

 Huangshan UGGp, China. Photograph by Yang Xiao

Lushan UGGp, China. Photograph

by Yang Xiao



Sanqingshan UGGp, China. Photograph by Yang Xiao

Wangwushan-Daimeishan UGGp, China. Photograph by Yang Xiao



Arxan UGGp, China. Photograph by Yang Xiao



Taishan UGGn China. Photograph by Yang Xiao

## International Mountain Day

December

nternationa

MOUNTAIN DAY

The Global Geoparks Network, the international organization of the 140 UNESCO Global Geoparks is joining the global campaign, through a social media communication and events around the world, to promote Mountains and their geological heritage, ecological and cultural value for our planet and the generations to come!

Dali Cangshan UGGp, China. Photograph by Yang Xiao

Jiuhuashan Geopark, China.
 Photograph by Geoparker





Photograph by Geoparke Acknowledgements:

Leye-Fengshan UGGp, China

The compilation and publication of the Newsletter are also supported by China Geological Survey (DD20179312) and Central Public-interest Scientific Institution Basal Research Fund.

Huanggang Dabieshan UGGp, China. Photograph by Geoparker





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## 8<sup>th</sup> International **Conference on UNESCO Global Geoparks**





s at the Closing Ceremon





#### GGN NEWSLETTER 2018 ISSUE 3

#### Published by:

Office of the Global Geoparks Network (supported by UNESCO and MNR of China) Chinese Geoparks Network Chinese Academy of Geological Sciences

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## <sup>n</sup> International Conference **O** on UNESCO Global Geoparks

#### 11<sup>th</sup>-14<sup>th</sup> September 2018 – Adamello Brenta UNESCO Global Geopark, Italy

The 8<sup>th</sup> International Conference on UNESCO Global Geoparks organized between 11<sup>th</sup> and 14<sup>th</sup> of September in the Adamello Brenta Nature Park and Geopark, in Trentino, Italy was one of the most successful organizations of the Global Geoparks Network ever!

The Conference themed "Geoparks and Sustainable Development", was organized by the Adamello Brenta Nature Park and Geopark management body together with the Tourist Board Madonna di Campiglio-Pinzolo-Val Rendena involving 40 members of staff, 43 Geopark Ambassadors, mountain guides involved in the field trips. At Conference also contributed 30 Geofair exhibitors and 10 local producers and "Park Quality" operators who attended the Agrimarket, an event dedicated to local products and the encounter between cultures through food. With almost 1000 participants



coming from 65 countries, and more than 300 scientific presentations (220 oral and 110 poster), the Conference gave the opportunity to Global Geopark Representatives and Geopark Professionals to discuss examples of best practice in Geoparks operation and management, in networking and collaboration among Geoparks and in building stronger and more effective partnerships and

collaborations. At the same time it gave the opportunity to many colleagues coming from Aspiring Geoparks to present their efforts for the establishment of new Geoparks worldwide.

The participation of the local Association of Families, Anffas and the Social Laboratory involving people with intellectual and social disabilities, provided a significant contribution to the Conference.

The greeting message of the President of the Italian Republic Mr. Sergio Mattarella at the opening ceremony, underlines the fact that Geoparks day by day gain momentum as international label of quality in environmental and geological heritage protection and management as well as in environmental education, sustainable tourism and local development.

At the opening ceremony the President of the Geopark, Joseph Masè, chairman of the



Conference, gave his welcome to the participants from 65 countries. Nickolas Zouros, President of the Global Geoparks Network highlighted the collaboration among Geoparks, the achievements and the common activities of the 140 UNESCO Global Geoparks to protect geological heritage treasures and to contribute in sustainable development of their territories. Patrick McKeever, Secretary of the International Geoscience and Geoparks Programme, highlighted the activities within Geoparks to achieve the goals for sustainability stated in the UN Agenda 2030.

The success of the 8<sup>th</sup> International Conference on UNESCO Global Geoparks, the decisions taken during the various meetings including the 2<sup>nd</sup> Ordinary GGN General Assembly, the establishment of new initiatives such as the GGN Working Groups Workshops

A Conference event was also

will contribute significantly to strengthen the operation and visibility of the UNESCO Global Geoparks and the Global Geoparks Network and the promotion and visibility of the outstanding natural beauty of the hosting Adamello Brenta UNESCO Global Geopark. the Exhibition "Stone made objects" - Intangible Heritage in UNESCO Global Geoparks. The exhibition is an initiative of the Intangible Heritage Working Group of the European Geoparks Network. It highlights the links between geological and cultural diversity and celebrates the European Year of Cultural Heritage.

For the Adamello Brenta UGG and its staff the Confrence has been an opportunity to involve much more local people and to enhance the sense of pride for the immense geological heritage where they live and the

#### **GGN Networking and Common Activities**

importance to protect it.

Participants enjoyed very much the enthusiasm and dedicated work of the Adamello Brenta Geopark team and volunteers, the involvement of local people in your activities, the warm hospitality and excellent food in Trentino!

All Global Geopark representatives agreed that both the 8th International Conference on UNESCO Global Geoparks and the associated GGN/EGN/ APGN/GeoLAC Meetings have very positive contribution to the cohesion and further development of the GGN and the Geoparks world-wide.

The impact of the 8<sup>th</sup> International Conference on UNESCO Global Geoparks is reflected not only to the impressive number of the participants coming all over the globe but also to the broad publicity locally as well as in many countries in Europe and the world.

## **2<sup>nd</sup> Ordinary General Assembly**

## of the Global Geoparks Network

On September 12th 2018 the 2<sup>nd</sup> Ordinary General Assembly of the Global Geoparks Network took place in Adamello-Brenta.

Representatives of the 140 Institutional Members - UNESCO Global Geoparks as well as the 29 Individual Memebrs - Geopark professionals, took place in the Assembly having the right to vote.

Observers were the representatives of the International Organizations (UNESCO and IUGS) as well as non-voting Geopark Representatives.

The 2<sup>nd</sup> Ordinary GGN General Assembly discussed the following items:

1.Status Report on the GGN Association

2.2018-2020 GGN Action Plan

3.GGN 2019 Membership fees (Article 5, Section 1)

4. Approval of GGN Honorary Members (Article 4, Section 2)

**5.UNESCO Global Geoparks Programme** 

The 2<sup>nd</sup> Ordinary GGN General Assembly agreed on the GGN Executive Board Report of the activities of the Global Geoparks Network during the last two years.

The 2<sup>nd</sup> Ordinary GGN General Assembly also agreed on the general framework of the GGN Action Plan 2018-2020 as proposed by the GGN Executive Board.

In the same framework it was also agreed that the GGN should strengthen its contribution to the UNESCO Global Geoparks programme. It was agreed the proposal of the GGN Executive Board for the new framework for the improvement of the Geopark Evaluators procedures and the establishment of a training course for Evaluators. This is a duty of the Global Geoparks Network according to the UNESCO Global Geoparks statutes.

The GGN Advisory Committee and the Individual Geoparks will submit their proposals on the discussion documents to the GGN Executive Board before the end of October for the finalization of the documents.

The 2<sup>nd</sup> Ordinary GGN General Assembly adopted the proposal of the GGN Executive Board to keep the Annual Membership Fee stable at the existing level for Institutional and Individual Members, for the next year.

The 2<sup>nd</sup> Ordinary GGN General Assembly adopted unanimously the proposal of the GGN ExB for the 5 new Honorary members.

Finally, the GGN General Assembly adopted the proposal made by Prof. Artur Sa for the donation of collection items from the Geoparks to the Natural History Museum of Rio de Janeiro who was burned on September 2nd 2018, showing solidarity to the most important Scientific and Historical Museum in Brazil and Latin America.



The GGN Executive Board in its 41st session, held on June 7th, 2018 decided to adopt the proposal of the GGN Best Practice Award Committee and to award the GGN Best Practice Award 2018 to the following UNESCO Global Geoparks:

1<sup>st</sup> AWARD: Adamello Brenta UNESCO Global Geopark 2<sup>nd</sup> AWARD: Las Loras UNESCO Global Geopark and Zigong **UNESCO Global Geopark** 

3<sup>rd</sup> AWARD: Sierra Norte De Sevilla UNESCO Global Geopark The Award Ceremony was held during the Gala Dinner of the 8th International Conference on UNESCO Global Geoparks in Adamello Brenta UNESCO Global Geopark on September 13th 2018. The announcement was followed by a certificate and a trophy made by school children with special abilities.

#### 1<sup>st</sup> GGN Best Practice Award: Adamello-Brenta UNESCO Global Geopark

Adamello-Brenta UNESCO Global Geopark will be awarded as 1<sup>st</sup> Best Practice for its education and school co-operation programme.

According to the Evaluator's observation the Geopark is collaborating with all schools of the area (infant, primary, secondary and high schools) and some schools outside the region, involving around 10.000 school children in 2016.

Therefore, Adamello-Brenta UGGp is practicing an authentic, unique, sustainable and very efficient long-term co-operation programme with local primary schools. Through this educational programme all children growing up in the Geopark

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The Trophy

area are continuously getting Geopark lessons about geological basics, wildlife, nature protection



Adamello-Brenta UNESCO Global Geopark

#### **GGN Networking and Common Activities**

and principles of sustainability. The children of the Geopark area are provided with a special comprehensive folder with a collection of proved Geopark worksheets accompanying them through the 6 years of the primary school. Teachers are

trained continuously by the Geopark staff to be part of the system. Outdoor activities and children's presentations are complementing this commendable educational school programme.

#### 2<sup>nd</sup> GGN Best Practice Award: Zigong UNESCO Global Geopark

Zigong UNESCO Global Geopark will be awarded with the 2<sup>nd</sup> Best Practice for its Geo-partners in Geotourism and especially the Shisun valley ecogreen tea base. Since the Shisun Valley became part of Zigong Geopark, the geopark management



+ Zigong UNESCO Global Geopark

body made a partnership with the local enterprise of "GREEN-TEA-SPRING" in order to promote the high quality green tea produced in an ideal environment.

