solid earth sciences.

All the items mentioned above can be easily translated into challenges for the further development towards an EGDI.
To be continued in 2013...

Rob van der Krogt
Project Coordinator

Spatial information Expert Group

From the date of its creation, the prime mission of the Spatial Information Expert Group has been to coordinate the contribution of EuroGeoSurveys to the INSPIRE implementation. While the implementation phase is now well on track, the SIEG will focus on a coordinated and efficient implementation of INSPIRE by the EGS members that will facilitate the design and development of the EGDI (European Geological Data Infrastructure), a strategic objective of EGS.

INSPIRE update

In July 2012, the INSPIRE thematic working groups delivered to the Commission draft documents for the data specifications of annex II and III data themes. EGS experts have been deeply involved in the development of those specifications (in particular for geology and mineral resources themes). These documents have been reviewed by the Commission services, and are currently being translated in the national languages. They are very close to the version submitted by the thematic working groups. The formal adoption of the data specifications should happen in 2013.

The technical implementation of the specifications should not be a major issue for the surveys, as they have been involved in their preparation, and have demonstrated through OneGeology-Europe a preliminary implementation which is very close to the final requirements. However, as the INSPIRE data specifications mainly describe the "core data model", an efficient and useful implementation will require the use of "extensions" to the core data model. Those extensions will not be mandatory, but will be of the responsibility of the communities to develop and adopt. EGS, through the SIEG will therefore have a major role to play to ensure a coordinated definition and adoption of extensions that will make possible to deliver added value data products. The contribution of EGS members to the development of standards will also take place in international groups such as the new joint group between OGC and IUGS/CGI for GeoSciML, or potential working groups on 3D standards.

From OneGeology-Europe to EGDI

The evolution from OneGeology-Europe to a full EGDI will be developed in different steps.

For the short and medium term, the OneGeology-Europe portal is confirmed as the main window to EGS pan-European datasets. The portal and its catalog are maintained by BRGM and CGS with a financial contribution of EGS. Moreover, the portal integrates datasets from different projects (currently EMODNET, PROMINE, PANGEO). The EGS Directors decided in September 2012 to launch the OneGeology-Europe+ initiative, under the leadership of CGS. The objective of this initiative is to extend the geographical coverage of the portal to all the members of EGS, by applying the same methodology as the one developed through the OneGeology-Europe project. The project will be fully funded by EGS members (no budget from the Commission).

On a longer perspective, the design and development of a complete infrastructure has been identified as a priority of the EGS strategy. The infrastructure has been named EGDI (European Geological Data Infrastructure). EGS has been successful in getting funding from the Commission, through an FP7-Infrastructure call, for an "EGDI-Scope" project (led by TNO). The project was kicked off in June 2012 for 24 months. This scoping project aims at defining scenarios for the EGS Directors for implementing an infrastructure. It will explore the thematic priorities, its technical specifications as well as the governance and legal issues. It will also define the possible relationship between EGDI and other scientific / research / thematic infrastructures, such as EPOS or GEOSS.

Of course, the connection between EGDI and existing projects (such as Emodnet, Terrafirma, InGeoClouds, EuroGeoSource, Promine,...) will be developed with the objective to provide a "permanent" infrastructure to "temporary" projects.

The role of the SIEG will be central for the success of the INSPIRE implementation, and for the development of EGDI. The SIEG members constitute the best technical resource to make sure that the proposed developments are relevant, feasible and sustainable. They will continue to work in partnership will the other EGS Expert Groups.

Francois Robida
Spatial Information Expert group Chairman

Interview with Morten Smelror

Managing Director, Geological Survey of Norway (NGU)

Like all the members of EuroGeoSurveys, NGU works with very many themes. One obvious topic is your tremendous contribution to European geochemistry, especially through NGU's leadership of the EGS Geochemistry Expert Group. What are your other specific priorities?

One of our primary goals is to contribute towards sustainable value creation from geological resources. Increased global demand for raw materials has led to greater interest for mineral resources in Norway. In recent years we have increased our effort to achieve a better documentation of our mineral resources. We are currently in the middle of an exciting four-year program of acquisition of basic geological, geophysical and geochemical data in northern Norway, primarily aimed at providing a better basis for prospecting for mineral deposits. From 2013 a similar program will be started in southern Norway. These programs, following on the introduction of a new Mining Act in 2010, have led to a dramatic increase in prospecting in Norway.

