



International Commission on Geoheritage

SUMMARY REPORT 2017-2020

October 2020

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International Commission on Geoheritage 2021 – 2024
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New IUGS Commission on Geoheritage

IUGS Commision on Geoheritage was created in 2016 with two sub-commission:

- Sub-Commission on Sites and Collections.
- Sub-Commission on Heritage Stones

The IUGS Executive Committee has recently dissolved the International Commission on Geoheritage, to create a more robust and workable structure.

New commission structure

Dr. Asier Hilario Orús, Scientific director of the Basque Coast UNESCO Global Geopark, has been appointed as Chair of the IUGS International Commission on Geoheritage. Joining Dr. Hilario on the executive of the new Commission are Dr. Juana Vegas, Secretary General, who leads the geoheritage program at the Instituto Geológico y Minero de España, Madrid; Dr. Angela Ehling, Vice Chair, who leads the geoheritage program in the Bundesanstalt für Geowissenschaften und Rohstoffe in Berlin; and Prof. Zhang Jianping of Beijing, Vice Chair, who leads the Geoheritage Reseach Center in China University of Geosciences. Prof. Ben Van Vyk de Vries from Clermont Auvergne University, will chair teh Sub-commssion on Sites and Collections and Prof. Kaur Gurmeet will chair the Sub-commision on Heritage Stones.

More information about the new structure of the Commission on Geoheritage can be found in <https://www.iugs.org/commissions>

New Commission's main goals for 2021 – 2021

- To become a global reference on Geological Heritage at international level.
- To coordinate and check the main activities of the existing two subcommissions within an unified strategic plan.
- Recruitment and clarification of voting members for both subcommissions
- Establishment of clear criteria, methodology and procedures for the IUGS recognition of Global Geosites , Global Collection and Global heritage stones resources of international significance.
- To strength the collaboration of IUGS with UGGP program through the annual assessment of the international significance of the geological heritage of new candidates and activating new lines of cooperation.
- To strength the participation and collaboration of IUGS in IUCN
- To increase the visibility of IUGS in the frame of Geological Heritage.

- Organization of the first IUGS Symposium on Geological heritage.
- To host an unified webpage with all the information related to the Commission activities as well as clear definitions and procedures, including an attractive cartographic representation of the IUGS Global Geosites, Collections and Heritage stones resources.

Main actions made by the new Commission on Geoheritage in Sept – Oct 2020

- Opening of a participatory process among the key representatives of the new commission to create a clear and agreed strategic plan for the next 4 years.
- Application of an IGCP project called “ Working for a new methodology for the recognition of IUGS Geological heritage sites (IUGS Global Geosites)”. This project will last 4 years and has brought together Geological surveys, scientific institutions and Unesco Global Geoparks from all over the world to work towards the definition and implementation of the new IUGS Global Geosite program.
- Clarification of the status of the issue related to the methodology proposed by the IUGS for the geological assessment of new UGGP candidates. IUGS will work to adapt this proposal to the recommendations received from the UGGP Council.

IUGS sub-commission on Sites and Collections

key elements of the IUGS responsibilities to the wider community have been upheld. These are notably the [UNESCO Global Geopark Reviews](#), and providing suggestions of experts to the [International Union for the Conservation of Nature's UNESCO World Heritage desktop reviews](#).

The (sub)-Commission has maintained its presence in UNESCO and Global Geopark virtual meetings over the time of the COVID crisis, and also in activities with the IUCN Geoheritage Specialist Group.

Sub-Commission membership.

The sub-commission has a dedicated board of members, but the process of widening the membership has been slow. We have a large list of geographically, age and gender balanced people ready to join, are just awaiting the new Commission structure to be fully in place to launch this. This is expected to be done before 2021.

IUGS Activities for UNESCO Global Geoparks

The duties in providing reviews, consultation and discussion with UNESCO and the global geopark movement is time consuming and requires a global team of dedicated and available geoheritage experts.

In 2019 a Global Geopark Review group was set up who can manage the IUGS roll in Geoparks. By the end of 2019, this group had started the huge task of reviewing the 21 proposed Aspiring Global Geoparks.

By May 2020, a full set of evaluations was delivered, on time, to UNESCO, along with an IUGS appraisal, that was first approved by the IUGS EC.

The new Commission has discussed the review process, and an updated review structure has been proposed, with a clear separation between a review board, and the commission. The two tier structure will enhance the quality and fairness of the process, while making best use of our human resources.

This Commission has represented IUGS in the Council meeting of the UGGP

Assessment Guidelines for Geoheritage Significance

This is an ongoing element of discussion with the new IUGS Geoheritage commission structure. To remind the readers: It has been long considered that there is a lack of clarity and rigour in the geological evaluation of Global Geopark applications, due to a lack of clear guidelines.