According to the Evaluator's observation the geotourism and ecotourism base offers a new experience for visitors in Zigong, combining the local geology with the traditional tea culture. We are impressed by the quality of the tourist services as well as the active involvement and support of the local community to the activities of the Geopark and the strong connection between the Geopark and the local guides.

The geotourism and agrotourism experience is without any doubt a model to follow for other rural areas in Geoparks.

#### 2<sup>nd</sup> GGN Best Practice Award: Las Loras UNESCO Global Geopark

Las Loras UNESCO Global Geopark will be awarded with the 2<sup>nd</sup> Best Practice Award for its Geo-partners and especially the Geo-bakery that sells breads in the shape of the local fossils, creating a special link between the geological heritage and local products.

According to the Evaluator's observation the Geopark is collaborating with the Geo-bakery which in his showcase, exposes not only his ammonites-

like bakery, but also original fossils and fragments of petrified trees. There are diverse photos and other artefacts related to the local geological heritage on the walls of his bakery.

This geobaker is managing also a small but very rich Ethnographical museum, which dwells except many authentic local relicts also some paleontological samples. He is not only good geoheritage interpreter and storyteller but he also serves as a geoguide in the Basconcillos del Tozo surroundinas.

The baker, person with the admirable amateur palaeontological knowledge, incredibly positive energy and contagious interest in geoheritage, plays a very important role of geopark ambassador and example to follow.

All that is enabled by the continuous support, advices and expert information provided to the baker by the enthusiastic and very professional team of the Las Loras Geopark team.

#### 3<sup>rd</sup> GGN Best Practice Award: Sierra Norte de Sevilla UNESCO Global Geopark

Sierra Norte de Sevilla UNESCO Global Geopark will be awarded as 3<sup>rd</sup> Best Practice because it has created strong links with the local communities and encourages the involvement of young local guides in Geopark tourist offer creating new jobs and improving visitors Geopark experience.

According to the Evaluator's observation Sierra Norte di Sevilla UNESCO Global Geopark offers a good example of collaboration between the Geopark management and the local communities, especially supporting and encouraging the development of tourist activities on the natural heritage and the geological heritage of the area. We are impressed by the strong connection between the Geopark and the local tourist guides. There are several enterprises partner of the Geopark, which realized guided tours within the Geopark territory focusing on geology and mining heritage as well as to the nature environment.

The training of how to provide the scientifically correct information in a visitors' friendly way is an example of best practice.

The educational activities provided through

#### **GGN Networking and Common Activities**



Las Loras UNESCO Global Geopark

the Geopark info-centers and specifically the educational program "Nature and You", which is developed by the Ministry of Environment and Spatial Planning with main objective to bring students from our community centres to the natural environment, facilitating the knowledge and dissemination of their heritage in another good practice of the Geopark.



+ Sierra Norte de Sevilla UNESCO Global Geopark



The 2<sup>nd</sup> Ordinary GGN General Assembly on September 12th 2018 unanimously adopted the GGN Executive Board proposal and nominated 5 new GGN Honorary Members to celebrate their significant contribution to the establishment of the first Geoparks in Europe and China and the foundation and development of the Global Geoparks Network:

Dr. Wolfgang Eder, Germany

Mr. Apostolos Athanasiades, Lesvos island, Greece Mr. Klaus Schäfer, Vulkaneifel, Germany Prof. Jianjun Jiang, P.R. China Prof. Changxing Long, P.R. China

A. UNESCO – Division of Earth Sciences took the initiative and organized the founding meeting of the Global Geoparks Network in February 2004 at the UNESCO Head guarters in Paris.

#### Dr Wolfgang Eder, Germany

Dr Wolfgang Eder, born on 18 May 1942, studied Geology at the Universities of Tübingen, Göttingen and Munich, all Germany; Diploma-Geologist, Univ. Göttingen (1966). Between 1966 -1970 he was Research Assistant in Marine Geology (Adriatic Sea), Sedimentology and Micropalaeontology (Devonian and Carboniferous, Conodonts); PhD in Geology, Geophysics and Geochemistry, Univ. Göttingen (1970); Thesis on "Calcareous Turbidites of Near-Reef Devonian Basins", 1971

-1980: Researcher and Lecturer in Carbonate Sedimentology, Paleoenvironment and Geological Mapping at University of Göttingen; Scientific Secretary of the Special Collaborative Programme "SFB 48" on the 'Earth's Crust' (DFG, German Science Foundation). Between 1981 -1991 he was Scientific Secretary of the Commission on Joint Research in Earth Sciences (DFG, Bonn), National Secretary of the 'International Geological Correlation Programme' (IGCP), the 'International Lithosphere Program' (ILP) and Continental Drilling



Ceremony of the nomination of Dr Wolfgang Eder as GGN Honorary Member during the Gala Dinner of the 8th International Conference on UNESCO Global Geoparks. Dr G. Martini General Secretary of the GGN gave the membership certificate and Dr. J. Masse President of the Adamello Brenta Geopark gave the trophy.

"KTB"-Project; involvement in the German activities of the International "Ocean Drilling Program" (ODP-IODP) and the 'Geomar'-Initiative. Between 1992-2005 worked at UNESCO Director, Division of Earth Sciences at UNESCO Headquarters, Paris; Scient. Secretary of **UNESCO-IUGS's "International Geoscience** Programme" (IGCP); co-initiator and -design of UNESCO's "Geoparks" initiative; cooperation With UNESCO's geo-related World Heritage as well as 'European and Global Geoparks Network' activities; involvement in the coordination of geoenvironmental projects related to 'Global Earth Observation' and Geological Mapping, Natural Disaster Risk Reduction (Landslides), and Capacity Building in Central America, the Eastern

#### **GGN Networking and Common Activities**

Mediterranean Region, Africa and South-East Asia. As Director of the Division of Earth Sciences at UNESCO proposed the establishment of a UNESCO Geoparks Programme in 1999, and contributed significantly for keeping this idea alive in spite of the difficulties. He encouraged and supported generously the operation and development of the European Geoparks Network, signing also a cooperation agreement between UNESCO's Division of Earth Heritage and the European Geoparks Network in 2002. He made all necessary preparations for the assessment of the potential first Global Geoparks, he proposed and organized the founding meeting for the establishment of the Global Geoparks Network in February 2004 with the participation of 17

#### GGN Networking and Common Activities

European Geoparks and 8 Chinese Geoparks. He also organized in collaboration with the Chinese authorities the 1st International Conference on Geoparks in Beijing in June 2004, with the participation of the European Geoparks Network and the contribution of IUGS, IGU and IUCN. This

was the first activity of the Global Geoparks Network to present the new concept to the international Geoscientific community and the first of the International Conferences on Geoparks which take place since every 2 years.

**B. The founding 4 European Geoparks.** Authorities from the Territories who initiated the European Geoparks Network in 2004, and especially Mayors and Officials who encouraged and supported the creation of Geoparks:

Apostolos Athanasiades, Sigri Village, Lesvos island, Greece.

Apostolos Athanasiades born on 21 December 1943 was President of the Local Council of Sigri village for 12 years (1999-2011) and elected Municipal Councilor of the Lesvos Municipal Council for 4 years (2011-2014). Since June 1999 to April 2011, represented the community of Sigri in the Board of Directors of the Natural History Museum of the Lesvos Petrified Forest as the elected President of the Sigri Local Council. Through out his service he supported the activities for the protection and rational management of the Lesvos Petrified Forest as well as the international collaboration which has been developed on the Geopark concept. He supported the creation of the European Geoparks Network and the participation of the Lesvos Petrified Forest in it. He strongly supported also the participation of the Lesvos Petrified Forest in the Global Geoparks Network in 2004 and the activities to establish, develop and promote Geoparks of the Natural History Museum of the Lesvos Petrified Forest as the operational body of the Geopark. He also supported as

Councilor of the Municipal Council of Lesvos the extension of the Geopark area to cover the total surface of Lesvos island.

Klaus Schäfer, Vulkaneifel, Germany Klaus Schäfer born on 19th August, 1960. He was since 1998 Business Manager (Geschäftsführer) of the Vulkaneifel Tourism & Promotion Profit Ltd. Company, Germany and from July 2000 Business Manager Eifel Tourism (ET) for Eifel Region in Rhenania Palatinate and as well for North Rhine Westfalia, Germany. Since 2005 member of Holistic Coordination of Future Initiative Eifel and "Care take" within the Network Tourism From 2008-2011 Board Member of Tourism Association North Rhine Westfalia. Since 2009 Vice-Chairman of German Association of Mid-High-Mountains.

From his position and responsibilities he contributed significantly to the development of Geo-tourism in Vulkaneifel and he encouraged and support the foundation of European Geoparks Network in 2000 as well as Vulkaneifel Geopark participation in the foundation of the Global Geoparks Network in 2004.

#### **C. Chinese Geoparks** – Officials and Experts who encouraged and supported the creation of Geoparks in China and their participation in the Global Geoparks Network:

#### Jianjun Jiang, P.R. of China

Professor and Dr. Jiang Jianjun, born on August 1, 1957, is now a retired director-general, Department of Sciences and Technology and International Cooperation, former Ministry of Land and Resources (MLR), P. R. China.

