

EUROPEAN GEOPARKS NETWORK

European Geoparks Magazine • Issue 22

European Geoparks: Achieving from the bottom up



THE EUROPEAN GEOPARKS NETWORK

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EGN Calendar of Events

MARCH

10th Anniversary of IGGP - Celebration

5-6 March 2025: 51st European Geoparks Network Coordination Committee Meeting, Paris

21 March 2025: International Day of Forests

22 March 2025: World Water Day

28 March 2025: EGN Workshop on SDG's - On Line

30 March 2025: International Day of Zero Waste

APRIL

10 April 2025: GGN Workshop on Tourism - On line / GGN WG on Tourism

22 April 2025: International Mother Earth Day 2025

30 April 2025: 2025 GGN Annual General Assembly for Accounts

MAY

18 May 2025: International Museum Day

21 May 2025: GGN Workshop on Geohazards - On Line

25 May – 8 June 2025: EGN Week

JUNE

2 June 2025: GGN Advisory Committee Meeting 3/2025 - On line

5 June 2025: World Environment Day

5 June 2025: New UNESCO Global Geoparks - Welcome Digital Event

8 June 2025: World Oceans Day

20-29 June 2025: International Course on UNESCO Global Geoparks “UNESCO Global Geoparks and Sustainability” Lesvos Island UNESCO Global Geopark, Greece

JULY

7-11 July 2025: Summer University on UNESCO Global Geoparks (Portugal - Spain).

AUGUST

6 August 2025: GGN Advisory Committee Meeting 4/2025 - On line

SEPTEMBER

11th International Conference on UNESCO Global Geoparks, Kütralkura UNESCO Global Geopark, Chile

7th September (Sunday): Accreditation - Ice Breaking Party - UNESCO workshop on Glaciers

8th September (Monday): Conference Opening Ceremony - Geopark Fair Opening Ceremony - 3rd GGN Film Festival Opening - Conference Sessions

9th September (Tuesday): Conference Sessions - GGN Advisory Committee Meeting 5/2025

10th September (Wednesday): Conference Sessions - GGN General Assembly and Elections

11th September (Thursday): Field excursion

12th September (Friday) : Conference Sessions - GGN WG Thematic Workshops - Closing ceremony

17 September 2025: World Cleanup Day

September 2025: 52nd EGN CC Meeting (online)

27 September 2025: International Tourism Day

OCTOBER

6 October 2025: International Geodiversity Day

13 October 2025: International Day for Disaster Risk Reduction

NOVEMBER

28 November 2025: GGN Advisory Committee Meeting 6/2025

DECEMBER

5 December 2025: World Soil Day

11 December 2025: International Mountain Day



European Geoparks Network Magazine

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Geoparks: Achieving from the bottom up

The European Geoparks Network (EGN) is one of three regional networks designated as UNESCO Global Geoparks (UGGps)

The variety of activities and innovations highlighted in the 22nd issue of the EGN Magazine show how, by networking and engaging with their respective communities and stakeholders, the European Geoparks continue 'Achieving from the Bottom Up' in their territories. In March 2024, the 49th EGN Coordination Committee Meeting hosted by Kula-Salihli UNESCO Global Geopark, Republic of Türkiye, was followed in September by the EGN's Coordination Committee Digital Meeting. With the designation of ten new Global Geoparks, EGN affiliation increased to 109 members in 28 Countries.

Engaging with stakeholders is a prerequisite in all UGGps.

Sierras Subbéticas celebrated its successful revalidation with stakeholders in June 2024. The Apuan Alps supported the 'I Raggi di Belen' association to enhance and protect the natural heritage of the Versilia Valley. A new Geosite was recognised through collaboration between the Azores UGGp and a village. Local community groups participated in signage development in Burren and Cliffs of Moher UGGp. Trollfjell UGGp involved its communities in trail management. Team efforts with stakeholders contribute to aspects of sustainability in Beigua and Bergstrasse Odenwald UGGps. Scientists, conservationists, and local communities engage in safeguarding biodiversity and geodiversity in Chelmos Vouraikos UGGp. Collaborating with Sobrarbe-Pirineos provides organisations with support in the ecotourism market. Bolster Community introduces the 'Scents of Home' collection by 'Acorn' - Candles with a Cause in Mourne Gullion Strangford UGGp. TERRA.vita UGGp created two geologically illustrated towers in partnership with the city of Georgsmarienhütte. The Bükki Kövirózsa Retired Association preserves and popularises the geological values of the Bükk Region. UGGps work closely with national and international associations. The Basque Coast UGGp hosted the seventh National Ecotourism Congress. The 12th National Expert Meeting for Biology and Geography Teachers of the Republic of Croatia was hosted by Biokovo-Imotski Lakes UGGp. In Fforest Fawr UGGp, a major UNESCO project, engages with stakeholders and communities to develop solutions to climate change.

Promoting geotourism contributes to sustainable economic stability in geoparks. The project 'On the Route of Man' raises awareness of cultural richness in Arouca UGGp. The Network of Astrotourism Viewpoints are a significant component of geotourism in Granada UGGp. In Katla UGGp Midgard, a tourist operator, contributes to reduce the impact of footfall. By joining the consortium 'Consorzio Together' to create the brand 'Kore Siciliae' Rocca di Cerere UGGp promotes geotourism and contributes to the wellbeing of its communities. The ambitious project 'Enhancement of Geosites and Geological Formations and Evaluation of Visitability of Geosites and Landscapes of High Aesthetic Value' fosters sustainable tourism in Vikos - Aaos UGGp. The Ore of the Alps UGGp highlights an excursion for members of the Ore of the Alps Association to the Pasterze Glacier. Vulkaneifel UGGp celebrates a state-of-the-art information concept for its 'Steffeln Volcano Garden' flagship geosite.

Conserving their landscapes and biodiversity in UGGps involves stakeholders and communities. Möllerdall UGGp provides gardeners with packets of seeds of native flow-

ering plants and wild perennials. Psiloritis UGGp is one of five targeted areas in the 'RescueME' a research project focused on the enhancement of the resilience of coastal cultural landscapes (CLs) in Europe. Pollino UGGp created and involved local people in a 'Forest Fire Prevention Plan' to predict, prevent and fight against forest fires. Vis Archipelago UGGp initiated a project to protect Mala Palagruža islet as a geological natural monument. The establishment of Platåbergens UGGp celebrated strong bottom-up engagement for the preservation of its table-mountain landscape.

All UGGps engage in formal and informal education. Harz . Braunschweiger Land . Ostfalen highlights collaborating with the University of Applied Sciences and Arts in Göttingen. In Idriga UGGp education programmes embrace a bottom-up approach that draws on local expertise and traditions. Community involvement contributes to educational initiatives in UGGps Karawanken – Karavanke and Maiella. The 'GEO Learning Environment' inspires students to think environmentally, locally, and globally in Lauhanvuori – Hämeen kangas UGGp. Participating with children, students and schools in educational activities are significant contributions in the activities of Orígens and Riess UGGps. In Lanzarote and Chinijo Islands UGGp an oral narrator enabled students to travel in time to "witness" volcanic eruptions in 1824. Naturtejo UGGp organised the 'Youth Meeting – Climate Action in Portuguese Geoparks'. The Finnish Sport Federation of South-Karelia (EKL) organises the annual South Karelian Nature Week in the Saimaa UGGp Over the course of a week, Terras de Cavaleiros UGGp held the workshop 'Sowing today to plant tomorrow' with students from the territory's schools.

Networking between UGGps contributes significantly to collaborative initiatives. Causses du Quercy, Famenne - Ardenne, and Sobrarbe-Pirineos UGGps, organised a photographic competition on the theme of 'Megaliths as landmarks in our Geoparks'. In Madonie UGGp the implementation of the 'Erasmus Repair the World' project involved Italian, Spanish, Turkish and Polish teachers. The Interreg 'Danube Geo Tour Plus' project led by the Styrian Eisenwurzen UGGp paves the way for sustainable tourism and fostering community engagement.

Engaging with social media is an important activity in geoparks. The joint video created for World Cleanup Day 2024 in the collaboration between the Swabian Alb UGGp and Instagram influencer Martina, known as 'Ulmer Dreckspatz', demonstrates how local initiatives can achieve global reach through modern communication channels. In Maiella UGGp the 'Dim the lights, brighten our future - 2 Geoparks working together for a greener tomorrow' was part of the Italian Radio's green campaign for the Energy Saving Day.

Five new UGGps, Lappajärvi, Finland, Land of Extinct Volcanoes, Poland, Meteora - Pyli, Greece, Oeste, Portugal and the Schelde Delta, Netherlands and Belgium are described in this issue.

The theme 'Achieving from the Bottom Up' through networking, engaging with communities, stakeholders, the media, and national and international programmes emphasises the role of European Geoparks as vibrant and imaginative organisations, and this theme will continue to contribute to develop the concept of UNESCO Global Geoparks.

Tony Ramsay,
Publication Editor

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The 49th European Geoparks Network (EGN) Coordination Committee Meeting – Kula Salihli UNESCO Global Geopark' Türkiye



Participants in Workshop 1 prepare to celebrate the 20th anniversary of the foundation of the Global Geoparks Network in 2004.

The European Geoparks Network (EGN) holds its Coordination Committee meetings biannually, with one taking place in the spring and the other in the fall. The spring meeting is conducted in-person, while the autumn meeting is held online. The spring 2024 meeting was hosted in Türkiye in the Kula Salihli UNESCO Global Geopark.

Held between March 5-8, 2024, the meeting involved the participation of 172 Coordination Committee members from 23 different countries. The meeting took place in a highly productive atmosphere, featuring not only the coordination committee discussions but also various workshops. Noteworthy activities included a city tour of Kula, a gala dinner, and a field trip. Presentations by Sophie Justice (EGN CC Coordinator), Kristoff Vandenberghe (Chief of the Section for Earth Sciences, UNESCO) and Professor Nickolas Zouros (President of the Global Geoparks Network) emphasised aspects of EGN progress, UNESCO's involvement in the Global Geoparks Network, and the celebration of the 20th anniversary of the foundation of the Global Geoparks Network respectively.

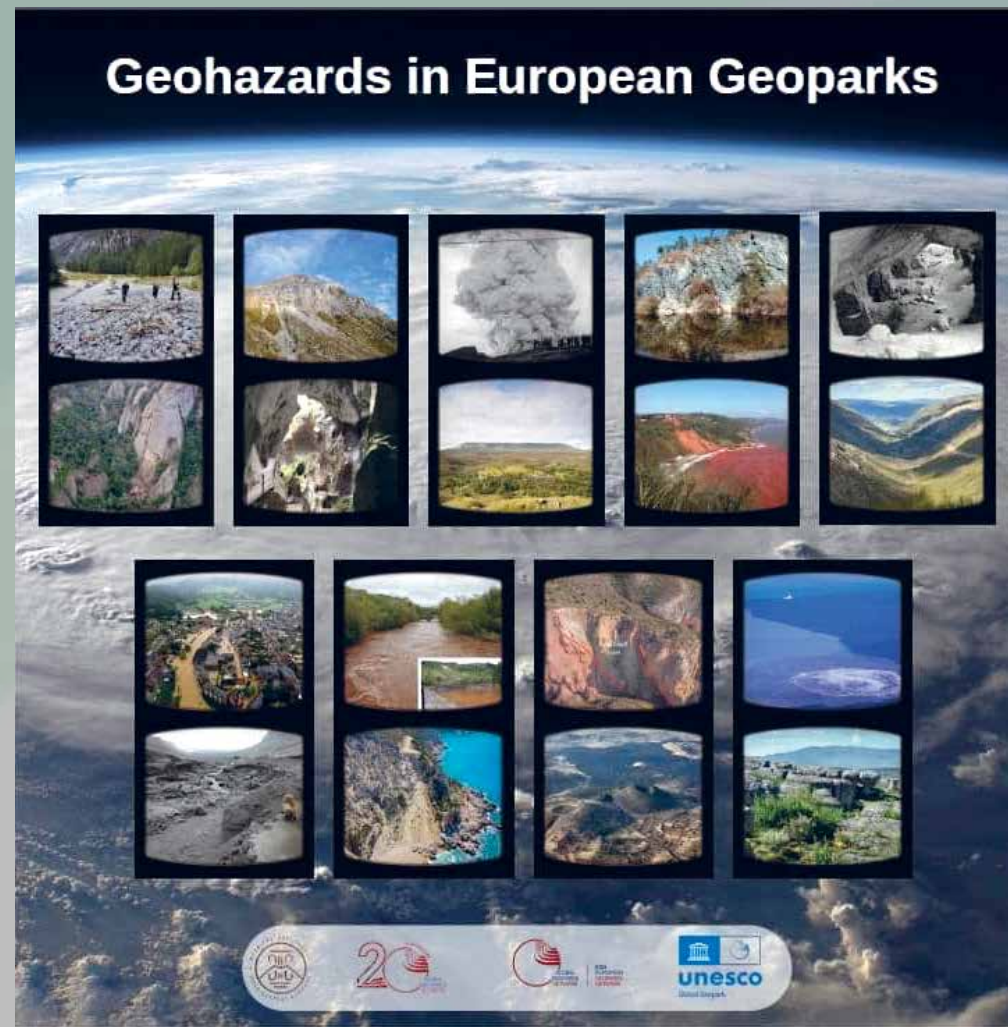
During the meeting, elections were held for the positions of President, Vice President, and the Advisory Committee of the European Geoparks Network. Additionally, the members of the EGN working groups presented their activities and plans. In this context, the book titled 'Geohazards in Eu-



ropean Geoparks', which was initiated in 2023 by the Geohazard Risk Reduction group, was distributed. This book focuses on geological disasters, providing case studies and information on educational activities related to these hazards. The book, published by Kula Salihli UNESCO Global Geopark, was edited by Xavier Mir Pellicer, Ahmet Serdar Aytaç, Alessia Amorfini, and Serge Delaby, with the layout designed by Ali Karatas. A limited number of copies were printed, with one copy allocated to each geopark. The digital version of the book can be accessed and downloaded from the following link: <https://kulasalihligeopark.com/uploads/cus->



Celebrating International Women's Day, 2024 with a gift of flowers. Fig. 4. The book cover for Geohazards in European Geoparks.

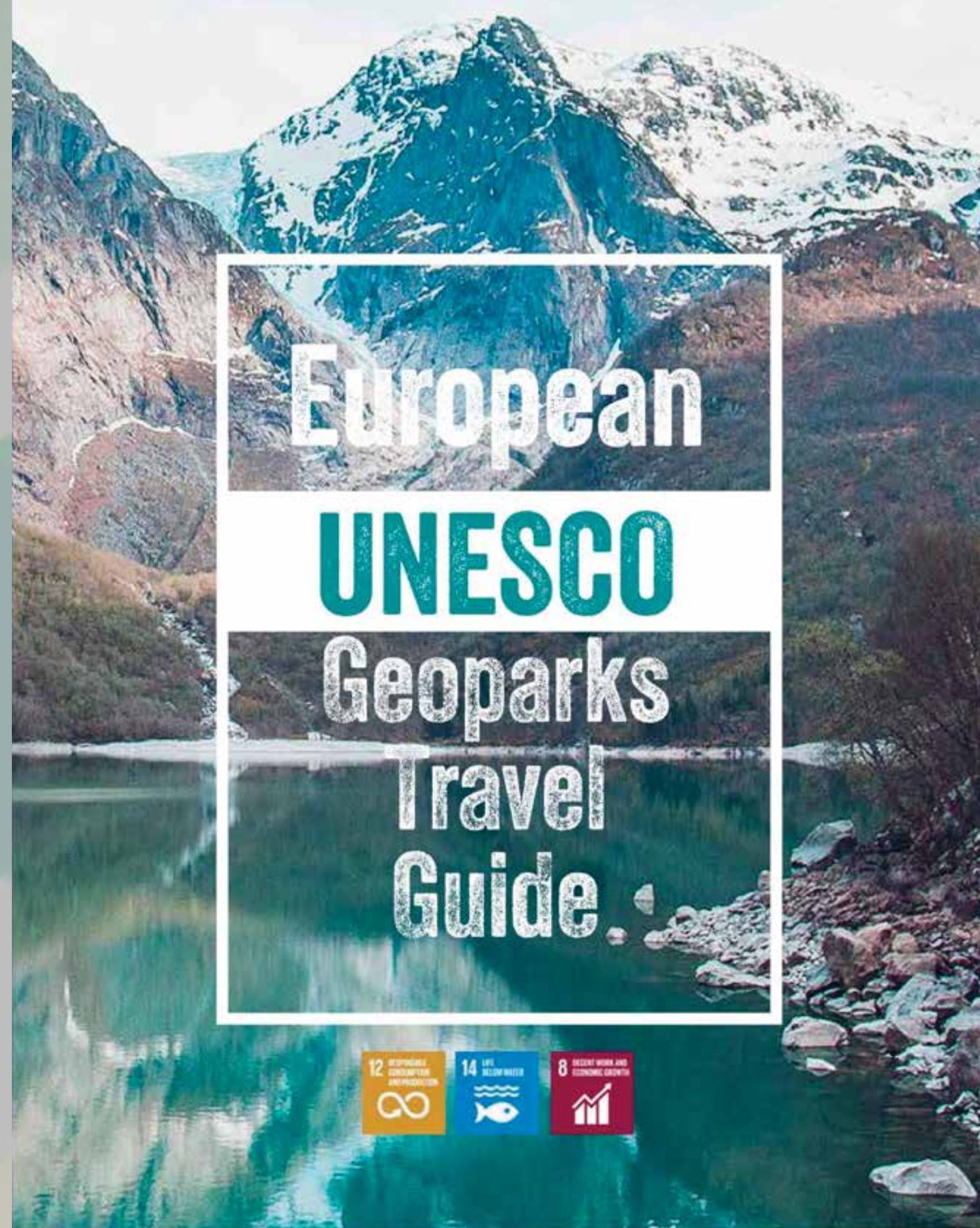


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On the final day of the meeting, participants had the opportunity to explore the unique geoheritage of the Kula Salihli Geopark. This day was also important because March 8th was International Women's Day. In celebrating the day, flowers were

given to the female members of the European Geoparks Network Coordination Committee. On March 9, 2024, the participants departed Salihli, marking the conclusion of the event.

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Reykjanes UNESCO Global Geopark Thriving Amidst Nature's Tests – 17th European Geoparks Conference in Reykjanes Geopark



The captivating images exhibition of recent volcanic events, during a field visit to Grindavík

In early October 2024, Reykjanes UNESCO Global Geopark hosted the European Geoparks Network Conference at Hljómahöll Cultural Centre in Reykjanesbær, Iceland. Under the theme «Thriving Amidst Nature's Tests,» nearly 400 participants from 30 countries, representing more than 190 geoparks

and institutions, attended the three-day event, comprising two days of around 230 presentations and workshops and field trips across the Reykjanes Peninsula and Katla Geopark.

The conference highlighted the resilience required by geoparks facing significant natural challenges, par-



Lilja Alfreðsdóttir, Minister for Culture and Business Affairs, opened the conference, and announced governmental financial support for Iceland's two UNESCO Global Geoparks, Reykjanes and Katla.



Matthew Roberts from the Icelandic Meteorological Office presented a scientific perspective, clarifying recent volcanic and seismic activity in Reykjanes.

ticularly relevant to Reykjanes, which has experienced frequent seismic activity and volcanic eruptions in recent years. The Minister for Culture and Business Affairs, Lilja Alfreðsdóttir, officially opened the conference and announced annual governmental support of 10 million ISK to Iceland's two UNESCO Global Geoparks, Reykjanes and Katla, for the next two years.

Following the minister's address, representatives from UNESCO and the European Geoparks Network emphasised the critical role geoparks play globally. Fannar Jónasson, Mayor of Grindavík and Chairman of Reykjanes Geopark, provided participants with insights into local community challenges resulting from volcanic unrest. A short documentary by Iceland's Civil Protection depicted the town's evacuation before recent eruptions near Grindavík, vividly illustrating local impacts. Additionally, Matthew Roberts from the Icelandic Meteorological Office offered a scientific perspective, clarifying recent volcanic and seismic developments. Delegates commended this informative approach for providing a deeper understanding than achieved by the international media coverage.

A key aspect of the conference was its extensive field trips, in which about 300 attendees explored the Geopark. Participants visited Kvikan Cultural Centre in Grindavík to hear first hand accounts from residents about coping strategies and community resilience. Field trips also provided insights into the geology, regional resources, cultural heritage, tourism development, STEM education (Science, Technology, Engineering, and Mathematics education), and local innovative projects. Guided by local experts, delegates visited educational institutions, cultural sites, research facilities, and businesses, gaining valuable perspectives on the Geopark's diverse activities and initiatives.

The primary objectives of the conference were enhancing cooperation among geoparks, sharing expertise, and showcasing successful practices globally. For Reykjanes Geopark, the event offered an opportunity to strengthen local awareness and highlight the Geopark's value to Icelandic communities and stakeholders.

Importantly, the event significantly benefited the



local economy. All conference services, catering, transport, cultural performances, and logistical arrangements utilised local suppliers and services, aligning with the Geopark's commitment to regional economic development. Sustainability was central, with measures including zero single-use plastics, minimal printing, local sourcing, and recycling. A portion of the registration fees funded carbon-offset initiatives and supported local search-and-rescue teams with a 1.1 million ISK contribution, underscoring environmental and social responsibility.

Participants and hosts universally praised the success of the conference, noting it as a memorable highlight in the history of the European Geoparks Network.

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Global Geoparks Network 20th Anniversary! Awarding individuals from Europe with significant contribution to GGN establishment and development



In any thriving organisation, it's members are the cornerstone of success. But especially for the Global Geoparks Network which was founded in 2004, as a voluntary network including 25 territories hosting geological heritage sites of international significance and within the last 20 years became an International Association, including 213 UNESCO Global Geoparks in 48 Countries and statutory partner of UNESCO for the UNESCO Global Geoparks Programme, is more than evident that the contribution of the Geopark representatives and Geopark professionals made this Network a real success!

