

GEOHERITAGE Newsletter



No. 3, December 2018



The 2nd GSG International Workshop on Geoheritage was held in 2018 at the International Academy for Nature Conservation, on the Isle of Vilm, Germany. The island is the remnant of a moraine formed by the retreating Scandinavian Ice Sheet. Active erosion by the sea over the last c. 8000 years has formed beaches and sandbars scattered with erratic blocks of Scandinavian origin derived from the glacial deposits. The island is a nature reserve, and large parts belong to the core zone of the Southeast-Rügen Biosphere Reserve. Areas outside the core zone are managed by the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz – BfN) which also runs the International Academy for Nature Conservation. As well as supporting relatively pristine oak and beech forests, the island provides habitat for many birds and mammals. Over the years, it has attracted many landscape painters, including Caspar David Friedrich. (Photo: John Gordon).

This issue of the Geoheritage Specialist Group (GSG) Newsletter reports on activities during 2017 and 2018. The main focus is on the outcomes from the 2nd GSG International Workshop on Geoheritage, held at the International Academy for Nature Conservation, on the Isle of Vilm, Germany, in April 2018. These include reports on the scientific proceedings and declaration, with an emphasis on geoheritage values and links with biodiversity, and the particular roles of cave and karst conservation. Also of note are the significant changes in the GSG structure and steering committee, the integration of the Caves and Karst Working Group within the GSG and a revised GSG purpose statement and work plan (2018-2020).

As always, contributions to the Newsletter from GSG members are welcome, including short articles, news items and best-practice case studies on geoconservation in protected areas.

John Gordon

Message from the Chair

Dear members,

It was really wonderful to have a chance to get together again on the Isle of Vilm, in the Baltic Sea, Germany, 2-7 April 2018, at the International Academy for Nature Conservation. I think the IUCN/WCPA GSG Workshop on Global Geoheritage was very meaningful for the geoheritage community worldwide. Special gratitude should go to Bärbel Vogel and Ralf Grunewald and many others, and also to the German Federal Agency for Nature Conservation (BfN, Ministry of Environment, Germany) for financial support. One of the most significant results is the revision of GSG Work Plan from 2018 to 2020. Among the priorities is a proposal of a new IUCN programme in 2020, "Key Geoheritage Areas". After our good friend Graeme Worboys suggested this idea a few years ago, I think this can be a big breakthrough for geoheritage conservation worldwide and that was why I was so excited to plan and organise this workshop. All of us should try our best to make this programme possible in IUCN at the next WCC in France in 2020.

The workshop was co-organised by the IUCN-WCPA Geoheritage Specialist Group, the BfN and the German Speleological Federation (VdHK). It included both a scientific programme and business meetings (see below). Important outputs were:

1. Revision of the GSG work programme.
2. Recognition of the need to resolve membership eligibility issues.
3. Incorporation of the Caves and Karst Working Group within the GSG.
4. Clarification of the Executive Committee and Steering Committee membership and roles.
5. Published scientific proceedings.
6. The Vilm Declaration on Geoconservation.

Members of the Steering Committee also attended and gave presentations on the work of the GSG at several international conferences, including the European Geosciences Union (EGU) General Assemblies, Vienna, 2017 and 2018 and the IX International ProGEO Symposium on the Conservation of Geological Heritage in Chęciny, Poland, 2018. It was quite nice that I presented the concept of the Key Geoheritage Area programme in Taiwan and Poland. Especially the strong support is expected by IUGS and close collaboration was confirmed by ProGEO.

Kyung Sik Woo

New GSG Structure and Steering Committee

A revised GSG Committee structure was discussed at the Vilm Workshop and subsequently approved by the WCPA Chair.

(1) GSG Steering Group

Chair: Kyung Sik Woo

Deputy Chairs:

Wesley Hill (Coordinator of Administration)

José Brilha (Coordinator of Operation of TFs, WGs, etc.)