A working group was set up in 2017 to produce some guidelines, that we delivered to the IUGS by the commission in 2019. These are with UNESCO and the Global Geopark council, but have yet to be ratified. We anticipate that the new Geoheritage Commission will unlock the impasse with these.

Sustainable Resource use in Geoheritage

Denise Gorfinkel and Helga Chulepin of the UNESCO Montivideo and Global geopark Council requested IUGS Geoheritage Commission's support for an initiative exploring sustainable resources use in geoheritage areas. With the assistance of Roland Oberhaensli and Benjamin van Wyk de Vries we grouped together with Edward Nickless of Resourcing

Future Generations to provide the project with a letter of support from the IUGS commission, for their launch.

The project has started with a survey sent to Latin American geoparks and geoheritage areas. In **June 2020**, a working document was produced of the results in Spanish, and is being translated into English, it should be ready for UNESCO publication shortly.

Geoheritage sub-commission will follow the progress of the project, with the aim eventually to globalise a Resources and Geoheritage project in 2021.

egu2019

The Geoheritage sub-commission supported the Geoheritage and Geodiversity session and splinter meeting at the EGU 2019. 34 presentations were given. The splinter meeting provided an opportunity to discuss with Global Geopark and general geoscience personnel and was promoted by a cheese and wine provided by the Clermont-Ferrand Risk centre.

The Sub-commission also supported an EGU booth for the ERASMUS+ 3DTeLC (3D - Teaching Learning and Communicating), which was part also of the recently accepted IGCP692 project 'Geohazards for Resilience'. This was one of the most successful EGU booths of 2019 and has been invited to return for 2020.

IGC Delhi 2020 Session Geodiversity, geoheritage, and geoconservation

This session has 69 contributions, programmed, being one of the most well attended geoheritage sessions outside the specialist geoheritage meetings.

EGU 2020

The Geodiversity session is again supported by the Commission, as is the invited ERASMUS+ virtual Reality booth for 2020.

International Geosciences Programme project 692 – Geoheritage for Geohazard Resilience

This project was accepted in 2019 and is the first Geoheritage IGCP project dedicated to geosites and natural hazards. The project will set up a global network of geoheritage sites that deal with geoheritage aspects of the resilience to natural hazards. A Website, email listserv and global webinars have been set up and the projects started in the participating countries. Two papers have been published and a number submitted, as well as several conference abstracts.

Peru – Two projects underway. One for the 'Ruta de Sillar', around the city of Arequipa bringing urban UNESCO World Heritage into contacts with the source rock 'Sillar'. The Sillar quarries are in areas at risk from floods, volcanic flows, pollution and urbanisation.

Second project, associated with the Colca and Valle de Andahua Geopark, included the setting up of geosites in villages sited in volcanic craters, viewpoints of the major volcanoes and tectonic features, and development of geotourism hazard awareness.

Colombia – The Nevado del Ruiz Aspiring Global Geopark, inducing assistance with the development of geosites in the 1985 Amero disaster area (30,000 dead).

Nicaragua – The Ometepe Aspiring Geopark development of a geosite inventory to support this project, which is now a priority for the Nicaraguan Geosciences body INETER.

Philippines – The Calabarzon Volcanic Field Geopark. Vast area south of Manilla, including the Taal supervolcano, the Los Banos thermal spas, and the huge Banahao volcano. First geosite inventory and development plan.

Ethiopia – Dallol geothermal field – publication of website (<http://dallol.lmv.uca.fr/>), and first satellite monitoring of a highly dynamic geothermal field. Publication submitted to 'Geoheritage Journal'. First monitoring (by satellite) of the geothermal fields, and communication of changes through website to the general public. (**note possibility of similar disaster as at White Island in New Zealand at this site**)

Iran – Tabas black lands volcanic field and Nayband Fault. Geological study and recommendations for the potential Tabas Geopark (Elahpour et al. 2019)

France – Urban Geoheritage of Clermont-Ferrand, a study in Urban management of geoheritage and resilience (Vereb et al in prep.). Geoheritage and Resilience of the Puy de Dome (Petronis et al. 2019). Sustainable Geoheritage and Water with Volvic Volcanic Experience 2019.

Mexico – Geopedregal a geoheritage site within the campus of UNAM Mexico City.
Teleconferences

University of San Augustin Aréquipa Péru. First presentation of geosite assessment by UNSA Geoheritage course participants December 2019.

Conference presentations

At II Latin American Geopark Meeting, Manizales Colombia 2019.

van Wyk de Vries B - Geoheritage and Resilience.

Guilbaud M-N – El Pedregal Geoheritage and Resilience site, UNAM campus Mexico.

