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CRUZIANA

NATURTEJO UNESCO GLOBAL GEOPARK - E-Magazine



MONTHLY ACTIVITIES

September – SmartFarmer Protocol for GEOfood in Portuguese Geoparks. The e-commerce platform SmartFarmer and the five Portuguese UNESCO Global Geoparks Naturtejo, Arouca, Açores, Terras de Cavaleiros and Estrela, signed a joint protocol for the promotion of the GEOfood brand. The international brand is being implemented in Portugal by all Geoparks, with a joint strategy of national scope. The protocol aims the promotion and creation of Food Hubs for each Geopark and an extensive dedicated to Geoparks and Portuguese GEOfood products.

SmartFarmer is a social business of OIKOS, Non Governmental Organization for Development, and aims to facilitate the access of small and medium farmers to the market, in fair conditions, and privileging logics of proximity and sustainability.

Naturtejo Geopark integrated SmartFarmer in 2020, having already been stimulated several joint initiatives and now sees the partnership expanding by the adhesion of new partners and by the national structuring of GEOfood.

September 1st and 2nd - European Geoparks Network Forum: an innovative organisation of Papuk Geopark. Papuk UNESCO Global Geopark in Croatia hosted another edition of the European Geoparks Network Forum. With a morning show format due to be an online event, the program was filled with an excellent promotion of the geological heritage, the activities that can be done at the Geopark, gastronomy and wines, beyond the normal agenda of any biannual meeting of the Coordination Commission of the European Geoparks Network. Carlos Neto de Carvalho once again represented Naturtejo Geopark among the 88 European geoparks, with representatives from 26 countries. The scientific coordinator of Naturtejo Geopark led the meeting of the Working Group for Tourism that counted with 19 participants, among which the President of the Global Geoparks Network, Nickolas Zouros.



September 1st and 29th - Qualification Webinars 'Fire Management in UNESCO Sites'. Naturtejo UNESCO Global Geopark shared its experience in the series of Qualification Webinars 'Fire Management in UNESCO Sites', promoted by UNESCO Montevideo and the Platform for Climate, Risk and Resilience of UNESCO Sites in Latin America and the Caribbean. This initiative took place throughout September and brought together experts, local stakeholders and academics from UNESCO Biosphere Reserves and UNESCO Global Geoparks to discuss issues relating to climate change and wildfires. Carlos Neto de Carvalho and Joana Rodrigues, in webinars 1 and 5, respectively, contextualized the problem of fires in the territory of Naturtejo Geopark.

The territory of Naturtejo Geopark has been strongly affected by megafires with huge environmental, social and economic impacts. Due to the great investment and effort of the municipalities, it has been possible to revitalize and recover many of the burnt areas, as well as to rethink the forest occupation.



September 1st to 10th - Research project brings new paleontological discoveries to Penha Garcia syncline.