Roger Crofts (WCPA link, Best Practice Guideline TF)

John Gordon (Newsletter, Biodiversity and Geodiversity TF)

Enrique Díaz-Martínez (IUCN member link, international activities and promotion)

John Gunn (Chair of the Caves and Karst Working Group in GSG)

Regional Focal Points:

Europe (Emmanuel Reynard, Switzerland)

North America (Thomas Casadevall, USA, Volcanism, IAVCEI*)

Oceania (Margaret Brocx, Australia)

Arabic countries & Africa (Ezzoura Errami, Morocco)

Asia (Ibrahim Komoo, Malaysia)

South America (Maria da Glória Garcia, Brazil)

(2) Thematic Advisory Group and Invited Organization Representative Members*

Graeme Worboys (WCPA) (Australia)

Lars Erikstad (ProGEO*) (Norway)

Nigel Dudley (WCPA) (UK)

Miguel Clusener-Godt (UNESCO*)

Murray Gray (Geodiversity) (UK)

Marie-Luise Frey (Fossils, GGN*) (Germany)

Paul Williams (Karst, World Heritage, UIS*) (New Zealand)

Piotr Migoń (Landforms, IAG*) (Poland)

Tim Badman (IUCN World Heritage Programme and Geoheritage Focal Point) Link to IUCN Secretariat (Switzerland)

Benjamin Van Wyk De Vries (ICG-IUGS*) (France)

*The delegates from international organizations were determined by a formal request from GSG to all the following organizations: IAG (International Union of Geomorphologists), IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior), GGN (Global Geoparks Network), International Commission on Geoheritage of IUGS, ProGEO (European Association for the Conservation of the Geological Heritage), UGGp (UNESCO Global Geopark Council), UIS (International Union of Speleology).

Revised GSG Purpose Statement and Work Plan 2018-2020

The purpose of the Geoheritage Specialist Group (GSG) is to facilitate and promote Geoconservation within the work of IUCN WCPA and specifically:

- 1) To provide advice and guidance for all aspects of geodiversity as it relates to the establishment and effective management of protected areas;
- 2) To provide specific advice on the conservation and effective management of geoheritage in protected areas and to prepare guidance material as appropriate;
- 3) To identify significant geoheritage areas that could be formally reserved as protected areas by nations;
- 4) To provide specialist geoheritage advice on request, for the to support assessment of World Heritage Site nominations by the IUCN World Heritage Panel;
- 5) To support the integration of geodiversity into all relevant IUCN programmes and activities;
- 6) To provide, as appropriate, a professional interface for IUCN between geodiversity and geoheritage stakeholders, and support IUCN in developing its partnerships on geoheritage.

GSG Goals & Work Plan 2018 - 2020

(1) Develop Key Geoheritage Areas scoping document

Outcomes: definition of aims, principles, methods, partners for a new initiative 'Key Geoheritage Areas' (precise name to be decided as part of scoping study).

Target audience: IUCN (including IUCN Government, Civil Society and Indigenous Peoples' Organisation members), local governments, private sector and partners (IAG, IUGS, ProGEO and others).

Leads: Kyung Sik Woo and José Brilha.

Key IUCN contributors: GSG members, WCPA SC members, IUCN WHP, KBA and GPAP, Jane Smart, Tom Brooks and IUCN Key Biodiversity Areas programme, Graeme Worboys. Connections to be made with SSC and WCPA regarding KBAs.

Potential Partner Organizations: ProGEO, IUGS and others.

Timescales: first draft of scoping study by end 2018.

(2) Publish Best Practice Guideline on Geoheritage Conservation and Management in Protected Areas

Outcomes: Guideline in WCPA Best Practice Series.

Target audience: PA managers and staff; PA advisers and consultants.

Lead: Roger Crofts.

Contributors: key section leads Graeme Worboys, Nigel Dudley, John Gordon, Murray Gray, Enrique Diaz-Martinez, Dan Tormey plus contributions from many GSG members.

Potential Partner Organizations:

Funding requirements and availability: funding for English version obtained from Culture Heritage Administration, Republic of Korea via IUCN WHP. Offers of translation for free accepted from Farzana Perveen, Pakistan: Urdu; Christof Ellger: German; Aqeel Al-Zubaidi and AfkarHadi, Iran: Arabic. Enrique and José will explore Spanish translator. Meng Wang will explore Chinese translator.