What is EuroGeoSurveys' impact in this matter?

EuroGeoSurveys has given valuable information on mineral resources to the EU commission that has drawn up the EU Raw Material Initiative. Europe has a huge need for traditional and new mineral resources. European industry uses more than 20 per cent of the world production of important metals, but mines in the EU countries produce only three per cent. China's dominance in many ore and mineral markets has led to a geopolitical situation where known but unexploited reserves come to the forefront again and new mapping starts. The EU considers Fennoscandia and the Barents Region as one of the most promising and prospective areas with the potential to meet a larger part of Europe's demand for important ores and minerals. EuroGeoSurveys is an important forum for developing European cooperation on both research and the use of geological data.

NGU has long experience in overlooking the supply, demands and reserves of mineral resources both nationally and together with our colleagues in Sweden and Finland. We are excited by the prospects of further expansion of these activities in Pan-European cooperation amongst EuroGeoSurvey's members, as well as in Circum-Arctic cooperation with our colleagues in USA, Canada and Russia.

NGU is committed to contribute to the strengthening of our European collaboration. EuroGeoSurveys is instrumental in facilitating this development. The Geochemistry Expert Group has conducted great and innovative mapping projects, as has the Marine Geology Expert Group.

Morten Smelror
Managing Director, Geological Survey of Norway (NGU)

'Geology for society' is a motto for NGU. What does that mean for you and what is your vision for the future?

NGU helps to create and secure values in the community and for individual people. We do this by collecting, processing and disseminating knowledge of the physical, chemical and mineralogical properties of the bedrock, superficial deposits and groundwater in Norway. We map Norwegian land and sea areas. We develop and operate national databases and map series about geological properties and processes. We carry out applied research and develop methodology in geology and geophysics. We give advice and disseminate all the knowledge and information we have gained after producing and supplying

»

Geological Survey of Norway in brief

Geological Survey of Norway (NGU) is the leading national institution for knowledge of bedrock, mineral resources, superficial deposits and groundwater. NGU is a government agency under the Ministry of Trade and Industry.

NGU must ensure that geological knowledge is utilised for efficient, sustainable management of the nation's natural resources and environment. As a research-based management agency, NGU also advises experts in other ministries on geological matters.

Under the vision "Geology for Society", NGU provides better maps and organises quality-assured geological information in national databases. Its activity is aimed at the following main objectives:

- Long-term added value from geological resources
- Increased use of geosciences knowledge in land-use planning & development
- Better knowledge of geological development and processes in Norway
- Good management and customization of geological knowledge
- Good communication and dissemination of geological knowledge
- Improving effectiveness through cooperation

geology for society for more than 150 years. As a part of the efforts we also place emphasis on improving cooperation with regional and local authorities to meet their need for geodata and processed knowledge to apply in developing business and industry, using land in the best way and managing the environment.

I often quote the Chinese thinker and social philosopher, Confucius (551-479 BC). He believed that "the essence of all knowledge is to own it". But we have to crave higher goals: It is not enough to own the knowledge. It must be shared.

Sharing of knowledge extends, increasingly, beyond national boundaries. EuroGeoSurveys itself, is an excellent example as is the cooperation between the Nordic geological surveys and sister organizations in NW Russia. A further dimension has been added with the establishment of cooperation between the geological surveys involved in the Arctic region, N of 60oN. So far this cooperation has led to bedrock geological, aeromagnetic, gravimetric and tectonic compilations. The participating organizations have now begun work on the Circum-Arctic Mineral Deposit project which aims to develop a web portal, map and publications on the major metal and industrial mineral resources in the Arctic.

Talking about future trends, how do you think geological surveys need to improve in the field of technology to stay competitive?

New technology for acquisition and processing of geophysical data has led to enhanced quality, more efficient data collection and quicker access to important data and information for users in industry, research institutes and decision-makers in different fields. People mapping in the field have also begun to use new technology. Electronically based background data and robust laptops make fieldwork more effective and reduce the time needed to make the data ready for the users. We must share in and foster these developments.

