



The VIII International ProGEO Symposium in Reykjavík, 2015

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Iceland is a young volcanic island in the middle of the North Atlantic. The land displays a unique geodiversity and diverse landscapes composed of volcanic, glacial, geothermal, fluvial and costal phenomena. Valuable Earth resources in Iceland are mostly confined to the volcanic zones, the main resources being geothermal, glacial rivers and ground water and they are under constant threat of exploitation. It is obvious that important geoheritage sites in Iceland may be damaged or lost without effective geoconservation and proper management. In recent years, there has been an increasing national awareness of the value of geoheritage and the need for geoconservation in Iceland.

It was therefore with great honour and enthusiasm among conservationists in Iceland that the VIII International ProGEO Symposium was hosted in Reykjavík from the 8th to 12th of September, 2015.

The ProGEO Symposium

The theme of the VIII International ProGEO Symposium was “Geoconservation strategies in a changing world”. The aim was to define strategies that benefit and strengthen geoconservation from different perspectives, but with a special focus on four main questions:

- A. How to secure the integrity of geosites under threat?
- B. What is sustainable use of a geosite?
- C. Are mining and quarrying compatible with geoconservation?

- D. How to incorporate geological heritage in Environmental Impact Assessments (EIAs)?

Around 80 participants from 23 countries took part in the symposium. A great diverse knowledge of geoheritage, geodiversity and geoconservation were presented in Reykjavík and introduced in 26 oral presentations linked to the main questions of the symposium theme. In addition, 25 posters with various approaches of geoheritage research and work were introduced.

At the welcoming ceremony on the 9th of September, the president of Iceland, Mr. Ólafur Ragnar Grímsson, addressed the guests with an inspiring talk about how the creation of nature in Iceland is active and ongoing, for example with recent eruptions like Eyjafjallajökull and Holuhraun. He mentioned how important a dialogue between science and politics are for all heritage strategies when planning for sustainability. Following the presidents talk, Jón Geir Pétursson Director General at the Ministry for the Environment and Natural Resources, claimed in his talk that although the geo-element is on the political agenda in Iceland, the geodiversity is not well understood, but rather as a better known part of a holistic understanding of nature. The president of ProGEO, José Brilha, ended the opening ceremony and mentioned the increasing recognition in many countries of the importance of geoconservation, although the status in each country is very different. Increasing scientific knowledge together with the involvement of young people would lead to enhancement of geoconservation values at national and international levels.

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The president of Iceland, Mr. Ólafur Ragnar Grímsson, at the welcoming ceremony (Photo: Kjartan Birgisson). Over the two symposium days, key-note speakers opened each day with an inspiring speech. The first day, Professor Roger Crofts, a member of the IUCN Geoheritage Specialist Group and former leader of the IUCN World Commission on Protected Areas presented the key-note “Putting Geoheritage Conservation on all Agendas”. He came up with questions for three fundamental issues: Why is there more focus on biodiversity in the nature conservation agenda than on geodiversity? Why geoheritage and geoconservation are uncommon on international and local political agendas? And where is the public support? One of the answers is the necessary to promote geoheritage in a way that increases interest, inspires and enthuses the public.

On the second symposium day, Snorri Baldursson, Chair of the Icelandic Environment Association, presented the key-note “The central highlands of Iceland – exceptional and priceless”. He talked about the value of the highlands as being one of the largest remaining wilderness areas in Europe and with some foreseeable threats with an increasing tourism industry. However, the far most serious threat is increasing pressure for exploitation of the remaining untouched watersheds and geothermal areas in the highlands of Iceland.

At the end of the first symposium day, round-table discussions were opened for different perspectives on

the symposium themes, and the debate was both very factual and interesting. At the end of the round-table session, it was decided to put forward “The Reykjavík Declaration” that focuses on the many challenges that were under discussion. The declaration was accepted by the symposium participants in the end of the second symposium day:

Declaration of REYKJAVÍK

Accepting that geoheritage is an intrinsic part of natural heritage and geodiversity is an integral part of natural diversity, the participants in the 8th International ProGEO Symposium, “Geoconservation Strategies in a Changing World”, held at Reykjavík, 9–10 September 2015:

Recognise

- the intrinsic values of geodiversity and geoheritage, and their wider values for science, education, culture and ecosystem support;
- the need to protect geodiversity and geoheritage as part of nature conservation;
- the fundamental links of geodiversity and geoheritage with biodiversity, cultural heritage and landscape;
- the ecosystem services that geodiversity delivers for nature and the benefits geoheritage provides for people;

- the need for geodiversity management to address the challenges faced by society such as climate change, natural hazards, sustainable use of resources, biodiversity loss and environmental degradation; and
- the duties of national governments to implement IUCN resolutions concerning geodiversity and geoheritage.