He earned his MSc and Ph. D degrees of Palaeontology respectively in 1982 and 1988 from the China University of Geosciences, Beijing, China. He has acted as an official at the MLR since 1990, and was the director-general of Department of Geoenvironment at MLR during the period from 2002 to 2008. In this period, he took part in the decision-making process of national geoparks and played a crucial role in the establishment of Chinese national geoparks network. He made his great efforts to encourage local governments to apply for the national geoparks, and chaired to formulate a series of governmental documents for geopark application, criteria, guidelines, assessment, building, management and promotion. In the early 2000s, he, representing the Chinese government, actively contacted with UNESCO and international communities, fully supported the establishment of Global Geoparks Network. From 2004 to 2006, as a leader of Chinese geoparks delegates, he participated and made application presentations for the global geoparks respectively in UNESCO Headquarter, Paris, France and Belfast, Northern Ireland, UK. In 2004, as a general coordinator, he successfully organized the First International Conference on Global Geoparks in Beijing. Under his effort, the Global Geoparks Network Office was set up in Beijing in 2004. He also set up a special organization to be in charge of establishing

#### GGN Networking and Common Activities

and managing the GGN website and editing the GGN Newsletters, which have played an important role in the development of the GGN. At the end of 2008, he was appointed as the director-general of Department of Sciences and Technology and International Cooperation, MLR. On his new position, he still cared about the situation and development of the GGN. As the major leader, he initiated a programme of Chinese Science Popularization Base for supporting the Chinese geoparks development, the most of Chinese UGGps have become the members of this kind of Base.

#### Prof. Changxing Long, P.R. China

Prof. Changxing Long, was born on December 26th, 1955. He earned in 1975 his degree in Geology, at Hebei University of Geosciences, China, his MSc in 1981, in Structural geology, at Chinese Academy of Geological Sciences, Beijing and PhD in Geology at Dalhousie University, Halifax, Canada.

Between 2005-2014 he was Professor, Director of the Institute of Geomechanics, Chinese Academy of Geological Sciences, Beijing. Since 2014 he is Professor, Honorary Director, of the Institute of Geomechanics, CAGS, Director of Li Siguang Memorial Museum, P. R. China. During this period contributed to the work of the Global Geoparks Network Bureau since 2006 and supported the strengthening and development of the Global Geoparks Network. He was Co-ordinator of the Asian Pacific Geoparks Network since his foundation till September 2017. In 2014 he was member of the founding Executive Board of the Global Geoparks Network and elected Vice-President of the Organization till September 2016.

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# **E**valuator's Seminar **ONUNESCO Global Geoparks**

### The 1<sup>st</sup> International Evaluator's Seminar was successfully organized in Beijing

The 1<sup>st</sup> International Evaluator's Seminar on UNESCO Global Geoparks took place on October 29<sup>th</sup> 2018 in Beijing hosted by the China University of Geosciences Bejing, China. In accordance with the Statutes of the International Geoscience and Geoparks Programme (Article 5) and the Operational Guidelines for UNESCO Global Geoparks (Article 4), UNESCO in conjunction with the Global Geoparks Network (GGN) will establish and maintain a roster of evaluators. The Roster of Evaluators' training strategy was discussed and agreed by the GGN Executive Board in its 47th Meeting which took place on August 7<sup>th</sup> 2018 with the positive contribution of the Secretary of the UNESCO Global Geoparks Programme. It was also agreed the necessity to involve all Evaluators in this new activity by running a series of such seminars. In order to save scarce resources it was proposed to organize these seminars in parallel with the already planned Geopark Meetings and Capacity Building Activities. The intention of establishing this Roster of Evaluators' training was to improve the common understanding of the Evaluators on the UNESCO Global Geoparks Statutes and Operational Guidelines which are the basic documents of the Seminar.

Thus, for the period 2018-2019 have been planed the following activities:

- the 1<sup>st</sup> Seminar on October 29<sup>th</sup> 2018 for Evaluators from China.

- the 2<sup>nd</sup> Seminar is planned on March 26<sup>th</sup> 2019 for EGN Evaluators, in parallel with the EGN meeting in Germany.

- the 3<sup>rd</sup> Seminar is planned on 5<sup>th</sup> September 2019 for APGN Evaluators, in parallel with the APGN meeting in Indonesia.

- the 4<sup>th</sup> Seminar is planned on 27<sup>th</sup> September 2019 (including evaluators from Canada and Latin America) in parallel with the EGN meeting in Spain.

The President of the UNESCO Global Geoparks Council and the Secretary of the International Geoscience and Geoparks Programme during the last session of the UNESCO Global Geoparks Council presented this new initiative which was met positively,

acknowledged and with comments on its necessity by the great majority of the UNESCO Global Geoparks Council members.

During the 8th International Conference on UNESCO Global Geoparks, at the General Assembly of the Global Geoparks Network on September 12<sup>th</sup>, the Evaluators procedures and training was presented and agreed. The GGN in collaboration with UNESCO Global Geoparks Secretariat will organize the Evaluator's Seminars.

#### The 1<sup>st</sup> International Evaluator's Seminar

With 22 Geopark Evaluators participants mainly coming from China and Canada, Japan, Malaysia, Germany, France and Greece the Seminar gave the opportunity to clarify issues related with the implementation of the Statutes of the International Geoscience and Geoparks Programme and the Operational Guidelines for UNESCO Global Geoparks.

The opening ceremony was greeted by

◆ Dr. Yuan Liu, Inspector of the Department of Reserves Management of the National Forest and Grassland Administration of China

- The Chair of the UNESCO Global Geoparks Council Dr Guy Martini
- The President of the Global Geoparks Network, Prof. Nickolas Zouros

The Vice President of the China University of Geosciences Beijing Prof. Xunlian Wang

The Lectures covered the whole day and included the following subjects: UNESCO Global Geoparks – Statutes and Operational Guidelines

- New procedures for Geopark Evaluators.
- Aspiring UNESCO Global Geoparks Evaluation Procedures and Report
- UNESCO Global Geoparks Revalidation Procedures and Evaluator's Report
- Geological Heritage: Assessment and Verification procedures
- Evaluators Mission and Conduct Guidelines
- Geopark Evaluator's security module

It was also discussed the current Evaluation and Revalidation procedures: Strong points and Weaknesses - Case studies and Best practice to follow.

#### **GGN Networking and Common Activities**





## New Geotrail Signposts that Link Myths and Geology

Conca de Tremp-Montsec UNESCO Global Geopark, Spain

This June, the municipality of Pobla de Segur with the support of the scientific committee of the Geopark, produced and installed different panels at the Collegats gorge, a magic place full of geology and legends. They are meant to promote one of the geotrails of the UGGp.

The Collegats gorge is a narrow pass carved out in limestones of early Cretaceous age (125 Ma) and conglomerates from the Paleogene (35 Ma) by the Noguera Pallaresa river.

The different signposts help in understanding this remarkable geological history in an amusing way by adding the myths and legends that people used to explain what ones see here. Two examples of the geological features and stories are mentioned here.

#### Serpent's Cave

The legend says that there once was a giant snake in the cave that ate everything that ventured by the mouth of the cave. A monk set a trap by putting knives in the bread he was carrying. The snake swallowed them and, when it died, it left the shape of its carcass engraved on the cave's ceiling.

The geological explanation about of the shape of this serpent's carcass can be described by three processes. First, water infiltrated and began to dissolve and erode at the intersections between the fracture plane and the stratification plans.



 A combination of photo and drawing the visitors can be found in the signpost of Serpent's Cave

Second, the erosion intensified in the layers with more clay and fine sand and finally the layers of intermediate conglomerates collapsed.

#### Argenteria: naturemade architecture

The Argenteria receives its name from the silver-coloured reflections from the layer of ice that forms in winter time. They say that the famous architect Antoni Gaudí was enchanted by Argenteria's beauty and that it inspired his designs like for the Sagrada Família in Barcelona.

It is a geological formation of travertine, a limestone rock formed by the precipitation of calcium carbonate on the vegetation that grew near fountains and springs. The process of travertine formation started with infiltration of water in limestones which led to dissolution and what is called karstification.

This geotrail is ideal for practising hiking while immersing in impressive landscapes, where geology, natural and cultural heritages co-exist. It can be adapted to different public because it gives you different options: a 4km route with a low level of difficulty and an



 A combination of pl Argenteria.



 Guided tour to pron Miriam Subirà

#### Geo Tourism

8.8km circular itinerary, with a bit more difficulty. For the more adventurous ones, it can also be

practised climbing and canyoning enjoying the wild waters of the Noguera Pallaresa River.

Conca de Tremp-Montsec UNESCO Global Geopark, Spain info@projectegeoparctrempmontsec.com

+ A combination of photo and drawing the visitors can be found in the signpost of

+ Guided tour to promote the newly interpreted geotrail on September 29th. Author:

#### Geo Tourism

Organización de las Naciones Unidas para la Educación la Ciencia y la Cultura



## Sobrarbe-pirineos and Ordesa-monte Perdido: Geology from the Top

#### Sobrarbe-Pirineos UNESCO Global Geopark, Spain

A high geodiversity is one of the main characteristics of Sobrarbe-Pirineos UNESCO Global Geopark, in the North of Spain. From the southern medium mountains, with mild Mediterranean climate, to the high mountains in the North in severe alpine conditions, 550 million years are represented in their rocks. Two orogenies (variscan and pyrenean), some of the key geological structures to understand the Pyrenees, the southernmost glaciers in Europe and many geomorphological features typical of the mountain landscapes are the basis of a rich geological heritage.

Ordesa and Monte Perdido National Park is one of the most important areas in our territory. Within it, 11 geotrails and one educative itinerary are developed by the Geopark. Its impressive geology is part of the reasons of the nomination as National Park, ephemerides of wich the centennial is now being celebrated.

Sobrarbe-Pirineos UGG is joining this celebration through different activities, one of which was a geological trekking across the National Park. The past 1st and 2nd of September, a group of 15 participants plus three mountain guides, two geological guides and staff of the National Park made a beautiful itinerary starting from the Ordesa valley.

Soon, the entire group was immersed in a world of limestone cliffs telling the story of the ancient Pyrenean sea from the upper Cretaceous to the Eocene. The Cretaceous-Paleogene boundary and the Paleocene-Eocene Thermal Maximum were clearly observed along the way and everybody understood the impact of these two events in the present landscape.

