

### Cooperation between UNESCO Global Geoparks

#### Adamello Brenta UNESCO Global Geopark (Italy): Host of the 8th International Conference on UNESCO Global Geoparks

The 8th International Conference on UNESCO Global Geoparks in 2018 will be hosted in the Adamello Brenta Nature Geopark in the north eastern part of the Italian Alps. The whole community is honored and proud to have this great opportunity to share good practices in the fields of sustainable tourism and geological/natural conservation and to share the the great geology of the Adamello Brenta Dolomites and the tradition of the people living in these mountains with the Conference participants. We look forward to welcoming you all to Adamello Brenta Geopark!



activities of the Global Geoparks Network. New Global Geoparks and aspiring Geoparks are strongly encouraged to participate and gain experience in best practices in the development and administration of geoparks. <http://www.petrifiedforest.gr/geoparks2017>  
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#### International Intensive Course on Geoparks 2017 - "UNESCO Global Geoparks and Geotourism Activities"

The Intensive Course will be held on Lesbos Island, Greece, from 12 -22 June 2017 in the premises of the Lesbos Geopark. It is co-organized by the University of the Aegean - Department of Geography and the Natural History Museum of the Lesbos Petrified Forest.

the course is open to Geopark staff members, geoscientists, local development professionals and students involved in geo-education, popularization of Earth sciences, geopark management, geotourism and the sustainable development of rural areas. The International Intensive Course on Geoparks 2017 is one of the main

#### Hateg Geopark Ambassadors (Romania) in their first international mission in Bakony-Balaton Geopark (Hungary)

Geopark Ambassadors is an innovative project, selecting and training 18 young geopark volunteers. After a few years of volunteer work and six months of training they became partners of the geopark and official representatives of their territory in national and international missions to promote and increase awareness of the Geopark and the UNESCO Geopark Programme.

The Ambassadors fulfilled their first international mission in Bakony-Balaton UNESCO Global Geopark. During the three days mission they visited the Lavender House, the Tapolca Lake Cave and the Pannonian Observatory Visitor Centres and discovered the Hegyestű Geological Visitor Site. The group was received in a professional manner by the Geopark team for whom it was a marvelous experience to meet these curious and enthusiastic Ambassadors.



### Common activities

#### Nature and Geopark Styrian Eisenwurzen UNESCO Global Geopark (Austria): Charitable activities

Our Geopark is very rich in diverse apple and peach orchards. Different projects are helping to protect these old orchards and their varieties of fruits for the future. In addition a project for local farmers contributes to the harvesting of their fruit. In October 2016 we were able to include refugees within this project providing them with the opportunity to contribute to the fruit harvest and to discover the Geopark and its inhabitants.. In addition, they learned to speak German and had a lot of fun. A small contribution to charitable activities and integrating refugees with another culture.





### **Troodos UNESCO Global Geopark (Greece): The Walls of Madari Geo-trail**

Troodos Geopark organized and delivered a superb fieldtrip along the Walls of Madari Geo-trail on October 15th.

The Beautiful Sheeted Dykes Complex right in the heart of Troodos Geopark was visited by 129 people from 12 different countries. The participants on the tour, which was promoted through Facebook, provided the local inhabitants and Erasmus Students from Nicosia with an opportunity to learn more about the formation of Troodos Range, the ophiolite complex 92 million years ago, as well as to admire three really special forests of Golden Oak (*Quercus alnifolia*), Troodos Juniper and *Cedrus brevifolia*.

The fieldtrip which lasted for 6 hours involved for a distance of 10 km and was supervised by 9 trail guides.



### **Rocca di Cerere UNESCO Global Geopark: Transnational training (Italy)**

The Geopark has delivered an interesting training course about TRANSPORT, ENVIRONMENT, URBAN PLANNING AND PUBLIC SAFETY, within the framework of the EU project "Development and implementation practices of strategies for health-enhancing physical activities in local communities across Europe". The course focused on geotourism as an opportunity for engaging in physical activity in rural areas and to promote a positive relationship with the environment. The Geopark hosted partners from Latvia, Lithuania, Poland, Turkey and Croatia. Every delegation introduced itself in relation to the focus of the training course and had the opportunity to experience the Geopark's amazing landscape and the recreational opportunities.