The GGN members during the last 20 years offer to the GGN voluntary contribution, hard work, dedication, solidarity and concrete achievements that drive the Global Geoparks Network forward.

Celebrating GGN's 20th Anniversary we feel the necessity to recognise the individuals with significant contribution to the GGN establishment, development and success. All those individuals who through different types of contributions impact the overall success of the Global Geoparks Network.

Recognition of their contribution is not just about giving praise; it's about acknowledging the hard work and commitment to GGN.



Thus the GGN organised special events during 2024 at the Regional Geopark Conferences and awarded with a special certificate the individuals with significant contribution to the GGN establishment, development and success!

It was the minimum we could offer as a small gift in return to their contribution.

On 4 October 2024, at the Conference Centre in Reykjanes UNESCO Global Geopark, the celebration of the 20th anniversary of the Global Geoparks Network (GGN) took place during the closing ceremony of the 17h European Geoparks Conference, with the participation of local authorities and nearly 500 domestic and international delegates.

The celebration marks the 20th anniversary of the establishment and development of GGN in

carrying out the tasks of preserving, conserving and promoting geological heritage, biodiversity, natural landscapes, tangible and intangible culture, environmental protection activities, for community development and sustainable development; enhancing the spirit of solidarity among Network members in implementing the common goals of the UNESCO Global Geopark.

The GGN Executive Board awarded certificates and honored members of the Global Geoparks Network ExB, GGN AC, Organisers of International Geopark Conferences, members from the UNESCO Global Geoparks Council and officials from International Organizations who have made important contributions to the foundation and development of the GGN.

Below the list of individuals from Europe with significant contribution in GGN building (by country name alphabetical order)

Oliver Gulas, Austria
Heinz Kollmann, Austria
Gerald Hartmann, Austria
Alain Petit, Belgium
Goran Pavic, Croatia
Goran Radonić, Croatia
Efthimios Tsiolakis, Cyprus
Martina Paskova, Czech Republic
Walløe Hansen Jakob, Denmark
Vesa Krökki, Finland
Juri Nenonen, Finland
Mikko Kiuttu, Finland
Jean-Luc Desbois, France
André Guerraz, France
Jean-Simon Pagé, France
Sophie Justice, France
Marie-Luise Frey, Germany
Hartmut Escher, Germany
Andreas Schüller, Germany
Jutta Weber, Germany
Henning Zellmer, Germany
Kupetz Manfred, Germany
Charalampos Fassoulas, Greece
Ilias Valiakos, Greece

Konstantina Bentana, Greece
Korbély Barnabás, Hungary
Imre Szarvas, Hungary
Sigurður Sigursveinsson, Iceland
Þuríður Aradóttir Braun, Iceland
Daníel Einarsson, Iceland
Patrick Mc Keever, Ireland
Clare Glanville, Ireland
Maurizio Burlando, Italy
Aniello Aloia, Italy
Alessia Amorfini, Italy
Rosaria Modica, Italy
Pasquale Li Puma, Italy
Violette Masè, Italy
Kausch Birgit, Luxembourg
Gretha Roelfs, Netherlands
Kristin Rangnes, Norway
Michał Poros, Poland
Jacek Koźma, Poland
Armando Jacinto, Portugal
Carlos Neto de Carvalho, Portugal
Artur Sá, Portugal
Margarida Belém, Portugal

Antonio Duarte, Portugal
Daniela Rocha, Portugal
Elisabeth Silva, Portugal
Carlos Nunes, Portugal
Dan Grigorescu, Romania
Alexandru Andrasanu, Romania
Bojjan Rezun, Slovenia
Suzana Fajmut Šrtučl, Slovenia
Asier Hilario, Spain
Jose Maria Barrera, Spain
Luis Alcalá, Spain
Anna Bergengren, Sweden
Tuncer Demir, Turkey
Melanie Border, UK
Kirstin Lemon, UK
Tony Ramsay, UK
Chris Woodley-Stewart, UK
Richard Watson, UK

UNESCO
Wolfgang Eder, UNESCO
Robert Missotten, UNESCO
Margaret Patzak, UNESCO
Kristof Vandenbergh, UNESCO

The European Geo parks Week 2024



ADAMELLO BRENTA UGGP, ITALY



APUAN ALPS UGGP, ITALY



BURREN AND CLIFFS OF MOHER UGGP, IRELAND



BUKK REGION UGGP, HUNGARY



AZORES UGGP, PORTUGAL



BASQUE COAST UGGP, SPAIN



BUZAU LAND UGGP, ROMANIA



CABO DE GATA-NIJAR UGGP, SPAIN



BIOKOV0-IMOTSKI LAKES UGGP, CROATIA



BOHEMIAN PARADISE UGGP, CZECH REPUBLIC



CABO ORTEGAL UGGP, SPAIN



CHABLAIS UGGP, FRANCE



BAKONY-BALATON UGGP, HUNGARY



BEAUJOLAIS UGGP, FRANCE



CENTRAL CATALUNYA UGGP, SPAIN

The European Geoparks Week, often called the Geoparks Festival, held between late May and early June, is a major item in the annual calendar of events for all European Geoparks. This European-wide festival aims to raise public awareness about Geoparks, their role in conserving the geological heritage, educational activities and how they endeavour to provide economic benefit for the local people by promoting geotourism. It also shows geopark communities that they are part of a wider European Network and Global Network.

Events in the 2024 European Geoparks Week programmes involved a variety of activities which, by highlighting the links between the geology,

landscape, natural heritage, and cultural heritage informed local communities and the wider public about the aims and holistic nature of the Geopark concept.

During EGN Week 2024, 93 European Geoparks organised 1,060 activities attracting 209,750 visitors, and 77 online activities with 92,696 participants. Nowadays on-line promotion of the Geoparks on the web and social media plays an increasingly important role. In addition, 560 press releases, 139,639 programme flyers and 10,390 printed articles were published.

Guided tours provided an opportunity to showcase landscapes and geology along established way-marked trails, also to introduce new trails.



CUILCAGH LAKELANDS UGGP, UK-IRELAND



DE HONDSRUG UGGP, THE NETHERLANDS



GREVENA-KOZANI UGGP, GREECE



HARZ . BRAUNSCHWEIGER LAND . OSTFALEN UGGP, GERMANY



DJERDAP UGGP, SERBIA



GEA NORVEGICA UGGP, NOWAY



HOLY CROSS MOUNTAINS UGGP, POLAND



HAUTE-PROVENCE UGGP, FRANCE



IDRIJA UGGP, SLOVENIA



SIERRAS SUBBETICAS UGGP, SPAIN



ESTRELA UGGP, PORTUGAL



FAMENNE-ARDENNE UGGP, BELGIUM

Apuan Alps UGGp, together with the Italian Alpine Club Section of Massa, organised the Health Comes by Walking event. An initiative conceived by the Italian League for the Fight against Cancer. In Lauhanvuori-Hämeen kangas UGGp participants explored the bird life and features of the Alkkianvuori Health Forest. Bakony-Balaton UGGp provided a guided geotour on International Volcano Day to explore the rich volcanic heritage in the Geopark's Tihany Peninsula. The Taste of Geodiversity Walk, Geotrekking: the Lerone Valley and the Alta Via Trail in Blossom traditional spring walk, introduced participants to the variety of landscapes in the Beigua UGGp. Bohemian Paradise UGGp offered geoexcursions to an inactive quarry site associated with precious stones and the Příhrázské Sandstone Rock Town. Highlights in the Buzău Land UGGp included guided tours led by the Geopark team to the Mud Volcanoes, Rock-Hewn Dwellings and Salt domes. In Cabo Ortegal UGGp the two activities with the greatest success included exploring an inland and a coastal GeoRoute. Causses du Quercy UGGp invited participants to a new kind of discovery trail to immerse themselves in the nocturnal

landscape. Exploring their beaches and coastlines were parts of the UGGps EGN Week activities in Gea Norvegica, GeoMôn and the North West Highlands. The mountain biking wine tasting tour and the school children's trip on their bicycles to the Kula Divlit Volcanic Park geosite were significant events in the Chablais and Kula – Salihli UGGps. Events in Maestrazgo UGGp included fieldtrips and sports activities. Maiella UGGp introduced the «Nuovo Cammino sulla Linea Gustav» trail that retraces the route of the «Gustav Line» (German defensive system created at the end of 1943) and organised a rock workshop for children within the initiative «Art Bike & Run + Wine». The Geology and Climbing Day, organised by two geopartners in the Massif des Bauges UGGp was shared with the delegation from the M'Goun Geopark, Morocco. Trollfjell UGGp, in collaboration with the Norwegian Trekking Association, offered a free kayak course for local youths and invited the locals on a guided tour along the historical Vistnes-trail. Haute-Provence UGGp organised the imaginative "through time visit" to the Middle Ages in the small village of Vaumeilh, the last glacial event, and even further back to

the Jurassic Ocean. The Land of Extinct Volcanoes UGGp combined a geological tour, with a lecture on geological history, trees and a concert. The "Walking lecture" to the sub-Cambrian peneplain, at Nordkroken was a significant component in EGN Week in Platåbergens UGGp. Fieldtrips for schoolchildren and undergraduates were provided by Rokua and Lavreotiki UGGps respectively. Villuercas-Ibores-Jara UGGp's ambitious programme included 14 hiking routes

with different itineraries to different sites. Impact Crater Lake – Lappajärvi UGGp organised a one-day guided tour to the Geopark's geosites. European Geoparks Week provides geoparks with an opportunity to engage across different age groups with children, families, and schools. In Idrija UGGp the most successful event, the "Meeting of three generations in Mejca", co-organised with the Idrija retirement home included children from kinder garden Idrija. In



KATLA UGGP, ICELAND



KULA-SALIHLI UGGP, TURKIYE



LAUHANVUORI-HAMEENKANGAS UGGP, FINLAND



LUBERON UGGP, FRANCE



KEFALONIA-ITHACA UGGP, GREECE



LAS LORAS UGGP, SPAIN



LAVREOTIKI UGGP, GREECE



MADONIE UGGP, ITALY



VULKANEIFEL UGGP, GERMANY



MELLERDALL UGGP, LUXEMBOURG



KARAWANKEN-KARAVANKE UGGP, AUSTRIA-SLOVENIA



LAND OF EXTINGUISHED VOLCANOES UGGP, POLAND



MOLINA ALTO TAJO UGGP, SPAIN



MAIELLA UGGP, ITALY

the Meteora – Pyli Geopark the older generation passed on to the children the culture, traditions, spirit of cooperation, social interaction, morals, and values of the Geopark area through play. Bergstrasse-Odenwald UGGp organised a family day at its sea of rocks geosite. Cuilcagh Lakelands UGGp held a Family Geoparks fun day in Killykeen Forest Park with lots of geological related activities for all ages. In Kefalonia-Ithaca UGGp children were helped to understand the significance of fossils and how fossils can connect different geoparks around

the world. Discovery with family activities, guided walks, and fun challenges of the Aptian marls of La Tuilière, a geosite in the Luberon UGGp, explored the occurrence of ancient marine fossils and present-day biodiversity with detailed explanations from specialists. Ries UGGp Invited families to engage in games and activities that introduce the fascinating geology of the Ries Crater. The Mëller-dall UGGp, in collaboration with stakeholders, set up stands in a family rally about nature-related themes, and closed EGN Week with a picnic. Events

in North Pennines UGGp included activities for families, guided walks, talks, arts workshops and volunteering tasks. All of these were themed around local nature, including peatlands, geology, animals, trees and meadows. In Rocca di Cerere UGGp the Kite Festival, held on multiple dates across various geopark towns, was a significant event. It provided a wonderful opportunity for children from diverse backgrounds to come together, play, and enjoy the experience of flying beautiful and colourful kites. The “Kids Day” proved to be a successful event at Psiloritis UGGp’s Information Centre. Catalunya Central UGGp organised exciting workshops, literary gatherings, storytelling sessions at public libraries, and numerous field excursions for children and families. The inauguration of a new geosite about the Ice Age and a varied programme with lots of hands-on activities for the whole family was

included in the activities in Harz. Braunschweiger Land. Ostfalen UGGp. In Holy Cross Mountains UGGp the Geology Enthusiasts Club organised geoeeducation workshops for families with children and the Geopark, in cooperation with local authorities. The European Centre for Geological Education, organised a Geotourism event for local schools. Papuk UGGp highlights the successful visit of the Vis Archipelago UGGp, during which children from the island of Vis performed a play for their peers at a local school. In Vis Archipelago UGGp children learned how to produce quality photos of their Geopark and kindergarten children enjoyed a one day field excursion. Shetland UGGp successfully launched the Shetland Geopark Junior Ranger Programme with its first participating school. Sitia UGGp shared World Environment Day 2024 with the teachers and students of the ‘B class of the 4th



MONTS DARDÈCHE UGGP, FRANCE



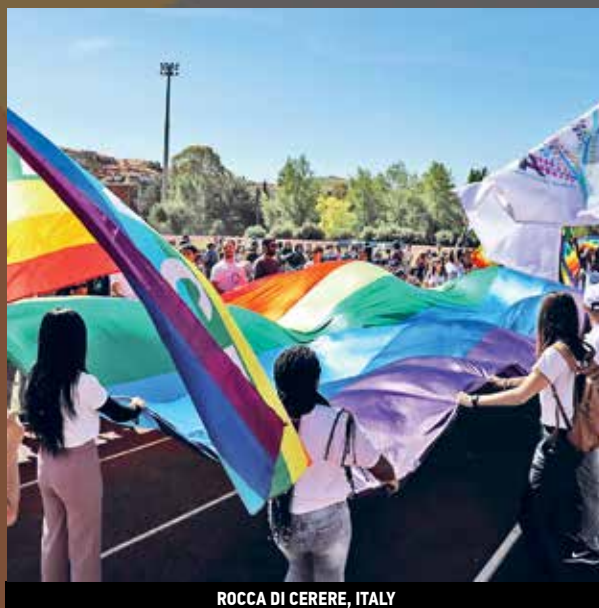
SITIA UGGP, GREECE



NOVOHRAD-NOGRÁD UGGP, HUNGARY-SLOVAKIA



ORE OF THE ALPS UGGP, AUSTRIA



ROCCA DI CERERE, ITALY



NATURTEJO UGGP, PORTUGAL



ORIGENES UGGP, SPAIN



PAPUK UGGP, CROATIA



POLLINO UGGP, ITALY



PSILORITIS UGGP, GREECE



NORTH PENNINES UGGP, UK



NORTH WEST HIGHLANDS UGGP, UK



MASSIF DES BAUGES UGGP, FRANCE



MAESTRAZGO UGGP, SPAIN

primary schools of Sitia. In Nature Day at the Joutseno school in Saimaa UGGP sixth graders got to know nature, with tasks including water exploration and identifying animal tracks. Most of the activities in Djerdap UGGP focused on educating the youngest students, socializing and making contact with children from preschool institutions and school-age children with educators and volunteers from the Romanian Hateg Country UGGP. The inauguration of the new Víkurfjara beach project signs at Icewear in Vík was a joint research project between the Katla UGGP and the elementary school in Vík. The inclusion of secondary school students from the Geopark in the GeoCommunity of Schools through an exchange trip with the neighbouring El Hierro UGGP was a special event in Lanzarote and Chinijo Islands UGGP. In Las Loras UGGP first «Cretaceous

Meetings» 160 children in the 5th and 6th grades from the Geopark's schools presented their work on the Geopark to their classmates. Novohrad-Nógrád UGGP organised an educational competition between Slovak and Hungarian schoolchildren at the Baglyaskő geosite and Geopark Visitor Centre.

European Geoparks Week provided an opportunity for a variety of group activities including lectures, seminars workshops, festivals and engaging with partners.

The GeoTalks initiative combining science and art was a special event in the Basque Coast UGGP. The Famenne Ardenne UGGP partnered with the municipality of Durbuy to host the 9th International Symposium on Monumental Stone Sculpture. Sculptors, engravers, stonemasons and other craftsmen demonstrated their know-how in Beaujolais UGGP's

Glaz Quarry Festival. The Ephorate of Antiquities of Grevena teamed up with Grevena-Kozani UGGP to show the public the inseparable bonds between geology and culture. In Naturtejo UGGP the XXIV Feira Raiana event in Idanha-a-Nova, brings national and international participants together to celebrate sustainability, culture, and diversity in Naturtejo UGGP. The late-night event with literature and Bronze Age cuisine at the site where the Sun Chariot was discovered was a special event in Odsherred UGGP. The Salpausselkä UGGP organised a seminar celebrating the region's intangible

cultural heritage. This included the tradition of sahti making, one of the oldest continually brewed beer styles in the world. To celebrate the replacement of Norway's pagan laws with the Christian law system in 1024 in the Sunnhordland territory Sunnhordland UGGP participated in two events "How to value Nature?" and "I am building myself a boat". In the four events in the Places of Time Festival an author, an artist or performer or a journalist of national standing provided members of the public with a guided tour of sites along the Tuscan Mining Park UGGP trail. The 'SuperPark. Autor's Vision' in Adamello



ODSHERRED UGGP, DENMARK



PLATABERGENS UGGP, SWEDEN



SALPAUSSELKA UGGP, FINLAND



SCHELDE DELTA UGGP, BELGIUM-THE NETHERLANDS



SKETLAND UGGP, UK



SIERRA MORENA DE SEVILLA UGGP, SPAIN

Brenta UGGP was a great success with tourists and residents. Six Italian regions participated in the Cilento and Vallo di Diano UGGP's Mediterranean Diet Exhibition. The Reykjanes UGGP shared news concerning the publication of the 2nd edition of the Reykjanes Book. Thanks to the UK Government funding scheme called UK Shared Prosperity funding this year's festival in the English Riviera UGGP enabled the development of the trial of the new

Geopark Discovery Experiences. Fforest Fawr UGGP introduced participants in the world-renowned Hay Literature Festival to the geological evolution of its landscape. The preview of a film shot in Gorafe, one of the most unique municipalities of the Granada UGGP, highlights the Cave Houses, one of the most relevant features in the territory's heritage. Monts d'Ardèche UGGP explored how humans crossed, developed and used the moun-



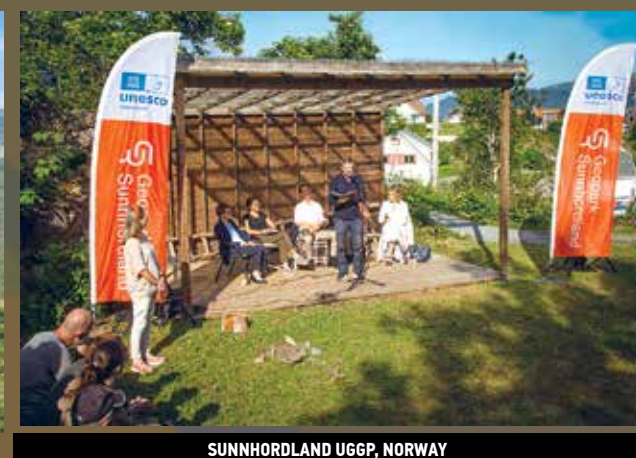
TERRAS DE CAVALEIROS UGGP, PORTUGAL



SAIMAA UGGP, FINLAND



STYRIAN EISENWURZEN UGGP, AUSTRIA



SUNNHORDLAND UGGP, NORWAY



SWABIAN ALB UGGP, GERMANY



TERRA.VITA UGGP, GERMANY

tain's water and slopes. The «Drava-Drava Run»: crossborder half marathon, PeaceWalk and educational workshops were significant events in the Karawanken/Karavanke UGGP. Sobrarbe-Pirineos UGGP celebrated the inclusion of transhumance, the practice of moving livestock from one grazing ground to another in a seasonal cycle, in UNESCO's intangible heritage list. "Recycling Day" with games and educational films involving pre-school students from schools in the territory was one of 15 events organised by Terras de Cavaleiros UGGP. In Troodos UGGP, viewing the Perseids meteor shower from the Geopark Visitor Centre, located in the historic Asbestos Abandoned Mine area was a very special

event. In Muskauer Faltenbogen/Luk Mužakowa UGGP's Geo'nConcert participants could listen to live music, take a ride on the narrow-gauge railway and visit exhibitions dedicated to the Geopark. The Bükkábrány Ancient Tree Festival, a local event celebrating the well-preserved Miocene swamp cypresses (Taxodium) in the Bükk Region UGGP, also featured performances by local folk dance groups and folk song circles, showcasing the region's cultural heritage. The guest guides in Vulkaneifel UGGP attended three training sessions on the wild orchids of the Vulkaneifel. The Geopark has 32 rare species of wild orchids. El Hierro UGGP organised a course for Official Guides and Active Tourism Com-



MOURNE GULLION STRANGFORD UGGP, UNITED KINGDOM



VIS ARCHIPELAGO UGGP, CROATIA



VIKOS-AOOS UGGP, GREECE



TUSCAN MINING UGGP, ITALY



TROLLFJELL UGGP, NORWAY



TROODOS UGGP, CYPRUS



IMPACT CRATER LAKE - LAPPAJARVI UGGP, FINLAND



MUSKAUER FALTENBOGENŁUK MUŻAKOWA



HAUTE-PROVENCE UGGP, FRANCE

panies «Natural and cultural resources linked to the volcanic phenomenon». The workshop on the topic of 'How do I integrate specific SDGs into my daily work was a significant event in Swabian Alb UGGp. «Bat voting and use of equipment for recording and analysing votes» was the subject of a workshop in Biokovo-Imotski Lakes UGGp concerned with the «Still Water Revival - restoration and preservation of small freshwater ecosystems of karst mountains in the Mediterranean». In Estrela UGGp the Conference for the «Biennium for Climate Action in Portuguese Geoparks», is a joint project aimed at implementing new approaches, strategies and tools to adapt and mitigate climate change in these territories. The "Shepherds Festival", in partnership with the Manteigas municipality, promoted shepherding and the territories tangible and intangible heritage. Burren and Cliffs of Moher UGGp focused on a single weekend event, The Geopark Academy, a full day of multi-disciplinary presentations on recent research from national institutions and universities. The University of Almería in partnership with Cabo de Gata-Níjar UGGp hosted two days of activities inside their new building. In TERRA.vita UGGp the EarthAge Centre of Borgholzhausen, shared the celebration of its 20th anniversary with the 20th anniversary celebration

of the Global Geoparks Network. Sierras Subbéticas UGGp highlighted the catalogue of educational resources and activities developed by the Geopark. Twelve activities in Sierra Morena de Sevilla UGGp focused on three subjects: the dissemination of the geological heritage of the Sierra Morena de Sevilla Natural Park across all educational levels; teacher training in geo-education and the promotion of scientific activities by universities within the territory. In Molina Alto Tajo UGGp the Day of Fraternisation between the primary education centres focused on the geotourism heritage of the municipality of Saelices de la Sal. All nine islands of the Azores UGGp were involved in creating the Campaign Pedraços de Mar e Ambiente which highlighted UNESCO Global Geoparks through science communication activities targeted at schools and the general public. In Mourne Gullion Strangford UGGp events focused on Community Conservation, Learning and Education, Sustainable Tourism and the UN's Sustainable Development Goals. De Hondsrug UGGp organised two successful Geopark Week activities in Noorderlaren, including a lecture and field study. The attention by the regional television was a special response to the EGN Week activities in Schelde Delta UGGp. In Origens UGGp the EGN Week event termed Earth Memory which

was dedicated to Geology included presentations and a story for children to discover prehistory with the lady of the mountains. The official opening of the ore trail around the miners' home in Mühlbach am Hochkönig, which took place on 8 June 2024 was the highlight of EGN Week in Ore of the Alps UGGp. The main activity in Vikos-Aoos UGGp involved a seminar with invited speakers who are expert geologists specializing in tectonics, minerals, and rocks, delivering talks related to the Geopark.

