

## Geological heritage in the central part of Scandinavia (GEARS)

A Norwegian-Swedish transboundary project (2017 – 2019)

by:

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There is in Scandinavia a need to advance the work in producing adapted information as well as basic information regarding sites of geological significance and their area of adequate use. For this development it is important to find collaborators and to build a network of stakeholders and users of the information. A transborder project started earlier this year that aim to develop the way of working in the range from a better knowledge-base to the management of sites.

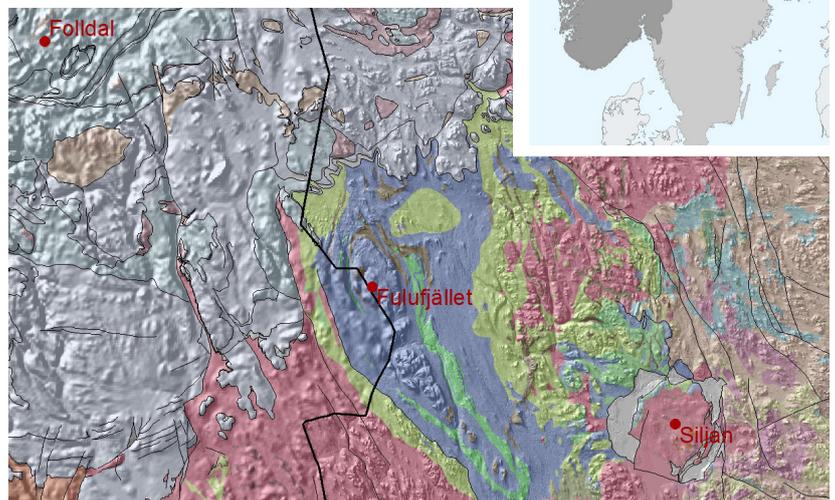
The project area includes geologically significant values of which some represent important parts of our geological heritage. These values could be made more well-known in spatial planning, nature management and tourism. In the project we aim to further the use of geodiversity as sustainable tourist destinations, produce good-examples for interpretation and presentation of some of the sites. The Norwegian and Swedish nature management differs in parts, and we find it important to reach a consensus and to find a methodology ranging from inventory, assessment, management to transferring of information regarding the transboundary geodiversity. This has not yet been done between the countries and would for that reason serve as a pilot study for a national management in both Norway and Sweden.

The project aim for these results:

- A joint methodology for inventory, categorization/assessment
- Inventory of the geoheritage in the region
- In three case study areas: registration, passing on information, produce good examples for management and value-adding
- Develop the cooperation between the different actors: from the holder of basic information to those that refine and interpret natural and cultural values.

In order to ensure the methodology, we would like to engage ProGEO and to invite exchange of experiences with other countries. We propose to organise a thematic seminar within the ProGEO Northern Europe regional group.

Collaborating partners in the project are the Norwegian and Swedish geological surveys, who are the leading partners in respective country. In addition, sub-partners from nature management, regional educational institutions and tourism are participating: Norwegian Institute for Nature Research, Inland Norway University of Applied Sciences, the foundation Follidal mines, County Administrative Board of Dalarna, County Governor of Hedmark and the local and non-profit association Sollerö Sockenförening. The project has been granted funding from Interreg Sweden-Norway, Hedmark County Council, and the Regional Development Council of Dalarna County.



**Figure 1 :** The Scandinavian peninsula with the case study areas shown as red dots. The main bedrock geological features in the region show that the case study areas complement each other as to the geological character and evolution. From Caledonides (very light blue) in the west, in the middle pre-Cambrian sandstone (blue; very well preserved despite younger Caledonian orogeny), to Precambrian crystalline bedrock (reddish etc.) in the east. A light grey ring of Palaeozoic bedrock shows at Siljan, representing the Siljan ring astrobleme (ca 370 million years old).



**Figure 2 :** Plumose structures in granite at largest impact crater in Europe (Siljan ring - 52 km across). It is the source and background for high geoheritage values in the region: not only impact structures and almost vertical Palaeozoic beds that are preserved in the ring structure, but it have also affected Quaternary features and processes.

## Meeting of the Geoheritage Commission

Biosphere Reserve of Menorca (Spain) from 6 to 10 June 2017

by:

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The XII National Meeting of the Geoheritage Commission (CPG) of the Geological Society of Spain (SGE) took place in Menorca from 6 to 10 June 2017. This biannual meeting is the main Spanish scientific forum on geoconservation, and its objective is to share, discuss and disseminate the initiatives developed in Spain for the adequate conservation of geoheritage, including inventories, legislation, management and public outreach. The meeting was also a great opportunity to consolidate the project developed by the Minorca Biosphere Reserve Agency of the Insular Council of Menorca (CIME) to publicize Minorca's geological heritage.