The Geological Survey of Romania (GIR)

Interview with Dr. Ştefan Marincea, General Director of the Geological Survey of Romania (GIR)

What is the role and potential of the Geological Survey of Romania?

The Geological Institute of Romania is a quite complex organization, in spite of its institutional organization as a research institution. Actually, the institution is organized as National Institute of Research-Development in the fields of Geology, Geophysics, Geochemistry and Remote Sensing, but a long history and a huge patrimony transform the institution in the key master of the Romanian geology. GIR was founded in 1906, by the Royal Decree of His Majesty, the King Carol I of Romania. A constellation of valuable scientists in the field of the Earth sciences, such as Ludovic Mrazec (the author of the theory of the piercing folds in salt and the first director of the Geological Institute of Romania), George Munteanu-Murgoci (the first to argument the theory of the nappe structure of the South Carpathians), Lazăr Edeleanu (the author of the theory of the petroleum cracking) were the prominent members of the first staff.

The main purpose of the institution was the geological mapping of the national territory, to which other activities (agricultural geology, geophysics, geochemistry, civil engineering, sedimentology) have been successively added. After several transformations, the institution was refunded as GIR in 1996 and is currently under the supervision of the Ministry of Education and Research – the National Authority for Scientific Research. According to the Government Decisions no. 1070/2000 and 1399/2005, GIR has to exercise attributions of a National Geological Survey, which would provide organizational, administrative and public capitalizing of the National Fund of Geological data, preserving and utilizing drilling cores, minerals and rocks collections, as well as monitoring the environment in mining areas.

The institute also has two other divisions:

- the National Museum of Geology, performing activities such as fundamental research in paleontology and mineralogy, education in earth-sciences and museology.
- the National Geomagnetic Observatory at Surlari - Caldarusani, a reference national station for the magnetic maps and national point of reference for the geomagnetic field, included in the international INTERMAGNET network of geomagnetic observatories and performing fundamental research in geo-magnetism, with applications in magnetic prospecting.

The patrimony is important: the institution owns a huge library, of more than 300.000 volumes (the most important in the field of earth sciences from the South-Eastern Europe), a depository of geological maps with more than 8500 maps from different countries, many laboratories (the most important being these of radiometry, geochemistry, study of surfaces, mineralogy and paleontology), the National Geological Archive (with a documentary fund of over 30.000 unpublished geological reports, studies of synthesis and prognosis, research and survey projects, lithostratigraphic lexicons, mineralogical and paleontological atlases), but also the National Depository of Drill Cores. This one preserves a representative collection of deep geological rock samples, which come mostly from structural drilling holes from the Romanian territory, but also from about 700 drilling holes of economical interest. About 60 km of drill cores, selected as illustrative by experts are representative for about 60.000 km of real drilling.

What are the tasks and specific activities of the institution?

By law, the main tasks of the GIR include:

- fundamental and applied research, technological development in geology, geological studies and prognoses of public and national interest
- deciphering the geological constitution, structure and evolution of the Romanian territory
- drawing, editing and printing geological, hydrogeological, geophysical and geochemical maps at various scales, for the entire Romanian territory
- unraveling and delimiting areas with mineral deposits
- elaborating methods, procedures and geological and geophysical technologies, including remote sensing and geochemical mapping, in order to identify areas with mineral deposits, geothermal waters and geological hazards, or polluted areas due to industrial activities, mainly mining and oil exploitation
- developing international cooperation in the fields of geology, geophysics, geochemistry and remote sensing.