Timescales: submit final draft to WCPA Publications Committee first half 2019. Expected publication 2020.

(3) Support and advice to IUCN World Heritage Programme regarding World Heritage criterion viii on:

(a) World Heritage Volcanoes:

Outcomes: thematic report to meet request from World Heritage Committee Decision 37 COM 8B.15 adopted at the 37th session Phnom Penh 2013.

Target audience: UNESCO WH Committee and States Parties, geoheritage community.

Lead author: Thomas Casadevall (commissioned by IUCN WHP).

Contributors: Dan Tormey and Jessica Roberts (co-authors). Many reviewers have inputted.

Potential Partner Organizations: RoK government, UNESCO, IAVCEI.

Funding requirements and availability: funding for English version obtained from Culture Heritage Administration, Republic of Korea.

Timescales: draft for completion by July 2018, final report completed by Spring 2019.

(b) Geological World Heritage:

Outcomes: response to request from World Heritage Committee Decision 37 COM 8B.15 adopted at the 37th session Phnom Penh 2013.

Target audience: UNESCO World Heritage Committee and States Parties, geoheritage community.

Lead: Tim Badman (lead for project is IUCN WHP).

Contributors: to be determined.

Potential Partner Organizations: RoK government, UNESCO.

Funding requirements and availability: funding for English version obtained from Culture Heritage Administration, Republic of Korea, via IUCN WHP.

Timescales: goal is completed report for June 2019.

(4) Fully integrate Caves and Karst Working Group (CKWG) into GSG programme and activities

Outcomes: full integration and undertake specific work activities. Current proposals for development are:

- (a) revision of IUCN Guidelines for Cave and Karst Protection first published 1997.
- (b) consider producing report on Caves and Karst in international protected areas other than WHS, specifically Global Geoparks, MAB Biosphere Reserves and Ramsar sites.

Target audience: UNESCO WHC and Committee and national committees, PA managers and staff, advisers and consultants on PAs.

Lead: John Gunn and Bärbel Vogel.

Contributors: members of Caves and Karst Working Group of GSG.

Potential Partner Organizations: IUS, IUCN SSC Cave Invertebrate Specialist Group.

Funding requirements and availability: none.

Timescales: proposals for (a) and (b) by end of 2018 following consultation with key individuals for (a) and key parties for (b.)

(5) Implementation of IUCN Resolutions on geoheritage

Outcomes: promote the implementation of IUCN Resolutions on geoconservation (5.048 and 6.083), including support and advice to WCPA and CEL, as well as the development of guidelines for stakeholders.

Target audience: IUCN Secretariat, Commissions and Members, international organisations related to trade of natural products and its control, especially UNESCO.

Lead: Enrique Diaz-Martinez.

Contributors: GSG members, Vincent Santucci, Jonathan Larwood.

Potential Partner Organizations: IUGS, ProGEO, UGGp, UNESCO.

Funding requirements and availability: not necessary for scoping study but fundraising is necessary if going to move forward.

Timescales: progress review before next IUCN General Assembly in 2020. Ongoing afterwards.

(6) Linking geoconservation to the wider conservation agenda

Outcome: headline is mainstreaming geoconservation into wider conservation agendas within IUCN and beyond linking to delivery of the Promise of Sydney and the IUCN Protected Areas programme. Specifically, linking geoconservation into the wider nature conservation agenda so that the values and relevance of geodiversity and its synergies with biodiversity are recognised within relevant IUCN programmes, strategies and guidance in areas such as conserving nature's stage, ecosystem services, climate change, natural solutions, cultural

heritage, human well-being and connecting people to nature (multi-cultural approaches), and marine conservation.

The first step is to prepare an initial scoping paper with horizon scanning to identify priorities and opportunities to contribute to consultations or IUCN programmes in these areas in the short, medium and longer terms.