After having the night in the infamous Góriz hut, where Charles Lyell was working in the 19th century, all the participants



 Cilindro de Marboré peak and its impressive anticline from Monte Perdido (Ánchel Belmonte)

headed to Monte Perdido peak (3355 meters high), the second highest peak in the Geopark and the third in the Pyrenees. From the top the view was awesome. Surrounded by folds, tarns and canyons, we enjoyed learning about the origin not only of the Ordesa and Monte Perdido National Park but also of the whole Pyrenean Mountains.

For some of the participants, this was their first time on a so symbolic summit. For all of us, it was a great moment of friendship, sharing our common love for geology and mountains.

The route continued climbing down the north face of Monte

Perdido, where an outstanding geosite lies: one of the last Spanish glaciers. Despite



+ The participants reaching the Monte Perdido glacier. (Ánchel Belmonte)

#### Geo Tourism

the reduced size, they have a great environmental value. Very detailed studies are being developed in order to monitor the retreat and the impact of the global change in the amount and extension of the ice. As the ice disappears, many new elements arise, like subglacial calcites and karren fields.

Finally, after a long way down, the group reached the bottom of Pineta valley. For the next year, a new trekking through our mountains will take place. Stay tuned!

> Ánchel Belmonte Ribas Sobrarbe-Pirineos UNESCO Global Geopark ajbelmonte@educa.aragon.es

## Understanding the World **Through Geoparks**

Oki Islands UNESCO Global Geopark, Japan

The Oki Islands UNESCO Global Geopark Promotion Committee is working to foster local pride in the Oki region and raise individuals who can share the value of the Oki Islands and the activities of the global geopark with the world.

Because of this, since 2015 the Promotion Committee has been organising Geopark English Camps and inviting local junior and senior high school students to participate. Through these camps the geopark aims to raise the participants' interest in English and develop their ability to share about the Oki Islands using English, as well as to improve the students' confidence in using a foreign language.



Icebreaker games (senior high)

English teachers (both Japanese and foreign nationals) from local schools were invited as staff. During the course of the camp students form small groups, each with a foreign teacher as their team leader. This created a good opportunity for the students to talk directly with foreign people and maybe notice some cultural differences, as well as to become more open to foreign people and cultures. The geopark aims to organise two camps each year, one for junior, and one for senior high school.



Brainstorming in groups (junior high)

This year both camps, each one a two-day event, were organised in August, and were targeted at students who were spending their summer holidays on the islands. The activities were carried out on Nakanoshima Island, one of the islands within the geopark. Using the nearby geosites, we tried to create opportunities for participants to communicate in English in a fun environment.



Barbecue (junior high)

The activities included icebreaker games, walking tours, barbecue, brainstorming about tourism on Nakanoshima Island, and short presentations about students' favourite ways to spend the summer (junior high) or designing a souvenir that is representative for the Oki region (senior high). Pictures from the camps and the projects created by the students were later displayed in the Geopark Visitor Centre to allow the local residents and tourists to see the outcomes of the camps.



+ Walking tour of the geopark (senior high)

#### Activities and Events



Walking tour of the geopark (junior high)

The Oki Islands UGGp Promotion Committee plans to continue to develop this project and carry it out on a yearly basis. Thanks to consistent management, the event is getting more visible each year, which results in some students participating in the camp multiple times. The next step will be organizing shorter yearly events for primary school students in order to expose them to the 'Geopark English Camp' project and hopefully connect them with the Geopark from an early age.



+ Group photo in front of the final project (junior high)

Reporters from Japan Airlines (the airline that connects Oki with Osaka and Izumo) were present for some parts of the camp. An article showcasing the Oki Islands Geopark English Camp will be included in the next issue of the airline's magazine.

#### Activities and Events



## he 29th International Day for Disaster Reduction Activities are Held in Leigiong **UNESGO Global Geopark**

#### Leigiong UNESCO Global Geopark, China

To make a good job in promotion, popularize the knowledge of disaster prevention and mitigation, and enhance the self-rescue and self-protection capacity for the public, Leiqiong UNESCO **Global Geopark Management** Committee held the 29th International Day for Disaster Reduction activities in Zhanjiang Huguangyan Scenic Spot and Haikou Ma'anling Scenic Spot on October 13, 2018.

With the theme of "Reducing **Disaster Losses and Creating** a Better Life", the activities were diversely held in Leigiong UNESCO Global Geopark by poster distribution, banner

hanging, panel display and video broadcast. In Huguangyan scenic spot and Ma'anling scenic spot, various publicity brochures were distributed to primary school students, high school students, college students and tourists. Brochures included Science Knowledge

of Earthquake Prevention and Disaster Reduction, 36 Measures for Thunder Prevention and Disaster Reduction, Meteorological Knowledge, Early Warning Signals and Guidelines for Prevention of Sudden Meteorological Disasters and



+ The activities to commemorate the 29th International Day for Disaster Reduction in Leigiong UNESCO Global Geopark

so on. Knowledge of natural disasters and emergency was well popularized among tourists.

Leigiong area is frequently attacked by natural disasters especially typhoons. Through these activities on the International Day for Disaster Reduction, Leigiong UNESCO Global Geopark has further raised high attention to disaster prevention and mitigation in society. The public awareness and knowledge of disaster prevention and mitigation has been promoted. Besides, more and more people re-recognize natural disasters, grasp the natural laws, and improve disaster prevention, self-rescue and mutual rescue abilities.

> Jie Yusheng, Tian Xiaofei Leigiong UNESCO Global Geopark leigiong2006@163.com



+ Primary students take brochures in Haikou Ma'anling scenic spot + Disaster prevention and reduction panel



+ Disaster prevention and reduction panel

#### Activities and Events



+ Tourists take brochures in Zhanjiang Huguangyan scenic spot





Students are watching videos about earthquake

#### Activities and Events



## ajestic Dabieshan

—A Journey to Huanggang Dabieshan UNESCO Global Geopark published in the journal of Scientific and Cultural **Popularization of Land and Resources, China** 

Huanggang Dabieshan UNESCO Global Geopark, China

In July, 2018, the 3rd issue of the journal of Scientific and Cultural Popularization of Land and Resources, China published a paper themed Majestic Dabieshan--A Journey to Huanggang Dabieshan UNESCO Global Geopark in the Column of Geologic Wonders. This journal is a quarterly newsletter, in which 9 main themes are usually included, for example, resources, science, geology, culture etc.

Huanggang Dabieshan UESCO Global Geopark, with a core area of 2625.54 square kilometers, located in the south of Dabie Mountains, and to the northeast of Hubei Province, is situated at the north bank of the Yangtze River. As an important dividing line of geography, geology, climate and ecology of the Central Orogenic System in China, with the significance of global geological comparison, Huanggang Dabieshan UESCO

Global Geopark retains multiple phases of deformation ever since Archean and various geoheritages resulted of magmation. Combined peaks, forest, pools and water-

falls with religious culture, folk custom and historic human heritages, there are ridges and peaks, sea clouds, vast forest, singing birds and sweet-scented flowers. Characterized by the continental orogenic belt structure and granite mountain landscape, Huanggang Dabieshan UESCO Global Geopark boasts rich geosites, unique natural and culture heritage, which are rare, representative, integral, systematical and beautiful, is not only a natural laboratory of geoscientific research and

research base for orogenic belt, but also a nature reserve with good ecological environment, profound culture and high scientific value. More details:

http://kptg.cgl.org.cn/ch/ reader/view\_abstract.aspx?file\_ no=20180306&flag=1



Li Feng Huanggang Dabieshan UNESCO Global Geopark, China hgdzgy@163.com



## The Union International de **Spéléologie Confirms the World Class Value of the Cave Chambers in Leye-Fengshan UNESCO Global Geopark**

Leye-Fengshan UNESCO Global Geopark, China

During October 4th and 15th, 2018, in cooperation with the Institute of Karst Geology of the Chinese Academy of Geological Sciences, the Honorary President of Union Internationale de Spéléologie (UIS) Andy Eavis coordinated an expedition team to have 3D scanning of the HongKong China Haiting chamber, which was discovered in 2017 in Leye-Fengshan Global Geopark P.R.China, and confirmed that its volume was 3.53 million cubic meters, ranking the 10th largest chamber in the world, and its floor area was 77600 square meters, ranking the third largest in the world. At the requirement of the Leye-Fengshan Geopark Management Committee, the

expedition team re-scanned with the high-precision of the Maoqi Dong chamber, and it displayed that its volume was 6.77 million cubic meters, ranking the third largest in the world. The height from the underground river to the roof of Maogi Dong chamber is 450 meters, which is the highest in the world. According to the previous scanning data, the Maoqidong chamber, the Hongmeigui Chamber, the HongKong China Haiting Chamber, the Mawangdong Chamber, the Marco Polo



+ A corner of HongKong China Haiting Chamber

Chamber, and the Chuanlongyan Chamber in Leve-Fengshang Geopark have a volume of more than 1 million cubic meters respectively. Among the world's top ten cave chambers, three of them are situated in Leve-Fengshan Geopark, including the Maodidong Chamber, the Hongmeigui Chamber, and the HongKong China Haiting Chamber; Hongmeigui Chamber has a volume of 5.25 million cubic meters.

HongKong China Haiting Chamber is located in Haiting Village, Pingle Yaozu Township, Fengshan County, southeast of Leve-Fengshan Geopark. It was discovered by the HongKong China Cave Expedition team in July 2017, so it is named as HongKong China Haiting Chamber. The chamber was formed in the peak cluster depression, under a Tiankeng, the Tiankeng is 100×200 meters in diameter and the maximum depth is 118 meters. At the bottom of the Tiankeng there is a virgin forest.