In fact, the specific activities are much important and various, being actually focused on the regional geo-cartography systems in digital format; setting of the basis for prospecting, exploration and territory management planning works; assessing, monitoring and managing mineral resources; assessing risks and settling mitigation norms of natural hazards effects; drawing applications of remote sensing in geosciences; analysis of sedimentary basins in order to establish the conditions for accumulation of hydrocarbons, coal and geo-thermal resources; reconstruction of climatic changes based on the temperature-depth records in drill-holes or on paleontological data; drawing regional geological and geophysical syntheses for location of nuclear or other waste repositories; drawing of landslides hazard assessment maps in specific areas; updating and digitizing of the geological and geophysical maps of Romania; elaborating specific mineralogical, radiometric and geochemical studies on ores, industrial mineral or mineral-processing deposits of interest; estimation of the hydrocarbon potential of the main sedimentary basins from Romania; study of the environmental impact of mining wastes and on water contamination downstream old mines; »

study of the groundwater geochemistry in areas with salt deposits; elaboration of structural maps for ecological rehabilitation of mining areas, using GIS techniques; computerized storage and re-evaluation of the mineral resources potential in Romania.

What about the future of the Geological Institute of Romania?

As regarding the mineral resources, Romania is one of the richest countries in Europe. Our country has very important resources of oil and gas, gold, copper, industrial minerals (e.g. salt, gypsum, high-purity quartz, dolomite, pyrite, feldspar, etc.), mineral waters, coal, a huge geothermal potential. Romania has also important problems related to the seismic activity, the management of environmental risks related to the old exploitations and to geohazard. The increasing role of our institution in the field of geological resources and risk mitigation needs, in my opinion, a new organization and a new law. In fact, Romania has not yet a Law of the Geological Survey and the last forms of the Mining and the Petroleum Laws ignored the Geological Survey as a strategic organization, very important for the development of the country and natural allied of both mining and petroleum companies and of the National Agency for Mineral Resources, acting as Mining Bureau.

I'm sure that the new and important discoveries in the fields of oil and gas deposits (particularly off shore, on the Black Sea Shelf), of gold deposits (we estimate the presence in only the Gold Quadrilateral from Apuseni Mountains of more than 8 big deposits, of more than 5 million ounches each) will bring in the actuality the re-organization of our institution. We intend to be again the "first counselor of the Government in the fields of soil and underground" as stated by the Royal Decree in the 19th of July 1906, and more and more people in our political class agrees with this necessity.

Dr. Ştefan Marincea
General Director of the Geological Survey of Romania (GIR)

ETP SMR Corner

European Technology Platform on Sustainable Mineral Resources

I2Mine General Assembly

The I2Mine project has now been up and running for just over a year and the annual meetings of the Management Committee, Advisory Board and the General Assembly were held at the end of October 2012 in Kiruna, Sweden, courtesy of LKAB. The project is an initiative focused on the technological challenges the mining industry is currently facing including the exploitation of ever deeper deposits and the aspiration for an invisible, safe, zero impact mine. The project involves a consortium of 27 companies and academic institutions from 10 European countries, led by LKAB over a period of 4 years.

The General Assembly provided the partners with the opportunity to present the progress that had been achieved over the last year and to catch up with colleagues and exchange thoughts and ideas. In the main, the time had been used to establish logistics, carry out background research and start developing the concepts that will underpin the design of the new techniques and technology for deep mining activities. The meeting was held in the LKAB visitor centre located 540 meters underground in the Kiruna iron ore mine. The delegates were later given the opportunity of visiting the mine.

The Management Committee, which is made up of the Work Package leaders, the Co-ordinator and the Project Manager, met to discuss management issues and the overall status of the project programme. The outcome of this dialogue was that all work is on track and no significant difficulties are foreseen.

This was the first meeting of the Advisory Board which is currently made up of 10 external experts with the remit of linking the project with the outside world, assessing the project progress and advising on corrections or modifications in the project work. The Chair of the Advisory Board presented the General Assembly with a number of preliminary recommendations mainly dedicated to particular technical items of the work packages. However, the Advisory Board considered the work and objectives of I2Mine as being so important that they recommended that every effort is made to ensure international information exchange. The project is well timed to meet global needs although deep mines in Europe are not as 'deep' as those in some other parts of the world.