Navarro M, Martinez W – Ometepe Asiting Geopark Risks and Geoheritage

Vallejo S – Volcanic Risk and Geoheritage in Ecuador

Manrique N, Zavila B – Geoheritage and Resilience in Peru.

Manrique - Geoheritage and Resilience Initiatives around Aréquipa – Association of Latin American Volcanologists, Antofagasta Chile (Delayed and presented in march 2020).

IUCN Geoheritage Specialist Group (Key Geoheritage Areas)

The Geoheritage Specialist Group of the IUCN is a member of the World Council for Protected Areas, and is the IUCN counterpart to the IUGS Geoheritage Commission. Commission Secretary General Benjamin van Wyk de Vries was elected onto the IUCN Specialist Group in 2019, and joined José Brilha (Working Group for Geological Assessment).

integrate all the advances, including the Key Geoheritage Areas idea into a coherent strategy. This is planned for 2021, to occur at a major international meeting.

Note about collections

IUGS has requested the Commission on Geoheritage to look into the creation of a collections sub-commission. During 2019 we consulted those of the sub-commission, who work with collections, museums and we consulted with major collection representatives (e.g. from the Smithsonian). At present, in strong contrast to the geoheritage sites, there does not seem to be a feeling in the collections community that an IUGS commission is needed. The connections between the IUGS and museums and collections does not seem to be regarded as necessary to improve already existing networks.

We suggest that the Commission on Geoheritage forms a Working Group to study the possible role of the IUGS in Collections, to find out what the IUGS could contribute and how best the IUGS should go about contributing.

Heritage Stone Sub-commission

The IUGS Heritage Stone Task Group was upgraded to a status of **Heritage Stone sub-commission** in 2016.

Noteworthy Achievements

1. IUGS-Global Heritage Stone Resource “GHSR’ designations

22 natural stones have been designated as Global Heritage Stone Resources (GHSRs) in the last four years, namely: Portland stone (UK), Petit granite (Belgium), Larvikite (Norway), Podpêc limestone (Slovenia), Hallandia gneiss (Sweden), Carrara marble (Italy), Villamayor sandstone (Spain), Estremoz marble (Portugal), Maltese Globigerina Limestone (Malta), Jacobsville Sandstone (USA), Lede stone (Belgium), Welsh Slate (Wales), Piedra Mar del Plata (Argentina), Kolmården serpentine marble (Sweden), Lioz (Portugal), Alpedrete Granite (Spain), Bath Stone (UK), Macael Marble (Spain), Makrana Marble (India), Pietra Serena (Italy), Rosa Beta Granite (Italy), and Tennessee marble (USA)

To know more about the designated GHSRs please visit our website:
<http://globalheritagestone.com/> and
<http://globalheritagestone.com/other-projects/ghsr/designations/>

2. Noteworthy Publications

- i. Around 50-60 articles have been published in the last four years on natural stones by HSS correspondents in journals like Episodes, Geoheritage, Geological Society of London, Sustainability etc.
- ii. Books and Special Issues of highly cited journals have been published by HSS group.
- iii. A book series by CRC Press/Balkema (Taylor and Francis Group) under the general title “Natural Stone and World Heritage” has been initiated in 2018. Two book on stone built heritage sites of Salamanca, Spain (Pereira, 2018) and Delhi-Agra, India (Kaur et al, 2020) have already been published. Eight more books from different countries are in the pipeline.
- iv. HSS group brought out four special issues on natural stones used in architectural heritage of cultural relevance in the last four years in Episodes, sustainability, Geoheritage.

3. Completed IGCP Project

Successful completion of UNESCO-IUGS IGCP-637 project (2015- 2019)

4. Current IGCP Project

HSS Group bagged another IGCP Project HERITAGE STONES RECOGNITION: A STEP FORWARD (HerSTONES) for four years from 2020-2023

5. Congresses/Seminars/Workshops

- i. HSS sessions on “Natural stone research and Heritage stone designation” were organised at (EGU-2016, EGU-2017, EGU-2018, and EGU-2019 and an online session-EGU 2020) in Vienna, Austria.
- ii. HSS organised symposia “Dimension stone and building materials” during 35th International Geological Congress held at Cape Town, South Africa (2016)
- iii. 1st Workshop on Heritage Stones (2-4 of October, 2018) was held at Salamanca, Spain.
- iv. HSS session at the 36th IGC in Delhi in 2021.

6. Global Networking

Heritage Stone Subcommission expanded in terms of numbers of correspondents representing wider geographical distribution. HSS group has seen increase in correspondents from developing countries and women scientists, in particular.

7. HSS website

A dedicated HSS website is in place. All-important achievements, information, events are regularly updated here:

<http://globalheritagestone.com/>.

The website hosts other relevant information related to natural stones, relevant publications, conferences, workshops, seminars and meetings.