Last year, Leye-Fengshan **UNESCO Global Geopark** reported this discovery to the large cave committee of the Union Internationale de Spéléologie. The committee paid great interest to it. The President



#### Activities and Events



#### Activities and Events



 Experts show 3D scanning results to Geopark leader

Andy Eavis personally led a team to the site to check it. There were nine members in this group, including Prof.Peter Smart from Bristol University, UK.

The experts used the single rope technique to descend to the bottom of Tiankeng. They found that the bottom of the Tiankeng sloped toward the southeast to form a huge cave with a depth of 400 meters and a height difference was 110 meters. One side of the cave bottom was a collapse block, while the other side was a well preserved stalactite landscape. They also found through a 3D scanning that there was a aven with 60 meters in diameter, extending 150 meters high. The roof of the aven was only 15 meters to the surface. This cave chamber, which was closely connected with Tiankeng, provided a lot of vivid evolutionary evidences. The cave



+ 3D scanning results show

collapsed and exposed to the surface, and formed great doline (Tiankeng), which also led to the release of rock stress, forming strata deformation, curved joints and cracks around cave wall of the chamber, as well as a large number of new and old collapsed blocks. There was a shift at the bottom of the chamber linking with the underground river, which was the result of the tectonic uplift of the regional structure.

How is such a large cave formed? "These huge caves are natural ones and are the result of long-term dissolution and transportation by underground rivers; Later, due to the crustal

 Expert team uses advanced equipment to carry out cave 3D scanning

uplift, most of the collapsed rocks were eroded and transportated by the underground stream and some left piled up at the bottom of the chamber." Zhang Yuanhai, an expert from the Institute of Karst Geology, Chinese Academy of Geological Sciences, explained, "Tiankeng is a very mature landform that underground river cave develops. It forms a cave chamber underground, and then collapses to expose to the surface, usually as a Tiankeng." "The formation of all caves is

not a one-step process. They basically have a history of more than 2 million years." Zhang Yuanhai said, "These caves are important evidences to study the evolution of the earth, important media to study the evolution of karst landforms, valuable resources for tourism exploitation and geoscience education, and paradise for explorers and brave people."

### **C**ister Geopark Signing Ceremony etween Leigiong and Azores **INESCO Global Geopark** was Held in Italy

#### Leigiong UNESCO Global Geopark, China

On September 13, 2018, when most of the global geoparks were gathering together in Italy to attend the 8th International Conference on UNESCO Global Geoparks, we decided to sign the Sister Geopark Agreement with Azores UNESCO Global Geopark there. The representatives from both geoparks and the experts from Leigiong attended the signing ceremony.

After communication for a long time, Leigiong and Azores have reached consensus on students exchange, geotourism, geopark protection and construction and some other fields. During the signing ceremony, we exchanged ideas, signed the Agreement and exchanged souvenirs. It was a simple but formal signing

ceremony. Signing the Agreement was just a starting point of the longterm networking between Leigiong and Azores. On one hand, both geoparks have reached the consensus on friendly cooperation and will gradually carry out exchange and cooperation projects in the



#### Activities and Events



Educational, Scientific and + UNESCO Cultural Organization . Global Geopark





future to promote the relationship between us. On the other hand, in response to "the Belt and Road Initiative" of Chinese President Xi Jinping, we hope the cooperation between Leigiong and Azores can be one of the way to promote the cooperation between China and Portugal.

Leiqiong Geopark is located

#### Activities and Events



within the Leiqiong Volcanic Belt. It covers mostly all types of volcanoes formed by basaltic and phreatomagmatic explosions. These include typical shield volcanoes (lava cones), scoria cones, tuff rings, maar lakes. In terms of quantities, types and varieties of landscape, it is the best representation of Quaternary volcanoes, and the best natural volcano geopark in China.

Azores Geopark (Portugal) is situated in the North Atlantic Ocean at the triple junction between the North American, Eurasian and African tectonic plates. Its geomorphology is therefore primarily shaped by volcanic and tectonic forces. There are 27 volcanic systems in the Azores Geopark, being 16 major polygenetic volcanoes, most of them silicic with a summit subsidence caldera: nine are still active.

Both Leiqiong Geopark and Azores Geopark are major tourism destinations. The indigenous people together with their stone household appliances, dog sculptures and ancient temples are of high cultural importance in Leiqiong Geopark. The Azorean volcanic landscapes and other natural and cultural values, as old religious and social traditions, manor houses, monasteries, churches and several fortresses built with local volcanic rocks, are important features for the Azorean geotourism strategy.

> Chen Kaili Leiqiong UNESCO Global Geopark,China leiqiong2006@163.com



Comarca Minera, Hidalgo UNESCO Global Geopark, Mexico

Just a few days prior to the 8th International Conference on UNESCO Global Geoparks, celebrated in Adamello Brenta, Italy, after a long and anxious wait, the Comarca Minera team received the printed books of its new official guidebook. Just in time to show it to the friends of the GGN we were going to meet in the Alps!

This novel publication, ground-breaking in the Americas for its format, style and design, is the result of two and a half years of hard work coordinated by the National Autonomous University of Mexico and funded by the National Council of Science and Technology -CONACyT- (FOMIX-Hidalgo project). The Guidebook communicates to a wide audience —and raises awareness— the awesome geoheritage of Comarca Minera, addressing a variety of subjects as volcanology, tectonics, geomorphology, mineralogy, ore deposits, history of science and of mining techniques, archaeology, history of art and the emerging transdiscipline of geo-aesthetics. Especially striking for attractive design and illustrations is the section that describes in detail each of the 31 geosites of Comarca Minera, inviting to discover on your own this stunning geopark that is less than two hours' drive from Mexico City, the largest in North America!

A HILL

Such work should not go unnoticed, since it was prefaced by inspiring forewords of Nikolaos Zouros, President of the Global Geoparks Network, Enrique Graue Wiechers, rector of the National Autonomous University of Mexico, Omar Fayad Meneses, Governor of Hidalgo State, and Elena Centeno, President of the Geological Society of Mexico.

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The coordination of such pioneering publication was done by Carles Canet Miguel assisted by Miguel A. Cruz Pérez; the scientific and technical editors were Blanca Mendoza Ortega and Andrea Rostan Robledo, respectively, and Vanesa Lizet Gómez Vivas was responsible of the design. The sixteen authors are especially grateful to the reviewers, whose rigorous work allowed to improve the quality of the book, namely: Susana Alicia Alaniz Álvarez, Luis Alcalá Martínez, Ricardo Barragán Manzo, Pedro Camaren Berruecos, Lucia Capra Pedol, Miguel Castillo Rodríguez, Salvador Galí Medina, Margarida Genera i Monells, Eduardo González Partida, Denise Gorfinkiel, Pablo León Higueras Higueras, Josep María Mata Perelló, Esperanza Muñoz Salinas, Joaquim Maria Nogués Carulla, Margarita Reyes Salas, Sergio Raúl Rodríguez Elizarrarás and María Teresa Sánchez Salazar.

If you would like to have a copy of the book, please contact the team at: geoparque@lasallep.mx

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## 2018 Cross-Strait Geological **Environment Research Camp** for geological investigation in **Taishan UNESCO Global Geopark**

Taishan UNESCO Global Geopark, China

From December 18th to December 19th, 2018, the Crossstrait Geological Environment Research Camp, composed of 30 teachers and students from China University of Geosciences, Beijing, Chinese Culture University and Taipei University of Technology, came to Taishan UNESCO Global Geopark.

The Cross-Strait Geological Environment Research Camp Project, to further enhance dialogue and promote crossstrait cooperation in education and peaceful development, is a critical measure made by China University of Geosciences, Beijing.

Taishan UNESCO Global

Geopark, a perfect combination of geoheritage and historical culture, an ideal place for scientific research and science popularization, not only has majestic mountains, beautiful natural scenery, but also has unparalleled human history and rich cultural accumulation. During the field investigation,

the teachers and students focused on the typical geological landforms of Mount Taishan, and the professors gave detailed explanations to the students. Especially during the inspection of Colorful Stone Stream, the teachers and students had a heated discussion on the geological relics, each of them published their own opinions in combination with their own research directions. While praising the beautiful natural scenery of Mount Taishan, the teachers and students were also impressed by the rich geological relics and profound cultural heritage of Mount Taishan. "This place really has too many geography phenomena at the textbook level." Marveled Luo Wei, a professor of National Taipei University of Technology,

when he visited Colorful Stone Stream. Through field geological surveys, visits and discussions of the Geopark Museum, the delegation has further understanding of the geological evolution, geoheritage and historical culture of Taishan UNESCO Global Geopark. During the inspection, the staff of Taishan Geopark actively communicated with the professors on the development situation of Taishan Geopark and the problems they are currently facing. Professors from Taiwan shared their experiences in the construction and development of the Geopark in Taiwan, and also put forward many constructive opinions on the construction and development of

Taishan UNESCO Global Geopark





#### Activities and Events



Field Trip - Colorful Stone Stream



Visiting Cultural Heritage - Dai Temple

Dr. Han Fei China University of Geosciences, Beijing fayehan0731@126.com

#### Activities and Events



#### Magma UNESCO Global Geopark, Norway

Magma UNESCO Global Geopark (MGP), located in South West of Norway, has been invited to share experiences and opportunities at the Regional Workshop for Europe, in Palermo (30 Sept.-2 Oct. 2018). The Workshop, organized by the UNESCO Regional Bureau for Science and Culture in Europe in Venice and supported by the City of Palermo (Italian Capital of Culture 2018), aimed to produce recommendations for the establishment, management, and enhancement of visitor centers in UNESCO designated sites.

One detailed and well-explained "work methodology" document was produced, identifying key issues to reinforce the role of visitor centers and their contributions to the goals of UNESCO designations, with special reference to three topics:

O Tourism sustainability and visitors management Interpretation of heritage and educational services



O Community engagement and communityoriented services

The workshop was composed of three thematic panels and one final session for conclusions. In total 24 different UNESCO designated sites were involved; castles, natural parks, churches, industrial heritage, tourist info points, areas of biodiversity, etc.