Styrian Eisenwurzen UGGp hosted a meeting about landslides and rockfalls.

The range and response to the activities delivered during EGN Week 2024 is testimony to the success and inventiveness of geoparks in engaging with visitors, families and the local communities. We look forward to building on these achievements in EGN Week 2025.

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Apuan Alps UNESCO Global Geopark, Italy

The key role of voluntary associations in making communities resilient: an example from the Apuan Alps Geopark



Sunrise through the hole in Mt. Forato .

(photo by Raffaello Barsanti)



The traditional San Giovanni's bonfires is renewed annually during the Summer Solstice Festival.

(photo by Andrea Guidi)



Musical event during the Summer Solstice Festival 2024.

(photo by Camilla Maria Santini)

On 19 June 1996, the Versilia Valley (southeastern Apuan Alps) was struck by a debris flood with devastating effects on the hydrogeological structure, public and private infrastructures, and above all resulted in the death of 14 people, mainly from the village of Cardoso. The 'Cardoso Flood' is how the event as one of the first examples of the impact of the ongoing climate change in Italy is recorded in the media.

After the disaster, the primary policy involving the processes of reconstruction and securing the area was based on the concept of prevention. The 'Versilia Model' was a set of actions that has been referred to in Italy as an example of best practices in civil protection. The Geopark participated in the scientific studies investigating the actual impact of specific factors (geological, geomorphological and land use) on the triggering of debris flows during the exceptional rainstorm of 19 June 1996.

However, it was also necessary to recreate the socio-economic fabric severely affected by the flood event. The strongly rooted communities in and around Cardoso remained in the territory of the disaster, where they had lived for centuries and where they slowly rebuilt their connective structures following the flood.

Within this framework, the voluntary association named "I Raggi di Belen" ("The Belen's Rays" - Belen is an ancient Celto-Ligurian divinity of light) was initiated by the communities of the villages of Cardoso, Pruno and Volegno to enhance and protect the natural heritage of the valley destroyed by the 1996 flood.

Since then, the association has been organising courses on environmental education and cultural initiatives related to the Apuan area overlooked by Mt. Forato (the "Holed" Mountain), one of the most iconic geosites of the Apuan Alps UGGp. Of particular note is the 'Summer Solstice' Festival held every year in June involving ten days of conferences, workshops, concerts, and excursions. On those days, it is possible to admire the sunrise through the large hole in Mt. Forato.

In 2024, the 25th anniversary of the Festival was an opportunity to take stock of the path from darkness (the flood disaster) to a brighter future. The goal seems to have been successfully achieved: local communities have become resilient and prevented the seemingly inevitable depopulation and abandonment of the area.

The Geopark, from its beginning, has participated in and financially supported the initiatives of "I Raggi di Belen" association as a bottom-up organisation, sharing the same aims. Contributing to the knowledge of past events and the formation of environmental awareness, keeping cultural traditions alive, and increasing pride in living in a mountain area such as the Apuan Alps UGGp, are all necessary actions to build more resilient communities to face any potential geological hazards.

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Arouca UNESCO Global Geopark, Portugal

On the Route of Man: A Strategy for Promoting Cultural Heritage in Arouca Geopark



Interactive mobile in the Casa das Pedras Parideira - interpretative centre.

A visitor using the Arouca Geopark's Man's Route Guide.



Who were the humans that inhabited the Arouca Geopark and where did they roam? Who was Mafalda Sanches and what impact did her arrival in Arouca have on the development of the region? What drew the English and Germans to this territory during World War II? Where did the Romans travel, and what did they leave behind? What marks did liberalism leave on our Geopark? What importance did our ancestors attribute to the Pedras Parideiras (Birthing Stones)?

These and other questions find answers in Iter Hominis, the latest project from the Arouca UNESCO Global Geopark.

Iter Hominis - On the Route of Man in the Arouca Geopark is the strategy adopted by AGA - Arouca Geopark Association for the preservation and enhancement of cultural heritage and the history of human occupation in the territory.

On the Route of Man in the Arouca Geopark is a project composed of a set of tools that provide a comprehensive approach to the history of humanity, from prehistory to contemporary times, in our territory, targeting different audiences.

Two documentaries were produced, one aimed at children and the other at the general public. The first animated film uses accessible language to spark interest in the history and local culture among younger generations. The second provides a broad view of the various phases of human occupation over the centuries.

Iter Hominis also includes a cultural-tourist guide, designed to allow visitors to explore the Arouca Geopark freely and autonomously, discovering the essential aspects of 32 cultural heritage sites.

In the guide, the territory is divided into five geographic regions, with suggested routes to be traveled by car or on foot in each region. Each site is presented in detail, with the historical context and curiosities about the location, surroundings, and/or intangible cultural heritage.

In addition to the documentaries and guide, the project includes an interactive mobile in the Casa das Pedras Parideiras - Interpretative Centre and the installation of informational panels on site.

These panels, strategically placed at the Iter Hominis sites, feature an illustration of the location and bilingual information (Portuguese and English).

As part of this project, an archaeological intervention was carried out at the Casal Romano of Malafaia (Várzea), with a view to its musealization. The work included cleaning the archaeological site, completing the excavations that had been open since 2008, and enhancing the set of structures.

Dolmens and mammoas, rock carvings, Roman gold mining sites, pillories, a memorial, and an epigraph are just some of the places that can be explored and interpreted with the help of this route.

Through this project, the Arouca Geopark preserves its historical legacy, raises awareness among future generations to value and protect the cultural richness of the region, and enriches the visitor experience in the territory.

The history of humanity continues to be written daily on a landscape shaped by nature.

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Informational panels on Casal Romano da Malafaia_Roman Site.



Azores UNESCO Global Geopark, Portugal

A geological site identified by the community within the Azores Geopark



Ponta da Ajuda, the geological site identified by the community of Fenais da Ajuda

(©João Câmara).

The Azores UNESCO Global Geopark (UGGp) is an archipelagic Geopark located in the North Atlantic. It consists of nine inhabited islands and several islets, all of volcanic origin. Our Geopark has protected and promoted through the years the geodiversity and geological heritage of the territory, cultivating the sense of belonging within the communities. We were surprised by our community when the inhabitants from the small village of Fenais da Ajuda in Ribeira Grande Municipality, São Miguel Island, called our team to check a peculiar outcrop that they intended to value and promote to contribute to social and economic development of their parish. The field work, performed by the Azores Geopark team, identified a new geological site that provided interpretation for part of the geological history of the island in a sequence of pyroclastic deposits and lava flows. This striking and imposing lava flow with columnar jointing, the biggest of its kind in São Miguel Island, extends for 500 m along the northern shore of the island. This peculiar geological structure is clearly visible from the sea, displaying caves and arches produced by erosion of the columns. At the top of the columns, hexagonal polygons can be observed, reminiscent of the well-known Giants' Causeway in Northern Ireland. The site provides unique scenic views of important scientific,

educational and touristic value. When we first visited the site a footbridge over the outcrop was under construction by the parish council with the support of our team. A viewpoint was created for the columnar jointing and the ocean, a geotrail around the village, and a swing that allows a view of sunrise and sunset. The City Council of Ribeira Grande has classified the area as a Protected Area of local significance, and the valorization of the site stimulated the economic development of the parish with the creation of new local touristic investments.

In our opinion, the identification, valorization and promotion of this new important geological site in the Azores UGGp is a perfect example of the bottom-up approach we all seek. The community is aware of the importance of geological values within their territory and understands that these values can create an economic lever with geotourism at its essence. The engagement of the community provided our Geopark with a new geosite that is now being integrated in the Azores Geopark inventory through the intense revision and reassessment of Azorean geosites.

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Columnar jointing of Ponta da Ajuda

(©João Câmara).



An example of the interpretive panels created for the municipal trail of Fenais da Vera Cruz to assist with geointerpretation.



Basque Coast UNESCO Global Geopark, Spain

The 7th National Congress on Ecotourism has been successfully held in the Basque Coast Geopark



Family photo of the organisers and participants in the congress

The Basque Coast Geopark hosted the seventh edition of the National Ecotourism Congress, which was held in October in the town of Zumaia, bringing together more than 200 professionals. Together they explored strategies, shared knowledge and debated the present and future of ecotourism in Spain.

Under the motto «Keys to success in ecotourism destinations and experiences», this event served to identify the keys to success in the management of ecotourism destinations and in the design and promotion of authentic experiences. Also to address the application of the basis of this product that positions it as one of the most beneficial for the enhancement and conservation of the natural and cultural heritage of destinations in natural protected areas. The technical sessions consisted of presentations, round table discussions and spaces to share experiences of destinations and companies, which have addressed the following topics:

- The evolution, management and promotion of ecotourism in Spain, Euskadi, the 'Green Spain' and the Basque Coast Geopark.
- Design of ecotourism experiences and how to effectively meet demand. Results of initiatives and projects both developed and underway.
- Geotourism.
- The management of the reception capacity and sustainable mobility in ecotourism destinations.
- The importance of interpretation in ecotourism. Tools and keys for effective interpretation.

These aspects were also discussed in the field, in the guided visits to the ecotourism destination hosting the

congress, the Basque Coast Geopark, and the field trip to Vitoria-Gasteiz, the administrative capital of the Basque Country, European Green Capital 2012.

In its objective of promoting the commercialization of Ecotourism in Spain, the Congress has also hosted a recruitment event for the selection of congressmen who have met with specialised operators who have previously visited various ecotourism destinations in the Basque Country, in particular the Basque Coast Geopark.

In addition to being a platform for the exchange of ideas and the promotion of ecotourism, the 7th National Ecotourism Congress has once again reaffirmed its commitment to the conservation of biodiversity. Thus, a part of the amount of each registration fee has been allocated to the research project for the conservation of the long-legged frog (*Rana iberica*) of the Basque Coast Geopark, an endemic species of the Iberian Peninsula classified as "vulnerable".

The National Congress on Ecotourism is an initiative promoted by the Asociación Ecoturismo en España, an organisation that manages the Ecotourism product club in Spain. The host organisers have been the Basque Coast Geopark, Basquetour (Euskadi Tourism Agency) and the Provincial Council of Gipuzkoa. The Secretary of State for Tourism (MINTUR) and the Autonomous Organisation of National Parks (MITECORD) of Spain and the Basque Government also participate as organisers of the Congress.

Irene Elortza Gereño - Basque Coast Geopark
Communications & Marketing komunikazioa@geoparkea.com

Business to business meeting brought together participants in the congress with international operators



The keynote presentation was given by Asier Hilario, Scientific Director of the Basque Coast Geopark

UNESCO Global Geopark Bergstrasse-Odenwald, Germany

Bergstrasse Odenwald Geopark casts an eye on what is below our radar and our feet – bottom-up experiences in more than one sense of the word



Young people planted a number of domestic wild plants in the inner circle of a hairpin bend.

UNESCO Global Geopark Bergstrasse-Odenwald has a very strong tradition of working together with over 100 municipalities in its territory and especially with groups and networks that originated within the municipalities. The topics are far reaching and represent the Geopark's holistic approach ranging from a focus on geological themes, nature and biodiversity to aspects of sustainability, to regional history, culture and the broader environment. Dealing with these issues requires considerable input and exchange across all levels. The large majority of activities supported and pursued by our Geopark have their roots in ideas and activities stimulated by local or regional communities who then also convince their respective municipalities of their value. As a Geopark acting across a territory of approximately 3,800 km², we certainly see a strong concept and tradition for networking and bottom-up approaches. From the many activities and projects, there are two that stand out as examples in 2024.

The Geopark's "Route of Bunter Sandstone Quarries" was officially initiated and opened in 2016. It tells the story of several regional sandstone quarries in the area that were in use from the early 19th century and the beginning of the industrial revolution. A shortage of wood and stricter building regulations meant that more and more stone was needed for building. The stone industry flourished and new quarries were opened everywhere. Anyone who travels along the 3.5 km on the Sandstone Quarry Route today will learn more about the hard life of the stonemasons of that time. Following the closure of the quarries in the second half of the 20th century, biotopes were created providing shelter for rare animals. Especially for amphibians



Participants explore the Route of Bunter Sandstone Quarries.

such as the yellow-bellied toad, which needs temporary puddles and pools, quarries are ideal and often the only habitats.

The route, in need of renovation and requiring some updates, was re-opened in June 2024. The initiative was taken by the municipalities of Eberbach and Schönbrunn and especially from a group led by a former quarry owner as well as individuals including geoscientists who had in mind to keep these windows into earth history alive and also the memory of the cultural history of the region.

Another Geopark project that shows how initiatives from a local, non-governmental level have impacted on the region is the continuous work of a group of young people engaging with the local action group Naturschutzbund (NABU, Nature Conservation Association) in the municipality of Seeheim-Jugenheim. Together they planted a number of domestic wild plants in the inner circle of a hairpin bend that now serves as their habitat. This all happened in their free time, outside school hours, and over a period of about six years. The project will continue to require maintenance work in the future to prevent fast-growing species from becoming dominant. A Geopark information panel informs the public about this exemplary and successful approach.

Both initiatives also show that they open up the understanding for topics that literally lie below our feet or even below the surface and, through their activities in collaboration with the Geopark, are brought to the attention of a broader audience.

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Beigua UNESCO Global Geopark, Italy

Sustainable tourism is a team effort in Beigua Geopark

The Beigua UNESCO Global Geopark has recently adopted the European Charter for Sustainable Tourism in Protected Areas (ECST) to encourage participation in the management of the territory and to share tourism strategies with operators and local authorities. The Charter is an instrument developed by the Europarc Federation based on 10 key actions, relating to the protection of natural and cultural heritage, conservation through tourism, reduction of environmental impact, and promotion of the territory.

The Beigua project involved 44 stakeholders (local authorities, accommodation providers, sports and cultural associations, farms, museums) who, for almost two years, took part in working groups distributed between the coast and the inland area. A critical analysis of the reality of tourism in the Beigua Geopark revealed opportunities to enhance the territory, but also critical points and weaknesses that threaten its growth.

We have therefore started with what was missing, with what was there but which we had not yet communicated or promoted. We also made a great effort in combining ideas with the resources, means and skills of each stakeholder.

The comparison resulted in a unified strategy, which aims to:

- improve the visibility of the Beigua Geopark and coordinate communication and promotion;



European Charter for Sustainable Tourism awarded to Beigua Geopark

- enhance and preserve the territory, which is like a mosaic made up of many tiles: nature, paths, villages, traditions, local food products and handicrafts.
- increase the awareness of tourism operators and local authorities of the value of Beigua and improve the quality of understanding.

Visibility, value, and territory are the key themes of the 90 initiatives that make up the 2024-2028 Action Plan, which was approved by all stakeholders and verified in the field by Europarc validators, and includes new proposals for the enhancement of the local heritage and its touristic value.

Out of the 21 actions proposed by the Geopark, a large part concerns the promotion of the geological heritage, with the creation of new promotional material, the improvement of hiking trails, educational activities, and collaboration with the University of Genoa in a project to enhance our geosites.

The Geopark's commitment for the next five years will be to focus not only on monitoring the plan, but also on strengthening the network of cooperation, both locally and with other Italian geoparks that have already signed the European Charter for Sustainable Tourism.

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Participants in a working group of the Beigua project.



Validation mission in the field to assess the Geopark's visibility and enhancement of the local heritage..

Burren and Cliffs of Moher UNESCO Global Geopark, Ireland.

Achieving from the bottom up: Working with Local Community Groups on new Geopark signage in the Burren and Cliffs of Moher Geopark



Chelmos Vouraikos UNESCO Global Geopark, Greece Protecting Biodiversity and Geodiversity: A Case Study from Chelmos Vouraikos Geopark Contribution to Sustainable Development Goal 15: Life on land



New Town and Village Signage.

Having informational signage across the Geopark territory is an important aspect of being a UNESCO Global Geopark. These signs provide information for visitors and locals, highlight the UNESCO designation, and are scrutinised as part of the revalidation process.

The signs contain information about the geological history, landscape, intangible cultural history, archaeology, biodiversity, or other topics depending on the location within the Geopark. In order to function well the information must be accessible and easy to read for as many people as possible. In addition, it might be required to have that information in more than one language. When images are added, the space available for information placed on the sign can be quite restricted. For these reasons the decision of what information to put on a sign and what to leave out is not an easy one.

The Burren and Cliffs of Moher UNESCO Global Geopark reviewed our signage following our last revalidation process and decided to add new Geopark Site signs, update pre-existing signs, including Geopark Heritage Trail signs and develop new town and village signage on roads entering



Example of new Geopark Site signage.

and leaving the towns, where permitted by the local authority.

Local community groups across the Geopark were invited to participate in the process for the new town and village signage. Following an initial design phase and consultation with roads engineers in Clare County Council, the community groups were asked to provide a phrase and logo that they felt best described their town as well as a list of what facilities they wanted to promote in their town. Community groups from Ballyvaughan, Lisdoonvarna, Corofin and Kilfenora worked closely with the Geopark manager, and the resulting signs were erected in August 2023.

Local community groups were invited to participate in content selection for the Geopark Site and Heritage Trail signs. The Kilfenora community group and the Corofin Tidy Towns group as well as the Corofin historical society provided valuable information regarding the cultural history, and also images of their area taken by members of the local community. They provided some translations of text content into Irish. All signage produced using government funding in Ireland must be in both Irish and English. Examples of one of the Geopark Site signs and Heritage Trail signs can be seen in Figures 2 and 3.

The information provided by local groups is what they feel is important about their location and history, and by using that information in addition to the geological information supplied by the Geopark geologist we strengthened our links to the local community groups and our signage was successfully achieved from the bottom up. Funding for the signs was provided by the national government Outdoor Recreational Infrastructure Scheme with support from Clare County Council.

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In the heart of Chelmos Vouraikos UNESCO Global Geopark lies a hidden gem - the local endemic *Silene conglomeratica*, a rare chasmophyte clinging to life on conglomerate rocks. With its restricted geographical distribution and small population, this species is classified as «Critically Endangered.» However, dedicated conservation efforts within the UNESCO Global Geopark have sparked hope for its survival. The significance of this endeavor extends beyond mere conservation. The area where *Silene conglomeratica* thrives is a designated geosite within the respective UNESCO Global Geopark, showcasing the intricate relationship between geodiversity and biodiversity. The conglomerates of the Megalo Spileo area, with their unique geological, natural, and cultural value, provide a sanctuary for this rare species.

The geological features of the rocks play a pivotal role in the plant's survival. Steep slopes offer protection from harsh winds and direct sunlight, creating microhabitats conducive to growth. The presence of cracks and sandstone lenses further enhances the habitat, highlighting the intricate interplay between flora and geological substrate. Recognising the importance of preserving this unique species and its habitat, a Micro-Reserve has been established, offering a safe haven for *Silene conglomeratica*. But conservation doesn't stop there. A groundbreaking research project aims to enrich the population by strategically planting individuals in new locations with suitable habitats. This innovative approach not only protects the plant but also strengthens its global population. In addition, the constant and detailed monitoring of abiotic parameters (temperature, humidity, etc.) has started to help us define the particular microenvironment of its biotope, and thus to identify possible threats related to climate change that will allow us to act in time and plan future conservation actions. Indeed, the protection efforts for *Silene conglomeratica* serve as a poignant reminder of the inseparable link between biodiversity and geodiversity. By safeguarding both, we not only preserve the natural heritage of our planet but also ensure the resilience of ecosystems for generations to come.

As we celebrate the 20th Anniversary of the Global Geoparks Network, let us reflect on the importance of such initiatives in advancing sustainable development goals. By translating theory into action, UNESCO Global Geoparks exemplify how local conservation efforts can have a global impact, paving the way for a more sustainable future.



In conclusion, the case of *Silene conglomeratica* stands as a testament to the power of collaboration between scientists, conservationists, and local communities in safeguarding our planet's rich biodiversity and geodiversity. Through continued dedication and innovation, we can strive towards a harmonious coexistence between humanity and nature within UNESCO Global Geoparks worldwide.

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Installing a data logger in between *Silene conglomeratica* plants at the vertical cliffs of Mega Spilaio geosite.

Nature and UNESCO Global Geopark Styrian Eisenwurzen, Austria

Danube GeoTour Plus: Transforming Geopark Experiences



First Transnational Meeting in Hateg, Romania, in June 2024;
©Photo: Urosh Grabner.