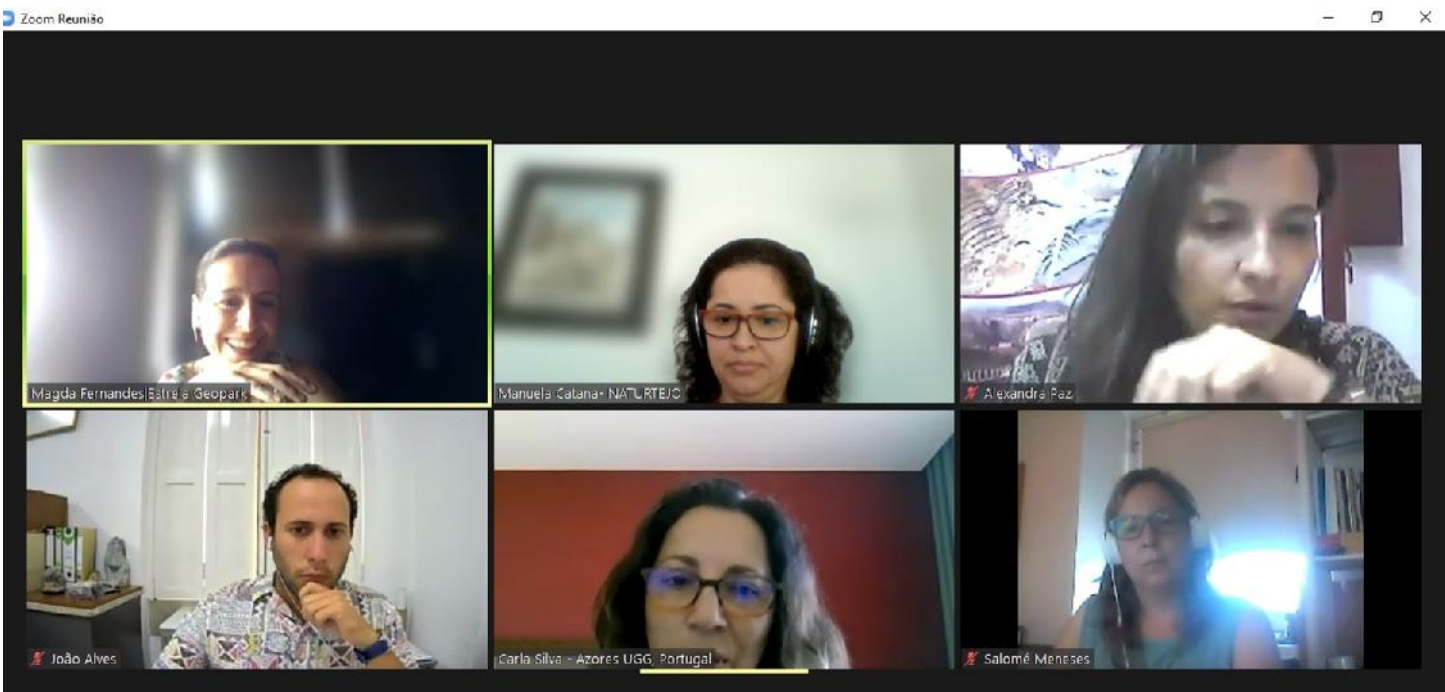
Following the paleontological research project of the formations that constitute Penha Garcia syncline by the Geology Survey of the Municipality of Idanha-a-Nova, new discoveries were made allowing us to characterise the marine life that existed here in a very remote past. An international group of geologists and paleontologists coordinated by Dr Sofia Pereira, from the Centre of Geosciences of the University of Coimbra, including the Spanish palaeontologist Jorge Colmenar, Miguel Pires and the geologist Ícaro Dias da Silva from the Faculty of Sciences of the University of Lisbon, developed detailed stratigraphic, structural and paleontological mapping of the geological formations, with an estimated age between 467 and 435 million years, which extend from Salvador to beyond the border of Termas de Monfortinho. The work was concentrated in Herdade do Vale Feitoso, with the support of Monfortur and the Agricultural Company of Penha Garcia, since a dozen of paleontological sites were already known here since the seventies, including sites of geological relevance of the Geological and Geomining Heritage Inventory of Naturtejo UNESCO Global Geopark. Besides a great diversity of marine fossils that were collected and will be studied by the team that includes Carlos Neto de Carvalho, Naturtejo Geopark scientific coordinator, the ten intense days of field work allowed the discovery of new sites with fossils never before identified in the region. The identification and mapping work of the new paleontological sites relied on Dr. Tim Young from Cardiff University, UK, who made Penha Garcia region part of his PhD thesis in the first half of the eighties and who knows the different fossiliferous sedimentary rocks of Vale Feitoso like no one else. Trilobites, brachiopods, echinoderms, bivalves, graptolites, ostracods, among a great diversity of marine organisms extinct hundreds of millions of years ago, some of almost microscopic dimensions, were collected and will now be restored, catalogued and studied, to be later returned to Idanha-a-Nova Municipality, in order to create a reference collection. According to Carlos Neto de Carvalho, "this research project supported by the Municipality of Idanha-a-Nova gathers Portuguese and foreign specialists that have been working in the region to make a detailed geological map with all the paleontological potential that Penha Garcia has and that was only known for the recently designated Penha Garcia Formation, of which the Ichnological Park is the most known site and international reference geomonument of the Naturtejo UNESCO Global Geopark". This paleontological collection will be appreciated in the new interpretative space under development in Penha Garcia that will allow knowing the "Ordovician Ocean of Penha Garcia" and the ways of life of its most famous ancestral inhabitants, the trilobites.