Magma Geopark presented its visitor centres and the DoubleVR virtual software which allows UNESCO sites to promote each other within interactive and educational information.

geoVR project develop through DoubleVR is the innovative solution for each territory to make explore and share other UNESCO sites around the Globe. Every territory can join it now!

Magma likes the initiative and would promote more interaction and exchange of ideas within other UNESCO designations within the Global Geoparks Network.

#### More info at:

https://magmageopark.no/en/discoverexperience/geovr/

http://dtvrviewer-production.s3-website.euwest-2.amazonaws.com/?v=1 To be part of it: post@magmageopark.com

Sara Gentilini and Pål Thjømøe

# Shell Limestone as Construction Material

Harz Braunschweiger Land Ostfalen UNESCO Global Geopark, Germany

"Is this going to be a fixed speed camera?", the metalworker Roland Seibt from Blankenburg was asked by pedestrians as he installed the new Geopark stele in Hessen, a small village in the UNESCO Global Geopark Harz · Braunschweiger Land · Ostfalen. It is stele no. 16 in the area of the Geopark.

The stele is a visual sign of pride of the recognition as UNESCO Global Geopark. Not only the attention of motorists is called by the new eye-catcher at the busy federal highway leading through Hessen. Also locals can get to know the typical rocks and their origin as well as the history of the village and of course the UNESCO Global Geopark Harz · Braunschweiger Land · Ostfalen. The walls of the castle buildings shine bright. Like most of the other historical buildings in Hessen they were built out of shell limestone. In the plinth of the stele, this rock can be seen. Further Geopark steles in the Harz region are in planning.



#### Activities and Events



Presentation of the new Geopark stele in Hessen (Photo: RVH)



#### Madonie UNESCO Global Geopark, Italy

Global Geopark Madonie is a forge of knowledge, tastes, geology and laboratory for projects of alternating schoolwork that houses university students and institutions of higher education, through activities in the protected area aimed at the promotion, enhancement and reception of foreign tourists.

The students of classes 4 and 5 of the Linguistic Lyceum of the Regina Margherita Superior Institute of Palermo visited the Madonie Park, in the context of an agreement signed with the city of Palermo Capital of Culture for the year 2018, aimed at the

representation of the parks in naturalistic components and in the related tourism segment. Accompanied by their tutor

teachers, the students were guided by guides of the park, in a naturalistic excursion on the path of the Golden Eagle and the Carnaio, carrying out an on-site



MARCATU DI PIANO FARINA

tasting with local products: fresh cheeses, curds, caciocavallo and "cunsatu" " bread ".

In the presence of many tourists from Hungary, they were able to observe the production process of ricotta and fresh cheeses.

The photographs were taken



◆ GUIDE DEL PARCO



◆ PIANO FARINA

territory.

The guided tours that the Park offers free to schoolchildren, are intended to contribute to the young, to the growth of the culture of respect and valorization of the territories, where secular traditions survive, the photograph of a social fabric stratified over time. Monumental trees, dating back a thousand years, dominate these mountains with gentle slopes. Remains fossils visible to the naked eye on the rocks,



such as: photography, knowledge

and learning of endemic plants,

FORMAGGI PIANO FARINA



#### Geo-Education and Science Popularization



spontaneous flora, geology, of the

are instead the testimony of an orographic genesis that up to 7 million years ago documents the fact that Sicily was entirely covered by water. Over time, their sediments have originated rocks that for over 230,000 million years form this mountain range, where the protected area is located.

But let's not forget that the Madonie offer leisure and entertainment both in summer and in winter. Sports, hiking and relaxation are all dream holidays in the Madonie park ".

PANE CUNSATU



SCUOLA -PROGETTO ALTERNANZA

#### Geo-Education and Science Popularization

## ommunicating naturtejo in Naturtejo UNESCO Global Geopark

#### Naturtejo UNESCO Global Geopark, Portugal

Ten sites of hydrogeological interest are inventoried in Naturtejo UNESCO Global Geopark, due to their scientific. educational. social. cultural and economic importance. The Geopark's geodiversity is "dissolved/absorbed" in the several different mineral waters, coming from the circulation of groundwater in sedimentary, schist, quartzite and granite formations, at different depths and temperatures, in a complex interaction between water and rocks.

A complex interaction between water and rocks. The result of the interaction, dependent on the time the water remains underground, turns each water in a unique water, with a unique story. Many of these geosites have a great geocultural value, with recognized therapeutic properties since the Roman period, mentioned by Pliny the Elder in his encyclopedia "Naturalis Historia", and some sacralized over the ages by the local populations.

These mineral waters are the bottom form the fundament for

visits, exhibitions, tourism and educational programs, which, combined with conventional health and wellness treatments in thermal spas, embrace Geosciences, Technology and Society.

Based on the most common and oldest thermal technique, the water drinking (the technique is call the water drinking?), it was created the "Acqua Challenge", a blind water tasting which appeals for the identification of water properties through the senses, looking for the underground story of each



Naturtejo UGG stand at Lisbon International Tourism Fair, promoting Thermal Springs with "Acqua Challenge" and massages

water. The "Acqua Challenge" is a transdisciplinary experience, with an innovative approach, used not only on guided visits, but also in promotional events and tourism fairs. It is being used as educational resource and example in teacher's trainings, and workshops and as a fundamental tool in training of the Thermal Spa teams.

> Joana Rodrigues Naturtejo UNESCO Global Geopark, Portugal joana225@gmail.com



Training session for the Thermal Spa staff



Visit to the water abstraction in Thermal Spa





## World Environment Day

#### Chelmos Vouraikos UNESCO Global Geopark, Greece

During two days, 4-5 June, in the framework of the educational activities that were carried out by the Primary School of Kalavryta, Chelmos-Vouraikos Management Body took an active role both with the provision of supporting material and with the presence of the Forest Protection Specialists. Specifically, on Monday, June

4, the area around the Primary School of Kalavryta, with the

help of the Kalavrita Police Department, was appropriately arranged as a traffic education park, with the aim of learning about the importance of road safety and road behavior, guided by their teachers. Chelmos-Vouraikos Management Body participated in this effort by the supply of seven mountain bikes and helmets.

Also, on Tuesday 5 June, the

#### Geo-Education and Science Popularization



World Environment Day, with the presence of the Forest Protection Specialists of the Chelmos-Vouraikos Management Body, a guided tour of the educational path "Agios Ioannis-Keramidaki" carried out with students of the 4th and 5th grade of the primary school of Kalavrita and was organized for helping to meet and to be informed about the natural environment of the area.



## A New Integrated **Uisitor Site Asset Management** System for Geotourism

Burren and Cliffs of Moher UNESCO Global Geopark, Ireland

As the success of UNESCO **Global Geoparks continues** to grow and attract increasing numbers of visitors, we may find ourselves challenged to measure and address the impacts of visitors on the Geosites, landscape, biodiversity, trails and built heritage they have come to enjoy (Figs 1,2,3). Sustainable Geotourism has the potential to bring many benefits to local communities, however as a key concept of UNESCO Global Geoparks, Sustainable Geotourism requires us to ensure we are not damaging the landscape or heritage of the Geopark.

Adopting and promoting the principles of Leave No Trace is fundamental to minimising any potential visitor impacts, however quantifying any potential impacts requires a dedicated monitoring and recording system.

By treating the Geopark attractions as assets and managing them in an integrated manner we can diligently monitor and evaluate the impacts of visitors and make corrections to our visitor management systems as required, ensuring we really do operate in a sustainable manner for the benefit of future generations of local communities. This is particularly important in areas that have special protection designations under national or international legislation such as EU Natura 2000 sites.

Through the recent EU-funded GeoparkLIFE project the Burren and Cliffs of Moher UNESCO Global Geopark developed an integrated system for the management of visitor sites with the cooperation of a number of national agencies. An important part of the project was to ensure transferability of the system to other areas and to agencies with different responsibilities.

The system uses best practice indicators and measures and is operated on Android or IOS hand-held devices for easy field use. It was presented at the GeoparkLIFE Final Conference in 2017 and a number of national agencies expressed their interest.



+ Fig 1. Guided walk on limestone pavement in the Burren National Park Geosite, Ireland,

We are pleased to announce that this new Integrated Visitor Site Asset Management System is now being further developed to be made available for a national roll out in Ireland and it is planned that it will be made available for international clients in 2019. Further updates will be posted in this newsletter in the coming months.

This project demonstrates very clearly how Geoparks can be important agents of positive developments that can have a reach beyond the Geopark network, further enhancing the reputation of the GGN as a model for best practice in Sustainable Geotourism.

Dr Eamon Doyle Burren and Cliffs of Moher UNESCO Global Geopark, Ireland edoyle@clarecoco.ie



+ Fig 3. Exploring bio-karst at Fanore Beach Geosite, Burren and Cliffs of Moher UNESCO Global Geopark, Ireland

#### Promotion and Communication

 Fig 2. Visitors on the Cliffs Coastal Path, Cliffs of Moher Geosite in the Burren and Cliffs of Moher UNESCO Global Geopark Ireland

#### Promotion and Communication

## Information and Partnership Visit Chinese and Japanese **UNESCO** Global Geoparks

#### Bergstrasse-Odenwald UNESCO Global Geopark, Germany

In 2011, Hongkong China and Bergstrasse-Odenwald UGG together with UNESCO WHS Messel Pit have founded a partnership, including exchange regarding geo-education, vocational Ranger training, networking and community participation. In this context, a delegation from Hongkong UGG,

China Lions Club members and a delegation from the Japanese **UNESCO Global Geoparks** Network, headed by Dr Ka Ming Yeoung and Prof Setsuya Nakada, recently visited the Geopark to identify new potentials

of cooperation regarding the communication of geoscientific contents to the public, the

integration of Geopark topics in school curricula, the participation of local communities in Geopark projects to create a public pride and ownership for the inhabitants and to lectureships for vocational trainings. The visit includes a whole range of Geopark localities as well as meetings with high rank politicians of the State of Hesse (including vice State Secretary Patrick Burghardt), who declared their interest in the further development of the cooperation.