### **Geopark Vulkaneifel celebrates official delivery of UNESCO Global Geoparks certificate (Germany)**

Inside a beautiful maar crater and under marvellous weather conditions, Geopark Vulkaneifel celebrated the official delivery of the UNESCO Global Geoparks certificate on Monday, 12th September 2016. The certificate was handed over by representatives of the German Ministry of Foreign Affairs (Mr. Michael Reiffenstuel, Chair of National Committee of UNESCO Global Geoparks in Germany) and the German National UNESCO Commission (Prof. Dr. Hartwig Lüdtke, Vice President). The celebration was attended by the Prime Minister of Rhineland-Palatinate and approximately 200 guests involved with politics, administration, schools, private businesses together with members of the general public.



## **Education**



### **Geo-education and Sustainable Tourism Development – Arouca Geopark (Portugal)**

The main educational topic chosen for the 2016/2017 school year in all schools of the Arouca Geopark territory was «Sustainable Tourism for Development» within the framework of the International Year of Sustainable Tourism Development currently observed by the United Nations. To address this issue the Geoeducation Department of AGA – Arouca Geopark Association prepared a plan with several educational activities including workshops, lectures in awareness, fieldtrips, school contests and didactic games, among others. This project will involve several AGA tourist trade partners in sharing their knowledge and in contributing for the implementation of true sustainable tourism development.



### **UNESCO Global Geopark Basque Coast (Spain): Geopark distributes more than 4,000 school diaries to students**

With the start of the school year, and as part of the Agenda 21 Escolar educational programme, the Basque Coast Geopark has distributed 4,050 free school diaries to the primary, secondary and baccalaureate student body (6-18 years) in 15 educational centres within the Geopark and adjoining municipalities. The diary uses an entertaining and amusing style to reflect on the important geological, natural and cultural values of the Basque Coast Geopark. The texts and messages are spread over 134 pages and are accompanied by carefully chosen illustrations, photographs and interesting information about the Geopark. The content is aimed at disseminating this extraordinary heritage as well as motivating and raising students' awareness about respect for the natural environment in general, and for this unique area in particular. The publication in Basque, printed on environmentally friendly paper, involved the support and collaboration of the corresponding Town Halls, educational centres and the Basque Government.



### **Burren and Cliffs of Moher UNESCO Global Geopark (Ireland): First taste of Geopark geology for students**

As part of our close collaboration with the National University Ireland, Galway, a group of university students will have their first taste of the geology of the Burren and Cliffs of Moher Geopark on November 5th. The students from the Earth and Ocean Sciences Department were supervised by a palaeontologist Dr John Murray, a hydrogeologist Dr. Tiernan Henry and the Geopark geologist Dr. Eamon Doyle they visited a number of geological sites to study carbonate sedimentology, karst development and palaeokarst horizons in the Burren Formation and the significance of conodonts and graptolites in the Clare Shale Formation.

### **Geoschools Geology Education Program in the Copper Coast UNESCO Global Geopark (Ireland)**

This autumn, The Copper Coast Geopark in County Waterford is organizing a geology outreach program called "Geo Schools" in primary schools located within the Geopark. As part of this programme, a number of participating schools will be visited twice by a geologist from the Geopark and be introduced to a number of key geological concepts and processes. Following these visits it is hoped the participating schools will take part in a field trip, together with the Geopark's Geologist, to a site of their choosing in the Geopark. Each school will also choose and complete a geology based poster project.



### **The Idrija UNESCO Global Geopark School Network (Slovenia)**

One of our most successful school activities involves the so-called School Network in which four local primary schools have participated since 2013. Each year one of the schools organizes a themed day, providing a high-level educational programme with numerous activities for all grade 7 students of the member schools, assisted by Idrija Geopark and its partners. This year Idrija Primary School organized the event. There were ten different workshops including one to present the geological heritage at the new Geopark playground called Among rocks and flowers at Hleviše Hill.



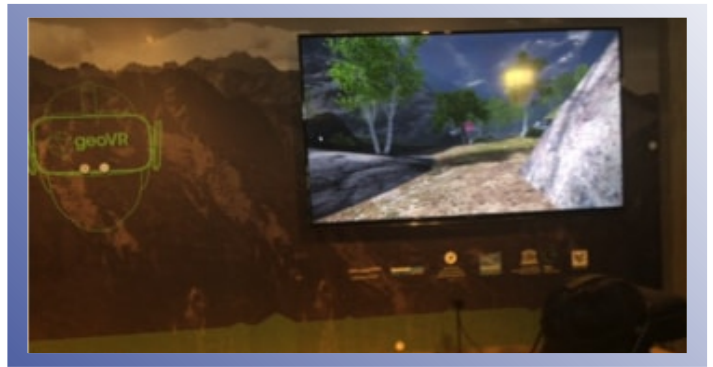
## Magma UNESCO Global Geopark (Norway):A