September 4th - Getting to know the Biodiversity and Geodiversity of Orvalho GeoTrail. September continued the initiative Living Science in summer promoted by Living Science Forest Centre and Naturtejo Geopark in partnership. To know the 'Biodiversity and Geodiversity of the Orvalho GeoTrail', the participants walked in the Muradal Mountain, through the Orvalho GeoTrail, that took them to the Fraga da Água d'Alta geomonument, the Fragasas Valley and the traces of the ancient subtropical forest. Armed with field guides, cameras and multimedia identification applications, the participants discovered plant and insect species they had never seen before, as well as the complex geological history that led to the formation of Oleiros mountains and Frágua da Água d'Alta. The action was led by Joana Rodrigues and Marta Palhim, instructor at Living Science Forest Centre.



September 8th - Secrets of Vale Mourão (Mourão Valley). To close this year's edition of Living Science in summer, a new activity was developed to unveil the Secrets of Vale Mourão (Mourão Valley) (Sobral Fernando), in a walk that included fossils, folded rocks, continental plates collision, roman mines and gold miners. This time the return to the village of Sobral Fernando went through the new walking trail opened by the community of Sobral Fernando and the statue "The Girl of Fears", by Cortiçada Art Fest, next to the river, in an action boosted by Marta Palhim, instructor at Living Science Forest Centre.



September 9th - Meeting of the "Education" working group of UNESCO Global Geoparks - Portugal. This online meeting was attended by 7 representatives of the five UNESCO Portuguese Geoparks discussing a joint educational programme within the GEOfood Project. Manuela Catana and Catarina Caria represented Naturtejo Geopark at this meeting.



September 10th to 12th - Innovations4thefuture Gathering - Idanha-a-Nova. The Municipality of Idanha-a-Nova hosted an event to raise awareness for entities and projects linked for future actions or partnerships. Each day a different theme was addressed: Economy, which took place in Idanha-a-Nova; Environment, which took place in Idanha-a-Velha and S. Miguel d'Acha and Education in Oledo. Manuela Catana was invited to address the topic of Education, presenting "Environmental Education - Sharing the work developed with public schools in the region and opening new collaborations". Fifty people attended the event.



September 12th - Barrocal Park wins another International award. Barrocal Park in Castelo Branco, in the heart of Naturtejo UNESCO Global Geopark, is one of the winners of the International Ecotourism Society Awards in the category Best Ecological Structure. The Best Ecological Structure distinguishes the most environmentally friendly infrastructures. With the application "Barrocal Park - Castelo Branco", the park was considered the most eco-friendly structure in the world. The international awards, promoted by The International Ecotourism Society Awards received over 1000 applications from around 100 countries aiming to recognise and value ecotourism and sustainable tourism projects carried out by the most varied entities worldwide.



September 17th - A natural twinning: In the celebrations of 10 years of Villuercas-Ibores-Jara Geopark a protocol with Naturtejo Geopark is signed. Villuercas-Ibores-Jara UNESCO Global Geopark celebrated its tenth anniversary in Guadeloupe. Large dozens of guests represented the communities of the territory, local and regional authorities, as well as companies associated to the project. Carlos Neto de Carvalho invited by the organization as representative of Naturtejo Geopark, attended the signing ceremony of the twinning protocol between the two neighbouring geoparks. This protocol signing was the formalization of a very strong union since the origin of Villuercas Geopark, which resulted in several projects, including joint scientific work. At the same event was Gonzalo Martínez, representing the Mixteca Alta UNESCO Global Geopark, from Mexico, which recently signed twinning agreements with the two Iberian geoparks and will soon coordinate a project on climate change and the erosional rates, which will take place in these territories.



September 18th and 19th - Guided tours at Barrocal Park increase in popularity. A guided visit in Barrocal Park illustrated by the landscape continues to be a great success. This weekend there were four visits, totalling 49 participants. Next month the educational programme at Barrocal Park will start for all the high school classes of the city of Castelo Branco.