Project Leads: John Gordon, Murray Gray, and biodiversity WCPA SG representative.

Contributors: GSG members, WCPA programmes, Protected Areas Programme.

Potential Partner Organizations: other IUCN WGs.

Target audience: Geological Surveys, natural science and conservation policy communities within and outside IUCN, IUCN commissions and WGs, policy makers.

Timescale: scoping paper by mid-2019; ongoing beyond 2020.

Finance: not required for scoping stage.

7. Building partnerships to promote geodiversity and specifically geoheritage conservation

Outcomes: input into the IUCN Programme 2020-24; establish links with other IUCN Commissions; establish links with IUCN Members directly related or not to geodiversity/geoheritage conservation; establish links with other partners: IUGS, IAG, IAVCEI, EFG, IGU, ProGEO etc; consider possibility of an International Day of Geoheritage Conservation; support for UIS proposal of UNESCO International Day of Caves and Karst (lead Nadja Zupan Hajna); develop links with other IUCN groups involved in caves and karst (lead Bärbel Vogel).

Target audience: IUCN and partners.

Leads: Kyung Sik Woo and José Brilha.

Contributors: first step GSG members and WCPA members.

Potential Partner Organizations: see under outcomes.

Funding requirements and availability: not necessary at first step.

Timescales: 2018- onwards beyond this programme.

IUCN/WCPA GSG Workshop on Global Geoheritage - International Significance and Biodiversity Values

The workshop was organised by the German Federal Agency for Nature Conservation (BfN) in cooperation with the IUCN/WCPA Geoheritage Specialist Group and the German Speleological Federation (VdHK).

The scientific themes of the workshop were to discuss:

1. the role of the GSG in IUCN/WCPA, exploring the links between geodiversity and biodiversity in the management of protected areas;
2. conservation of Caves and Karst;
3. recognition of Key Geoheritage Sites.

Scientific proceedings

The scientific proceedings of the conference have been published: Vogel, B., Woo, K.S., Grunewald, R., Crofts, R. & Stolpe, G. (Eds.) *Global Geoheritage – International Significance and Biodiversity Values*. Proceedings of the Workshop of the IUCN-WCPA Geoheritage Specialist Group and the Federal Agency for Nature Conservation (BfN) at the International Academy for Nature Conservation on the Isle of Vilm, Germany, 4-7 April 2018. *BfN-Skripten* 500. <https://www.bfn.de/en/service/publications/bfn-skripten.html>

Summary of the main outcomes from the Vilm Workshop

Roger Crofts

1. Developing geoheritage protection

Our frame of reference is that “geoheritage is inherited from the Earth, maintained in the present and bestowed for the benefit of future generations”. In discussing the need for improving the global systems of geoheritage sites we:

- i. Recognised the importance of placing our programme within the framework of the *Promise of Sydney*, the major outcome of the VIth World Parks Congress;
- ii. Recognized that various past global initiatives for geosite assessment and declaration had not been successful;
- iii. Acknowledged that WHS and GGN were important initiatives but did not cover all of the subject matter and had obviously narrower criteria, but there was an opportunity particularly to have greater recognition of various geoheritage elements to be pursued through thematic studies;
- iv. Considered that a systematic approach was needed with a framework embracing three components: geological and geomorphological setting, geoheritage inventory and specific criteria;
- v. Identified rarity, representativeness and integrity as critical criteria;

- vi. Agreed on the need for clear procedures for identification of sites/areas and for assessing their effectiveness;
- vii. Agreed that any system must have a scientific underpinning to give it rigour and credibility;
- viii. Agreed that a collaboration with IUGS Commission on Geoheritage was the most appropriate way forward on this topic, learning from past attempts;
- ix. Recognised the importance of embracing experience in community collaboration, interaction with economic development interests, and the need for promoting education;
- x. Called for a review of the effectiveness of existing geoconservation laws as an effective legal basis was needed; and
- xi. Considered that international targets (as developed for biodiversity) should be developed.
- xii. considered the need to develop a programme, labelled at present Key Geoheritage Areas, learning lessons from the establishment of Key Biodiversity Areas within IUCN;

2. Integrating Caves and Karst

We agreed that full and effective integration of the former WCPA Caves and Karst Group into GSG was a priority, welcomed the appointment of John Gunn as the chair of the Sub Group and as a GSG Deputy Chair, and recognised the need for approval of terms of reference for the sub group by the WCPA Executive Committee.