The Interreg Danube GeoTour Plus project, led by UNESCO Global Geopark Styrian Eisenwurzen, is paving the way for sustainable tourism and fostering community engagement across nine long-lasting Geopark cooperations in the Danube region. By emphasising inclusion, the development of innovative tourism products, and balanced visitor management, the project directly supports the UN Sustainable Development Goals and strengthens the Global Geoparks Network.

Key Achievements

Engaging Vulnerable Groups

The finalised Joint Strategy, led by Hateg Country UNESCO Global Geopark, for Engaging Vulnerable Groups ensures the inclusion of economically disadvantaged individuals, ethnic minorities, rural women, and youth at risk of brain drain. A workshop in Hateg, Romania, showcased practical examples of cultural preservation and geopark activities, highlighting contributions from youth volunteers and local women's networks. Inspired by this approach, the nine participating Geoparks are implementing concrete actions based on the joint strategy.

Led by UNESCO Global Geopark Idrija, our Geopark Experiences combine elements of local communities, nature, prehistory, global changes, and archaeology, enhanced by innovative visitor engagement tools. From long-distance trails and escape rooms to interactive

learning methods, these initiatives bring abstract topics like palaeo history to life.

Planned Geopark Experiences include dinosaur exhibitions, learning traditional fishing methods from ancient Neolithic times, and many more. We developed a joint criteria model, for participative and sustainable Geo products, to engage vulnerable groups and create a long-lasting impact. The joint framework emphasises sustainability, community involvement, and innovation.

Visitor Management Solutions

Guided by the Technical University of Košice, we test new digital tools to track and manage visitor flows to reduce congestion and protect high-traffic areas. Surveys were conducted across nine Geoparks to balance the interests of visitors, locals, and stakeholders to improve our overall geopark management.

Collaboration and Events

The project fosters strong partnerships through shared platforms, weekly online meetings, and in-person gatherings. The Hateg event (June 2024) featured workshops (e.g. Joint Strategy) and site visits, while the Kladovo event (November 2024) focused on action plans, storytelling, promotion, visitor management, and scaling solutions for the Geopark Experiences. Our next steps are:

- Conduct action plans for engaging vulnerable groups and sharing best practices.
- Initiate Geopark Experience pilots to create unique visitor experiences.
- Test digital visitor management solutions across all Geoparks.

Danube GeoTour Plus emphasises inclusivity, innovation, and collaboration, positioning Geoparks as dynamic centres for heritage, tourism, and community development. This project is supported by the Interreg Danube Region Programme co-funded by the European Union.

Stay up to date: <https://interreg-danube.eu/projects/danube-geotour-plus>

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Involvement of Youth in creating Geopark Experience.
©Photo: Martin Gebeshuber.



Causses du Quercy UNESCO Global Geopark, France, Famenne - Ardenne UNESCO Global Geopark, Belgium and Sobrarbe-Pirineos UNESCO Global Geopark, Spain

Three Geoparks shine a spotlight on Megaliths!



The flyer shows the prize winning photos in the 1st Digital Photo Contest Megaliths as Landmarks in our Geoparks..

Our Neolithic ancestors left us a rich megalithic heritage as a testimony to their burial practices. The UNESCO Global Geoparks Causses du Quercy (France), Famenne-Ardenne (Belgium) and Sobrarbe-Pirineos (Spain) wanted to highlight this heritage and share its universal feature. With this aim they organised a photographic competition on the theme of «Megaliths as landmarks in our Geoparks».

Open to non-professional photographers from Spain, France and Belgium, the competition highlighted the rich megalithic heritage and unique landscapes of the three organising Geoparks, and promoted the relationship between culture, landscape and science in these territories. Seventy photographs were submitted. Each Geopark made the first selection of photos relating to its territory. These three selections were combined to select the 3 winning photos:

- The first prize was awarded to Alberto Cortés García from Zaragoza (Spain) for his impressive photo «Losa de la Campa at sunset», which captures the mystical Tella dolmen in the Sobrarbe-Pirineos Geopark in the evening light. The winner will receive a 4-5 day stay for two people in one of the three organising Geoparks, including accommodation, breakfast, dinner and

programmed activities.

- The second prize went to Hervé Dañon from Figeac (France) for his photo «Dolmen du Pech Laglaire face à la Voie Lactée», a spectacular image of the Pech Laglaire dolmen in the Causses du Quercy Geopark under the Milky Way, highlighting the relationship between megalithic history and landscape.
- The third prize went to Christian Hamoneau from Mercuès (France) for his photo «Dolmen du Mas de Coti», a striking image of the dolmen of the same name, also located in the Causses du Quercy Geopark. The 2nd and 3rd prize winners will receive a basket of local produce worth €150.

The winning photos will be published on the websites and social networks of the three Geoparks in order to promote the international significance of the megalithic heritage. The competition was launched as part of the celebration of the European Day of Megalithic Culture and as a joint action of cooperation and exchange between these Geoparks.

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Fforest Fawr UNESCO Global Geopark, Wales UK

Climate Change and Natural Heritage in the FForest Fawr Geopark



Climate change presents growing and multiple impacts to cultural and natural heritage across the UK. Fforest Fawr Geopark, located in the western part of the Bannau Brycheiniog (Brecon Beacons) National Park, is already experiencing compounded climate impacts, creating local poly-crises. Landslips, erosion, and flooding are reshaping the Geopark's landscape.

A major new UNESCO project is underway within the Geopark, aiming to develop and test improved collaborative approaches and data tools to develop cross-cutting solutions to the impacts of climate. The project builds on research from the UK and Canadian Commissions for UNESCO, Sites for Sustainable Development Report. It found that UNESCO sites not only serve as ideal test beds for developing participatory approaches to global challenges, but are also well positioned to support authentic, on-the-ground collaboration.

The geology of the Fforest Fawr area narrates the story of ancient climate change, providing an extremely thematic foundation for addressing today's challenges. To support collaboration, Fforest Fawr Geopark is working alongside two other pilot sites: North Devon Biosphere Reserve and Hadrian's Wall World Heritage Site. Early project activities, including stakeholder mapping and collaborative workshops, have underscored the need to understand the priorities and concerns of the diverse stakeholders who live in and visit the Geopark to develop a picture of the nuances of place-based resilience and adaptation to climate change. It is only by giving a voice to our stakeholders that we can truly understand how the impacts of climate change will affect the people of the Geopark - surely one of its greatest assets.

Co-design has been at the heart of the work conducted so far and by thinking about what the Geopark is like now, who is involved and whose voices are missing, by exploring scenarios that are occurring throughout the Geopark and designing who and how people can respond to challenges we begin to create ideas of what the future of the Geopark will be.

In tandem, the project is developing data tools



Themes for discussion with diverse Geopark Stakeholders at the Climate and Heritage Workshop in Brecon Guildhall.

which will allow better access and sharing of relevant climate information across the Geopark. This work will all build toward a range of deliverables in support of creating a climate risk assessment for the Fforest Fawr Geopark, a critical step in creating a more resilient Geopark.

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Participants in the Climate and Heritage Workshop at Craig-y-nos Country Park.



Members of the Climate Change and UNESCO Heritage view the damage caused by Storm Darragh which brought down over 100 trees in the Craig-y-nos Country Park. Photo by Alan Bowring.



Granada UNESCO Global Geopark, Spain

Astrotourism in Granada Geopark



Night sky from the Sierra de Castril Stargazing Viewpoint, located towards the northwest region of the Granada Geopark where light pollution is absent. Can you see the fuzzy object right on top of the informative panel to the left on the picture? It is the Andromeda galaxy.

The Andalusian province of Granada, which today has the privilege of hosting the Granada Geopark (GG), has a long tradition of astronomy. The natural atmospheric behaviour and terrain conditions are exceptional throughout substantial portions of this territory, as determined by the light pollution research study carried out by the Sky Quality office of the Instituto de Astrofísica de Andalucía (Spanish National Research Council-CSIC).

We could say that it was inevitable that the Granada Geopark would incorporate the natural spectacle of the night sky and astronomy, taking advantage of the opportunity to broadcast the cutting-edge science produced by the scientific community settled in this territory.

At the beginning of 2021, the strategic plan began to include the development of various resources to incorporate astronomy into the Granada Geopark. Along with didactic material aimed at the educational community, citizen awareness talks on light pollution, or advising the tourist network on the opportunities offered by the Geopark, the most ambitious resource of all those related to astronomy was also developed: The Network of Astrotourism Viewpoints of the Granada Geopark



This is how the Negratín (water reservoir) Stargazing Viewpoint site looks like at daytime. From this outstanding place to enjoy the badlands landscape we invite you to take a space trip to recognise different forms of erosive processes in planets and moons of the Solar System.

(NAVGG).

When building the core concept of this resource we kept in mind that, as it is mentioned in Article 1 of the Geoparks Charter: other cultural resources can be added to the geological legacy. It was by following this philosophy that we asked ourselves, what if we used the viewpoint's network to show the connections between different branches of scientific knowledge? This way we could show the beautiful connection between astronomical and geological knowledge, but also introduce into our equation palaeontology, scientific historic facts, archaeology, or even raise awareness regarding problems related to climate change.

Each of the fifteen viewing points that make up the NAVGG provides visitors with the opportunity to enjoy interconnected brief scientific stories told from spectacular natural settings, by day and by night. From the Mirador del Puente del Hacho, one of the longest iron bridges on the Spanish railway network at the beginning of the 20th century, we tell you that all the iron present on the bridge, on our planet, and in our cells, has been manufactured inside the most massive stars. From the Mirador de El Peñón we tell you that when the pillow lavas that you can see in this place emerged, some stellar groupings, like the Pleiades, that we see in the sky today had not yet been born, and from the Mirador de la Estación Paleontológica del Río Fardes you will be surprised to learn the story that links mag-netostratigraphy, marine ridges and the Cold War!

These are just three of our stories, when are you coming to check what the remaining twelve are about?

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Here you can see under the sunset light the equipment that constitutes the viewpoints, in this case you can see the Cerro Jabalcón Stargazing Viewpoint from where we tell you about the diversity of heat sources inside of planet Earth.

Geopark Harz . Braunschweiger Land . Ostfalen UNESCO Global Geopark, Germany



Study Project on Education for Sustainable Development in the Harz . Braunschweiger Land . Ostfalen



The _quiz: Pupils testing their knowledge on karstification and water flow in a short quiz.

(© Lüth.)

Creating programmes for young people in schools can be a challenge, when you struggle with how best to reach the pupils. So why not involve younger people in the planning? The Harz . Braunschweiger Land . Ostfalen UGGp reached out to the University of Applied Sciences and Arts in Göttingen to realise this. The Master 's degree programme "Regional Management" provides for the implementation of a study project in which regional stakeholders are involved. In this context the Geopark presented the offer to carry out a study project concerning the Geopark and the UN's Sustainable Development Goals (SDGs). At the same time principles of Education for Sustainable Development (ESD) should be followed. A group of four students was interested in the Geopark 's offer and decided to plan a hike on which pupils got different tasks regarding the topic "water in the region". Quickly, they found a dedicated teacher from



Rhume Spring: Brief input on drinking water treatment at the Rhume Spring.

(© Czymoch/Geopark HBLO)



Oder River: Testing the water quality in the Oder River.

(© Czymoch/Geopark HBLO)

the Ernst-Moritz-Arndt High School in Herberg am Harz who was motivated to support this project and perform a test run of the excursion developed with his 10th and 12th grade pupils.

The 7 km long hike started at the station in Herzberg am Harz, led through the Pöhlde basin and finished at the Rhume Spring. At five stations along the route different topics were discussed. After an introduction in the region 's geological phenomena, the pupils performed a quick quiz game on how the landscape influences the flow of water. Later, effects on the water system, such as agriculture and farming, were analyzed. Therefore, water characteristics, like the level of nitrite and nitrate, were tested in the river along the trail. In groups, the pupils were led to slip into different roles to discuss challenges and solutions for sustainable water supply while minimising environmental pollution and bringing together various stakeholders. The Rhume Spring is important for the local drinking water supply, which is why the pupils simulated drinking water treatment by building a water filter at the hike 's destination. A "SDG-speed-dating" game to reflect the experiences closed the excursion.

Since the excursion was a test run for their thesis on the study project, the students collected suggestions for its optimisation not only from the Geopark-team and the involved teacher, but also from the students who took part in the excursion. During the whole project, the Geopark kept close contact with the students and supported them in technical questions as well as in knowledge about the SDGs and ESD. The aim is, to optimise the excursion based on the students ' thesis and include it as permanent component in the Geopark 's educational offer for schools.

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Idrija UNESCO Global Geopark, Slovenia

Building Connections Through Education in Idrija Geopark



Interactive programme «Magical Adventure with Zjalca the Dinosaur» at the Idrija UNESCO Global Geopark Visitor Centre.

Photo by Bojan Tavčar.

The workshop »Wool experience« with a local craftswoman.

Photo by Nina Erjavec.



and exploration, they learn about the geological processes that shape our planet and the incredible natural wonders it holds.

For preschool-aged children, the Geopark offers engaging programmes designed to introduce them to nature in an age-appropriate way. Activities such as nature walks, sensory exploration and crafting with natural materials encourage curiosity and foster a connection with the environment. Storytelling sessions and hands-on exhibits at the Visitor Centre make learning fun while introducing young learners to the region's cultural traditions.

Workshops for older students offer deeper explorations of the Geopark's heritage. In geology sessions, students examine minerals, fossils and rock formations, guided by local experts, to deepen their understanding of the area's geological significance. Cultural heritage workshops focus on Idrija's rich traditions, where artisans share their skills and the historical importance of these crafts.

The Idrija Geopark School Network further extends the Geopark's educational outreach. Collaborating with local primary schools in Idrija, Spodnja Idrija, Črni Vrh and Cerklje, the network organises tailored programmes for seventh graders. These include workshops, lectures and outdoor activities designed to showcase the region's diverse natural and cultural landscape. Local experts guide students through sessions on geology, cultural heritage and environmental exploration, fostering a deeper understanding of the area's unique features.

Through the integration of local knowledge and resources, the Idrija Geopark exemplifies a bottom-up approach to education, fostering pride in the region while strengthening community ties. By preserving and celebrating the region's traditions and beauty, the Geopark inspires a sense of stewardship and connection among all participants, ensuring that its knowledge and heritage are passed on to future generations.

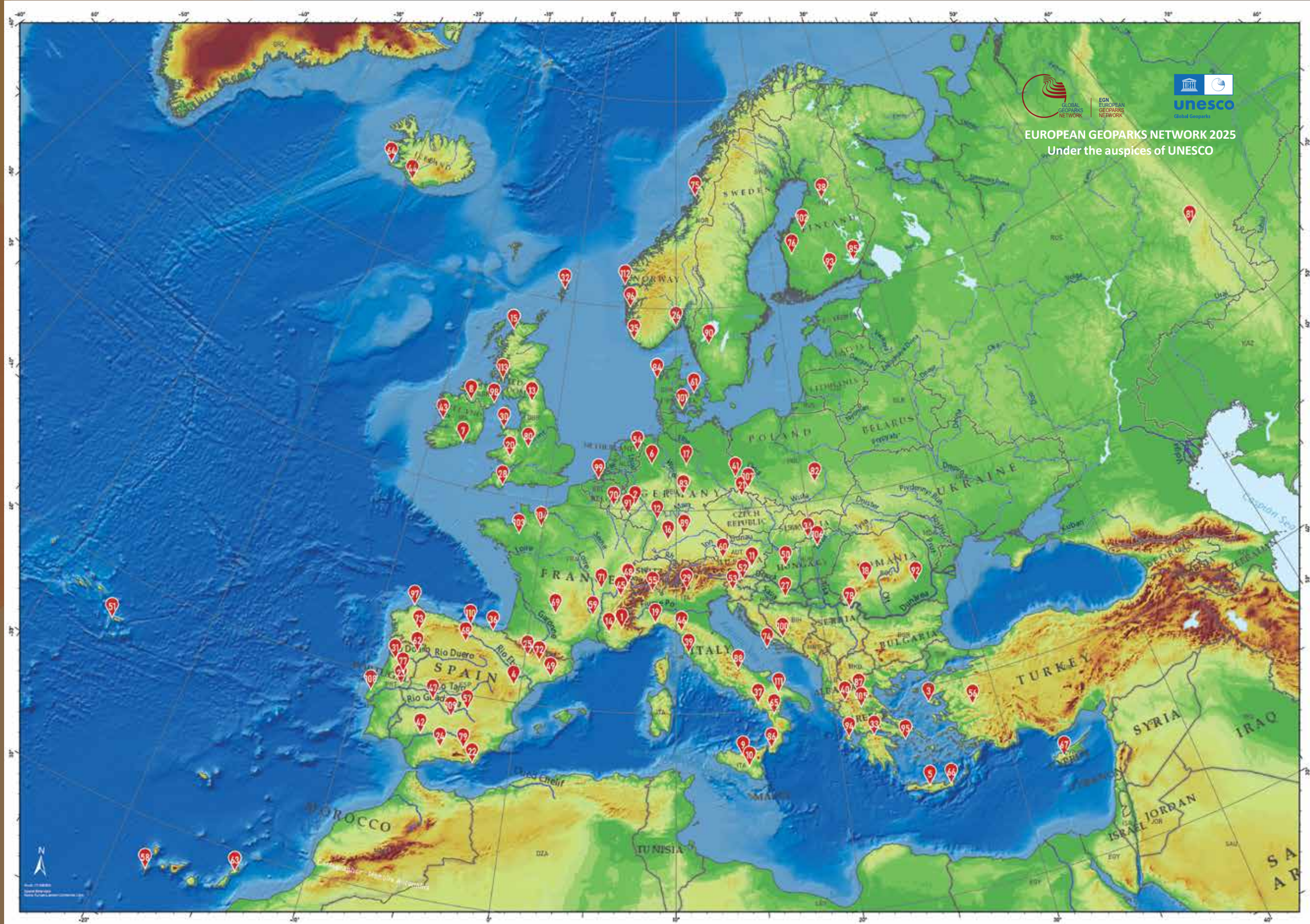
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Annual thematic day of the Geopark Idrija School Network.

Photo by Nina Erjavec.



The European Geoparks Network today



The Network consists of 109 Geoparks in 28 European countries
www.europeangeoparks.org



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NETWORK

No.	Geopark	Country	Year	No.	Geopark	Country	Year
1	Haute-Provence	France	2000	59	Monts d'Ardeche	France	2014
2	Vulkaneifel	Germany	2000	60	Ore of the Alps	Austria	2014
3	Lesvos Island	Greece	2000	61	Odsherred	Denmark	2014
4	Maestrazgo	Spain	2000	62	Terras de Cavaleiros	Portugal	2014
5	Psiloritis	Greece	2001	63	Lanzarote and Chinijo Islands	Spain	2015
6	Terra vita	Germany	2001	64	Reykjanes	Iceland	2015
7	Copper Coast	Republic of Ireland	2001	65	Pollino	Italy	2015
8	Cuilcagh Lakelands	N. Ireland/Republic of Ireland	2001	66	Sitia	Greece	2015
9	Madonie	Italy	2001	67	Troodos	Cyprus	2015
10	Rocca Di Cerere	Italy	2001	68	Las Loras	Spain	2017
11	Styrian Eisenwurzen	Austria	2003	69	Causse du Quercy	France	2017
12	Bergstrasse-Odenwald	Germany	2003	70	Famenne-Ardenne	Belgium	2018
13	North Pennines	UK	2003	71	Beaujolais	France	2018
14	Luberon	France	2004	72	Origens	Spain	2018
15	North West Highlands	UK	2004	73	Courel Mountain	Spain	2019
16	Swabian Albs	Germany	2005	74	Vis Archipelago	Croatia	2019
17	Harz Braunschweiger Land	Germany	2005	75	Trollfjell	Norway	2019
18	Hateg Country	Romania	2005	76	Lauhanvuori-Hameenkangas	Finland	2020
19	Beigua	Italy	2005	77	Estrela	Portugal	2020
20	Fforest Fawr	UK	2005	78	Djerdap	Serbia	2020
21	Bohemian Paradise	Czech Republic	2005	79	Granada	Spain	2020
22	Cabo de Gata	Spain	2006	80	Black Country	UK	2020
23	Naturtejo	Portugal	2006	81	Yangan-Tau	Russian Federation	2020
24	Sierras Subeticas	Spain	2006	82	Holy Cross Mountains	Poland	2021
25	Sobrarbe-Pirineos	Spain	2006	83	Thuringia Inselberg-Drei Gleichen	Germany	2021
26	Gea-Norvegica	Norway	2006	84	Vestjylland	Denmark	2021
27	Papuk	Croatia	2007	85	Saimaa	Finland	2021
28	English Riviera	UK	2007	86	Aspromonte	Italy	2021
29	Adamello Brenta	Italy	2008	87	Grevena-Kozani	Greece	2021
30	GeoMôn	UK	2009	88	Majella	Italy	2021
31	Arouca	Portugal	2009	89	Ries	Germany	2022
32	Shetland	UK	2009	90	Platåbergen	Sweden	2022
33	Chelmos-Vouraikos	Greece	2009	91	Möllerdall	Luxembourg	2022
34	Novohrad-Nograd	Hungary/Slovakia	2010	92	Buzău Land	Romania	2022
35	Magma	Norway	2010	93	Salpausselkä	Finland	2022
36	Basque Coast	Spain	2010	94	Kefalonia-Ithaca	Greece	2022
37	Cilento, Vallo di Diano e Alburni	Italy	2010	95	Lavreotiki	Greece	2023
38	Rokua	Finland	2010	96	Sunnhordland	Norway	2023
39	Tuscan Mining Park	Italy	2010	97	Cabo Ortegal	Portugal	2023
40	Vikos-Aoos	Greece	2010	98	Mourne Gullion Strangford	UK	2023
41	Muskau Arch	Germany/Poland	2011	99	Schelde Delta	Belgium/Netherlands	2024
42	Sierra Norte de Sevilla	Spain	2011	100	Biokovo-Imotski Lakes	Croatia	2024
43	Burren and Cliffs of Moher	Republic of Ireland	2011	101	The South Fyn Archipelago	Denmark	2024
44	Katla	Iceland	2011	102	Impact Crater Lake	Finland	2024
45	Massif des Bauges	France	2011	103	Armorique	France	2024
46	Alpi Apuani	Italy	2011	104	Normandie-Maine	France	2024
47	Villuercas Ibores Jara	Spain	2011	105	Meteora-Pyli	Greece	2024
48	Chablais	France	2012	106	Bükk Region	Hungary	2024
49	Central Catalonia	Spain	2012	107	Land of Extinct Volcanoes	Poland	2024
50	Bakony-Balaton	Hungary	2012	108	Oeste	Portugal	2024
51	Azores	Portugal	2013	109	Volcanes de Calatrava	Spain	2024
52	Karavanke/Karawanken	Slovenia/Austria	2013	110	Costa Quebrada	Spain	2025
53	Idrija	Slovenia	2013	111	MurGeopark	Italy	2025
54	De Hondsrug	Netherlands	2013	112	Fjord Coast Regional and Geopark	Norway	2025
55	Sesia-Val Grande	Italy	2013	113	Arran	UK	2025
56	Kula-Salihli	Turkey	2013				
57	Molina and Alto Tajo	Spain	2014				
58	El Hierro Global	Spain	2014				



Katla UNESCO Global Geopark, Iceland Katla Geopark “Our environment, our responsibility”



Hildur Kristjánsdóttir (second from the left), the sustainable tourist manager of Midgard, accepting the award from the Icelandic Soil Conservation Service for clear environmental goals in relation to the use of land in tourism and emphasis on environmental education for staff and guests, from the director of the Icelandic Soil Conservation, Árni Bragason (first from the left).