September 18th and 19th - Naturtejo Geopark at the 14th Meeting of Alentejo and Algarve Geosciences Teachers. Naturtejo Geopark attended the 14th Meeting of Geosciences Teachers from Alentejo and Algarve, promoted by the Association for the Defense and Promotion of the Geological Heritage of Alentejo and Algarve, which took place in Serpa. The meeting, organized by the Geologist and Professor José Tomás de Oliveira was dedicated to the subject "The geology of the Guadiana Valley region". Besides lectures and a field trip, the Meeting included the Round Table "From the valuation of the Geological Heritage to the Local Development - The importance of Geoparks", where Joana Rodrigues presented the experience of Naturtejo Geopark. In the debate was presented and discussed the possibility of developing a candidacy to a UNESCO Global Geopark, of the region of Mértola, Serpa, Moura and Barrancos, based on the preliminary study made by the National Laboratory of Energy and Geology.



September 20th - Guimarães Viagens visits Naturtejo Geopark. A group of 50 people, by Guimarães Viagens, visited Idanha-a-Velha and Penha Garcia. This visit was guided by Paulo Barata.



September 21st - Training session on the Boulders Trail in Monsanto. A field training action for Naturtejo Geopark guides took place, dedicated to the Boulders Trail in Monsanto. The heritage values were explored, with emphasis on the geological and geocultural heritage. Were also addressed the tourist resources, namely circuits and visitation places, tourist infrastructures as well as technical information about the trail, Historical Village and points of interest.



September 23rd and 25th - Iberian Neanderthals celebrated at the 25th edition of the Calpe Conference in Gibraltar. The 25th international scientific conference organised by the National Museum of Gibraltar was held at the University of Gibraltar and involved some of the leading scholars on the evolution of Neanderthals. In this perfect organisation, which included a boat and detailed visits to the “cathedral” of the Neanderthals, in the Gorham's-Vanguard complex of coastal caves, the origin and evolution of Neanderthals and the importance of the Iberian biogeographical context were discussed. Carlos Neto de Carvalho was one of the invited researchers, as a result of the partnership developed with specialists from the Gibraltar Museum, as well as from the Spanish universities of Seville and Huelva. Carlos Neto de Carvalho presented the latest findings of Neanderthal footprints in coastal ecological contexts and introduced a synthesis of the importance of the Portuguese archaeological record, as a tour of the main Neanderthal sites known from Naturtejo UNESCO Global Geopark to Gibraltar.

September 24th - Online Round Table 'Geoparks: Territories of Sustainability'. In the scope of ObservaEstrela 2021, promoted by Estrela Geopark, took place the Online Round Table 'Geoparks: Territories of Sustainability', with the participation of all the Portuguese UNESCO Global Geoparks. The group discussed the challenges of the several geoparks, as well as the several joint projects in development, having Naturtejo Geopark been represented by Joana Rodrigues.



September 24th - TV programme “It's Good to Do Good” highlights voluntary restoration work on the International Appalachian Trail.

September 24th - TV programme "It's Good to Do Good" highlights voluntary restoration work on the International Appalachian Trail. The TV programme "It's good to do good" came to know the recovery work of the International Appalachian Trail, in Oleiros, greatly affected in the fires of 2017. This programme from SIC national TV and the brand Skip aims to show stories of people who like to put their hands to work to help others, travelling through places where help is always welcome. Dozens of volunteers from the region, together with Trilhos do Estreito Association, were challenged to give a hand in cleaning trails, planting native species, painting signs and finishing the observation platform of Portelo geosite. Joana Rodrigues addressed the importance of this geosite and its valorisation, as well as the relevance of the International Appalachian Trail.



IMPACT OF GEOPARK IN MEDIA



TV & Radio

September 3rd (Rádio Castelo Branco) - Talhadas' Via Ferrata ready to be explored
September 12th (Beira Baixa TV) - Talhadas' Via Ferrata ready to be explored
September 12th (Beira Baixa TV) - BEST ECOLOGICAL STRUCTURE - Barrocal Park wins another award