### New way to learn natural sciences:

<http://www.geoVR.no>

GeoVR would be an attractive part of teaching geology in school, according to the feedback from pupils after trying out the Magma Geopark geoVR experience Jærmuseet, in Nærbø municipality in Southwest Norway. The pupils responses are rather promising for improving the technology. The material is collected from the participants of geoVr experience in the Jærmuseet pilot exhibition opened in June 2016. After using the geoVr technology the visitors were asked to complete a webform on an iPad next to the Virtual Reality station. Eighty five percent of the participants would like to use geoVR in learning activities in their schools. After using geoVR,

65% of the students would like to learn more about geology. Half of Of the 207 students providing feedback on the geoVR experience, 94 % would like to try it again. The largest group of participants (68%) were from the 8-12 years age group. The popular words used to describe the experience were exciting and fun (see the most popular adjectives in the graphic). You can try the user experience: <https://youtu.be/AYBWGb8T9Uk>. From 2018 each Geopark can participate, info at: [post@magmaageopark.com](mailto:post@magmaageopark.com)



## Educational activities in the Sitia UNESCO Global Geopark (Grece)

The Sitia UNESCO Global Geopark in cooperation with the Centre for Environmental Education has organized two-day thematic seminars on Sustainable Education on Friday and Saturday 25 and 26 November. The theme involves the "Wetlands of Crete: Protecting and promoting them for sustainable education". Also for Sunday, November 27, 2016 the Geopark has organized the educational workshop: "Caves of Sitia Geopark: Their use in sustainable education" Contributions will include the biodiversity of the caves in Sitia Geopark and the opportunities for their use in environmental education. The seminar will involve 50 teachers from all over Crete. [www.sitia-geopark.gr](http://www.sitia-geopark.gr)

## Geological/Biological Heritage

### Special windows into the past - 15th anniversary of the „Geotope of the year award, UNESCO Global Geopark Bergstrasse-Odenwald (Germany)

Since 2002, Bergstrasse-Odenwald UNESCO Global Geopark has with its award, "Geotope of the Year" a special window into the Earth's history of the territory, participated in the Germany-wide "Day of the Geotope". The award "Geotope of the Year" highlights outstanding geological features and relates their connection to nature, culture and history of the territory. This year, the castle graben at the world famous Heidelberg Castle has been awarded as the 15th "Geotope of the Year". The celebration, which included the mayor of the city of Heidelberg, the State Secretary of Finances, Baden-Württemberg and the German UNESCO Commission, reflects the continuity and success of the award programme in contributing to awareness building, geo-communication, participation and cooperation.



## Sand – diversity in grains (UNESCO Global Geopark Muskau Arch (D/PL)

If you asked somebody about sand, everybody will have a concept of the nature of this material. At first glance it seems to be rather ordinary, but if you take a closer look, you will get a feeling for the importance of this raw material.

In 2016, an expert panel led by the Professional Association of German Geoscientists (BDG) selected sand and sandstone as the sediment and rock of the year! In response, the Muskau Arch Geopark initiated a new project dealing with sand. It includes presentations and school projects together with excursions to show the connection between the diversity of sand, and the use and importance of raw materials in our daily life.



## Tourism ●●●●●

### Azores UNESCO Global Geopark (Portugal): Azores Triangle Adventure

The 2nd Azores Triangle Adventure is a sport event of trail running that took place from October 7th to 9th, 2016 in the Azores Archipelago, on the islands of Pico, São Jorge and Faial, with a stage on each island involving important geosites of the Azores UNESCO Global Geopark

This trail started at Pico Island, from the Vineyards World Heritage Site to the highest point in Portugal, the Pico Mountain Volcano, at 2351 metre above sea level. The second stage in São Jorge Island – included its “fajãs” Biosphere Reserve, crossed the central volcanic ridge – and ended at Faial Island, in the youngest terra firma of Portugal: the 1958 Capelinhos Volcano Geosite.