Photo by Áskell Þórisson

Some of the activities that Midgard offers, including its hotel, hiking and bike trips, and its restaurant.
Photo: by Midgard.



Tourism in Iceland has increased drastically over the last years and as a result problems regarding the environment and sustainability have increased, both within Katla Geopark and Iceland as a whole. One of the biggest impacts has been on vegetation around geosites and other sites of interest. The vegetation in Iceland is very fragile and easily succumbs to excessive footfall and other impacts due to tourism. Once the vegetation is gone from the topsoil, the soil itself becomes easily erodible through human and weather driven factors. There are ways to limit the trampling of course, for example with fences and paths, but the most important factor is educating visitors about the environment and our impact on it. One company within Katla UGGp has gone above and beyond in its work to decrease the impact of increased tourism and footfall.

Midgard is a tourist operator, located in the village of Hvolsvöllur in the western part of Katla

UGGp, and is a long-time partner and supporter of Katla UGGp. Midgard, which was founded in 2010, has had steady growth since its foundation and today has between 30 and 40 employees which are distributed across the three parts of the company, Midgard Adventure, Midgard Base Camp and Midgard Restaurant. From its beginning, Midgard has had protection of the environment and sustainability as their focus and are one of the few companies in Iceland that have an Environmental and Sustainability Policy. With their work, Midgard has become a leading company when it comes to sustainability in tourism by limiting the impact of the company's activity on nature. They have worked hard to reduce their carbon footprint, leaving no trace, and building strong relationships within the community. Their actions have not gone unnoticed, and in June 2023 they received an award from the Icelandic Soil Conservation Service for clear environmental goals in relation to the use of land in tourism and emphasis on environmental education for staff and guests. This award is not the only award they have received, they also received the Community Award from Hvolsvöllur Municipality (one of three municipalities within Katla Geopark), and in early 2023 they were one of three companies nominated for the Incentive Awards for Responsible tourism in 2022. Midgard has set an example that hopefully other companies will follow, both in Katla UGGp and Iceland, where the environment and its protection will be at the heart of each adventure.

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Karawanken - Karavanke UNESCO Global Geopark, Austria/Slovenia

Community at the Core: The Karawanken - Karavanke Geopark's Path to Resilience



A Geopark
Karavanke
Guided hike.

Photo by Urosh
Grabner.

Since its establishment in 2013 and designation as a UNESCO Global Geopark in 2015, the cross-border Geopark Karawanken/Karavanke in Austria and Slovenia has been dedicated to the involvement and empowerment of the local community.

The Geopark has prioritised educational initiatives that engage community members. One key programme is the annual school topic and teacher training workshops, which have evolved significantly since their inception. This year's topic celebrates the 10th anniversary of UNESCO Global Geoparks, titled "UNESCO Geopark - Green Classroom". These workshops raise awareness about the region's geological and cultural heritage while empowering local residents to become active stewards of their environment. As the workshops progressed, they fostered a culture of collaboration and knowledge-sharing, equipping participants with skills that enhance both personal and community resilience. This grassroots approach has laid a strong foundation for the community's involvement in broader sustainable practices.

Building on this educational foundation, the Geopark is advancing sustainable tourism through the «Interreg Slovenia-Austria GreenTour project (GreenTour)». This initiative focuses on the further development of the Geopark Partners network and responsible tourism management that leverages the area's unique natural and cultural assets while ensuring economic benefits for the local community. Key components include establishing a resilient management system called «greencare», developing sustainable tourism products, and managing visitor flows. These efforts aim to balance economic growth with environmental conservation, ensuring that tour-

ism enhances, rather than exploits, local resources.

As the Geopark strengthens its community initiatives, the implementation of the «Interreg Slovenia-Austria KaraMon project (KaraMon)» is set to enhance resilience against natural disasters. This initiative addresses the challenges posed by severe weather events, such as storms and floods, which significantly impacted the entire Geopark region during the summer of 2023. By enhancing disaster monitoring and warning systems, KaraMon aims to protect the local population through improved cross-border communication among crisis teams and emergency organisations. The project integrates advanced risk assessment models and strengthens disaster communication, enabling a coordinated response to emergencies. In addition, the project aims to improve resilience to natural disasters by developing a digital network for monitoring, communication, prevention, and intervention. Through these collaborative efforts, the Geopark enhances community resilience and prepares residents for environmental challenges. By involving local decision-makers, specialists, and scientific experts, KaraMon focuses on proactive measures for disaster prevention and crisis management. This comprehensive approach highlights the significance of community engagement in achieving sustainable development.

In summary, the Karawanken - Karavanke UNESCO Global Geopark illustrates the effectiveness of a community-driven approach. By integrating educational initiatives, sustainable tourism, and disaster resilience strategies, the Geopark fosters a thriving ecosystem that benefits both people and the environment, showcasing how local engagement can lead to meaningful progress in sustainable development.

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Consequences
of a natural
disaster in
2023. Photo by
Urosh Grabner.



Land of Extinct Volcanoes UNESCO Global Geopark, Poland



The cone of Mt.
Ostrzyca is a
volcanic neck
made of mid-
Cenozoic basalt.

Land of Extinct Volcanoes UNESCO Global Geopark is situated in southwestern Poland, straddling the boundary between the Sudetes mountain range and the mountain foreland. Its highest point reaches 723 m above sea level. It covers 1,290 km² and is inhabited by approximately 102,000 people. The area is divided into 14 municipalities, predominantly rural, with a few towns. The regional capital of Wrocław is one hour drive away.

The regional geoheritage is diverse in terms of both geology and geomorphology. The distinctive feature is the occurrence of volcanic rocks from three different periods of volcanism. The oldest are from the early Palaeozoic era and are products of submarine, rift-like volcanism. The original basalts were transformed into greenschists, but in several places one can still observe pillow lava structures. The second volcanic period dating back to the early Permian is represented by rhyolites and trachybasalts. The youngest volcanism occurred in the Oligocene and Miocene, with basalts as the main volcanic rocks. The legacy of this phase includes numerous isolated hills, which are mainly exposed volcanic conduits. One of them, Ostrzyca (501 m), with its regular conical shape, is the regional landmark. Other than volcanics, the rock record in the Geopark covers the timespan from the Cambrian to the Quaternary, with only rocks of the Jurassic period missing, and includes igneous, sedimentary, and metamorphic rocks. Among them, Cambrian limestones and Cretaceous sandstones support distinctive landforms. During the Pleistocene the area was reached at least once by the Scandinavian ice sheet. Otherwise, it remained in a cold environment as testified by various periglacial landforms such as blockfields.

Although the natural environment has been signif-

icantly transformed by human activities, particularly agriculture and mining, the area still hosts valuable habitats, especially in the western part of the Geopark. Large forest complexes survived in hilly terrains, whereas the network of protected areas includes one Landscape Park and ten nature reserves, mostly protecting forest communities. Some habitats are included in the Natura 2000 network.

The rich cultural heritage goes back to the early medieval times, testified by remnants of hillforts. The intense increase in the size of the population started in the 13th century, with the expansion of towns and village networks. Agriculture and forestry were the main branches of the local economy, accompanied by mining focused on gold, iron, copper, building stones, and aggregates. Places of historical interest include the World Heritage-listed Church of Peace in the town of Jawor, medieval castles and churches, numerous palaces, and manors from the modern era (some ruined), and objects of industrial heritage.

The Geopark is managed by the local association Stowarzyszenie Kaczawskie (SK), with the President of SK being the director of Geopark. The Board of Geopark is composed of representatives of local municipalities, state forests, and NGOs. Scientific support is provided by the Scientific Advisory Board, which involves specialists from different disciplines, not only geoscientists. The Geopark runs the Educational Centre in the village of Dobków. Various educational and outdoor activities targeted at local inhabitants and tourists are coordinated by the Geopark, but there are also many initiatives implemented in individual municipalities and villages.

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Educational
Centre of the
Geopark in
Dobków, in an
old renovated
farmstead.



Restored basalt
quarry at Mt.
Wilkołak is the
premier geosite
within the
Geopark.

Lanzarote and Chinijo Islands UNESCO Global Geopark, Spain

The Legacy of the Volcano: Lanzarote and Chinijo Islands Geopark commemorates 200 years since the last volcanic eruptions.

A blink of an eye and 200 years have passed since the Earth roared again and the «little fires» that were kept inside emerged from the bowels of Lanzarote. This is how Isabel Cabrera, oral narrator, made students from educational centres in the municipalities that witnessed the eruptions of Tao, Nuevo del Fuego (known as Chinero), and Tinguatón travel through time and imagination. This marked the beginning of the events around the commemoration of the 200th anniversary. In 1824, at the end of July, the first of the eruptions began. Now, in 2024, we bring back the smell of sulphur to envelop our population, bringing the volcano closer through talks and field trips during the III Conference «Mitigating volcanic risk, international experiences for mitigating volcanic risk in island territories». The conference focussed on coexisting with the volcano and mitigating the risks involved in living in a territory that, although it is currently asleep, could well wake up. The Commemorative Conference turns science into outreach, featuring important speakers to recognise an island that goes beyond the Timanfaya eruptions in 1736, and highlights the last three volcanic events on the island. These are conferences where students from different Secondary Education Centres present geological studies carried out throughout the year about Places of Geological Interest on the



Group during the activity «Mitigating the volcanic risk»

island. If the youngest do not make science their own, it loses its incredible power for social transformation; sowing knowledge now is harvesting conservation in the future. Many testimonies were collected from that time: «On July 29, 1824, at five o'clock in the morning, an earthquake was felt in several towns on the island of Lanzarote, although its movement was of short duration.» A loud noise was heard towards the middle part of the island over El Poniente and a great explosion; and without having preceded an earthquake, tremblor, or other sign, a new eruption occurred». These testimonies become an exhibit, and also the script for the documentary «The Memory of the Volcano: Eruptions of 1824» which brings to the screen the stories and experiences of those people who witnessed the natural power that lies in the heart of this Canary Island. From November 23 to December 20, 2024, the UNESCO Global Geopark of Lanzarote and the Chinijo Islands vibrates strongly, is tinged with magma and lapilli to celebrate the history of three volcanoes, Tao, Nuevo del Fuego or Chinero, and Tinguatón, which until just a blink of an eye ago roared and smoked, telling the wind that the heart of the island is alive.

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Lauhanvuori – Hämeenkanas UNESCO Global Geopark, Finland

Empowering Learning through the GEO Learning Environment

A Gateway to the Future of Environmental Education in Lauhanvuori – Hämeenkanas Geopark

The raised bog of Huidankeidas is a great example of a Geopark site.

Photo by Piia Orava.



Envision a learning environment where students feel connected not only to the subject but also to the nature and world around them. It is a place where innovative pedagogy, nature, and technology come together to shape new generations of problem-solvers and critical thinkers. This vision is realized in the Finnish GEO Learning Environment, launched by Lauhanvuori - Hämeenkanas UNESCO Global Geopark (LH Geopark) in collaboration with other local contributors in the Northern Satakunta region. The GEO Learning Environment inspires students to think environmentally, locally, and globally.

The GEO Learning Environment provides comprehensive nature and cultural experiences in LH Geopark, where vast wilderness mires dominate the landscape. The learning environment also includes learning materials and the versatile GEO Learning Centre, dedicated to environmental education. To integrate and guide these diverse components, a new environmental education plan has been published. The plan is available to local teachers, and anyone interested in promoting environmental themes within their community. It is also available in English here: <https://psvsa.samk.fi/en/environmental-education-plan/>.

As outlined in the environmental education plan, various workshops and events offer opportunities to engage with the GEO Learning Environment. For example,

In the GEO Learning Centre, visitors can learn about nature using various pieces of equipment.

Photo by Piia Orava.



GEO Learning Environment can mean bee hotel workshops.

Photo by Piia Orava.

ample, this year, artistic bee-hotel workshops were piloted and further developed into a Bee Walk. This initiative encouraged citizens to explore their surroundings, locate the bee hotels, and learn how to create their own to support local bee populations. The workshop concept involved collaboration between local upper secondary school students and fine arts students from Satakunta University of Applied Sciences.

The operating model of the GEO Learning Environment is particularly noteworthy. LH Geopark provides sites, guides, activities, and research opportunities. The GEO Learning Centre, led by Honkajoki General Upper Secondary School, takes responsibility for environmental education. Higher education institutions contribute by offering opportunities for collaboration and educational pathways. For example, the environment can create working opportunities for young people. Currently the GEO Learning Environment employs a young individual who graduated from Honkajoki Upper Secondary School.

In the future, the GEO Learning Environment aims to continue employing young people through summer jobs and project-based opportunities. New workshops, such as a hedgehog house workshop, are planned for testing. Additionally, the Kirkkokallio Eco-Innovation Park, a local eco-industrial park, will serve as a dynamic example of the circular economy, with new materials being prepared using tools such as drones. Guide concepts are also being developed for LH Geopark sites and the surrounding natural areas.

We are always open to and actively seeking new international cooperation opportunities, so please do not hesitate to reach out to us!

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Madonie Unesco Global Geopark, Italy The Erasmus Repair the World Project in Madonie Geopark



Among the many activities, 2024 saw the implementation of the Erasmus Repair the World project, with the participation of Italian, Spanish, Turkish and Polish teachers invited to study new practices for a more sustainable world.

In February, delegates visited the Madonie Geopark which is rich in geosites that illustrate the geological evolution of the Mediterranean.

Over a number of days, eleven lecturers visited the Sicilian territory to understand its naturalistic value, appreciate its beauty and learn about the projects launched by the Madonie UNESCO Geopark for protecting biodiversity.

While studying the Madonie, the teachers collected information to be used to draw up new teaching material once back at their institutes when teaching their students how to protect nature.

The Madonie Park Authority Commissioner Salvatore Caltagirone reminded us all of 'the Madonie Geopark's commitment to nature education, in line with the Directives of the UNESCO World Network of Geoparks to promote environmental education for the citizens of the future. Over the years, the Park has launched important environmental protection pilot projects that have placed the Authority as an international reference point in the protection of Biodiversity. Through this experience, the culture of environmental protection is strengthened.

In May, the group visited Spain, while in October, during the visit to Rzeszów (Poland), the Madonie UNESCO Global Geopark project representatives, Peppuccio Bonomo and Franca Gennaro of the Madonie Geopark Staff together with a group of young people from local schools, presented the activities carried out in the Madonie Geopark, together with colleagues from Valencia, Spain.

"We have agreed with our colleagues from the Holy Cross UGGp but also with educational institutions to evaluate the possibility of carrying out new projects or collaboration", explained Peppuccio

**Mobility
Manises-
Valencia.**



Bonomo.

Other visits to Poland were scheduled and included the Holy Cross UGGp, which is also one of the Madonie's partners in the Erasmus Vr@geoparks project, and the Bóbrka Geopark, where the group discovered the open-air museum of the oil industry and its laboratories.

A further point of interest was the visit to the Łukasiewicz Centre and its well-equipped laboratories where training workshops and visits were carried out. The events ended at the Department of Education of the Voievodship with the planned certification.

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**Mobility
Madonie UGGp
ITA geosite
Pollina.**

**Mobility
Rzeszow/Poland
and Holy Cross
UGGp meeting.**



Mëllerdall UNESCO Global Geopark, Luxembourg Soil Properties and Biodiversity in Mëllerdall Geopark



**A simple
identification
aid to determine
the soil type for
garden owners.**

© NGPM.

**A group of
refugees
building a
nesting aid.**

© SINGA.

The Mëllerdall UNESCO Global Geopark is located in the east of Luxembourg. A small-scale cuesta landscape developed here in the alternating sequence of Triassic and Jurassic sandstones, dolomite and marls during the Cenozoic. In the centre of the structure lies the up to 100 m thick Lower Jurassic Luxembourg Sandstone, which today represents one of the most impressive sandstone landscapes in Western Europe. Marls of Upper Triassic and Lower Liassic age beneath and above the Luxembourg Sandstone form extensive flat undulating plains. The marls are not preserved everywhere on top of the Luxembourg Sandstone, so that the sandstone provides the substrate for soil formation there. Sandy soils dominate in these areas (Cambisols, Luvisols, Podisols), while clayey Vertisols are mostly developed on the marls.

People in the region are familiar with the differences in the soils, as the clayey-weathering marl in the gardens is slippery when it rains and extremely hard when dry.

The Geopark is actively involved in the conser-

vation of biodiversity in the region and thus in the achievement of SDGs 11 and 15. It fosters biodiversity and the conservation of habitats in forests, open land, and settlement areas, in direct cooperation with landowners and municipalities. One project is dedicated to insects, which fulfil a variety of important ecosystem services.

For example, natural breeding sites for wild soil-breeding bee species are becoming rare in the countryside. Therefore, artificial sandy nesting areas ("Sandaria") are being created to mitigate this problem. The construction of other nesting aids in practical workshops is very popular with schoolchildren, citizens and refugees living in Luxembourg.

In addition to these breeding sites, a food supply is also created for insects. This is done in urban areas in the form of near-natural green areas and in agriculture by creating flower strips (wildflower meadows etc.). To support this, citizens can receive packets of seeds of native flowering plants as well as native wild perennials, which are distributed free of charge once a year (both the seeds and the wild perennials are produced in Luxembourg). In this way, garden owners can replace decorative perennials with wild perennials that are more climate resilient and thus better adapted to climatic extremes. By creating a simple identification aid, people can determine the soil type of their garden soil to obtain perennials that are suited to their location. The analysis is carried out on moist soil material using simple rolling and shearing tests. In the future, wild perennials in gardens can thus continue to delight people and insects in the long term, even in increasingly extreme weather conditions.

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**Ground-nesting
bees use
sandaria made
of weathered
Luxembourg
sandstone.**

© NGPM/Maurice
Schilling.



Naturtejo UNESCO Global Geopark, Portugal Youth Meeting “Climate Action in Portuguese Geoparks”, at the Naturtejo UNESCO Global Geopark



Group of participants at the Centro de Ciência Viva da Floresta (Living Science Forest Centre, Municipality of Proença-a-Nova.

The “Youth Meeting – Climate Action in Portuguese Geoparks” was organised within the scope of the “Biennium of Climate Action in Portuguese Geoparks (2022-2024)” by the Naturtejo UNESCO Global Geopark (Naturtejo UGGp), in the municipality of Proença-a-Nova, on February 22nd and 23rd, 2024. Naturtejo UGGp organisation has partnerships with the Municipality of Proença-a-Nova, the interpretation centre “Centro de Ciência Viva da Floresta” (Living Science Forest Centre), the Proença-a-Nova School Group and the Portuguese Geoparks.

Students from the 3rd Cycle of Basic Education participated in this event accompanied by teachers and technicians from the respective geoparks along with representatives of the five Portuguese UNESCO Global Geoparks and two of the three aspiring Portuguese geoparks. The groups of participating students were selected by each geopark, based on a 3-minute video, on the theme “Climate Action in my Geopark”. Students representing the aspiring Geopark Algarvensis participated online in the event.

On February 22nd, the activities took place at the

“Centro de Ciência Viva da Floresta” (Living Science Forest Centre). The event began with the opening session. Then, in the auditorium, students representing each geopark presented their territory and the video they had created. Afterwards, the participants went to the area surrounding the “Centro de Ciência Viva da Floresta” and each group of students planted one strawberry tree, with eight strawberry trees representing each geopark being planted in order to commemorate this event for posterity and to actively contribute to improve the environmental quality of our planet. At the end, there was time for a free visit to the Centres’ several exhibition rooms. On February 23rd, the activity consisted of the Field Trip Discovering the Geomonument of the “Portas de Vale Mourão”, in Sobral Fernando, with participants covering around 3 km of the “Segredos de Vale Mourão” (Secrets of Vale Mourão) walking trail.

The event’s final assessment was very positive, as team spirit and mutual assistance was created and knowledge of the respective geological heritages and different forms of climate action in each of the territories were shared. Fifty four people participated in the youth meeting: 34 students, 8 teachers and 12 technicians from five Portuguese UNESCO Global Geoparks (Arouca, Açores, Estrela, Naturtejo and Terras de Cavaleiros) and two aspiring Portuguese Geoparks (Oeste and Litoral de Viana do Castelo). The success of the event led to the wish for a joint educational project and a final youth meeting to be held every year, organised by the geoparks on a rotating basis.