Newspapers & www

Blog Post: Nature Fields – GEOfood partner in Naturtejo UNESCO Global Geopark (Portugal)
<https://cutt.ly/GETW8BL>
September 1st (iNature Newsletter) – Journey through Earth's history
September 2nd (Jornal de Proença) - Talhadas' Via Ferrata ready to be explored
September 2nd (Jornal de Oleiros) - Talhadas' Via Ferrata (Proença-a-Nova) ready to be explored
September 3rd (Diário Digital) - Talhadas' Via Ferrata - Country's longest itinerary ready to be explored in Proença-a-Nova
September 3rd (BeiraNews) - Talhadas' Via Ferrata ready to be explored
September 8th (Povo da Beira) - Talhadas' Via Ferrata ready to be explored
September 9th (Reconquista) - Included in Naturtejo UNESCO Global Geopark - Talhadas' Via Ferrata ready to be climbed
September 15th (GEOfood.no) – Nature Fields – GEOfood partner in Naturtejo UNESCO Global Geopark (Portugal)
September 16th (National Geographic Spain) - Evidence of prehistoric elephants found in Huelva province
September 16th (New Scientist) - Prehistoric elephant nursery probably made easy prey for Neanderthals
September 16th (Sciencenews.org) - Fossil tracks may reveal an ancient elephant nursery
September 16th (www.iflscience.com) - These Tiny Fossilized Footprints Are Evidence of An Ancient Elephant Nursery
September 16th (www.dailymail.co.uk) - An ele-phantastic finding! Fossilised footprint tracks discovered in Spain reveal a prehistoric NURSERY where elephants raised their newborn offspring 129,000 years ago
September 16th (www.livescience.com) - Baby elephants frolicked in an ancient 'nursery,' fossil footprints show
September 17th (El País – front page) – How coastal Neanderthals and megafauna lived in Doñana, their last European refuge
September 18th (Público) - Prehistoric elephant nursery revealed in southern Iberian Peninsula
September 18th (Reconquista) – Barrocal Park wins another award
September 26th (Natural History Museum, London) – Nursery for ancient elephants uncovered in Spain

SCIENTIFIC CONTRIBUTIONS FOR THE GEO PARK AND THE GEOSCIENCES



- BAUCON, A., NETO DE CARVALHO, C., BRIGUGLIO, A., PIAZZA, M., FELLETTI, F. 2021. A predictive model for the ichnological suitability of the Jezero crater, Mars: searching for fossilized traces of life-substrate interactions in the 2020 Rover Mission Landing Site. PeerJ, 9:11784 <http://doi.org/10.7717/peerj.11784>.

- NETO DE CARVALHO, C., BELAÚSTEGUI, Z., TOSCANO, A., MUÑIZ, F., BELO, J., GALÁN, J.M., GÓMEZ, P., CÁCERES, L.M., RODRÍGUEZ-VIDAL, J., CUNHA, P.P., CACHÃO, M., RUIZ, F., RAMIREZ-CRUZADO, S., GILES-GUZMÁN, F., FINLAYSON, G., FINLAYSON, S., FINLAYSON, C. 2021. First tracks of newborn straight-tusked elephants (*Palaeoloxodon antiquus*). Scientific Reports, (2021) 11:17311, <https://doi.org/10.1038/s41598-021-96754-1>

- NETO DE CARVALHO, C. & MUÑIZ, F. – One small step...for Neanderthals: ichnological evidence for their success in coastal habitats. 25th Calpe Conference, Calpe 21 – 95th Anniversary Gibraltar 2 Neanderthal, Gibraltar, 23-25 September, 44.

PROMOTION FOR THE GENERAL PUBLIC



- NETO DE CARVALHO, C. – Sobral Fernando: construída sobre uma mina de ouro. National Geographic Edição Especial Viagens “As Vilas e Aldeias mais Belas de Portugal”, 78-79.
- NETO DE CARVALHO, C. – Monsanto: Granito como Chão, Parede e Tecto. National Geographic Edição Especial Viagens “As Vilas e Aldeias mais Belas de Portugal”, 69-71.

