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FUN GEOPARK IN JEJU

Jeju 제주특별자치도
Jeju Special Self-Governing Province

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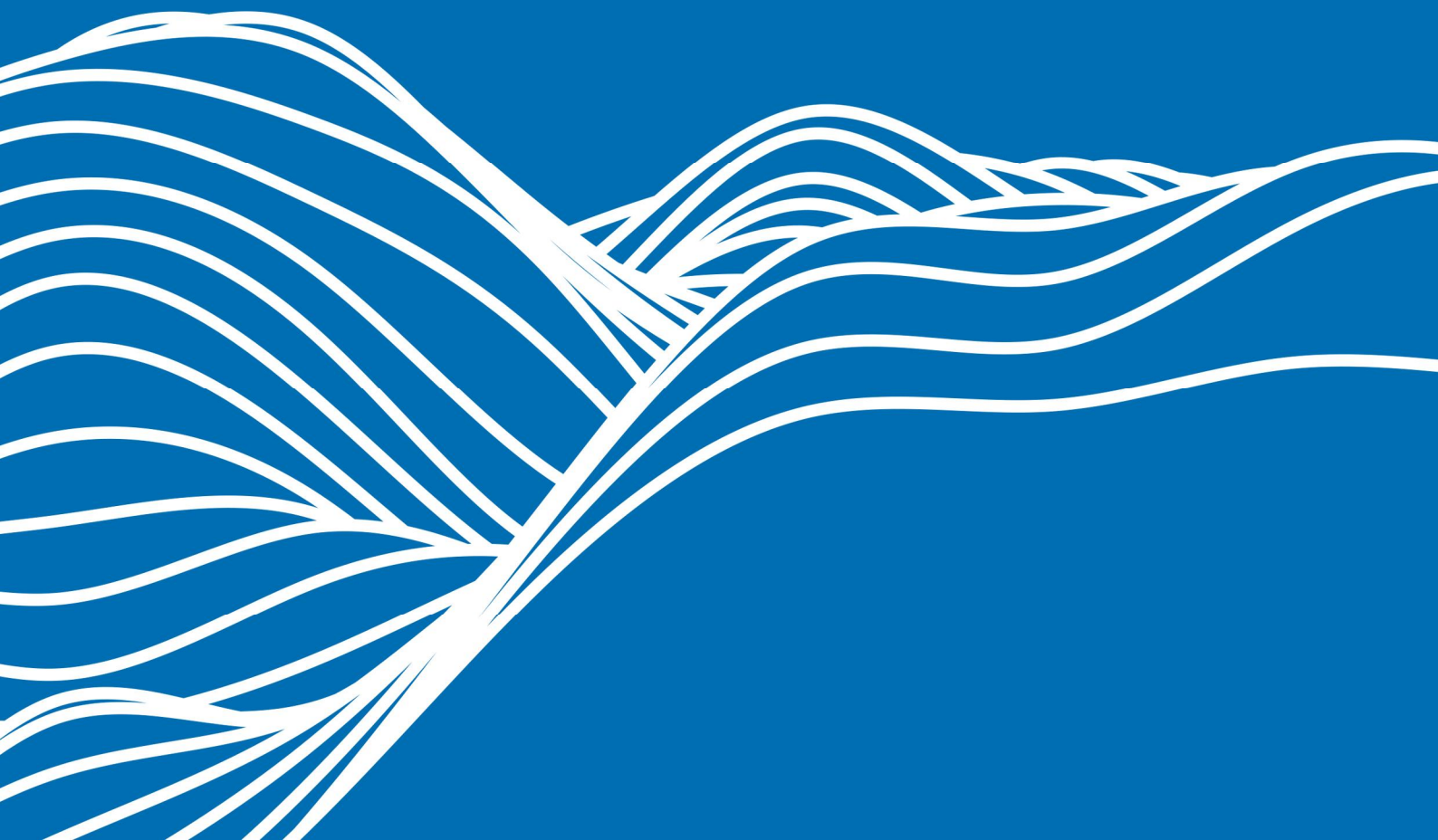
Poster



Geotourism and Geoeducation In The Shilin UNESCO Global Geopark

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The Shilin UNESCO Global Geopark, covering an area of 350km, is located in southwest China's Yunnan province. It features numerous odd-shaped rock formations, and in the Geopark late Paleozonic carbonate rocks, in which diverse plateau karst landscapes developed, occur extensively. Landscapes occurred in the Geopark include plateau hill, low-medium mountain, depression, basin, doline, rock hill, stone forest karst, clint, cone karst, cave, river valley, etc, of which, the stone forest karst is the most striking and spectacular landscape. Clusters of stone pillars of various shapes and sizes are distributed in various topographies, displaying unique plateau karst landscape and exceptional natural beauty. Geotourism specially focuses on geology and landscape, promotes tourism to geosites and an understanding of earth sciences through visiting, learning from, appreciating and engaging in geosites.Training workshops are frequently conducted to upgrade the capacity building of tour guides, because they play a significant role in geotourism, and by whom geoscience is widely spread among visitors; 12 geotrails are well developed for the purpose of geoactivities; local students are organized to visit the Geopark and geomuseum so that they will get vivid earth science; the interpretation panels inside the Geopark are annually improved to ensure they are nice and easily understood for common visitors; guide books, brochures, leaflets and geomaps are free for visitors to help plan their trips; scientific research is jointly carried out by the Geopark and other science institutions and universities, and the study results enhance geoheritage conservation.