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Group of participants in the field trip Discovering the Geomonument of the “Portas de Vale Mourão” (Naturtejo UGGp).



Ore of the Alps UNESCO Global Geopark, Austria Großglockner-Excursion on the International Geodiversity day

The Großglockner (3798 m) on the left and the Pasterze Glacier in the Hohe Tauern National Park.

© Horst Ibetsberger.



Every year, the Ore of the Alps UGGp organises an excursion for the members of the Ore of the Alps Association. This year’s excursion took us to the neighbouring Hohe Tauern National Park. The National Park not only contains Austria’s highest mountain, the Großglockner at 3798 m, and Austria’s largest glacier, the Pasterze, with an area of 14 km², but also has an enormous bio- and geodiversity. The Grossglockner High Alpine Road opens up the entire area and has its highest point at the Hochtor (2504 m). The Kaiser-Franz-Josefs-Höhe with its Visitor Centre at 2369 m offers the best view of the Pasterze.

This year, the participants focussed on climate change and its effects on the high Alpine landscape, in particular the changes to the glaciers. The glaciers are used to visualise climate change.

In the Ore of the Alps UGGp, there is the Hochkönig Glacier ‘Übergossene Alm. This glacier is following the global glacier trend of rapid melting. However, as the glacier is located at an altitude of approx. 3000 m and the ascent takes over six hours, this key geotope is not accessible to everyone in order to tell the climate history of the Alps since the end of the last ice age.

This excursion took us to the Pasterze Glacier to show the public the radical changes in the ice mass since the glacier culminated at the end of the Little Ice Age around 1850. The glacier tongue, which is still 4 km long today, retreated by 800 metres from 1850 to 1952, by another 800 metres from 1952 to

2000 and by an incredible 722 metres from 2001 to 2014. In the last four years, the Pasterze has melted by around 400 metres! The glacier year from October 2022 to September 2023 was approx. 1.7° C warmer than the average for the 1981 to 2010 climate period.

The Hochkönig Glacier in the Ore of the Alps UGGp is melting in the same way. In a few years, ‘the eternal ice’ will have disappeared. In particular, the participants were shown the consequences of the glacier melting, such as increasing mass movements on exposed slopes due to permafrost melting, increasing water shortages in the high mountain reservoirs for electricity production, dramatic changes in biodiversity, etc.

The participants were also shown the development of the glaciers depending on the climate over the last 12,000 years. In the Visitor Centre there are stone pine trunks around 9000 years old that are currently melting out of the glacier’s tongue area. This means that at that time, 300-year-old stone pines grew in areas now covered by ice. This was intended to contrast natural climate change with man-made climate change. There has always been climate change, but not at this enormous speed. That was the purpose of this ‘bottom-up excursion’!

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Horst Ibetsberger explains the landscape development, the glacier history and the climate change since the end of the ice age.

© Ore of the Alps Association.



The members of this “bottom-up excursion” were proud to be objectively informed about climate change, as it happens all over the world.

© Ore of the Alps Association.



Orígens UNESCO Global Geopark, Spain “Orígens 3-8, a space where scientific observation begins”



Elements used in the Dinosfera Science Space include fossil replicas and learning and teaching materials for children and teachers.

Since birth, children have a scientific attitude towards the world showing an insatiable need to explore and understand things that adults might overlook. In 2023 The Orígens UNESCO Global Geopark created three science spaces aiming to fulfil this need for three to eight year old pupils. These learning spaces about fossil heritage help teachers and educators to familiarize children with the palaeontological heritage, make science more appealing and encourage pupils to be active learners.

The highlight of the Orígens Geopark is the palaeontological heritage during the Cretaceous geological period. The Conca Dellà Museum (Isona) and Dinosfera Interpretation Centre (Coll de Nargó) present the fossil remains of the last dinosaurs in Europe that lived in the Orígens Geopark area at the end of the Cretaceous, between 70 and 66 million years ago. The museum focuses on the description of new species of dinosaurs and their body shape and footprints and the Interpretation Centre presents a large collection of dinosaur egg nests. On the other hand, the Montsec de Meià Interpretation Centre shows a very rich lacustrine environment fossil record from lower Cretaceous lithographic

limestone quarries, defined as a Konservat-Lagerstätten.

These small museums communicated to the Orígens Geopark their need to dynamize their visits for young children. Therefore, the Geopark provided them with science spaces named “Orígens 3-8”. Each science space is a piece of mobile furniture approximately W150 cm x D70 cm x H70 cm with modules of dimensions tailored to the size of the fossil replicas for each museum. Orígens Geopark provided specific training to the museums staff on the use of the learning spaces as a tool for children to learn about the development of scientific research.

A science space is not only a physical space, but it also comprises a methodology with guidelines to generate meaningful interactions with the space. The methodology specifies goals for the “child-focus” learning environments and provides a possible learning content and key ideas to engage children. It also defines the museum’s material to be exhibited in each space and the structure for the learning sessions suggesting questions to generate reflection and conversation.

The Geopark responded to the need reported by the museums to improve their educational programme. These science spaces help pupils to learn about the properties of fossils, understand the research methods that help scientists to decipher how the world was in the past, based on scientific evidence, and emphasize the rich heritage of the territory. We are receiving very positive feedback from the museums as the science spaces are being significantly used and becoming a helpful asset to their educational strategy. “Orígens 3-8” is a science space and a learning environment for everyone, children, teachers and the museum.

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Maiella UNESCO Global Geopark, Italy Climate Change education: examples of «bottom-up approach»



Flyer of the initiative for the Energy Saving Day organised in collaboration with the Lesvos Island UGGp.

© Staff of the Maiella UGGp

Global Warming is one of the most important topics at international level and its effects concern all countries. Public awareness of Climate Change can be raised through education, especially aimed at the new generations. The public can also be made co-protagonists in the implementation of solutions to counter this issue. In 2020, Italy was the first country to have proposed the obligatory teaching of this subject that must necessarily be taught with a holistic approach. The Maiella UNESCO Global Geopark involves people in various initiatives to improve its knowledge and best practice. In line with the Agenda 2030 Sustainable Development Goals (SDGs), and especially the Goal 13 «Climate Action», the Geopark informs local communities through communication and dissemination activities to promote lifestyle change aimed at students, stakeholders and tourists. Educational projects, classroom training and experiences in nature are among the activities undertaken by the Geopark and its partners to attain the goal. In February 2024, the initiative called Dim the lights, brighten our future - 2 Geoparks working together for a greener tomorrow was very successful. It was part of the Italian Radio’s green campaign for the Energy Saving Day. For the

occasion, similar to the Earth Hour of the World Wide Fund for Nature (WWF), numerous schools from Maiella UGGp and the Lesvos Island UNESCO Global Geopark, “since air, oceans, mountains and forests know no boundaries and must be defended with a change that must be global”, engaged in the theme by performing the symbolic switching off of all unnecessary lights. Around 1,300 students took part, creating drawings and discovering how even seemingly insignificant gestures can make a difference. In November 2021, for the Geofesta degli Alberi (Trees Geofestival), local schools were invited to participate in the Lettere verdi event promoted by an Italian publishing company. To encourage a common reflection on the urgency of acting to save human and natural ecosystems, handwritten letters from students were sent to local authorities (e.g. mayors). Another example is the recently proposed project to monitor biodiversity within fountains, as their fauna is significantly impacted by Climate Change. A properly trained population will be involved in monitoring these animals and in the creation of an «environmental nudge» to inspire citizens to adopt and implement desired behaviors (Citizen Science activities). The project results will be presented at a final event and communicated through educational panels and a booklet with cultural aspects (legends, curiosities, etc.). In conclusion, the proposed activities that involve communities have the potential to motivate individuals to take action on the climate challenges of the future.

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Student writing a green letter to local authorities on the occasion of the Geofesta degli Alberi (Trees Geofestival)

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Platåbergens UNESCO Global Geopark, Sweden

The wrath of West Gothlanders affects those who harm their mountains – the success story of the establishment of Sweden's first UNESCO Global Geopark



Erected stone with inscriptions from 1976 protests.

Photo by Henrik Theodorsson.

The table mountain landscape in Västergötland gained recognition as Sweden's first UNESCO Global Geopark in April 2022. This achievement is the result of long-standing efforts where residents in the area have aimed to preserve and highlight the unique natural and cultural environments surrounding the mountains. Perhaps this initiative began as early as the 1970s with protests against new plans for uranium extraction near Ranstadverken outside Skövde. Local engagement peaked with «Västgöta Mountains Day», celebrated for a week in 1976 with lectures, hikes, and protests, gathering as many as 25,000 people in total. At that time, this was the largest environmental protest in Sweden! As a conclusion, a stone was erected at Häggums Church inscribed with the words:

«Devastation threatened Billingen, Borgundaberget, Gerumsberget, Tovaberget, Gisseberget, Myggberget, Mösseberg, Plantaberget, Varvsberget, and Ålleberg. West Gothlanders willing to protect their region gathered on May 1, 1976, in Häggum. The stone serves as a reminder that "The wrath of West Gothlanders affects those who harm their mountains.»

In the early 2000s, a few enthusiasts and associations in the area joined forces under the name «Geoarena Skaraborg», a geological network seeking to enhance interest in the region's geology. The initiators were the Ålleberg Group, SGS Skaraborg Geological Society, the Millstone Quarry in Lugnås, and Råbäck Mechanical Stone Work. Here the thought of establishing a Geopark grew and the local initiators started to work for political support. Parallel, new threats of uranium mining made

it urgent to highlight and further strengthen the importance of the landscape as a thriving place for rural livelihood, recreation, and tourism.

Local enthusiasm and stubbornness led to a pre-study that was conducted under the leadership of the Biosphere Office in Mariestad from 2014 to 2015. The conclusion of the pre-study was that nine municipalities wished to collaborate further in establishing a Geopark in the area. A project manager was hired, and the work on the Geopark truly began in August 2017 with the strong support from people in the area, community life, public partners, and geologists from almost all major universities in Sweden. Of course, the table mountain landscape itself was the foundation for success, an extraordinary area with unique natural and cultural environments.

In November 2019, the application for membership as a UNESCO Global Geopark was submitted. The evaluation was finally carried out in the fall of 2021, and April 2022, UNESCO's board formally made the decision: Sweden has its first UNESCO Geopark, and the Global Geopark Network has a new member country! The establishment of the Geopark is a success story in memory of the protests in the 1970s and the subsequent strong bottom-up engagement for the preservation of the table mountain landscape. From now on, the strong network of Global Geoparks will help guard the mountains, together with the local communities.

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Pollino Unesco Global Geopark, Italy

Forest Firefighting in the Pollino Geopark – a model for involving local communities



Saving a pond turtle.

The Pollino UGp has a large variety of landforms and geomorphological features including mountains, rocky outcrops, caves, plains, basins, river valleys, gorges, cliffs, scree slopes, landslides and alluvial fans as well as widespread evidence of glaciation.

Furthermore this rich geodiversity is the basis of an even more rich biodiversity. For example the area hosts an important forests heritage. In fact the park has a woody coefficient of about 60%, with a total of 110.516 hectares (1105 km²) covered by forest or by areas with developing arboreal and shrub vegetation. Moreover, in the area there are some of the most interesting beech forests (*Fagus sylvatica*) in the entire Apennines, like the ancient beech forests of Cozzo Ferriero and Mount Pollinello (WHL UNESCO).

To preserve this important heritage the park made a "Forest Fire Prevention Plan" aimed to predict, prevent and actively fight against forest fires. It is drawn up in compliance with the Italian Law no. 353/2000 «Framework law on forest fires». The law specifies that for the natural parks and natural reserves the plan is proposed by the management body of the area. Subsequently, with a collaborative approach,

Local association for civil protection.



First intervention.

it is approved by the Ministry of the Environment in agreement with the interested Regions, after consulting the State Forestry Corps.

The plan is based on the cooperation with local associations of civil protection. Indeed, the park authority signed different agreements with them, aimed to establish some actions to prevent forest fires. For example for the strengthening of lookout points, sighting with ultralight aircraft, controlling automatic remote sensing, and first intervention. These contracts are an example of "responsibility contracts": it means that during the forest fire season (from June to September) the park provides a sum of money to pay for the activities of the local team in charge of controlling a specific area. But the contract provides for a bonus based on the results of the activity. Starting from 100% of the money provided by the park, if during the time of the agreement, the surface area affected by the fires does not exceed 50% of the average annual surface area burned in the previous five-year period in the territory entrusted to the association, it can be reduced to 50%, and to 20%. If the surface area affected by fires exceeds 80% of the average annual surface area burned in the previous five-year period the sum is reduced to 0%.

With the accountability of the local associations the firefighting plan works successfully, in fact from 2007 to 2023, if we exclude the notable extraordinary events of 2017, forest fires were reduced by approximately 90%.

In our opinion it represents an important example of involving the local people, through the cooperation with local associations of civil protection, to defend the unique forest heritage of the protected area.

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Psiloritis UNESCO Global Geopark, Greece

RescueME - A Cultural Landscape Approach to Resilience. Co-creating two impact chain workshops with local stakeholders in Psiloritis Geopark



RescueME (Resilient Cultural Landscapes) is a Research project funded by the Horizon Europe programme and operates with the support of a consortium of 17 research and technology partners. It focuses on the enhancement of the resilience of coastal cultural landscapes (CLs) in Europe. RescueME is going to produce digital tools and innovative solutions for climate change adaptation and natural disaster risk management in five target areas, including Psiloritis UGp. Planned actions focus on shielding the northern coast of the Psiloritis UGp (parts of the Municipalities of Mylopotamos & Rethymnon) from the impacts of extreme weather phenomena such as extreme heatwaves, droughts, water shortages and, secondarily, floods.

In particular, local stakeholders of the project have so far been engaged in two “impact chain” workshops (ICWs) to address the socio-economic impacts from heatwaves and temperature rise and possible adaptive measures in this coastal cultural landscape.

On 11th October 2023, at the first ICW, 13 local stakeholders from the public and private sector gathered at Panormos in Crete in an interactive group session to discuss how they perceive the existing and potential future climate-related hazards in the region. The workshop’s results revealed how the selected area’s climate-related hazards, such as the rise of winter temperatures, may cause impacts on agriculture, culture, ecosystems, infrastructure, people, tourism and Crete’s economy. At the same time, the participants’ discussions explored how the impacts are affected by exposed elements of the CL, apparent sensitivities and capacities in these sectors. Therefore, the ICW concluded in an effort of the stakeholders to propose potential adaptation measures.

On 2nd February 2024, at Aggeliana in Crete, a



deeper review of the same topic was undertaken by 12 different local stakeholders from targeted sectors. This time, the focus of ICW2 was only on agriculture and tourism, since these are the main driving forces in the economy of Crete. At that workshop, new adaptation measures were also addressed.

So, how will RescueME use this information in the next steps of the project? This task is going to support the identification and co-creation of resilience measures and inform a multi-level assessment of impacts from climate change and natural hazards at the European and local level. It will also contribute to the development of resilience strategies.

All these actions are only the beginning of a long co-creation and decision-making process to protect our common heritage with the collaboration of project partners and local actors.

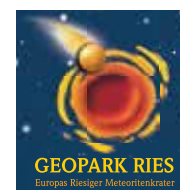
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The second impact chain workshop (ICW2), a group photo of the RescueME stakeholders



The boundary of the RescueME ICW2 area on the map is defined by the blue line.



UNESCO Global Geopark Ries, Germany

Geopark Ries integrates “achieving from the bottom up” in management structure



For years, “hiking around the crater rim” was the most common request of interested visitors—and is now possible on the 128-km-long Ries Panorama Trail.

Photo by Dietmar Denger.

The Swedes’ Way hiking trail was the idea of the town archivists of Nördlingen and Bopfingen to commemorate a significant local event in the Thirty Years’ War.

Photo by Dietmar Denger.

From its very beginning, the Geopark Ries has prioritised development from the “bottom up” and integrated appropriate procedures into its management structure. Through the years, other inclusive opportunities emerged, and interesting and innovative projects have resulted from these initiatives.

The management structure of the UGp Ries includes five Expert Teams to provide a specialized input in various topics and cover all relevant thematic areas: 1-Science, 2-Nature, 3-History, 4-Industry, 5-Tourism. The core team with approximately 60 members are experts in their respective fields (e.g., geologists, representatives of organisations or museums) as well as associations (e.g., nature conservation) and institutions or businesses, as well as interested individuals (e.g. hobby archaeologists, plant specialists).

Ideas for the development and management plan of the UGp Ries are developed in workshops and regional conferences with the Geopark management, the Expert Teams, mayors, district administrators and tourist-information representatives. An especially valuable partner is the local tourism association, Ferienland DONAURIES, which co-operates in staffing joint trade-show booths at many tourism conferences. Participation at tourism

trade shows not only increases visibility and builds awareness among the public, it also offers insights into trends and interests. Geopark Ries tour guides also provide ideas and feedback.

For years, “hiking around the crater rim” was the most common request by visitors to the Geopark and at tourism fairs. The development of the Ries Panorama Trail was a daunting task, involving 20 participating municipalities and many more individual landowners, but cooperation with UGp Ries and Ferienland DONAURIES succeeded. The 128-kilometre trail is divided into seven daily stages, each with at least one restaurant and overnight accommodation.

Other hiking trails were motivated by local interests: The 7-Hills Trail, for example, was suggested and implemented by an amateur archaeologist. The 18-kilometre - long loop connects geological, archaeological and historical features as it crosses seven prominent hills offering panoramic views of the Ries Crater.

The Swedes’ Way hiking trail was the idea of the town archivists of Nördlingen and Bopfingen. The 19-kilometre trail commemorates the march of the Swedish-Protestant army, on 5 September 1634 during the Thirty Years’ War, from Breitwang near Bopfingen towards the Albuch south of Nördlingen.

Member municipalities often suggest geological outcrops for development by the Geopark: Recently implemented infrastructure projects include, for example, the Otting quarry and the Wennenberg outcrop.

The UGp Ries is now taking steps to ensure future involvement from the bottom up—and from younger participants. Through its network of Geopark Ries Schools, the Geopark Ries brings a message of regional identity and sustainable development to young people of all ages and educational levels, and young people are encouraged to engage with geological history and sustainability, assuring “bottom up” participation for generations to come.

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The 7-Hills Trail was suggested by a local amateur archaeologist to connect geological, archaeological and historical features—and provides panoramic views of the Ries Crater.

Photo by Dietmar Denger.

Rocca di Cerere UNESCO Global Geopark, Italy Kore Siciliae: The Power of the bottom-up approach. Collaboration in Promoting Sustainable Tourism in Rocca di Cerere Geopark



In a remarkable example of collaboration, several local small and medium enterprises (SMEs) in Rocca di Cerere UNESCO Global Geopark have joined in the consortium 'Consortio Together' to create the brand Kore Siciliae. This initiative aims to enhance the unique characteristics of the Rocca di Cerere UNESCO Global Geopark by promoting geotourism, an approach that connects the geological, natural, and cultural heritage of the area with the well-being of its communities.

Kore Siciliae exemplifies how local businesses can amplify their impact through cooperation. By forming a consortium, these SMEs can share resources, exchange ideas, and learn from one another, creating a replicable model that benefits both members and the wider community. The collaboration fosters the development of tourism services under the Kore Siciliae brand, which stands as a mark of quality, authenticity, and sustainability.

The consortium's efforts go beyond marketing and branding; they focus on community involvement, ensuring that tourism development aligns with local values and needs.

Among the key initiatives from the past year, the consortium launched a new e-commerce website offering both tangible products and intangible services under the unified Kore Siciliae brand. This platform allows consumers to purchase local products and experiences that embody the region's cultural and environmental heritage.

In addition, an event called Kore Siciliae: Storie di Aziende e Territori was organised, and specifically targeted adolescent audiences to promote healthy lifestyles. This initiative used simple language to inform young people about the importance of healthy eating, starting with snacks.

Another significant moment was the organisation of the GeoFoodFest, a weekend event dedicated to Food within the Rocca di Cerere Geopark. All the participating businesses have been committed to using tools that tell the «story» of their products.



Bee experience at one of the consortium businesses.

This effort aims to provide visitors and travelers with authentic, engaging experiences that respect the environment and raise awareness of their historical, environmental, and cultural heritage.

The Kore Siciliae project is more than just a tourism initiative; it is a model of sustainable economic development driven by local actors. By offering an authentic and transformative experience rooted in the mythology and traditions of the land, through the myth of Proserpina (Kore for the local people), the project connects tourists with the history and culture of the territory. The consortium serves as a platform for networking, collaboration, and knowledge-sharing, providing SMEs with the tools they need to thrive in the modern tourism landscape.

Kore Siciliae highlights the importance of bottom-up initiatives in achieving sustainable and resilient tourism development. It demonstrates how collaboration among stakeholders, local businesses, community organizations, and public entities, can drive economic growth while preserving cultural and environmental heritage.

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Cheese experience at one of the consortium businesses.



Example of some of the products of excellence under the unique 'Kore Siciliae' label.



Saimaa UNESCO Global Geopark, Finland South Karelian Nature Week in Saimaa UNESCO Global Geopark



Nature Week family sports event 2024.

Photo by Veera Hakkarainen.



Students investigate animal tracks.

Photo by Veera Hakkarainen.

The Finnish Sport Federation of South-Karelia (EKL) organises the South Karelian Nature Week in the Saimaa UNESCO Global Geopark every year. The week is especially aimed at early childhood education and primary education in South Karelian. All primary schools and kindergartens in South Karelian are invited to take part in the theme week in February. The aim of this theme week is to encourage children to explore and learn in nature, to teach wilderness skills, to offer comfortable nature experiences and increase their knowledge of South Karelian nature. Participation in Nature Week is completely voluntary and free of charge.

Nature Week continues the 60-year tradition of cross-country skiing, promoting outdoor activities, cultural history, and health benefits, fostering enthusiasm for outdoor activities among new generations.