The local government of the island (CIME) hosted the inauguration of the meeting on Tuesday 6th in an event that included the interventions of Javier Ares (Councillor of Environment and Biosphere Reserve), Ana Maria Alonso (president of the SGE), and Laia Obrador (member of the City Council of Maó).

Together with CIME and CPG, other organizations also collaborated, supported and/or sponsored the meeting, such as the Menorca Studies Institute, the Ministry of Environment of the regional Government of the Balearic Islands, the City Councils of Maó and Ferreries, the University of the Balearic Islands, the Association of Geologists of the Balearic Islands, the Geological Survey of Spain (IGME), the Lithica Foundation, the Martí i Bella Historical & Archaeological Society, and the company Yellow Catamarans.



The meeting had 89 registered people, of which about 70 were experts in the field of geoheritage from different parts of Spain, as well as Portugal, Germany and Brazil. The first day (Tuesday 6th) took place an intensive course on "Interpretation and Management of Geological Heritage", which was also a success. The course covered its quota of 40 entries, and was part of the XXI edition of the International University of Menorca.

The scientific sessions of Wednesday 7th and Friday 9th allowed to share the latest developments on geoconservation and management of geological heritage. These included well-moderated 8 min discussions after each 12 min presentation, as well as invited conferences on "Trends and challenges in geoconservation" by José Brilha (professor of the University of Minho, Braga, Portugal) and "Management of heritage in Biosphere Reserves" by Francisco Cantos (secretary of the Spanish

National Committee of the Man & Biosphere Programme). Other activities included a debate open to the general public, a boat trip for all participants to see the geology along de Bay of Maó, and a tribute was paid to the Minorcan geologist Antoni Obrador.

As is tradition in these national meetings of the CPG, the technical sessions took place all in the same auditorium (i.e., with no session overlaps), and alternated with several excursions around the island on Thursday 8th and Saturday 10th, which allowed the attendees to get a good knowledge of the exceptional geological heritage of Menorca, and its relation with cultural heritage and other types of natural heritage.

On the occasion of the meeting, and following the line of work promoted by the Menorca Biosphere Reserve Agency, the local government of the island (CIME) produced a video documentary on the geological heritage of Menorca and its influence on the landscape, which was premiered during the meeting with the intention to start a line of public outreach on the natural heritage of the island. The Municipality of Maó joined the initiative with the publication of an urban geological guide for a walking tour of the city center.

The meeting also included formal protocols of the Commission, such as the required general assembly, the election of location for future meeting, and election of new executive committee. The next meeting will take place in Tenerife (Canary Islands) in June 2019. The executive committee renewed its members, except for its new president (Manu Monge) and vice-president (Ángel Salazar), in exchange for outgoing Enrique Díaz-Martínez and Guillermo Meléndez.



The work resulting from the meeting has been collected in a monographic volume of the series “Cuadernos del Museo Geominero” under the title “Geological heritage, managing the abiotic part of the natural heritage” and available in <http://www.igme.es/Museo/publicaciones/CUADERNO21.pdf>

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## Southeastern Europe - regional group

Meeting in Ankara (12-14 April 2017)

by:

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The meeting ProGEO South-eastern Europe - regional group was held under the framework of the 70th International Geological Congress of Turkey, which was held in Ankara from 12 to 14 April 2017. This congress hosted sessions dedicated to Geological Heritage Conservation, Geoparks and Geotourism.

The special Session on Geoheritage in SE European countries was arranged April the 13th. Here country reports and presentations were given by N. Kazanci and H. Inanner et al. (Turkey); S. Vasile and D. Grigorescu (Romania); R. Nakov and V. Zagorchev (Bulgaria); L. Marjanac (Croatia); V. Pruthi (Kosovo); L. Moisiu, M. Dollma (Albania); G. Sijarich (Bosnia and Herzegovina); G. Horwath (Hungary).

The second part of this session was dedicated to a joint debate about ProGEO future activities and projects in participant's countries.

The participants spoke about the future activities and projects, and especially on a book of regional geosite list of SE European countries. The debate also focus: inclusion of ProGEO membership for Slovenia, Bosnia and Hercegovina, and Macedonia; involvement of ProGEO young researchers and students in every country; organization of local and regional ProGEO thematic trips and meetings, promoting the knowledge exchange between countries; creating a list of the “best” geosites in SE European countries; organizing a summer school for training on geoconservation, and a digital interactive map with geosites.

In this debate participated among others) Nizamettin Kazanci, Bill Wimbleton (ex-President of ProGEO), and Ivan Zagorchev founder ProGEO Southeastern Europe - regional group.