For additional information about the I2Mine project:
www.i2mine.eu - pm@i2mine.eu

Secretariat's agenda

17-18 January
Luca Demicheli at EUREGEO Congress Organising Committee meeting in Barcelona

21 January
Mart van Bracht, EGS President, paying official visit to Elias Ekdahl, GTK Director General, in Helsinki

22-23 January
EGS Spatial Information Expert Group (INSPIRE) meeting in Brussels

23 January
Asko Kapyaho, EGS Expert for the European Innovation Partnership on Raw Materials (EIP RM) at EIP RM Sherpa Group meeting in Brussels

25 January
EGS Water Resources Expert Group meeting in Brussels

29 January
EGS Soil Resources (Superficial Deposits) Task Force meeting in Hannover

4-5 February
30th EGS National Delegates Forum and Expert Groups Chairs meeting in Brussels

12 February
Mart van Bracht, EGS President, at European Innovation Partnership on Raw Materials (EIP RM) High Level Steering Group meeting in Brussels

18-19 February
Luca Demicheli at PanGeo Progress meeting in Paris

19-20 February
Luca Demicheli at IUGS Executive Committee at UNESCO in Paris

28 February - 1 March
Patrick Wall, EGS Scientific Policy Officer, at EU Joint Programming Conference 2013 in Dublin

26-27 February
Luca Demicheli and Claudia Delfini, EGS Communication Officer, at EGDI-Scope Executive Committee meeting in Rome

4-6 March
Luca Demicheli at European Environment Agency 'Eye on Earth' Conference in Dublin

19-20 March
EGS General Meeting in Brussels

EU agenda

The Next Environmental Agenda

The EU is not on track to meet many environment-related targets, which is why a new Environmental Action Programme (EAP) identifying nine priority objectives to be reached by 2020 has been proposed. The EAP does not propose new targets; rather it puts forward a coordinated overarching framework for future environment policy, and makes several calls for action. It also aims to clarify to policy makers, businesses and industry the main environmental challenges facing Europe, and what actions need to implemented.
The proposal is the form of a Decision, which must be adopted by Council and Parliament, and is not accompanied by a Communication. The EU is committed to achieving a low-carbon, resource-efficient green economy in which natural capital is protected and citizens' health and safety ensured. EAPs, which have been in place since early 1970s, are adopted with a view to guiding and coordinating EU and Member State action in environmental policy making.

The timeframe of this particular programme is aligned to the multi-annual financial framework 2014-2020 and other key strategies, including the Europe 2020 Strategy, to ensure its timely implementation. At the same time, the year 2050 serves as a reference point for longer-term action, beyond 2020. This is because the final evaluation of the previous 6th EAP concluded that in some cases, a ten-year timeframe is simply too short to properly assess improvements on the ground.

The 7th EAP proposal aims to address:

- The remaining environmental challenges ahead in line with Europe 2020 Strategy. These are identified as biodiversity loss, climate change, waste, natural resource management, water, air quality and chemicals, where progress has been mixed

- New opportunities in the area of green growth. Environment policy should make a strong contribution towards smart, sustainable and inclusive growth, says the Commission

- The global dimension of environmental action based on Rio+20.

The EU wants to ensure that an ambitious legally binding global climate agreement covering all countries is adopted by 2015 and comes into force by 2020.

Source: www.EUIssueTRacker.com

Member states to vote on Commission's Water Blueprint

The Commission wants water policy to be a priority during 2013.

The year's final meeting of environment ministers from the European Union's member states will feature just a single vote, on water policy.

On Monday, 17 December 2012, the ministers adopted conclusions on the European Commission's blueprint to safeguard Europe's water resources, released earlier this year. The Commission says that water policy should be a priority during 2013. The conclusions will call on member states to take the measures outlined in the blueprint into account when dealing with all policies that might affect water.

Ministers will hold their first debate on the Commission's proposal for a seventh Environmental Action Programme. They will also discuss ideas to make the European semester – the EU's yearly cycle of economic-policy co-ordination – more environmentally friendly.
The results of The United Nations climate summit in Doha which occurred the week of December 10th 2012 will also be discussed.

Cyprus, which holds the rotating presidency of the EU's Council of Ministers, will give updates on progress with new priority substances that are to be restricted in water, the environmental assessments directive, and a mechanism for monitoring and reporting greenhouse-gas emissions.

Source: Dave Keating, www.EuropeanVoice.com, 13/12/2012

European Commission Water Blueprint available online

The objective of this Blueprint is to ensure that a sufficient quantity of good quality water is available for people's needs, the economy and the environment throughout the EU.