Recommend that

- geoheritage should be conserved for its own values, and all IUCN protected area management categories have a role to play in the conservation of these values;
- geodiversity and geoheritage should be fully integrated into the selection, management and monitoring of all protected area categories as part of a holistic ecosystem approach that recognises the value of both geodiversity and biodiversity processes in nature conservation;
- in the face of human pressures and climate change, geoconservation guiding principles and geodiversity-informed strategies for nature management are essential to ensure benefits for people, particularly in protected areas and geoparks;
- geoheritage inventories based on clear criteria, and accounting for geodiversity and geoheritage sites already lost, should be the starting point for geoconservation activities; this includes assessment of values, vulnerability and potential uses, and provides a secure basis for conservation of significant, unique and representative sites and elements at different administrative (local, national, international) levels;
- the values of geoheritage should be communicated using appropriate messages, means and language for different audiences, and geoheritage interpretation should engage directly with people's experience and cultural heritage;
- the geoconservation community should contribute actively to integrating geodiversity and geoheritage into nature conservation strategies and related initiatives such as natural capital evaluation, revision of EU Directives, and development of sustainability goals;
- the inclusion of geoconservation policies in national and local legislation and plans, namely on land-use planning and environmental impact assessment, is actively pursued;
- geoconservation concepts are integrated at all levels of the educational system and there is a stronger recognition of geoconservation as a geoscience in the academic and scientific environment.

The Symposium Field Excursions

As part of the symposium, two optional field excursions were planned: The pre-symposium 1-day field excursion was to the Reykjanes Peninsula and the post-symposium 2-day field excursion was held in southern Iceland.

The Reykjanes Peninsula is the inland continuation of the Mid-Atlantic Ridge and a part of the Icelandic rift zone. The area is characterised by Weichselian and Holocene volcanic landscapes and during the excursion, geosites were visited displaying hyaloclastites, pillow lava, basaltic lava fields, shield volcanoes, craters and crater rows, geothermal activity, tectonic rift, faults and fissures. The pre-symposium field excursion was guided by Hreggviður Norðdahl, geologist at the University of Iceland, and the manager of Reykjanes UNESCO Global Geopark, Eggert Sólberg Jónsson, presented the Geopark over the lunch break.

The post-symposium 2-day field excursion toured southern Iceland and crossed both the Western the Eastern Volcanic Rift Zones. The Western Volcanic Zone represents the on-land continuation of the Mid-Atlantic Ridge and can be clearly seen at the Þingvellir National Park where spectacular fissures and normal faults form a 7-km wide graben marking the tectonic plate boundary. Another special geosite visitation was the Geysir area, with its famous high temperature geothermal hot springs and geysers.

The Eastern Volcanic Zone contains the most active volcanoes and volcanic systems in Iceland, including the Hekla, Eyjafjallajökull, Katla and Grímsvötn central volcanoes. The field excursion stretched into the highlands of Iceland, visiting the Veiðivötn areas with an overnight stay at Hrauneyjar Guesthouse. The Veiðivötn volcanic fissure swarm is part of the Bárðarbunga volcanic system. This area is the source of many of the largest eruptions during the Holocene and after the settlement of Iceland there were two important eruptions in this area.

Landmannalaugar was visited on the second day of the field excursion. The site is the northern part of the rhyolitic Torfajökull central volcano and mostly within the Fjallabak Nature Reserve. In the area, an interaction of basaltic Veiðivötn eruptions with the rhyolitic Torfajökull volcano can be seen. The Torfajökull central volcano has the largest rhyolite formation and geothermal area in Iceland. The landscape is spectacular with hot springs and colourful rhyolite formations.

Viewing the Icelandic landscape played a huge part in the field excursions. (Photo: Lovísa Ásbjörnsdóttir).



On the way back to the lowlands, many other geosites were visited, including f.ex. Eldgjá, a 50-km-long eruptive fissure, and the glaciofluvial sandplains of Mýrdalsjökull formed during the Katla eruption of 1918.

The 2-day post-symposium field excursion was guided by Kristján Jónasson, geologist at the Icelandic Institute of Natural History, and Brynja Davíðsdóttir, the manager of Katla UNESCO Global Geopark presented the Geopark.

Final Words

In a world with an increasing demand for the exploitation of Earth resources, there has never been as much need for geoconservation and an understanding of geoheritage and geodiversity as today. Many internationally important and valuable geological phenomena are constantly under threat and will be lost if nothing is done.

This Special Issue of *Geoheritage* includes submissions from participants that took part in the VIII International ProGEO Symposium 2015 in Iceland. Although being only a part of all the interesting posters and oral presentations, they reflect diverse research on geoheritage world-wide and on the main issues today. It was very important to put forward the Reykjavík declaration to reinforce the importance of geoheritage and geoconservation. Although knowledge and recognition about geodiversity has been steadily increasing over the past years, we are still far behind the international agendas of biodiversity. However, we see processes under way and one of the most pleasant successes is to see increasing numbers of young students putting into force the importance of geoheritage.