Keywords: Shilin Geopark, Geotourism, Geoeducation

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Constructing "geoscience kingdom" and provide tourists with new suggestions on multi-dimensional tourism playing methods ---- Songshan UNESCO Global Geopark in action

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Songshan is a famous geological mountain in the world and a famous historical and cultural mountain in China, there are geological relics and historical and cultural resources here,as early as the 1950s, China's older generation of geologists made pioneering work, After that, the research continued to deepen,at present, it has expanded to more than 130 universities, dozens of schools have taken Songshan as a teaching practice base, and more than 100 scientific research groups have participated in the research on various resources in Songshan area. According to big data statistics. There are 6776 scientific research and popular science articles with the theme of Songshan and Dengfeng, where Songshan is located, A total of 638 people have completed their dissertations on Songshan or Dengfeng, Where Songshan is located, Among them, there are 121 doctoral theses and 517 master theses; There are more than 40 types of funds participating in Songshan scientific research; More than 40 Monographs on Songshan's Geosciences and culture have been published, thus establishing Songshan as a well deserved "geoscience kingdom" in the world. A large number of scientific research results show that Songshan is a treasure house of geological relics resources and an "Encyclopedia of geoscience" that can never be learned. In a more open form, the managers of Songshan Mountain are attracting scholars and groups at home and abroad to participate in the in-depth research of Songshan Mountain, transforming scientific research achievements into tourism resources and providing tourists with new suggestions on multi-dimensional tourism playing methods.

Keywords: Songshan UNESCO Global Geopark, Geoscience Kingdom, Scientific research and popular science

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The New Geo-science Experience Center of Shennongjia UNESCO Global Geopark

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The exhibition mode of the old geomuseum of Shennongjia UNESCO Global Geopark is monotonous and lacks of interaction. In order to improve this shortcoming, in addition to upgrading the display of the geomuseum, Shennongjia UGGp started to build a geo-science experience center in 2020, which has been open to the public since October 1, 2021. Using VR, AR and other interactive display technologies, the new Geo-science Experience Center allows visitors to learn about the origin of the universe, the process of the formation and development of the earth and the environment it is in, the spheres of the earth, the characteristic rocks, fossils and minerals of Shennongjia, the geological evolution of Shennongjia, the geological and geomorphological features of Shennongjia and other information related to Shennongjia, in a fun and interactive way, so as to popularize earth history and geoscience knowledge to the public, especially primary and secondary school students. Since the opening of the Geo-science Experience Center, it has attracted a large number of visitors, and its fresh, interactive, immersive and experience-based approach to science popularization has been well received by visitors, especially children, and has greatly improved the geo-science popularization capability of Shennongjia UGGp. This poster introduces the functions and features of the exhibition units of the Geo-science Experience Center with illustrations.

Keywords: geo-science popularization, interactive technologies, experience, fun, Shennongjia

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The Curriculum Design For The Sanqingshan Geopark Museum

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Educational tourism is an innovation in the integration of on-campus and off-campus education, which to a certain extent makes up for the singularity of on-campus education. In recent years, China has attached great importance to the function of youth museum education, and has issued related policies to encourage high school and primary school students to use museum resources, so as to comprehensively improve students' education. Geopark museums showcase typical geology and landforms, natural ecology and local culture. They have rich scientific, ornamental and educational value and are an important place for educational tourism. The Sanqingshan Geopark Museum is the first batch of educational tourism bases for geosciences in China. It has been carrying out educational activities since it was first put into use in 2018, and has made great progress. In accordance with the characteristics of the Geopark and the requirements of educational tourism, this paper discusses the curriculum design of the Sanqingshan Geopark Museum with respect to the five aspects of the 5E philosophy, i.e., curriculum objectives, curriculum resources, learning contents and methods, curriculum implementation, and curriculum evaluation.

Keywords: Geopark, Museum, Educational tourism

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Progress Report of Sanqingshan UNECSO Global GeoparkIntroduction of Sanqingshan Geopark MuseumThe Study of Research-based Course Design with Guidance, Practice, and Evaluation as Cores