It outlines actions that concentrate on better implementation of current water legislation, integration of water policy objectives into other policies, and filling the gaps in particular as regards water quantity and efficiency.

The Water Blueprint is closely linked to the EU's 2020 Strategy and to the 2011 Resource Efficiency Roadmap although it is expected to shape EU water policy in the long run.

http://ec.europa.eu/environment/water/blueprint/index_en.htm
Source: www.eurogeologists.de

The European Commission to sign protocol against offshore pollution in the Mediterranean

Offshore installations in the Mediterranean Sea will in the future be evaluated periodically in order to prevent hazards and to reinforce the response capacity of the European Union. Parliament has given its consent for the ratification of an «offshore» protocol under the Barcelona convention against pollution in the Mediterranean. The Offshore Protocol aims to increase safety measures, establish liability and compensation requirements, as well as a better coordination between the contracting states. It is part of the 1976 Barcelona Convention against pollution in the marine and coastal regions of the Mediterranean.

www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2012-0319&language=EN
Source: www.eurogeologists.de

European Parliament Resolution on shale gas adopted

MEPs state in their resolution adopted on 21 November 2012 that robust rules on fracking are required in view of the emergence of exploration for shale oil and gas in some EU countries. Member states should further be «cautious» about permitting exploitation of unconventional fossil fuels pending further analysis of whether EU-level regulation is appropriate. The Parliament rejected an amendment tabled by MEPs from different political groups urging Member states not to authorize any new fracking operations in the EU.

www.europarl.europa.eu
Source : www.eurogeologists.de

EU agenda

Towards better prevention and response against natural and man-made disasters

Thanks to new legislation in the field of disaster prevention and response adopted by the Environment and Public Health Committee's draft decision on 30 November 2012, Members States should soon be able to better coordinate their actions within and outside the EU. The new legislation should enhance voluntary-based cooperation for civil protection between Member States and new instruments such as the European Response Centre should improve the response capacity in terms of disaster management. This new Mechanism is a merger of the two existing instruments responsible with civil protection: the Civil Protection Mechanism and the Civil Protection Financial Instrument.

Source: www.eurogeologists.de

EC Consultations

Consultation on Ensuring sustainable development globally: EU follow-up to Rio+20
The objective of the consultation is to provide input to the European Commission for the development of specific actions and measures. It will serve as input to a Communication from the Commission on Rio+20 follow-up, planned for the first half of 2013.
The consultation is also a complement to the Public Consultation «Towards a post-2015 development framework».

Open from 16 October 2012 to 15 January 2013
http://ec.europa.eu/environment/consultations/rio20_en.htm

Consultation on options for revision of the EU Thematic Strategy on Air Pollution and related policies
The objective of the consultation is to gather views on the review of the EU's Thematic Strategy on Air Pollution and on the possible options identified by such review for a comprehensive air pollution policy package that would aim to ensure full implementation of the existing legal framework and make further progress to reduce the negative impacts of air pollution in the longer term. This consultation marks the final stage of a broad consultation on the review of EU air policy foreseen to end in 2013 at the latest.

Open from 12 December 2012 to 4 March 2013
http://ec.europa.eu/environment/consultations/air_pollution_en.htm

Consultation on structural options to strengthen the EU Emissions Trading System
Stakeholders and experts in the field of the European carbon market are invited to comment on the structural options and views reflected in the report «The state of the European carbon market in 2012», which serves as the consultation document. There is no additional questionnaire.

In order to assist the Commission in its evaluation of your contributions, it would be appreciated if you could maintain the numbering of the options, when commenting on the options in the report. Please indicate the expected impact of individual structural options, including on:

- emission reductions;
- ability of the EU ETS to meet the EU long-term target of an 80-95% reduction in a cost-effective manner
- your activities or the activities of the business under your jurisdiction, including estimated changes in compliance and administrative cost
- employment and households.

Please also state the reasoning behind your comments and any evidence supporting it.