We welcomed the opportunity to hear presentations on recent developments in caves and karst science and methodology. In particular we:

- i. Recognised that caves and karst were complementary elements;
- ii. Recognised that hydrogeology was a fundamental process;
- iii. Noted new scientific approaches and discovery of more underground systems;
- iv. Noted the discovery of new cave species and greater understanding of the natural environment;
- v. Agreed the need for a comprehensive whole environment approach in research and protection of cave systems;
- vi. Noted the importance of linking nature and culture in caves;
- vii. Expressed concern about the human impacts in caves and the need for further assessment of how to combat increases in visitor pressure, infrastructure, lighting system, changes in atmospheric conditions (temperature, humidity, and partial pressure of CO₂), and effects on cave fauna and their habitats;
- viii. Expressed concern about the external effects on caves and especially their hydrology from activities in their catchments;
- ix. Considered that Red Listing of caves species and natural processes should be discussed; and
- x. Considered that reviews of caves and karst features and processes in international sites, specifically GGN, Biosphere Reserves and Ramsar sites, should be undertaken.

3. Developing links between geodiversity and biodiversity

This was a major topic of discussion given the recognition that geoconservation was way behind on local, national and international agendas of policy and action compared with biodiversity conservation. We:

- i. noted the recently published reviews by some of our members assessing the reasons and what we can learn from biodiversity conservation;
- ii. recognised that the new thinking on 'conserving nature's stage' reflecting the underpinning abiotic elements and process of nature (soil, water, air, tectonics, glaciation etc) was fundamental to the variety, functioning and health of plants and animals at all levels; and welcomed the special issue of Biological Conservation journal devoted to this topic;
- iii. recognised the need to provide and promote guidance on the management of geodiversity across all categories of protected area that highlights the value of geoconservation principles and 'working with nature and natural processes' and the benefits for both geodiversity and biodiversity;
- iv. noted that too frequently geodiversity was only considered if relevant to biodiversity not for its own sake. And noted that geoheritage was often ignored when it was an important feature or process, as exemplified in the thematic study nearing completion on volcanic WHSs;
- v. sought to develop the bio focused thinking by focusing on ecosystems, especially their functions and the link to nature's services and to natural capital, using the scientific underpinning, and opening minds beyond the narrower and anthropocentric ecosystem services approach. There may be merit in considering 'abiotic ecosystem services' to complement the bio focused approach and to promote a more inclusive approach that emphasises the whole of nature, not just biodiversity, and its benefits for people.
- vi. Recognised the importance of relating abiotic processes to major environmental issues, such as extinctions and species evolution, past environments and their relevance to understanding the present and future climate changes (based on past climate investigation) and disaster risk reduction; and

4. Mainstreaming geoconservation to major conservation issues

We recognised the need to relate geoconservation to the major conservation and environmental issues of the wider nature conservation movement, partly to increase the relevance and credibility of geoconservation and partly in recognition that this element is underplayed in the work of geodiversity professionals. We determined that this topic should be a new programme element devoted to mainstreaming geoconservation. In particular, we:

- i. noted that key elements would have to be climate change, extinctions and the role of abiotic processes, connectivity between protected areas, connecting people with nature and making protected areas work more effectively;
- ii. noted that we had made progress through Resolutions to the IUCN General Assembly and needed to ensure that these were fully implemented, hence a specific programme on this element;
- iii. agreed the need to develop statements of our position on key issues in the form of briefing notes to promote greater understanding of geoconservation and promote its values and benefits to society, communities, economy and health. Also agreed to identify within our membership who were likely to be the most successful interlocutors;