BARROCAL
PARQUE

WORKSHOP
FOTOGRAFIA
DE NATUREZA
10 de outubro

INSCRIÇÕES LIMITADAS

mais informações em:
barrocal-parque.pt/atividades

Castelo Branco
CENTRO 2020

Ilva Rodrigues
2ª Workshop

Francisco Cuijano
3ª Workshop

Pedro Martins
1ª Workshop

BARROCAL
PARQUE

**VISITAS COM
GUIA**

16 e 17 de outubro
10h às 12h

Descubra mais sobre uma história com 310 milhões de anos

Castelo Branco
CENTRO 2020

barrocal-parque.pt

**02-03
OUTUBRO**

**IDANHA-A-VELHA
PENHA GARCIA**

**+25 CHEFS
NACIONAIS**

ENTRADA LIVRE

ARREBITA
GASTRONOMIA LOCAL SUSTENTAVEL
IDANHA BIO
2021

#ArrebitaTuaRegião
#ArrebitaPortugal

Amuse Bouche
CENTRO 2020

PROMOTION FOR THE GENERAL PUBLIC



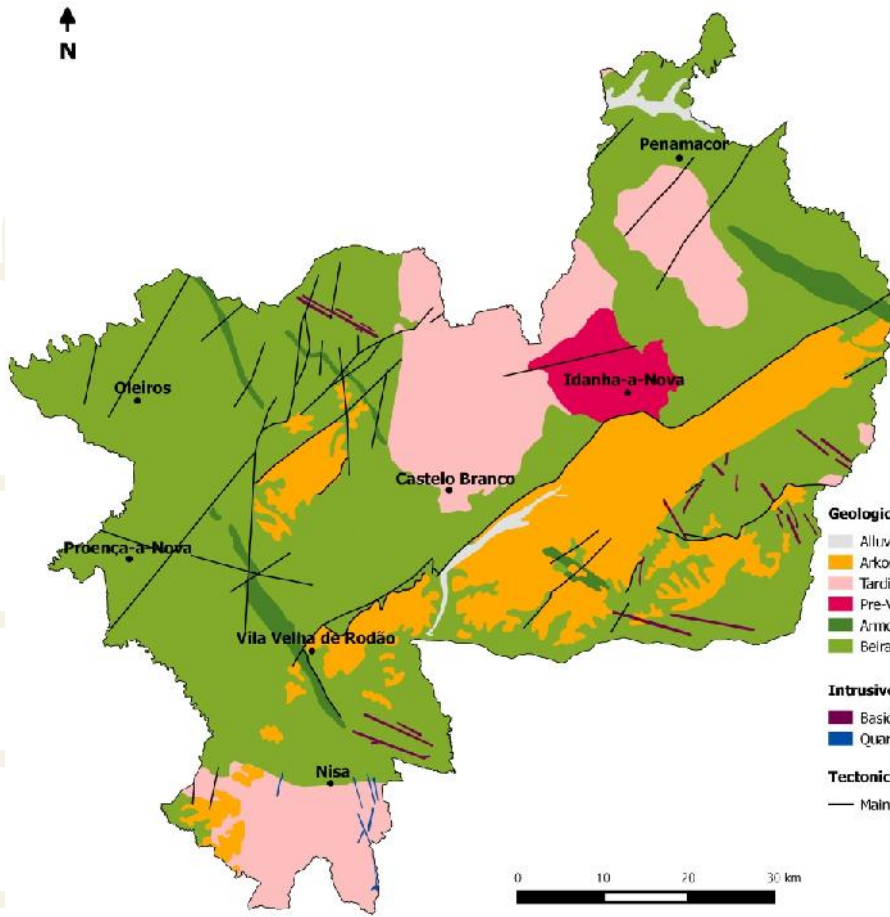
UNESCO Global Geoparks
Sustainable Tourism Destinations
27 SEPTEMBER

WORLD TOURISM DAY 2021
TOURISM FOR INCLUSIVE GROWTH

GLOBAL GEOPARKS NETWORK
www.globalgeoparksnetwork.org

Visit Naturtejo Geopark in:

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-  issuu.com/geoparknaturtejo
-  https://twitter.com/Geo_Naturtejo
-  <https://www.linkedin.com/company/geoparknaturtejo/>



Geological Formations (Ma-Million years)

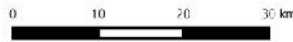
- Alluvium and fluvial terraces - Pliocene-Holocene (1Ma-present)
- Arkoses, breccias and conglomerates - Eocene-Pliocene (50-2.6Ma)
- Tardil-Variscan orogenic granites (315-300Ma)
- Pre-Variscan granodiorites (480-472Ma)
- Armorican Quartzite and schists - Ordovician-Lower Silurian (488-435Ma)
- Belra Group (schists and greywackes) - Neoproterozoic (610-542Ma)