Open from 7 December 2012 to 28 February 2013
http://ec.europa.eu/clima/consultations/0017/index_en.htm

Upcoming Events

24th Colloquium of African Geology (CAG24) + 14th Congress of Geological Society of Africa (GSAfI4)

From : 08.01.2013 Till : 14.01.2013
Location : UN Conference Centre, Addis Ababa, Ethiopia

The «Colloquium of African Geology» (CAG) is a major biennial meeting organized under the auspices of the Geological Society of Africa (GSAf). Since the first colloquium in 1965, this Colloquium has been hosted by several European and African countries. The African countries that had a chance to organize this event were Swaziland, Zimbabwe, Morocco,Mozambique, Tunisia and South Africa. Based on the decision of the Geological Society of Africa (GSAf) General Assembly held on 14 January 2011 at the University of Johannesburg, South Africa (during the 23rd Colloquium), the organization of the next Colloquium of African Geology (CAG24) as well as the 14th Conference of the Geological Society of Africa and the 40th Anniversary of the Geological Society of Africa (1973-2013) was assigned to Ethiopia.

This will be conducted at the United Nations Economic Commission Conference Center (UNECA) in Addis Ababa, Ethiopia from 8 to 14 January 2013. The CAG24 will be organized by the Ethiopian Geosciences and Mineral Engineering Association (EGMEA) in cooperation with governmental and non-governmental organizations under the auspices of the Geological Society of Africa (GSAf). The Theme of the Conference is : "40 Years of Gsaf (1973-2013): Earth Sciences Solutions to African to African Development Challenges".

www.cag24.org.et

Conference: Is There a Role For Innovation In the Sustainable Management of Raw Materials?

From : 23.01.2013 Till : 23.01.2013
Location : Brussels, Belgium

The European Commission recently launched the European Innovation Partnership on Raw Materials featuring innovation as a core channel for managing raw materials sustainably and meeting EU needs. In view of responding to the growing demand from consumers, while avoiding to further dig the gap between imports and exports, fostering the emergence of new technologies appears to be one of the solutions. In the framework of the discussions on, and implementation of, the Partnership's strategy, the workshop will seek to provide answers to the concrete role that innovation can play throughout the value chain process - from the extractive stage, through processing, to recycling. Some questions will be addressed, such as:

- Can innovation be the miracle solution?
- What are the limits to innovation? This conference will be the first event organised by the new working group entitled "Business and Raw materials" of the EP Intergroup "Climate Change Biodiversity and Sustainable Development." It will bring together the various actors in the sector to debate on the role of new technologies in fostering more efficient production, use and recycling of raw materials in view of feeding into the broader discussion recently launched by the European Commission.

www.ebcd.org

Conference: «Innovation in practice, what can we learn for key enabling technologies?»

From : 28.01.2013 Till : 28.01.2013
Location : Brussels, Belgium

In the context of the Innovation Union, the European Commission launched two studies to analyse how to successfully bridge the gap between research outputs and innovations access to the market in the area of industrial and key enabling technologies.

The studies followed two complementary approaches in answering the overall question of «how to convert research into commercial success stories»:

1. An analysis of EU-funded research projects in the field of Nano-sciences, Nano-technologies, Materials and New Production Technologies conducted by the Austrian Institute for SME Research, Oxford Research Norway and Nordic Research Ltd.; and
2. An analysis of commercial successes based on innovations in the field of Nano-sciences, Nano-technologies, Materials and New Production Technologies conducted by PwC EU Services

The studies are based on qualitative interviews and the analysis of case studies.
This conference will present the results in order to:

- discuss how research outcome can be transformed into innovations that are successful on the market
- analyse how to better manage the innovation cycle
- share your experience and opinion about key impact factors of successful market-oriented exploitation and market penetration.

Showcases of success stories will illustrate the findings of both studies. At the Conference, feedback from the participants will help to validate the results of the studies. Participants will receive a summary of the draft reports before the conference.