Exploring nature, working together, and using the resources of partners

Participants will be provided with freely usable material. However, each early childhood educator and primary school can build their own version of the Nature Week. The diversity of the week is enhanced by the services offered by competent partners.

The theme week offers the opportunity to implement a multidisciplinary study module combining outdoor activities, working together, and using resources provided by local and regional partners. The event encourages students and teachers to move their learning environment into nature, promoting physical activity and a sense of community.



Building birdhouses 2023.
Photo by Mikko Ikävalko.

Saimaa UNESCO Global Geopark and Nature Week

Saimaa UNESCO Global Geopark is an annual participant in the Nature Week. For example, in 2023, children and young people were encouraged to build birdhouses. Participants were given building instructions and a separate construction video to help them, which made the project accessible and inspiring.

In 2024, Saimaa Geopark participated in Nature Week's family sports event, educating participants in nature using track mats, raising environmental awareness,

and promoting biodiversity protection.

There is also an annual competition to design a logo for the Nature Week. The competition was open to all registered schools and early childhood education centres. The image to be used as the logo for next year's Nature Week will be chosen by a jury of event organisers. The winning image will be used to promote the 2025 Nature Week.

In 2024, the design competition results were displayed in the Saimaa Geopark Visitor Centre. The theme was «Fun things to do on Lake Saimaa», and the images focused on the cultural or natural aspect as part of the landscape shaped by the ice age. The competition encouraged participants to explore and express themselves through art, which is a valuable part of the learning process.

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Sierras Subbéticas UNESCO Global Geopark, Spain Strengthening the identity of the territory

The successful revalidation of Sierras Subbéticas UNESCO Global Geopark for another four years in 2023 represents a recognition of the territory's work in various areas, such as geo-education, geo-conservation, sustainable development, geo-tourism, and cooperation. This achievement is symbolised by the awarding of the Green Card, which highlights the collective effort at both local and institutional levels. It marks the consolidation of a project that began in 2006, where today the inhabitants of Sierras Subbéticas, entrepreneurs, associations, and local government take pride in this acknowledgment of their collective efforts. It is, therefore, necessary to highlight this achievement and simultaneously encourage all stakeholders to continue working in the same direction.

In this spirit, the revalidation event took place on 10th June, aiming to share the news of the obtained Green Card within the partners, congratulating them for their work and collaboration with the Sierras Subbéticas Geopark, and motivating them to stay on course. The event was attended by around fifty participants, including members of the regional government, the Scientific Committee, the Governing Board, entrepreneurs, administrators and associations. Following the presentation, a workshop called «Cooking the Geopark» took place, in which attendees, acting as students training in the local gastronomy, were asked to think of the ingredients needed to «cook» the Sierras Subbéticas Geopark. Their ideas were written on adhesive labels and



Green Card distributed to the inhabitants of the Geopark municipalities. On one side of the card, the achievement is highlighted, and on the other, the characteristics and benefits of being a Geopark territory are described.

placed on pieces of the Geopark's map. The activity concluded with the complete configuration of the map, representing the importance of community for the development of such projects.

However, it was also essential for the news of the Geopark's revalidation to reach the inhabitants of Sierras Subbéticas, so that this community could identify their territory as a UNESCO Global Geopark and take pride in having been awarded the Green Card. Therefore, in the four days leading up to the event, two short videos were posted on the Geopark's social media channels with the slogan «something is cooking in the Geopark,» creating anticipation and curiosity. In the five days following the revalidation event, two additional videos were posted, one on the same day

as the Green Card presentation, explaining the significance of this recognition, and another explaining what a Geopark is and the benefits it brings. This information was also disseminated in the most frequented urban spaces of the Geopark municipalities through green cards being distributed by a man dressed as a football referee.

All these actions related to the revalidation of the Sierras Subbéticas were designed to remind the inhabitants of the Geopark that they are essential to its success and sustainability, as their active participation and local knowledge enrich the management, conservation, and promotion of the territory.

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Members of the regional government, the Scientific Committee, the Governing Board, entrepreneurs, administrations and associations derive their conclusions from the 'ingredients' needed to 'cook' a Geopark in the revalidation event that took place on 10th June.



Sobrarbe-Pirineos UNESCO Global Geopark, Spain Resource management, from the bottom-up. Programme of Collaborating Entities in Sobrarbe-Pirineos Geopark



Sobrarbe fossils (very sweet).

Photo by Sobrarbe-Pirineos UGGp.

Products from the collaborating organisations at the fair.

Photo by Sonia Sampietro.



destination.

Collaboration with the Geopark provides organisations with significant benefits, such as national and international promotion through the UNESCO Global Geoparks Network. It also allows them to be part of the Ecotourism Club in Spain, which gives them visibility and support in the ecotourism market, while strengthening their competitiveness.

Thanks to the collaboration of local companies and associations, heritage conservation and the dissemination of local culture are promoted, while at the same time generating a deep sense of belonging and responsibility among the inhabitants, who become key players in the preservation and promotion of their environment.

This programme strengthens sustainable practices and promotes the conservation and enjoyment of heritage. Thus, Sobrarbe-Pirineos UGGp is organised as an internationally recognised destination in the field of ecotourism, a development model that combines economic growth with environmental responsibility.

In addition, the programme contributes to strengthening the local socio-economic fabric by providing training, promotion, access to quality labels and technical support to organisations so that they can adapt to the challenges of climate change and apply sustainable practices. This allows them to design solutions adapted to their specific needs and to the environmental challenges of the territory.

Undoubtedly, this community-centred development model guarantees not only long-term sustainability, but also the conservation of the natural and cultural values of the Geopark.

Thus it establishes a path towards inclusive development, respectful of the environment in which heritage becomes a major resource for improving people's quality of life.

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Accommodation for collaborating organisations. Accommodation, located in the Geopark, is part of the Geopark's Collaborating Organisations programme.

Photo by Anchel Belmonte.

Swabian Alb UNESCO Global Geopark, Germany Achieving From the Bottom Up - the Swabian Alb Geopark's project on Instagram on the occasion of World Cleanup Day



The bottom-up approach is a driving force when it comes to sustainable change. The Swabian Alb UGGp is not only dedicated to protecting the unique karst landscape, but also to the idea that environmental protection often arises from civil society initiatives. One example of this principle is the collaboration between the Swabian Alb UGGp and Instagram influencer Martina, known as 'Ulmer Dreckspatz'.

An Instagram campaign for World Cleanup Day
A joint video was created for World Cleanup Day 2024, the largest global citizens' movement against environmental pollution. In the clip, Martina talks about her voluntary work using the impressive backdrop of the Hohle Fels cave in Schelklingen. She has been collecting garbage in and around Ulm in her free time for nine years. What began as a personal reaction to the increasing pollution in her surroundings has developed into a passion that she shares with her growing Instagram community. With over 2,000 followers, Martina motivates people around the world to stand up for a clean environment.

The Swabian Alb Geopark saw the potential in this initiative to extend the idea of sustainability. Through Martina's Instagram presence, the message of waste avoidance and the sustainable use of resources could be made accessible to a wider public. This type of collaboration shows how an individual can start a movement that is gaining more and more support through social media.

Communicating sustainability digitally
As part of the UNESCO Sustainable Development programme, the Swabian Alb Geopark is demonstrating how local initiatives can achieve global



**Success of
the rubbish
collection
campaign.**

Photo by Martina
Freund.

reach through modern communication channels. Projects like this promote awareness of environmental protection in the region and beyond. They inspire people to become active themselves and make their own contribution.

The cooperation with the "waste fluent" Martina shows that small steps can lead to big changes. It illustrates that bottom-up developments not only have a local impact, but also gain global significance through the power of social media. The Swabian Alb Geopark is proud to support this movement and to use its platform to make the commitment of citizens like Martina visible. Together, they are sending a strong signal for environmental protection - from the Swabian Jura to the whole world.

The Geopark's targeted public relations work strengthens initiatives like this and gives them a wider reach. This shows how "Bottom Up" projects can bring about positive change in the long term - a message that is relevant both locally and globally.

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**Rubbish
collector and
influencer
Martina from
Ulm shows off
her finds.**

Photo by Martina
Freund.



Terras de Cavaleiros UNESCO Global Geopark, Portugal Sowing today to plant tomorrow in Terras de Cavaleiros Geopark



**Reforestation
campaign in
Terras de
Cavaleiros
UGGp.**

**Workshop on
sowing seeds
in Terras de
Cavaleiros
UGGp.**



**Student
participation in
sowing seeds.**

Over the course of a week, the Terras de Cavaleiros UNESCO Global Geopark (UGGp) held the workshop 'Sowing today to plant tomorrow' with students from the territory's schools. This initiative, which has been running for about a decade, has the main aim of sensitising young people to the importance of native forests and their role in preserving local ecosystems. Over the years, the activity has provided a concrete learning experience and direct contact with nature.

The workshop emphasises the crucial role of native forests in maintaining the biodiversity of habitats, promoting local flora and fauna. The roots of native trees prevent soil erosion and help retain moisture, favouring the recharge of aquifers and maintaining water resources. Adapted to local conditions, these trees are resilient, effective at sequestering carbon and play an essential role in mitigating climate change. Their resistance to pests and diseases reduces the need for human

intervention, making them more sustainable. In addition, they provide wood, fruit, and other valuable resources for local communities.

During the workshop, the students sowed acorns collected from native forests. In the classroom, under the guidance of their teachers and the Geopark teams, they sowed the seeds in pots. This practical stage allows them to follow the germination process, strengthening their connection with nature. Next year, on Autochthonous Forest Day, the sprouted trees will be planted in selected areas, preferably land that has been affected by fires. This strategic choice promotes the recovery of affected areas and sensitises students to the importance of reforestation.

This initiative has proved essential for building a more resilient and sustainable future. Sowing seeds, although simple, has a profound impact on environmental conservation and ecological balance. By actively involving young people, the Geopark creates a solid environmental awareness that will last throughout their lives.

The mission of the Terras de Cavaleiros UGGp is to instil in young people the concept of environmental responsibility. By raising awareness among the new generations, it is training future citizens who are prepared to adopt sustainable practices and minimise negative impacts on the environment. 'Sowing today to plant tomorrow' is more than a metaphor: it represents a commitment to preserving natural resources and building a healthier planet for future generations.

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TERRA.vita UNESCO Global Geopark, Germany

Young graffiti artist sprays TERRA.vita's geologic history on observation towers in TERRA.vita Geopark

At over 20 metres high, the two sister towers Hermannsturm and Varusturm stand on mountains near the town of Georgsmarienhütte. They are located on the Dörenberg, at 331 metres the highest elevation of the UNESCO Geopark TERRA.vita, and on the Lammersbrink respectively, around 3 kilometres to the northwest of the Dörenberg. From here, visitors have an impressive view of almost the entire Geopark area. The towers themselves are less impressive, they merely radiate the idyllic appearance of a barren concrete building.

This gave TERRA.vita the idea to present the region's 300 million years of Earth's history on both towers, thus turning the towers themselves into a visual highlight. In collaboration with the city of Georgsmarienhütte. The contract for this project was awarded to the spray art and graffiti agency "Bunte Hunde" ("Colourful Dogs") from Osnabrück. The concept and most of the painting work was carried out by the young artist Christian Aretz.

On the Hermannsturm, the artist and his colleagues sprayed TERRA.vita's main rock layers, extending from the Carboniferous to the Quaternary, and the most important fossils found in these rock layers. As a counterpart to the Hermannsturm, they painted the palaeo-environments reconstructed from the rocks as well as the plants and animals



reconstructed from the fossil remains on the Varusturm. In the upper sections of both towers, the most recent history complements the geologic history. In addition to today's mixed forest and its forest animals, archaeological artifacts, and soil types of the Geopark as well as the cultural and historical highlights of the town of Georgsmarienhütte are presented. The latter include, for example, the historic "Alte Wanne" building made of Osning Sandstone and the annual funfair "Oeseder Großkirmes", that celebrated its 480th event in 2024.

Additionally, a search puzzle for children has also been incorporated into the wimmelpicture of the Varusturm. Numerous "Varus masks", painted in the style of an ancient Roman ceremonial mask found in the Geopark area, are hidden in the palaeo-environments, the number of which has to be guessed.

Thanks to the spray art, the unsightly sister towers of Georgsmarienhütte have not only become visual highlights and landmarks, they also create awareness and appreciation for the geological uniqueness of the UNESCO Geopark TERRA.vita and the urban and cultural life of Georgsmarienhütte. Even though the process from idea to completion was bottom-up, the financing was top-down, so to speak. The Geopark funding from the Lower Saxony Ministry of Economics has been used to paint both towers. This meant that the budget of the city of Georgsmarienhütte was spared during a difficult economic time for local authorities, but the landscape attraction was nevertheless enhanced. In total, the project contributes to the SDGs 4 (Quality education) and 9 (Industry, innovation, and infrastructure).

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Trollfjell UNESCO Global Geopark, Norway

"On the right path" in Trollfjell Geopark



"Where is the right path?"
These four women eagerly discuss the trails in their own "backyard" during one of the public meetings arranged by the Geopark.

Photo by Kamilla Pedersen, Trollfjell Geopark.

The trails that are promoted to tourists have clear signs and markings as well as good parking capacity. The green and red colour coding indicate easy and challenging trails, respectively.

Photo by Olav T. Sola, Trollfjell Geopark.



ings. Maps were printed and people from all parts of the community gathered around the tables to discuss where the trails led, condition of the trails, considerations along the trails, as well as wishes and needs for the future. Some landowners wanted less traffic outside their doorstep, others wanted more as this would be good for their business. Some uttered concern regarding an exposed and hazardous trail and a new path was suggested. For many trails, it was decided to lay wooden pathways to protect the peat, and at the same time facilitate access. At the end of the meetings many of the locals agreed to collect GPS-track data to update the trail database. Representatives from various volunteer organisations also gave feedback to the finalised management plans to make sure that the right measures were prioritised.

By involving the community in every part of the trail management process, the result was trail management plans with a broad sense of ownership and commitment. When the inhabitants of the Geopark actively contribute to directing tourism to areas that can withstand higher pressure, vulnerable nature is protected while everything is in place for sustainable economic growth.

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Children from a local school are using the newly upgraded trail near their school.

Photo by Bergliot K. Storruste, Trollfjell Geopark.



Vikos-Aoos UNESCO Global Geopark, Greece

Rocks Under the Microscope: A Photographic Exploration of Vikos-Aoos Geopark



a. The interpretive panel at viewpoint "Panorama of the Kapesovo Fault and the Southwestern Flanks of Mt Tymfi" and the participants in the Vikos-Aoos Geopark re-evaluation (July, 2024), b. Aerial view of the Vradeto karstic field with a complex network of joints through the limestone strata, c. Interior detail of the sulfur cave named "Skordyli Cave" located at the "Mikra Stena Sarantaporou" Gorge.

Between 2022 and 2024, the Vikos-Aoos Geopark launched the ambitious project "Enhancement of Geosites and Geological Formations and Evaluation of Visitability of Geosites and Landscapes of High Aesthetic Value". A key part of this initiative was installing three outdoor viewing areas among significant geosites. These viewpoints serve as educational platforms and panoramic stops, allowing visitors to engage with the region's unique geology while enjoying breathtaking views. Equipped with interpretive panels, the structures offer detailed information about each site's geological, natural, and cultural features.

The "Panorama of the Kapesovo Fault and the Southwestern Flanks of Mt Tymfi" viewpoint reveals how tectonic activity has shaped the local landscape. Interpretive panels describe nine distinct geological features, including the impressive U-shaped valleys carved by glaciers during the Pleistocene. Aerial photographs and diagrams complement the view of Mount Tymfi, showcasing its limestone formations and the geomorphic effects of glacial (e.g. moraine deposits) and karst erosion (e.g. karstic fields and shafts). Similarly, at the viewpoint "Panoramic View of the Voidomatis River Valley", visitors encounter the amphitheater-like arrangement of mountains defining the valley and the iconic «Towers of Papingo», sculpted by limestone erosion and the activity of the Astraka fault. The panels delve into

nine focus points, describing the regional karst system, and detailing its springs and underground hydrology that contribute to the flow of the Voidomatis River. Additionally, the terrace units, sources of chert for the valley's Palaeolithic rock shelters, are detailed.

The "Panorama of the Konitsa Fault and the Lowlands of the Aoos River" viewpoint atop Prophet Elias Hill offers a sweeping vista of the western part of the Geopark. Visitors can trace the 24-km long Konitsa fault and learn about the structural features of this active seismogenic fault. Furthermore, they can explore the sedimentary processes of the Aoos River, learn about the sulfur caves of Sarantaporos River Valley and admire the Smolikas (2637 m) and Gamila (2497 m) peaks. Interpretive materials highlight seven key features, blending geology with the striking natural beauty of the region. These viewpoints provide not only stunning landscapes but also a deeper understanding of the geological forces that shape them. By combining scenic appreciation with educational insights, the Vikos-Aoos Geopark invites visitors to connect with the history of the region, fostering sustainable tourism and awareness of its unique geological heritage.

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Vis Archipelago UNESCO Global Geopark, Croatia

Preserving Geological Heritage: Mala Palagruža within the Vis Archipelago Geopark



Aerial view of Mala Palagruža and surrounding rocks during the July 2024 geological expedition.

The Vis Archipelago UNESCO Global Geopark, located in the Croatian central Adriatic Sea, encompasses the islands of Vis, Biševo, Svetac, and several offshore islets. It features internationally significant geological sites, including the geological natural monuments Jabuka and Brusnik, as well as the geomorphological natural monuments the Blue Cave and Medvidina Cave on Biševo and the Green Cave on Ravnik Islet. However, the Palagruža Archipelago, situated at the Geopark's southernmost part, remains unprotected despite its outstanding geological significance.

Mala Palagruža the second-largest islet in the Palagruža Archipelago, is significant for its exceptional geological features. It is home to the Middle Jurassic Mala Palagruža Member, a geological unit unique to this islet. Composed of silicified crystalline dolomites interlayered with cherts, it exhibits a stratigraphy unparalleled in the Adriatic. This formation was first identified in the 2012 Basic Geological Map of Croatia by the Croatian Geological Survey (HGI-CGS). Dr. Tvrtko Korbar, a geologist from HGI-CGS, has played a key role in its mapping and subsequent research.

A Geological Expedition

To begin the process for the protection of Mala Palagruža as a geological natural monument, a geological expedition took place from 11–13 July 2024, led by Prof. Kristina Pikelj of the University of Zagreb, Faculty of Science. The team included Dr. Maja Martinuš, Dr. Andrea Čobić, and Filip Prelec, MSc in Geology, from the Vis Archipelago UNESCO Global Geopark. Lana

Schmidt, Executive Director of the Geopark, supported the organisation.

Royal Marine Croatia, a local partner with expertise in remote islet expeditions, provided logistical support. Skipper and diver Jakov Smolić retrieved marine sediment samples by free diving to depths of 12 metres, while Andrea Sviličić assisted with logistics. The team stayed at the Adriatic's largest lighthouse on Vela Palagruža.

Preliminary Findings

The expedition highlighted the unique geology of Mala Palagruža. The Mala Palagruža Member features decimeter-bedded silicified dolomites alternating with cherts, forming a "layered cake" structure. Coastal erosion, driven by Sirocco winds, has shaped cliffs, sea arches, and caves. Beach sediments, primarily weathered chert nodules, are a rarity in the eastern Adriatic.

Preliminary findings were presented at the 2024 European Geoparks Network (EGN) Conference in Keflavik, Reykjanes UNESCO Global Geopark. These results underscore the islet's geological importance and pave the way for its protection. The next steps involve collaboration with Croatia's Ministry of Environmental Protection and Green Transition, the Public Institution for Managing Protected Areas in Split-Dalmatia County "Sea and Karst," and other stakeholders to finalise its designation as a geological natural monument.

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The 2024 Mala Palagruža geological expedition team: Dr. Kristina Pikelj, Dr. Maja Martinuš, Dr. Andrea Čobić, Filip Prelec, MSc in Geology, diver Jakov Smolić, and Andrea Sviličić.



The 2024 Mala Palagruža geological expedition team: Dr. Kristina Pikelj, Dr. Maja Martinuš, Dr. Andrea Čobić, Filip Prelec, MSc in Geology, diver Jakov Smolić, and Andrea Sviličić.

Vulkaneifel UNESCO Global Geopark, Germany New Information Concept at the Steffeln Volcano Garden: Discover the Volcanic Past of the Vulkaneifel Geopark



The “Steffeln Volcano Garden”, a flagship geosite within the UNESCO Global Geopark Vulkaneifel, now features a state-of-the-art information concept that combines modern design with the latest scientific insights. This enhancement celebrates the site’s pivotal role in the early development of geoparks and geotourism, ideas born in the Vulkaneifel that gained international recognition with the establishment of the European Geoparks Network (EGN) in 2000.

The so-called Volcano Garden owes its existence to the foresight of the local community in Steffeln, who recognised its value as a geological treasure in the 1990s. At a time when former quarries were often filled in or repurposed, the people of Steffeln decided to preserve this site, leaving its volcanic layers exposed. Their decision not only safeguarded a window into the region’s dynamic volcanic history but also laid the groundwork to evolve into a regional strategy that established the Vulkaneifel to pioneer the geopark concept.

The newly updated information concept builds on this legacy, featuring multilingual panels in German, English, and Dutch. These panels present complex geological findings in an engaging and accessible way, making the site a resource for visitors of all ages and backgrounds. Central to the new content is the incorporation of recent discoveries from the “Volcanological Field Studies and Remapping of the Nature and Geopark Vulkaneifel” project, which identified four distinct eruption phases of the Steffelnkopf Volcano. Such findings are vividly illustrated on-site, linking scientific research to the visible volcanic features.

The site’s preserved quarry, with its exposed layers of volcanic deposits, provides an invaluable resource for understanding the region’s geological past. Enhanced by the updated interpretation



materials, visitors can now explore the volcanic history of the Vulkaneifel while appreciating the importance of community-driven conservation efforts. It reflects the Vulkaneifel’s long-standing commitment to geoscience education, sustainable tourism, and the celebration of its unique geological heritage.