Intrusive rocks

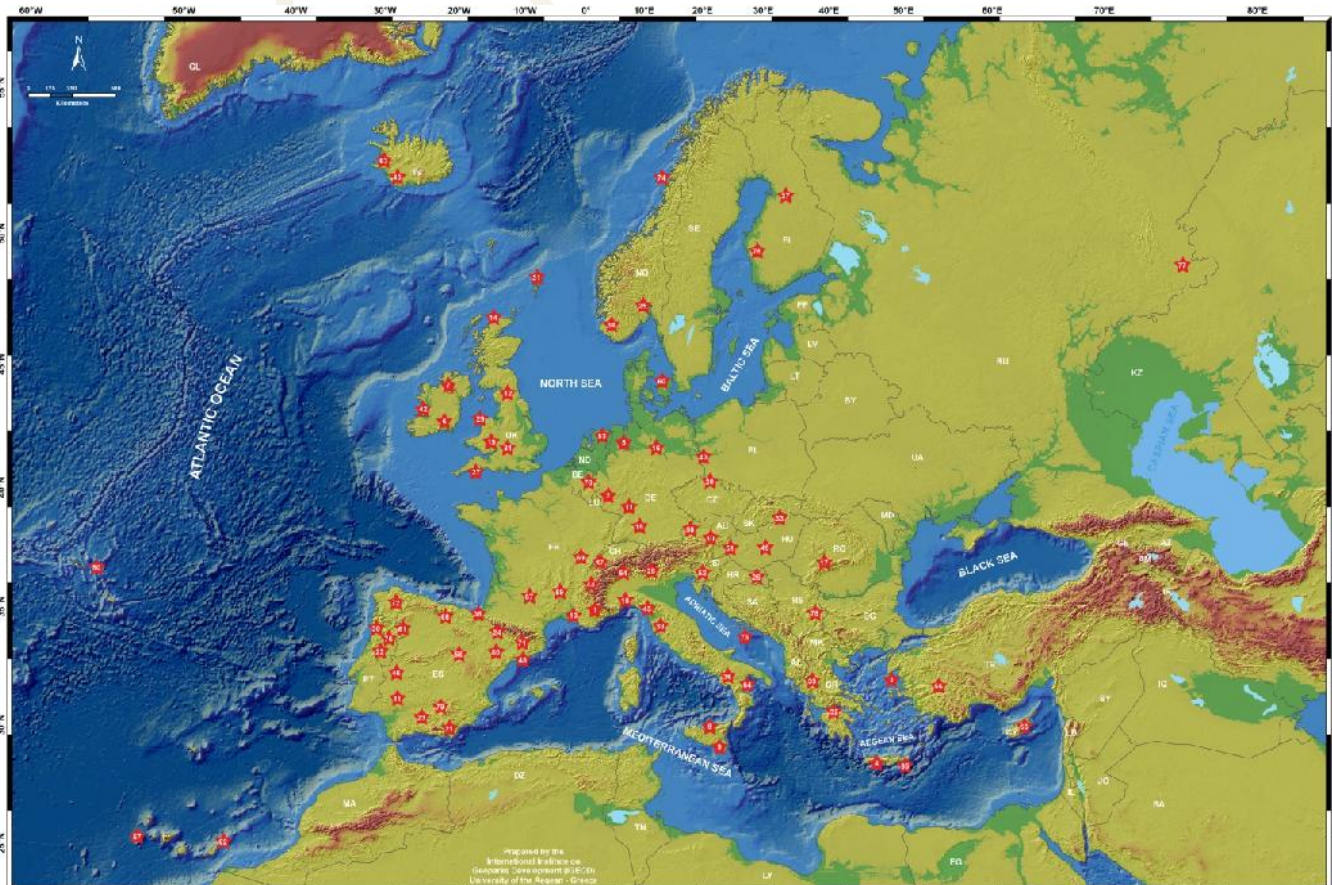
- Basic rocks, aplites and pegmatites
- Quartz

Tectonic

- Main faults



Geoparks: Geology with human face





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