### Chelmos-Vouraikos UNESCO Global Geopark (Greece): 1st International Meeting for Alternative Tourism EXPO NOSTOS, Nafpaktos, 14-17 October 2016

The Chelmos-Vouraikos Geopark participated in this exhibition in the stand of Municipality Of Kalavrita. The Geopark contributed extensive informative material concerning the promotion of biodiversity and geodiversity in the region and the prominence of the Chelmos-Vouraikos UNESCO Global Geopark,. The Municipality's contribution concentrated on tourism infrastructure, the ski center of Kalavrita and alternative forms of tourism. The exhibition was very well attended and provided participants with the opportunity and motivation to visit the Chelmos-Vouraikos Geopark at any season

during the year. Meetings also took place between Greek and foreign travel agents in order to create information packages for tourists. Our goal is to extend the tourist season throughout the year, with hiking trails, cycling routes, environmental education with assistance from staff members of Management Body of Chelmos-Vouraikos etc. Stay informed at [www.fdechmos.gr](http://www.fdechmos.gr)

## Science/Research ●●●●●

### Collecting “Big Data” in Fforest Fawr UNESCO Global Geopark (UK)

The Cribarth, a prominent feature associated with the NE-SW oriented Swansea Valley Disturbance, contains a zone of folded and faulted Carboniferous rocks involving Variscan and post-Variscan deformation events. This project with Cardiff University involves documenting the faulted rocks in the axis of the main anticline using data derived from ground based photography, drone aerial photography and LIDAR photography, a range sensing technology set at an accuracy of 2 cm. These data will be integrated in a 3D model using Agisoft Photoscan software to gain a clearer understanding of the deformation history. The multiple phases of deformation recorded on the Cribarth represent relics of temporal changes in the regional stress field through time. Regional stress fields, now and in the geological record, are generated primarily by tectonic processes at plate boundaries. Understanding the stratigraphy of the changing stress patterns recorded on the Cribarth will lead to a better understanding of the nature and origin of Variscan and post Variscan regional stress fields in south Wales.



### Beigua UNESCO Global Geopark (Italy): geo-archaeological heritage interpretation and education

From October 27th to November 6th 2016 the Geopark Educational Center participated in the 14th “Science Festival” held in Genoa by presenting an educational workshop in collaboration with the Natural History Museum of Genoa. The workshop was dedicated to the study of the earliest forms of written communication developed by man in prehistory, with particular reference to the marks left on the ophiolitic rocks of the Beigua Mountain; mysterious symbols that tell of the daily life and ancient religious rituals. The young archaeologists (between 4 and 13 years old) who attended the workshop enjoyed recognizing the characteristics of the rocks, interpreting these messages and trying to reproduce the signs of the past.



## El Hierro UNESCO Global Geopark (Spain/Canary Islands) promotes a better connection between science and society

In 2011, El Hierro experienced the first eruptive episode of the 21st century in the Canary Islands - the La Restinga underwater volcano. This eruption was the trigger for the island being declared a Geopark, which has served to create a better connection between science and society. The local government wishes for information to effectively reach the population in order to improve knowledge and the capacity to respond to a volcanic eruption. It also requests that the significant geological material generated by this eruption be returned to the island so that it can be exhibited in the El Hierro Volcanology Centre.



## ■ ■ ■ ■ ■ New projects & facilities



### "Pure Geology", a travelling exhibition around the Lanzarote and Chinijo Islands UNESCO Global Geopark (Spain/Canary Islands)

"Pure Geology", a travelling exhibition between August and December 2016, presents different aspects of the Geopark. The material included in the exhibition is presented in five languages and provides a guide and instruction about the environmental. Participants will learn about the concept and aims of geoparks, a brief geological history of the Earth, the distribution of Global, European and National Geoparks, and the recognition and history of Lanzarote, as a recent addition to the Network of UNESCO Global Geoparks. The exhibition also includes an area for children's workshops.

## Meet our Geoparks ■ ■ ■ ■ ■

### "Photographing the VIKOS - AOOS UNESCO Global Geopark" (Greece)

The photo contest entitled "Photographing the VIKOS - AOOS Geopark" is organized by the Vikos Aaos Geopark and the Development Agency of Epirus. It encourages public participation through the photography of the distinctive highlights of the Geopark including: geology, ecosystems, traditional settlements, human activities and of course culture. Any person above 14 years of age, including amateur or professional photographer of any nationality and gender can participate in the competition "Photographing the VIKOS - AOOS Geopark". The 5 categories of the competition are: a. Geological formations and Landscape, b. Settlements and Monuments, c. Human activities, d. Wildlife and e. Aerial photos. For more information please visit our website: <http://vikosaoosgeopark.com>



## Agenda/Calendar ■ ■ ■ ■ ■

**September 2016 - The European Geoparks Network became silver partner of the International Year of Sustainable Tourism for Development, 2017 (IY2017) following the decision taken during its 38th EGN Coordination Meeting in the English Riviera UNESCO Global Geopark.**