In addition, a delegation from Zhangjiajie UNESCO Global Geopark (China), headed by vice mayor Luo Zhibin, visited the territory, expressing their interest in a closer cooperation with Bergstrasse-Odenwald UGG. During the excursion, several topics, especially regarding geo-



+ Exchange with delegation headed by Luo Zhibin from Zhangjiajie UGG and Geopark President Christian Engelhardt

education and geo-touristic exchange, were discussed. The potentials will be investigated in more detail during a delegation visit, which will follow next year.

Jutta Weber

+ Hongkong UGG, China and Japanese UGG delegation together with Vice State Wecretary Patrick Burghardt at UNESCO WHS Messel Pit, Northern Geopark Entrance





+ Hongkong UGG, China and Japanese UGG delegation at Geopark Environmental Education Centre



+ Exchange with delegation headed by Luo Zhibin from Zhangjiajie UGG and Geopark President Christian Engelhardt

#### Promotion and Communication

+ Zhangjiajie delegation - visit of the Sea of Rocks, a famous Geopark geosite

## hina and Greece Sister **Geopark Hand-in-hand** to Conserve Dinosaur Footprint Fossils in Yanging

Yanging UNESCO Global Geopark, China

Since the establishment of sister geoparks between Yanging UNESCO Global Geopark and Lesvos UNESCO Global Geoaprk on April 30, 2015, the two sides have actively followed the agreements and carried out a series of fruitful communication and collaboration like mutual visits, mutual exhibits. promotion and silicified wood conservation. In 2018, the collaboration between Yanging and Lesvos took another step forward, conserving Yanging dinosaur footprints of hundreds of millions of years, and achieved win-win cooperation and expanded impact.



Dating back about 150 million years, the dinosaur footprint fossils of Yanging Global Geopark, with important scientific significance and research value, is the only dinosaur footprint record among capital circle of China. Yanqing dinosaur footprints No.1 site is located in the trapezoidal wall area of approximately 1600 square meters, the slope



+ Students draw the dinosaur



 Disseminate relevant knowledge of dinosaur footprint fossils and their conservation to tourists



Sistering Geopark Ceremory

length is about 42 meters, the vertical height is about 27 meters, and the ground angle is about 44 degree. The rock formation of dinosaur footprints often suffered from rain, snow erosion, and severe weathering. Without timely conservation, fossils will gradually disappear.

Protecting precious geoheritage is the core concept of the development of geopark. During the conservation of silicified wood of Yanging and Lesvos in 2016, the expert group explored and repeated tests many times to determine effective chemical reagents suitable for Yanging dinosaur footprint fossil surface, so as to jointly formulate the best program for the conservation of dinosaur footprint fossils. With the strong support of Yanqing District Government, the international cooperation between China and Greece has been carried out smoothly in the conservation of dinosaur footprint fossils in Yanqing. Through the conservation processes of clearing fossil layers, injecting special

# ering Agreement Between Lesvos Petrified Forest Global Geopark-Greece and Yanqing Global Geopark of Beijing-

chemical reagents, painting waterproof coatings and filling rock cracks, the dinosaur footprint fossil layers have been effectively strengthened and their resistance to rain and snow erosion has been improved. The ability to resist weathering keeps dinosaur tracks in the most natural state.

#### Sister geoparks and conservation team to achieve fruitful results

Yanging Dinosaur Footprint Fossil Conservation Team has the cooperation of two sister geoparks, Yanging and Lesvos UGGp, as well as the support of China University of Geosciences (Beijing) as the scientific research institute. The Natural History Museum of Lesvos UGGp in Greece has rich experience in fossil conservation. They spare no effort to teach the principles, techniques and steps of conservation of dinosaur footprints to fossil conservators of Yanqing UGGp and China University of Geosciences (Beijing), thus forming an

#### Promotion and Communication





















- 1. Sicicified wood conservation
- 2. Cleaning
- 4. Painting waterproof coatings
- 5. Communication

6. Painting waterproof coatings 7. Filling rock cracks 3. Injecting special chemical reagents 8. painting special chemical reagent

- 9. Dinosaur footprints after conservation
- 10. Conservation site

international conservation cooperation team. After careful cleaning, confirmation and positioning during dinosaur footprint fossils conservation, the conservation team finally confirmed 15 new dinosaur footprint fossil sites, increasing the number of Yanging dinosaur footprints to 185. It provides accurate data for the updating of Yanqing geological heritage database, and lays a solid foundation for the next scientific research topic of dinosaur footprint fossils.

#### Science popularization to make local community and tourists enhance understanding of geoheritage conservation

During the conservation of dinosaur footprint fossils in Yanqing, Yanqing UGGp attaches much importance to disseminate relevant knowledge of dinosaur footprint fossils and their conservation to local community residents, students and tourists is emphasized.

Yanging UGGp invited Dr. Ilias, the conservation specialist of Greece to give a lively and interesting science popularization course for Qianjiadian Primary School. He also led the students to observe the scene of dinosaur footprint conservation and to talk about the significance of protecting these



+ International conservation team group photo

#### Promotion and Communication

precious geoheritage in their hometown, which made the students have a deeper understanding of silicified wood and dinosaur footprints in their hometown. Students will disseminate these knowledge to their parents to enhance the community residents' awareness of the protection of precious geoheritage and give local people a sense of pride in their region.

#### Publicity and promotion to gain the international visibility

During the international conservation project of dinosaur footprint in Yanging UGGp, more than ten media reporters, including Xinhua News Agency, China Daily, Beijing Morning News and Beijing Evening News, visited the site of the Dinosaur Footprint Conservation and carried out special publicity and promotion through TV, internet, newspapers and new media, covering a wide range of areas. According to statistics, the number of only Xinhua News Agency readers reached 250 thousand. The Sino-Greek dinosaur footprint fossil conservation networking not only enhances the brand influence of Yanqing UGGp, but also strengthens the visibility of Lesvos UGGp in China. It achieves the win-win effect of sister geopark communication and collaboration.

+ International conservation team group photo



#### Vulkaneifel UNESCO Global Geopark, Germany

In September the UGG Vulkaneifel welcomed a group of Geopark delegates from Japan and HongKong China. Besides visiting Geosites such as the Lava bomb and the Wartgesberg Volcano, the group got an insight into the work the UGG Vulkaneifel is undertaking in areas such as climate change, regional

development and tourism. A visit illustrated the touristic added value of the Maar landscape as areas of recreation and education and in the project ZENAPA local development will be supported through using local potentials for renewable energy production. Prof. Setsuja Nakada of the University of Tokyo, Dr. Ka Ming

Yeung from HongKong UGG, China and the host Dr. Andreas Schüller mutually agree that visits like this should be repeated frequently as it is of high value for all to get first hand information about innovative projects and different approaches to geopark management.



+ The group from HongKong China and Japan in front of the lava bomb in Strohn, UGG Vulkaneifel

### MAS Campesino



Organización . Lanzarote y de las Naciones Unidas - Archipiélago Chinijo para la Educación, - Geoparque mundial la Ciencia y la Cultura - de la UNESCO



Lanzarote and Chinijo Islands UNESCO Global Geopark, Spain



#### Culture and Custom



The Monumento al Campesino is located in the geographic centre of the Lanzarote, and it is a public tribute that the artist César Manrique paid to the effort of men and women working the fields, and facing the worst conditions in order to be able to bring the land to life. The Museo del Campesino complex, is a visual and emotional display, that pays special attention to the wit, courage, bravery of local farmers. It consists of a series of buildings that look like traditional homes, with white walls and green wood, combining the most characteristic elements of the different areas of the island. The Museo is guarded by the majestic Monumento a la Fecundidad: a fifteen-metre tall sculpture created by Manrique using boat water tanks, and iron and cement

#### Culture and Custom







+ Patio in Monumento al Campesino



objects assembled. A magnificent symbol of avant-garde art that became an iconographic symbol on the island. The Museo del Campesino and the Monumento a la Fecundidad were created by the creative perspective Manrique had when it came to local architecture, a real-life bridge between what is traditional or modern.

The Lanzarote and Chinijo Islands UGG Art, Culture and Tourism Centres, have designed a development plan for one of the corners in La Plaza de los Artesanos centre, which has been inactive for quite some time. The aim is to strengthen and develop this space as exhibition and dissemination venue and handcraft sales point, by introducing the Monumento al Campesino Sustainable

Traditional Market (MAS Campesino).

This event aims to support the use of the spaces available around the Patio de los Artesanos, by artisans, entrepreneurs and entities to promote activities related to traditional handcrafts and the real world, in a public-private collaboration framework. The main focus is to support, promote and put into practice, local traditional activities associated with aspects and values of our heritage-related values, undoubtedly closely linked to the identity of Lanzarote and the Canary Islands, as well as the ethnographic and anthropological past of the islands. And, let's not forget the necessary introduction of an innovative aspect that fully leads to a professional future,

compatible with our traditional hallmark.

The number of spaces rented will vary depending on the availability and the proposals submitted. The aim of this entity is to favour the implementation of activities that cover the following experiential areas: Traditional handcrafts from Lanzarote, Children: Toys and games, Agriculture related to handcrafts, Agriculture and gastronomy, and lastly, Agriculture and the landscape.