The Volcano Garden exemplifies the bottom-up approach that defines UNESCO Global Geoparks. The Steffeln community’s initiative to preserve the site demonstrates how local action can foster geotourism, education, and heritage preservation. This initiative was realised in collaboration with the local tourism agency and the municipality of Steffeln. As one of the early adopters of geotourism, the Steffeln Volcano Garden continues to inspire the global geopark community by demonstrating how local action can have a worldwide impact.

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Redesigned Information Concept at the Steffeln Volcano Garden: Representatives from the UGGp, the local tourism agency and the Vulkaneifel district unveiled multilingual panels showcasing the region’s geological history.

© Natur- und Geopark Vulkaneifel.

The interpretive panels provide multilingual information (German, English, and Dutch) into the region’s volcanic history. Featuring visuals such as illustrations, maps, and photographs, they explain the surrounding geological outcrops as windows into Earth’s dynamic past.

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Goats act as four-legged landscape managers, helping to keep the geological outcrops in the Vulkangarten accessible.

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UNESCO named 18 new Geoparks in 2024

UNESCO’s Executive Board has endorsed the addition of 18 sites to the UNESCO Global Geoparks network. This brings the total number of geoparks to 213 in 48 countries (27 March 2024)

The new geoparks are situated in Brazil, China, Croatia, Denmark, Finland, France, Greece, Hungary, Poland, Portugal and Spain. There is an additional new transboundary geopark spanning Belgium and the Kingdom of the Netherlands.

The UNESCO Global Geopark designation was created in 2015. It recognises geological heritage of international significance.

Geoparks serve local communities by combining the conservation of their significant geological heritage with public outreach and a sustainable approach to development.

UNESCO continues to promote the geopark concept in regions where geoparks are less common, notably in Africa, the Arab States and Small Island Developing States. UNESCO does this by facilitating expert missions, tailored training sessions and individual consultations on both a national and local scale, to guide the preparation of applications for UNESCO Global Geopark status.

The newly designated UNESCO Global Geoparks are:

- | | | |
|--|--|---|
| 1. Schelde Delta, UGGp, Belgium and Kingdom of the Netherlands | 7. Wugongshan, UGGp, China | 13. Normandie-Maine, UGGp, France |
| 2. Uberabe, UGGp, Brazil | 8. Xingyi, UGGp, China | 14. Meteora Pyli, UGGp, Greece |
| 3. Enshi Grand Canyon-Tenglongdong Cave, UGGp, China | 9. Biokovo-Imotski Lakes, UGGp, Hungary | 15. Bükk Region, UGGp, Hungary |
| 4. Linxia, UGGp, China | 10. The South Fyn Archipelago, UGGp, Denmark | 16. Land of Extinct Volcanoes, UGGp, Poland |
| 5. Longyan, UGGp, China | 11. Impact Crater Lake, UGGp, Finland | 17. Oeste, UGGp, Portugal |
| 6. Mount Changbaishan, UGGp, China | 12. Armorique, UGGp, France | 18. Calatrava Volcanoes. Ciudad Real, UGGp, Spain |



SCHELDE DELTA UGGP, BELGIUM AND KINGDOM OF THE NETHERLANDS



UBERABE, UGGP, BRAZIL



ENSHI GRAND CANYON-TENGLONGDONG CAVE, UGGP, CHINA



LIXIA, UGGP, CHINA



LONGYAN, UGGP, CHINA



MOUNT CHANGBAISHAN, UGGP, CHINA



WUGONGSHAN, UGGP, CHINA



XINGYI, UGGP, CHINA



BIOKOVO-IMOTSKI LAKES, UGGP, HUNGARY



IMPACT CRATER LAKE, UGGP, FINLAND



NORMANDIE-MAINE, UGGP, FRANCE



BÜKK REGION, UGGP, HUNGARY



OESTE, UGGP, PORTUGAL



THE SOUTH FYN ARCHIPELAGO, UGGP, DENMARK



ARMORIQUE, UGGP, FRANCE



METEORA PYLI, UGGP, GREECE



LAND OF EXTINCT VOLCANOES, UGGP, POLAND



CALATRAVA VOLCANOES. CIUDAD REAL, UGGP, SPAIN

Biokovo-Imotski Lakes UNESCO Global Geopark, Croatia

Preservation of identity and reduction of vulnerability of karst areas in conditions of climate change and sustainable development in Biokovo-Imotski Lakes Geopark

The lecture by the executive director of the Geopark, Ivana Čapin, entitled «UNESCO Global Geopark Biokovo-Imotski Lakes - establishment and significance of the project for sustainable development»



On August 29 and 30, 2024, the two-day 12th National Expert Meeting for Biology and Geography Teachers of the Republic of Croatia was held in the Biokovo-Imotski Lakes UNESCO Geopark, in the Public Open University in Imotski.

The event was organised by the Education and Teacher Training Agency (AZOO) in cooperation with the Dr. Mate Ujević Gymnasium in Imotski and Geopark Biokovo-Imotski Lakes.

The topic of the conference was «Preservation of identity and reduction of vulnerability of karst areas in conditions of climate change and sustainable development».

The meeting covered topics from the field of sustainable development related to the identity, vulnerability and protection of karst areas. It consisted of plenary lectures, fieldwork, and selected examples of teaching practice in working with students. Through very interesting and professional lectures, we tried to draw attention to the impact of climate change on the sustainability of resources (water and food) and biodiversity in the karst areas of the Republic of Croatia.

Recent changes in climate and economic trends increasingly affect the landscape and the indigenous community. Through professional education, we try to guide the local community with the aim of strengthening its resilience in the karst areas of our country.

Of the ten very interesting topics, it is certainly important to mention the lecture by the executive director of the Geopark, Ivana Čapin, entitled



The lecture by Prof. Branimir Jukić, from the County Public Institution «Sea and Karst», entitled «Waters of the Imotski Region - Results of the latest research, Threats and Perspectives»

«UNESCO Global Geopark Biokovo-Imotski Lakes - establishment and significance of the project for sustainable development». She explained how significant the UNESCO Global Geopark project is, and what it means for the development of geotourism and the sustainable development of this area. When we talk about sustainable development and cooperation with partners, the Geopark first of all wants to encourage small producers, innovative crafts and new employment opportunities through the concept of geotourism.

Another very interesting lecture was presented by Prof. Branimir Jukić from the County Public Institution «Sea and Karst» entitled

«Waters of the Imotski Region - Results of the latest research, Threats and Perspectives». He focused on three main topics: results of the latest research, threats to water resources, and perspectives for the future.

Certainly, the importance of preserving water resources is crucial for the ecological balance and the quality of life of the local population. It is also important to establish sustainable water management for the long-term protection and use of this vital resource, and to solve problems that require an interdisciplinary approach involving cooperation between scientists, decision-makers and the local community.

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Bükk Region UNESCO Global Geopark, Hungary Bükk Geopark and the Golden Girls: A Case with the Old Hens' Association



Traditional gastronomic event in Mikófalva.



Éva néni (Aunt Éva) shares her knowledge about the geology of Bükk mountains in the Szomolya Cherry Festival.



ÖTYE club (elderly volunteers from Mikófalva) visited the Szeleta Park Visitor Centre, the exhibition site of the Bükk Region UGGp.

The primary goal of geoparks is to disseminate as widely as possible the geological values and cultural heritage of their territory. The elderly can also play a role in this, and we are delighted to present a recently formed volunteer organisation from the Bükk Region Geopark that has already achieved significant results.

In the village of Mikófalva, located in the Bükk Region UNESCO Global Geopark, an active association was formed a year ago, officially called the Bükki Kövirózsa Retired Association, but humorously calling themselves the ÖTYE (meaning Old Hungarian Hens' Association). Their name alone reveals that this group of 35 elderly, but rather «young for a long time» ladies is a very cheerful and humorous team.

They gather weekly, where they regularly sing folk songs, reminisce over old films capturing the village's significant events, and frequently come together to cook traditional local dishes, preserving the region's culinary heritage. They also engage in various crafts, such as making paper decorations with neighboring

Mónosbél or crocheting for the local kindergarten. These diverse activities represent a typical retirement community, but what sets them apart is their profound interest in geology.

With the formation of the group, the preservation and popularisation of the geological values of the Bükk Region has reached a new level. The enthusiasm and thirst for knowledge of the elderly are exemplary.

One of the defining figures of the ÖTYE is Éva Gasztonyi (in Hungarian: Éva néni; and approximately in English: Aunt Éva), a retired geologist who played a decisive role in compiling the application and professional materials for our Geopark. Thanks to her, we have collected all the cultural, industrial, and archaeological monuments of our 109 Geopark settlements, in addition to the geological values.

We can regularly count on her cooperation in Geopark programmes and the organisation of geo-tours, as Éva néni (Aunt Éva) leads a geo-tour to the beehive rocks for interested visitors at the annual Szomolya Cherry Festival. At our outreach events, she gladly talks to young people and children, and inspiringly introduces them to the beautiful geology of the Bükk.

The work of the Mikófalva volunteers is not only valuable for the Bükk Region Geopark but also offers the ÖTYE members an opportunity to live an active life and contribute to the transmission of the geo-heritage by sharing their knowledge.

In exchange for their active work in the Geopark, the ÖTYE group visited the interactive exhibit of the Szeleta Park Visitor Centre where its members could learn about the caves, geology, and archaeology of the Bükk. The trip provided a special opportunity for the elderly of Mikófalva to see in an exhibition environment the natural and cultural values they are actively involved in preserving, not to mention that such gatherings also have a significant community-building power.

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Comet Tsuchinshan-ATLAS over the moonlit impact crater lake Lappajärvi in October 2024, photographed from the eastern crater rim.

Photo by Tapio Niemi.

Lappajärvi UNESCO Global Geopark, Finland Landscape with an impact – the Impact Crater Lake Lappajärvi Geopark



Seventy-eight million years ago, life forms in what would become western Finland had a very bad day. A stony asteroid 1.6 km in diameter hit the 1.9 billion year old bedrock at 15–20 km/s. In this cosmic collision, energy equivalent to 17 million atomic bombs was released and a crater with a diameter of 22 km was formed. Today, the crater rim rises 100 m above the surface of the present-day Lake Lappajärvi. As a continuous waterbody within the rim of an impact crater, Lappajärvi is Europe's largest impact crater lake.

Now, the crater forms the core of the Impact Crater Lake Lappajärvi UNESCO Global Geopark. The Geopark is located in the beautiful lake district of western Finland and is hosted by the municipalities of Evijärvi, Lappajärvi and Vimpeli and the town of Alajärvi. It covers an area of 2300 km² and has a population of 16,850.

The administration of the Geopark is managed by the JPYP Business Service Ltd (Järvi-Pohjanmaan Yrityspalvelu Oy, JPYP), owned by the municipalities and businesses of the region. The main governing body is the Geopark Board, consisting of the mayors of the four municipalities, the managing director of JPYP, and members from the lake district's vocational institute and local tourism industry. The Board is advised by the Geopark Council with broader expertise from, e.g. tourism, education, and industry. The operative arm of the Geopark is the Core Team of an executive manager and a geologist.

The bedrock of the Geopark consists mostly of typical mica schists, gneisses, granite pegmatites and granitoids. Two other Palaeoproterozoic rock types are rarer: narrow strips of metavolcanic rocks, including pillow

lavas, snake through the Geopark. Within the metavolcanics are carbonate rocks, not normally encountered in western Finland. After the carbonate rocks were discovered in the mid-1800s, burnt lime became an important merchandise. They are still quarried in Vimpeli.

The impact created a variety of rock types, which are the youngest rocks in Finland. The most important one is the impact melt rock bearing the local name of karnäite. In the 1800s, it was discovered that the hard and fine-grained karnäite is excellent material for the bearings in the wind shaft in wind mills. This globally unique innovation spread throughout the lake district. The impact also preserved rocks, like early Cambrian sandstones, which contain the world's oldest microfossils of ringed worms.

Different phases of the Weichselian glaciation are evidenced by drumlins, eskers and palaeoshorelines high on the crater rim. Natura 2000 areas and nature preserves in the Geopark are mostly ombrotrophic raised bogs, inhabited by numerous endangered plant and bird species and, also by Finnish forest reindeer. Carbonate rock occurrences give rise to patches of protected herb-rich forests – a vivid demonstration of how geodiversity and biodiversity go hand in hand. Dozens of protected historic lime kilns as well as hundreds of pine tar pits dot the Geopark.

From mountain building and volcanism to impact cratering and glacial processes, diverse wildlife and fascinating history and culture – Impact Crater Lake Lappajärvi has it all.

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Pyhävuori ("Holy Mountain") on the southeastern rim in Alajärvi is where versatile geology, peculiar history – evidenced by the ruins of a hermit's dwelling seen here – and rich mythology come together.

Photo: Municipality of Lappajärvi.



High school students from Liceo Classico Statale "Francesco Vivona" in Rome, Italy and Lappajärvi Geolukio enjoying lunch.

ÖTYE members learn about the various geosites of our geopark.

Meteora - Pyli UNESCO Global Geopark, Greece

Uncovering a treasure of Geological, Natural and Cultural World Heritage Landscape in Meteora - Pyli



Highlights in the Meteora - Pyli UNESCO Global Geopark, Greece.

Meteora - Pyli Aspiring UNESCO Global Geopark is located in the Thessaly Region in the centre of mainland Greece. The area of the Geopark spans an area of 2,409.5 km² and includes the municipalities of Meteora and Pyli which belong to the Trikala Regional Unit. These two municipalities together host a rich geodiversity including the outstanding landscape of the Meteora breathtaking rocks, geological monuments, and protected areas teeming with biodiversity.

The Geopark is celebrated for the extraordinary geological formations of Meteora, a stunning array of sandstone pillars that formed approximately 60 million years ago. It is also one of the most significant centres of Orthodox monasticism, featuring monasteries that date back to the 14th century, a stunning blend of distinctive architecture and rich Byzantine art. Towering up to 400 metres, these majestic rock columns were sculpted over time by the natural processes of erosion and gradual weathering, creating one of Europe's most remarkable geological landscapes. This unique terrain is also home to numerous caves and gorges, providing exceptional opportunities for exploration and rock climbing.

The nearby Pyli area is renowned for its traditional stone bridges and ancient cobblestone paths, which have been carefully preserved and remain in use today. Notable historical structures, such as the Portaikos Bridge, trace their origins to the Ottoman Empire and stand as remarkable examples of folk architecture. The Koziakas range, stretching approximately 25 km from Kalambaka to Pyli, is a unique geological and ecological reserve.

The «Meteora-Pyli» Geopark is governed by a permanent management system established to

jointly monitor and evaluate its development. The Geopark's administration is a collaborative effort between the Region of Thessaly and the Municipalities of Meteora and Pyli. The Thessaly Regional Operational Programme, in partnership with these municipalities, is developing an Integrated Territorial Investment (ITI) that includes a comprehensive action plan with eight areas of intervention. These initiatives focus on protecting the unique geological formations, enhancing environmental awareness among residents and visitors, promoting sustainable tourism, and strengthening the region's economic, social, and cultural potential.

The mission of the Meteora - Pyli Geopark is to safeguard and celebrate the rich geological, natural, and cultural heritage of the region by achieving a harmonious balance between human needs and environmental stewardship. The Geopark envisions promoting a sustainable tourism model that honors both the environment and local traditions, offering authentic experiences to visitors while enhancing the local economy. By protecting unique geological landmarks like the iconic Meteora rock formations and highlighting the area's biodiversity and cultural heritage, the Geopark seeks to implement actions that foster the economic, social, and cultural prosperity of the local community. Its mission also emphasises raising environmental awareness among residents and visitors alike, through educational programmes and partnerships with local businesses and cooperatives, strengthening the region's identity and supporting long-term sustainable development.

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Oeste UNESCO Global Geopark, Portugal

Oeste Geopark, a new Geopark with Dinosaurs in Portugal



The stunning coastline of the Balear Peninsula is pounded by the strong Atlantic waves.

The Oeste UGGp is located in Central West Portugal 50 to 100 km North of Lisbon and encompasses six municipalities: Bombarral, Cadaval, Caldas da Rainha, Lourinhã, Peniche and Torres Vedras, covering a total area of 1,154 km². Of the 72 km of Atlantic coastline in this area, around 15 km are sandy beaches, a major attraction for locals and occasional or seasonal visitors. The landscapes and the exposure of geological layers in the coastal cliffs also attract interested parties, researchers and scientific tourists from all over the world.

The Geological heritage of this territory is mainly related to the incredibly rich findings of Jurassic dinosaur fossils, as well as the detailed record of the Mesozoic opening of the North Atlantic.

The geological record extends from the Upper Triassic to the Cretaceous, with some Cenozoic cover, but it's clearly dominated by Late Jurassic rocks (both siliciclastic and carbonates). These units contain abundant fossils of dinosaurs (including 12 holotypes) and other vertebrates, as well as several rare dinosaur egg nests. The Jurassic record also includes an important Global Boundary Stratotype Section and Point (GSSP), defining the base of Toarcian Stage. A total of 22 internationally relevant geosites have been recognized by IUGS.

The alpine collision uplifted and exposed the Mesozoic units, creating excellent conditions for observing and studying these rocks, particularly along the coastal cliffs. The coast also reflects the Quaternary climate evolution, with several coastal lagoons, silted estuaries, and sandy spits.

The biodiversity of this region is related to its mild temperate climate, including several lowlands

A view of the Quincho Beach and the Quincho Rock. Exposure to strong winds and powerful Atlantic waves make this beach an ideal location for surfers and kite surfing.



and lagoons, besides smooth hills and valleys. Considering the biotic components, this territory is located in Mediterranean and Marine Atlantic biogeographical regions. It encompasses distinct terrestrial and aquatic ecosystems, extending from the Coastal Zone of the Western Region, through plateaus and mountain chains, towards the most inland areas, serving as repositories for important vegetation, of national and international importance.

The Coastal Zone is divided in 24 habitats, 3 marine and 21 terrestrials.

The area is also known for its rich agriculture, both of fruit trees (pears and apples) and vegetables (mainly pumpkin and cabbage), as well as grapes for wine.

This territory has always been occupied by communities interested in coastal and land resources. Archaeological findings date back to the Palaeolithic caves and Neolithic hilltop "castros", followed by historical Roman villas and medieval castles and churches. The Napoleonic invasions are well documented by several defence lines and forts. Local traditions include the presence of windmills, religious processions, Carnival parades, and gastronomic delicacies. Industry has a minor role in this area and is related mainly with the transformation and conservation of fresh fish and sea food along the coast, as well as fruits and wine production inland.

The Oeste UGGp is supported legally by the AGEO - Associação Geoparque Oeste (Oeste Geopark Association), a private non-profit association created in 2018, through a public deed. Its objective is to promote and manage the application process for the UGGp recognition, but also to implement a participatory management of territorial development based on the UGGp programme.

The Oeste UGGp carries out geoeducation and geotourism activities in partnership with local communities, private companies, schools, and municipalities. We also develop events in partnership with the five UNESCO Global Geoparks in Portugal, National Tourism Office and the other UNESCO Global Geoparks around the world, specially the one's with Portuguese language.

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View of a windmill in Maceira Valley

Schelde Delta UNESCO Global Geopark, Belgium/ Netherlands

Geopark Schelde Delta, a Geopark that surprises and makes you think.

Welcome to UNESCO Global Geopark Schelde Delta. A cross-border Geopark in the Netherlands and Belgium covering 5,500 km² with 1.5 million inhabitants, and a 50-million-year story of subsidence and uplift, sea level rise and fall and climate change. It also shows the alternately dominant and subordinate role of natural processes and the dominant human influence during the Holocene. The cuestas around the Flanders Valley that show the first traces of periodic climate changes from 33 million years ago (the Rupelian Stratigraphy called after the River Rupel in our area) and Pleistocene erosion slopes are relative ripples in a sedimentary young landscape of sand, clay and peat. A landscape characterised by a coastal plain where, in the past, through an alternation of ice ages and interglacials, the sea was distant and then close or even covered the area, where the river Scheldt now makes its way to the North Sea, aided by deeply carved estuaries that experience tidal ebb and flood movements of many metres. An area that is a geological nursery for future sandstones and shales where man has managed to build his existence in this very dynamic environment that from Roman times has involved a continuous struggle between life with water.

Large parts of the area are characterised by wetlands (Ramsar, Nature 2000 sites) of intertidal areas, salt marshes, peat meadows and wet floodplains along the rivers further inland. This provides a great wealth of biodiversity due to the many variations in slope. The area is therefore also an important stopping place for birds on the major migration routes between Africa and northern Europe and an important breeding area for many water and meadow birds. Because of its location at the mouth of the Scheldt, the area has an ancient history of ports and trading centres and fishing and fishing villages. The Zwin area was the economic centre for northwestern Europe in the late Middle Ages, later trading towns such as Middelburg took over this function in the 16th and 17th centuries, and today there is the globally significant port of Ant-



werp. The 30-million-year-old Rupel Clay created an unprecedented brick culture in the Rupel region. Geology, industrial heritage, and social aspects go hand in hand here.

The organisation of Geopark Scheldedelta is housed in a Benelux Grouping for Territorial Co-operation (BGTC). A cross-border legal form with a General Assembly and a Board of Directors. The day-to-day business is done by the permanent staff. The approximately 150 organisations that make up the Geopark Schelde Delta meet periodically in the Partner Council.

As a Geopark, as a living community we want to show the traces of geology, geomorphology, archaeology, cultural history, nature, traditions, and local food that tell this fascinating story to people who visit us and inspire them. This provides valuable baggage for understanding and coping with current climate change and likely sea level rise in this vulnerable area.

Walter Jonkers Coordinator and geoscientist -
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Geopark
art around
climate change
awareness by
Rem van den
Bosch

Salt marsh in
the drowned
land of
Saeftinghe.
Photo by Sky
Pictures.

Walking through
Pleistocene
river dunes
landscape of
the Kalmthoutse
Heide.
Photo by Ed Kil.



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