To register, please send a request to:
RTD-NMP-INNOVATION@ec.europa.eu

Upcoming Events

UNCCD 2nd Scientific Conference

From : 04.02.2013 Till : 07.02.2013
Location : Fortaleza, Brazil

There is a widespread consensus that the pressing issues of Desertification, Land Degradation and Drought (DLDD) are not yet properly included and addressed in today's political and private sector agendas on a global, national and local level and that it is therefore of vital importance to raise awareness of the effects - costs and benefits - that decisions related to land management and ecosystems have. The UNCCD 2nd Scientific Conference therefore aims to gather a broad range of stakeholders - academics, policy makers, civil society actors and the private sector - to approach DLDD from an economic perspective. The conference will provide guidance to governments and non-governmental actors alike, on why they should and how they can, together, reverse current DLDD trends, support affected countries and communities to improve their land management practices and increase resilience.

http://2sc.unccd.int

Joint Programming Conference 2013

From : 28.02.2013 Till : 01.03.2013
Location: Dublin

The Joint Programming Conference 2013 will take place under the Irish Presidency of the Council of the European Union, with support from the European Commission, on the 28th February-1st March 2013.

Under the guidance of the Programme Committee, the conference will include keynote addresses, parallel sessions & workshops and Your Space Sessions focussed on the theme of the conference "Agenda for the Future & Achievements to Date". The conference will provide the ideal forum to stimulate ideas, establish connections and initiate debate on the lessons from the experience to date and the way forward in Joint Programming. The Conference will bring together 500 delegates from more than 40 countries. The extensive programme coupled with the networking opportunities and outreach activities should make for a very engaging two days.

Registration is open until the 31st January 2013 or until the conference is full, due to limited capacity. To register, please go to: www.jpc2013.com

The 3rd Annual European Raw Materials Conference 2013

From : 19.03.2013 Till : 19.03.2013
Location : Brussels, Belgium

Coming on the back of the European Commission's proposal on 'Industrial Policy' and the launch of the European Innovation Partnership (EIP) on Raw Materials, this conference will particularly focus on the role of innovation in efforts to boost production and sustainability across the Raw Materials Value Chain. Securing a supply of these vital materials is more important than ever in light of their key role in the development of the low carbon technologies required to meet the EU's emissions reductions targets. How can Europe's own extractive industries help to reduce its import dependency, and what further steps can be taken to ensure the efficient use of materials already within circulation? What measures should be put in place in order to make the global trade of Raw Materials fairer and more sustainable, and how can Europe take a more pro-active stance in international dialogue on the future security of these valuable resources.

www.rawmaterials-conference.eu

European Geosciences Union General Assembly 2013

From : 07.04.2013 Till : 12.04.2013
Location : Vienna, Austria

The EGU General Assembly 2013 will bring together geoscientists from all over the world into one meeting covering all disciplines of the Earth, Planetary and Space Sciences. Especially for young scientists, it is the aim of the EGU to provide a forum where they can present their work and discuss their ideas with experts in all fields of geosciences. The EGU is looking forward to cordially welcoming you in Vienna.

www.egu2013.eu

The EuroGeoSurveys Newsletter is a three-monthly publication of :

EuroGeoSurveys, the Geological Surveys of Europe
36-38, Rue Joseph II - 1000 Brussels (Belgium)
Tel.: +32.2.888.75.53 - Fax: +32.2.503.50.25
info@eurogeosurveys.org
www.eurogeosurveys.org - www.geology.eu

Editorial board: Claudia Delfini (Editorial Coordination), Patrick Wall, Isabel Pino de Juana, Celine Andrien, Woody Hunter

Layout and design: www.tango-grafix.be

Conference Cilento and Vallo di Diano Geopark has the honor of hosting the **12th European Geoparks Conference**, when the global development strategies of the Earth Sciences assume an important role in the world. The geo-hazards and climate change hardly affect all human activities and can strongly condition the future of humanity. Infact, life, property, economic and financial losses due to natural hazards and the impact of disasters on society have both increased dramatically over the last couple of decades. Scientists - both physical and social -, policy makers, insurance companies, disaster managers, and the public themselves, have different ways for understanding natural geo-hazards and sustainable use of natural resources.

This conference aims to: verify how Geoparks can direct the scientific knowledge of the academic community on these items; understand how the Ge oparks address these issues in the educational system and disseminate the role of Geoparks on the public awareness and sustainable use of natural resources.

For more information Please see the website http://egnconference2013.cilentoediano.it