#### Isabel Betancort Delgado and Elena Mateo Mederos

Lanzarote and Chinijo Islands UNESCO Global Geopark, Spain geoparque@cabildodelanzarote.com



# The 9th Japanese Geoparks National Conference at Mt. Apoi UGGp

#### Mt. Apoi UNESCO Global Geopark, Japan

The Japanese Geoparks Network (JGN) holds a national conference each year, and this vear it was hosted by the Mt. Apoi UGGp during October 6th through the 8th on the island of Hokkaido

The conference focused on looking back at geopark activities from the past 10 years, as 2018 marks the 10th anniversary of the first Japanese Geopark, and on discussing what the next 10 years may bring.

674 participants from national and global geoparks within Japan participated at the conference, and when combined with the participants, staff and volunteers from the surrounding areas that

number climbed to 1,100 people. This was guite a feat for Mt. Apoi UGGp who has a population of approximately 4,300 people The opening ceremony was held on October 6th and started off with traditional dances from the indigenous Ainu and a keynote speech from Nickolas Zouros, the President of the GGN, about geopark activities held around the world. After the opening ceremony ended the participants split off into separate themed sessions that included workshops, discussions, and tours to facilitate an exchange of ideas.

Additionally, there was one session theme that focused

exclusively on the Sustainable **Development Goals.** 

There were also a variety of geotours (excursions) offered before and after the conference. The conference pre-tours were

held at Toya Caldera and Usu Volcano UGGp and at three other national geoparks in the island of Hokkaido. The post tours include seven different courses to explore the Mt. Apoi UGGp.

This conference not only acted as a place for Japanese Geoparks to come together to exchange ideas, but also as an opportunity for participants to experience Mt. Apoi UGGp and the other Hokkaido national geoparks first hand.

## he 4<sup>th</sup> International Training Course on UNESCO Global Geoparks **Management and Development** Successfully held in Beijing, China

Based on the experiences of great success of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> International Training Courses on UNESCO Global Geoparks (UGGp) Management and Development in Beijing, in 2016 and 2017, and with the support of the Global Geoparks Network, the 4<sup>th</sup> International Training Course on UNESCO Global Geoparks Management and Development was successfully conducted during the period from October 30-November 3, 2018 in Beijing and Shandong, China. A total of 107 participants from 23 UNESCO Global geoparks,

4 aspiring UNESCO Global Geoparks, local governments, and geopark technical supporting organizations attended the event. Coordinated by Prof. Jianping Zhang from China and Prof. Nikolaos Zouros from Greece, the training course was jointly organized by the China University of Geosciences (Beijing) and Taishan UNESCO Global Geopark in East China's Shandong province. The invited lecturers include Prof. Nikolaos Zouros (GGN president, UGGp council member, Greece), Dr. Guy Martini (UGGp council

chairperson, GGN secretarygeneral, France), Prof. Jianping Zhang (UGGp council vicechairperson, GGN ExB member, China), Prof. Xiaochi Jin (GGN vice-president, China), Prof. I. Komoo (GGN vice-president, Malaysia), Dr. M. Watanabe (UGGp Council and GGN ExB member, Japan), Dr. M. Frey (GGN ExB member, Germany) and G. Bremner (GGN ExB member, Canada), Mr. Yuanyuan Zheng (CGN coordinator, China), KM Yeung (HongKong UNESCO Global Geopark, China), Prof. Mingzhong Tian and Prof.







+ Co-coordinators

Fadong Wu (China University of Geosciences, Beijing, China). At the opening ceremony on October 30, 2018, Prof. Junjie Ma, Chairman of China University of Geosciences (Beijing) (CUGB), welcomed all the participants and presented the activities and contribution of CUGB to the development of the Global Geoparks in China and the world. Also Dr. Guy Martini, Professor Nikolaos Zouros, and Mr. Qinghai Wan (Vice-director of Administration of Taishan UNESCO Global Geopark)

The first part of the course (October 30-31) took place in the China University of Geosciences (Beijing), with an emphasis on the philosophy, statutes, guidelines and the latest developments of UNESCO Global Geoparks, as well as marketing and promoting activities of UNESCO Global Geoparks. The second part (November 1-3) was held in the Taishan UNESCO Global Geoparks, which focused on Earth Heritage Interpretation and related experiences sharing.

delivered their welcoming

speeches.



+ Chairman Prof. Junjie Ma

The presentations in the first part dealt with topics ranging from the basic knowledge of UNESCO Global Geoparks philosophy, statutes and operational guidelines, the founding and operation of UNESCO Global Geoparks, and evaluation and revalidation procedures, to present situation and challenges of Chinese UNESCO Global Geoparks, experiences from European, Canadian, Malaysian, Japanese and Chinese Global Geoparks, local community involvement, marketing and sustainable development, scientific research in geoparks and others.

arranged in the afternoon of the first and the second days, during which questions and problems from the audience were answered and explained.

Invited lecturers

Two panel discussions were



Mr. Qinghai Wan

The second part of the course focused on the Earth Heritage interpretation, including a. the role and function of the Geopark museum and visitor center in UNESCO Global Geoparks; b. geoheritage interpretation examples from European, Malaysian, Japanese, Chinese geoparks; and c. geopark signage, design and management. Also the similarities and differences among WHS, MAB and UNESCO Global Geoparks were explained. Colleagues from the HongKong China, Dunhuang, Taishan, Yanqing, Huangshan and Yangan-Tau geoparks shared their experiences. The interaction between speakers and audience was robust.

The visit to the Taishan UNESCO Global Geopark and its geopark museum provided the

#### Conferences, Workshops and Courses



+ Beijing venue



+ Prof. Nikolaos Zouros

trainees plenty of opportunities to ask questions and to comment on the geoheritage interpretation system and the functions of the geopark museum.

Most participants highly appreciated the efficiency and effectiveness of the training course, and found it is very helpful to their geoparks management and development.

At the end of the course, Prof. Jianping Zhang announced that the next training course will be held in the last week of October 2019 jointly organized by the China University of Geosciences



Dr. Guy Martini

(Beijing) and the Songshan UNESCO Global Geopark in Henan province, China. Parallel to the Course several other activities took place. The 51<sup>st</sup> Meeting of the GGN Executive Board took place on October 28<sup>th</sup> 2018. Main issue of this session was the implementation of the new evaluator selection and management procedures as agreed at the 2<sup>nd</sup> Ordinary General Assembly of GGN held in Adamello Brenta UNESCO Global Geopark, Italy in September, 2018.

Meanwhile, 8 GGN ExB members presented at the opening ceremony of the exhibition of Suplendid Legace of Nature to the Huanshan and Lesvos Island UNESCO Global Geoparks at the Geological Museum of China in the noon time of October 28, 2018.

Jianping Zhang and Nikolaos Zouros



+ Taishan venue

### **GGN Calendar of Meetings and Events**

#### 2019

February 2019: 2<sup>nd</sup> Latin America and Caribbean Geoparks Meeting, Araripe UNESCO Global Geopark
6-10 March 2019: Participation with GGN stand in ITB Berlin
26-30 March 2019: 43<sup>rd</sup> European Geoparks Network Meeting, Swabian Albs UNESCO Global Geopark, Germany
26 March 2019: 2<sup>nd</sup> Geoparks Evaluator's Seminar, Swabian Albs UNESCO Global Geopark, Germany
22<sup>nd</sup> April 2019: International Earth Day, Geopark Activities
25<sup>th</sup> May-9<sup>th</sup> June 2019: European Geoparks Week
31<sup>st</sup> May-10<sup>th</sup> June 2019: International Intensive Course on Geoparks : UNESCO Global Geoparks – climate

31<sup>st</sup> May-10<sup>th</sup> June 2019: International Intensive Course on Geoparks : UNESCO Global Geoparks – climate change adaptation and natural hazards mitigation, Lesvos Island UNESCO Global Geopark, Greece
 2<sup>nd</sup>-7<sup>th</sup> September 2019: 6<sup>th</sup> Asian Pacific Geoparks Network Symposium, Rinjiani-Lombok UNESCO Global Geopark, Indonesia

7<sup>th</sup> September 2019: 3<sup>rd</sup> Geoparks Evaluator's Seminar, Rinjiani-Lombok UNESCO Global Geopark, Indonesia
 23<sup>rd</sup>-24<sup>th</sup> September 2019: 44<sup>th</sup> European Geoparks Network Meeting, Sierra Norte de Sevilla UNESCO Global Geopark, Spain

23<sup>rd</sup> September 2019: 4<sup>th</sup> Geoparks Evaluator's Seminar, Sierra Norte de Sevilla UNESCO Global Geopark, Spain
 25<sup>th</sup> – 27<sup>th</sup> September 2019: 15<sup>th</sup> European Geoparks Conference, Sierra Norte de Sevilla UNESCO Global Geopark, Spain

13<sup>th</sup> October 2019: International Day for Disaster reduction, Geopark Activities
 28<sup>th</sup> October – 2nd November 1019: International Course on UNESCO Global Geoparks, China University of Geosciences Beijing, China

12<sup>th</sup> – 27th November 2019: UNESCO General Conference, Paris, France
 11<sup>th</sup> December 2019: International Mountain Day, Geopark Activities

#### 2020

 March 2020: 45<sup>th</sup> European Geoparks Network Meeting, Papuk UNESCO Global Geopark, Croatia
 September 2020: 46<sup>th</sup> European Geoparks Network Meeting, Hateg UNESCO Global Geopark, Romania
 14–20 September 2020: 9<sup>th</sup> International Conference on UNESCO Global Geoparks, 3<sup>rd</sup> Ordinary GGN Association General Assembly, Jeju Island UNESCO Global Geopark, Korea

#### 2021

March 2021: 47<sup>th</sup> European Geoparks Network Meeting, Katla UNESCO Global Geopark, Iceland
 September 2021: 48<sup>th</sup> European Geoparks Network Meeting
 September 2021: 16<sup>th</sup> European Geoparks Conference, Sesia - Val Grande UNESCO Global Geopark, Italy

#### Calendar of GGN

(updated January 2019)