- iv. agreed that mainstreaming within WCPA and with the Global Programme on Protected Areas was a priority and that promoting the Best Practice Guidance and a proposal for a new IUCN programme 'Key Geoheritage Area' should be followed;
- v. agreed that linking with other parts of IUCN was essential, especially the relevant parts of the Species Survival Commission (including the Specialist Group on cave fauna) and the Commission on Ecosystem Management. Developing joint discussions and liaison was a key priority to be covered in a new programme of work;
- vi. agreed that beyond IUCN, we needed to make better links with the geoheritage community, specifically the IUGS and its new geoheritage commission, ProGEO, IAG, IAVCEI, GGN, and IUS. Agreed to invite representatives of these bodies to be part of our steering/liason arrangements;
- vii. agreed the need to have better links with UNESCO, especially its Global Scientific Programme and the Global Geoparks Programme, and with MAB for Biosphere Reserves; and also with UN institutions such as UNEP/WCMC for Planet Earth data base and the CBD; and
- viii. agreed to develop our capability to respond to key consultations where geoconservation input was valid, preferably in consultation with colleagues in other geo organizations.

5. Developing our membership

We agreed the need to increase our membership and to ensure that it represented the range of specialisms, and skills and experience needed to deliver our new programme of work. In particular, we:

- i. Agreed to appoint Regional Vice-Chairs to represent members interests in their region, to develop the network regionally, to act as the conduit for communication between the Steering Committee and the members. Names were identified so approaches could be made;
- ii. Agreed that the newsletter should continue as a means of disseminating news and other information;
- iii. Expressed concern that some nominations for membership of the GSG have been refused by WCPA without reasons being given. And agreed that this should be pursued with the WCPA Chair;
- iv. Agreed that once the membership issue had been resolved, a call for new members would be issued;
- v. Agreed to investigate the use of social media for communicating with members.

Vilm Declaration on Geodiversity and Geoheritage Conservation

We, the members of the IUCN WCPA Geoheritage Specialist Group meeting in Vilm, Germany, in April 2018, on 'Global Geoheritage – international significance and biodiversity values', consider that

- conservation, understanding and promotion of sites and areas of geoheritage significance is fundamental in its own right;
- geodiversity is part of nature and a fundamental component of natural capital and is intrinsically linked to ecosystem functions, goods and services;
- geodiversity and geoheritage conservation underpins biodiversity conservation, human wellbeing, economic prosperity and contributes to sustainable development;
- geodiversity is significant at all scales from the local to the global.

We are determined to work in a focussed way to deliver our revised programme for the period 2017-2020. The programme comprises 7 goals with associated work programmes identifying outcomes, target audiences, leads, contributors, partners, funding and time-scales.

To achieve our ambitions, we recognise the vital importance of working in partnership within IUCN (WCPA and other Commissions and the Secretariat) and with the geodiversity and geoheritage community at large (including IUCG, ProGEO, UIS, IUGS, IAG, IAVEI, YES and UNESCO programmes).

Agreed by:

**The Vilm workshop participants
International Union for Conservation of Nature, World Commission of Protected Areas,
Geoheritage Specialist Group**



Participants at the Vilm Workshop (Photo: Kyung Sik Woo).

GSG Caves and Karst Working Group (CKWG)

CKWG Chair: Professor John Gunn (j.gunn.1@bham.ac.uk)

CKWG Secretary: Bärbel Vogel (b.w.vogel@gmx.de)

Purpose

The purpose of the IUCN/WCPA/GSG Caves and Karst Working Group is to facilitate conservation of caves and karst and specifically:

- 1) To provide advice and guidance on all aspects of bio- and geo-diversity as they relate to the establishment and effective management of karst and caves in protected areas;
- 2) To provide specific advice on the conservation and effective management of bio- and geo-diversity of karst and caves in protected areas and to prepare guidance material as appropriate;
- 3) To identify significant karst geoh heritage areas that could be formally reserved as protected areas by nations;
- 4) To provide specialist bio- and geo-heritage advice for the assessment of UNESCO World Heritage and UNESCO Global Geopark site nominations that contain caves and karst areas;
- 5) To facilitate the integration of cave and karst geodiversity into all relevant IUCN programmes and activities;
- 6) To provide, as appropriate, a professional interface for UNESCO/IUCN between karst and cave geoh heritage stakeholders and the mining industry and others.