The second day a ProGEO sessions “Geological Heritage in the Middle East and South East European Countries” had the following presentations:

- Geological Heritage Inventory and Geoconservation Studies in Turkey, by Tahya Cifci, et al. (Turkey);
- TAR-AL-SAYED Area Suitability as Geopark, by Ahmed J, et al. (Iraq);
- Sand dunes migration over Qara Taba architecture site in southern Iraq, by Hasan K. Jasim, et al. (Iraq);
- Regional Geological Sites of Albania in a Regional Geological Context by A. Serjani (Albania);
- Reclassification of Geosites based on the New Administrative Reform of Territory of Albania by L. Moisiu (Albania);
- Ahvar of Southern Iraq in the UNESCO World Heritage list by Zeki M. Hasan, et al. (Iraq).



This was followed by the session “Geoparks and Geotourism” with the following presentations:

- Ohrid Geopark and its Unique Geoheritage by A. Mici, et al. (Albania);
- Valorisation of the Geosites of Tropoja for Geotourism Development by M. Dollma (Albania);
- Fulgurite: A Potential site for Geological Heritage by I. Gundogan, et al. (Turkey);
- Living Hydromagnesite Stromatolites and Salda Lake by Elife Akgul, et al. (Turkey);
- Geotourism potential of natural Sites around Kayseri, Malatya, Sivas, Yozgat Provinces in Turkey by M.Gormus, et al. (Turkey);
- Geopark Potential of Kackar Mountain National Park by Yildirim Ginger, et al. (Turkey);
- Geological Features of Cal-Camili Natural Park and their Geotourism Potential by N. Araz, et al. (Turkey);
- Assessment of the Geotourism Potential of Seydiler and Nearest Area by Cagiag Ozkaymak, et al. (Turkey);
- The Geopark Potential of Oltu Narman Basin (Eastern Turkey, Erzurum) by D. Azaz, et al. (Turkey);
- Significance of Geosites for Protection of Nature and Selected Geosites by C. O. Akin, et al. (Turkey);
- International Geological Congress, Geological Heritage and Geoparks by Aydin Aras (Turkey).

In addition, Dan Grigoresku gave a presentation about the Cretaceous Dinosaur’s Park in the session of Stratigraphy.

The third day it was a field trip visiting:

- PeltchikYashian Petrified fossils (forest);
- Abaca fairy chimneys;
- Mahkeme Agacin cultural geosite;
- Guverm columnar basalt;
- Bekonak leave and fish fossils.

This meeting of ProGEO Southeastern Europe - regional group was a new experience for all participants.

The outcomes of the meeting will support and enhance future scientific studies and research projects. We expect to increase public awareness on importance of geological sites and Geoparks in our countries, with special focus on education of young generations.

Our Turkish colleagues combined the very good hospitality we experienced with a precise organization of the meeting as the core factor to the meetings success.

These very nice days in Ankara, were a strong remember for all of us members of “ProGEO: Big Family”.



## Geoheritage

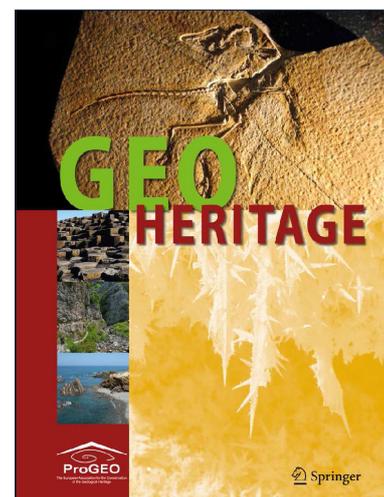
ProGEO scientific journal - impact factor 1.472

by:

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Our efforts with the ProGEO scientific journal “Geoheritage” seem to pay off! It is a great encouragement to see that the impact factor of “Geoheritage” continues to increase! The new Journal Citation Reports (Thomson Reuters) are now out showing that the 2016 impact factor for Geoheritage is: 1.472. This is an increase of 40% in relation to 2015.

Thank you to all authors, reviewers, readers, and editorial board that are the basis of this result and let it be an encouragement for us all to continue to do the work so we can secure this positive development.





## Deadline next issue of ProGEO NEWS

October 2th, 2017

Please send contributions to ProGEO NEWS. Members are interested in things that happen all over the world, your experiences, activities, science, geosites, geoconservation and geotourism efforts!

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Please send your contributions (unformatted word file). 500 – 2000 words with photographs, maps and figures clearly marked as ProGEO NEWS.

If longer texts are needed, please contact the editor.

ProGEO: European Association for the Conservation of the Geological Heritage.

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