An apology is due to members of the former WCPA Caves and Karst Specialist Group as there has been a great deal of confusion following the decision of WCPA to disband that Group and to incorporate it as a Working Group within GSG. Following the Vilm meeting and discussions with WCPA and GSG, it is intended that the CKWG will become active again and revising the excellent but now somewhat dated "Guidelines for Cave and Karst Protection" will be a priority. We will be contacting members of the former CKSG whose email addresses we have inviting them to become members of GSG CKWG. However, if anyone who is reading this letter has an interest in the conservation of caves and karst and would like to become a member of CKWG please could you email the Chair (j.gunn.1@bham). If you are already a member of WCPA then it will be easy to join CKWG but if you are not already a member then we will propose you for membership.

Geoconservation Best Practice Guideline - appeal for case studies

Roger Crofts

Preparation of the 'Best Practice Guideline on Geoheritage Conservation and Management in Protected Areas' is continuing. This will be published in the IUCN Best Practice Protected Areas Guidelines Series. Case studies are still required on the following topics:

1. Geoconservation values
2. Examples of IUCN Management Categories for geoconservation site/areas
3. Links and conflicts between geoconservation and biodiversity conservation
4. Ignoring existence of geoheritage
5. International approaches to geoconservation
6. Establishment of geoconservation areas
7. Managing geoconservation sites/areas
8. Dealing with threats to geoconservation
9. Communicating geoconservation

Case studies should be 800 words and include the following elements: site name and location, site designation, IUCN Category if available, features/processes protected, conservation issues, management objectives and innovations, contacts for further information and e-links for any literature. A photo and location map and site map can be included.

Responses please to roger.dodin@btinternet.com

Deadline: as soon as possible.

The IUCN Volcano Thematic Study: Update on GSG work programme task: revision of "World Heritage Volcanoes" report

Thomas Casadevall

Volcanic landscapes are among the most recognizable protected areas of the World Heritage Program, the Man in the Biosphere program, and the UNESCO Global Geopark Network, yet important questions remain. Are the world's most significant and important volcanic landscapes recognized and properly protected? What are the challenges in the management of volcanic world heritage properties in the future? Are the various regions of the globe properly represented in these programs?

To address these questions, the International Union for the Conservation of Nature (IUCN) has undertaken a revision of its *Volcano Thematic Study on World Heritage Volcanoes*

to examine not only World Heritage properties, but properties in the Man in the Biosphere program as well as in the UNESCO Global Geopark Network. Preliminary evaluation of the properties through June 2018 show that for World Heritage sites, 80 of 1073 (7.4%) have volcanic features; for Biosphere Reserves, 58 of 669 (8.7%) have volcanic features; and for UNESCO Global Geoparks, 35 of 140 (25%) have volcanic features.

We have identified significant gaps in the inclusion of volcanic sites in the World Heritage list where, of the 80 volcanic sites, only 27 are inscribed for outstanding universal value for their geological attributes under criterion viii (the geological criterion). This is not surprising as in addition to their geoscience story, volcanoes provide one on Nature's most dynamic stages which have their expressions in the great biodiversity found in volcanic landscapes, the cultural connections between people and their environment, and as a record of human developments.

Since the start of 2018, the team working to revise the IUCN report on World Heritage Volcanoes met in Denver with the aim of completing a presentation on our progress which was shared at the Vilm, Germany workshop in April 2018, as well as with IUCN-Gland staff. A draft version of the report will be shown at the World Heritage Committee meeting in Bahrain in late-June 2018.

Thomas J. Casadevall, U.S. Geological Survey, Denver, Colorado, USA (tcasadevall@usgs.gov)
Daniel Tormey, CE Solutions, Santa Monica, California, USA (dtormey@ce.solutions)
Jessica Roberts, University Portsmouth, Portsmouth, UK (jessica.roberts@port.ac.uk)

Call for Hosting the 2nd International Conference on Geoheritage

The GSG Steering Committee is currently seeking nominations for host countries and partner organizations for the 2nd International Conference on Geoheritage. If you are interested in hosting and helping to organize the 2nd International Conference, please contact the GSG Secretary General, Wesley Hill (wesleymhill@gmail.com).

Forthcoming meetings of interest

- The European Geosciences Union (EGU) General Assembly, Vienna, 7-12 April 2019, includes a session on 'Geodiversity and Geoheritage' (ITS3.9/GM6.1/ERE7.4/GMPV7.15/SSS13.29). The session is co-sponsored by the Working Group on Geomorphosites and the Working Group on Landform Assessment for Geodiversity of the International Association of Geomorphologists; ProGEO, the European Association for the Conservation of the Geological Heritage; the IUGS International Commission on Geoheritage; the Geoheritage Specialist Group of the World Commission on Protected Areas of the International Union of Conservation of Nature, the International Lithosphere Program, and the IAVCEI Commission on Volcanic

Geoheritage and Protected Volcanic Landscape. For further details, see:
<https://meetingorganizer.copernicus.org/EGU2019/session/32657>.

- The International Quaternary Association (INQUA), Dublin, Ireland, 25 - 31 July 2019 includes a session on 'Valuing the Quaternary: Nature Conservation and Geoheritage'. See: <http://www.inqua2019.org/>
- The X International ProGEO Symposium will be held in Segovia, Spain, 9-12 June 2020. Further information will be available at www.progeo.ngo.
- IUCN World Conservation Congress(WCC) 11-19 June 2020, Marseille, France.

Recent publications of geoheritage interest

Hose, T.A. (ed.), 2016. *Geoheritage and Geotourism: a European Perspective*. The Boydell Press, Woodbridge, Suffolk

Reynard, E. & Brilha, J. (eds), 2018. *Geoheritage. Assessment, Protection, and Management*. Elsevier, Amsterdam

Dowling, R. & Newsome, D. (eds), 2018. *Handbook of Geotourism*. Edward Elgar Publishing, Cheltenham.

The latest issue of Earth Heritage Magazine, No. 50, which publishes news and popular articles on geoconservation will be available online shortly: www.earthheritage.org.uk

Useful Links

IUCN-WCPA Geoheritage Specialist Group: <https://www.iucn.org/theme/protected-areas/wcpa/what-we-do/geoheritage>

The European Geoparks Network: <http://www.europeangeoparks.org/>

Asia Pacific Geoparks Network: <http://asiapacificgeoparks.org/>

Global Network of National Geoparks: <http://www.globalgeopark.org/>

UNESCO Earth Sciences: <http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/global-geoparks/>

ProGEO (The European Association for the Conservation of the Geological Heritage): <http://www.progeo.ngo/>

IUCN WCPA Geoheritage Specialist Group

The Geoheritage Specialist Group (GSG) provides specialist advice and guidance on all aspects of geodiversity and geoheritage in relation to the establishment and effective management of protected areas, and to support the integration of geodiversity into all relevant IUCN programmes.

Further information about the GSG is available at: <https://www.iucn.org/theme/protected-areas/wcpa/what-we-do/geoheritage>

GSG Chair: Professor Kyung Sik Woo (wooks@kangwon.ac.kr)

Secretary General: Wesley Hill (wesleymhill@gmail.com)

To become a member of GSG, geoheritage experts must be members of the WCPA. Everyone who wishes to apply for WCPA membership must secure in advance the support in writing of the GSG Chair and/or Roger Crofts as the Deputy Chair responsible for WCPA links.

GSG also maintains a list of 'advisors' in the wider geoheritage community, who are not WCPA/GSG members. If you would like to be included on this list and to receive details of announcements and copies of the Newsletter, please send an email to Wesley Hill, including your full contact details (address, email, country, and your geoheritage interests).

The GSG Newsletter is compiled and edited by John Gordon. Please send contributions to: jgordon0914@gmail.com