Imbabura UNESCO Geopark as an Engine of Public Geo-Education

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Imbabura UNESCO Geopark as an Engine of Public Geo-Education Lisbeth OÑA1*, Patricia RENGEL2,Yachay Tech University1, Republic of Ecuador1, Kyung Hee University2, Republic of Korea2. Geopark Imbabura project establishes geo-education as a fundamental basis for expanding knowledge and generating opportunities within local communities. At the same time, Imbabura Geopark seeks to boost the value of the cultural identity of Imbabura inhabitants based on the recognition, respect, and use of the geological heritage and nature. For these reasons, engagement activities with the public has been intensely developed. The results have been more than satisfactory and the public has shown support to these activities. Moreover, the academy played an important role in terms of geo education. So far, 8 training courses have captured the attention of more than 200 people, who have received classes on the environment, geology, geological history of Imbabura, and tourism. The training courses have included dynamic laboratory practices and field trips to the different geosites of the region to instill in the population a friendly behavior with the geological heritage and strengthen existing tourist routes. In 2021, professors and students build simple seismographs from low-cost materials to directly impact the community and make it a teaching resource for schools in Imbabura province. In March 2020, to multiply efforts, strengthen the provincial identity, and promote the transfer of knowledge, the first online congress "Te Vivo Imbabura" was held. Students of Yachay University showed the state of art knowledge related to the 12 geosites of Geopark Imbabura. On the other hand, the articulation of civil and social organizations such as "Taita Imbabura Consortium" and the permanent campaigns of "Friends of Imbabura Geopark" have been in charge of transmitting the objectives and projects of the GPI to indigenous communities through educational workshops with a purely local and non-scientific approach to empower the population in topics of environmental conservation and use of natural resources to apply them to geotourism. These workshops have generated spaces for reflection towards active participation in local communities' development. They reach about 60 people per community, most of them women. In addition, activities such as the first drawing contest on myths and legends of Imbabura were held during the first year of the pandemicIn summary, geopark Imbabura join the interest and necessities of several groups and created spaces for public education. The activities undertaken by both academia and civil and social organizations have created spaces to identify problems and opportunities to improve the quality of life of Imbabura inhabitants from geo-education.Key words: Geo-education, Imbabura Geopark, Academy, Conservation, CommunityCorresponding author: Lisbeth OÑA, +593 987653504Email: lisbeth.ona@yachaytech.edu.ec

Keywords: Geo-education, Imbabura Geopark, Academy, Conservation, Community

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3D Modelling Of Geosites - From Surveying To Outreach

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The UNESCO Estrela Geopark is located at Serra da Estrela, Portugal. It has an area of 2,216 km2 and its landscape is very diversified as a result of multiple geological transformations, climatic contrasts, as well as a very ancient human occupation (IV millennium b.C.). The genesis of the mountain range is related with a pop-up process during the Miocene, with the uplands and several valleys having been reworked by glacial processes during the Pleistocene. The Estrela Geopark shows over 120 geosites of different typologies, several of them of difficult access to visitors with reduced mobility. With this in mind and supported by Unmanned Aerial Vehicle technologies, several geosites are being surveyed using optical cameras, allowing to create 2D and 3D digital models used for management, dissemination and education purposes. Surveys were conducted with quadcopters at different heights, following grid survey lines and with camera tilts from nadir to 60º, depending on terrain roughness. Then the structure from motion-based techniques in Pix4D Mapper were used to build the point cloud, the Digital Surface Model (DSM) and the orthomosaics. The orthomosaics and DSM are being used for the detailed mapping of the geosites and for monitoring the impact of visitors. Terrain models of several geosites have been printed in 3D and are used for education and dissemination activities. They have been integrated in several public exhibitions and may be used as by people with visual impairment or loss vision, for improving the understanding of the geopark features and their genesis.

Keywords: Geosites, Surveying, Geodiversity, 3D modelling, Portugal
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Geo-Urban Routes As A Powerful And Easily Available Educational Resource - Case Of Angra Do Heroísmo City In Azores UGGp

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Geo-Urban Routes as a powerful and easily available educational resource - Case of Angra do Heroísmo city in Azores UNESCO Global GeoparkManuel Paulino COSTA 1,2; Salomé MENESES 1,2* João Carlos NUNES1,31 Azores UNESCO Global Geopark, 2 Regional Secretariat for Environment and Climate Change, 3 Azores University, Geosciences DepartmentOne of the major concerns of UNESCO Global Geoparks (UGGp) is to demonstrate to local communities the importance of their territory in a holistic approach, based on the natural phenomena and human interaction that created the landscape and on the different elements that compose it. There are several strategies used by UGGp's in order to explore the educational (and touristic) potential of their territories, from geosite routes to workshops on geodiversity and geological heritage. In line with this concern, (geo)urban routes are an excellent resource that allows an integrative approach to the different aspects of the heritage and identity of a certain place – natural and cultural (tangible and intangible). In fact, the (Geo)Urban Route proposed by the Azores UGGp for the city of Angra do Heroísmo (Terceira island), has proved to be a powerful educational tool for the most varied audiences (locals and visitors, students and teachers), and with interest in different areas. This route allows to explore a city immerged in history and classified as UNESCO World Heritage Site, while exploring the geomorphological context in which the city was installed (angra=bay), interpret the geological phenomena (earthquakes, floods and tsunamis) that affected it and also identify and learn about the natural resources used on its built heritage. The buildings in the city of Angra do Heroísmo (with interesting exceptions) reflect the geology of the city and surrounding area, marked by the presence of tuffs from the Monte Brasil surtseyan cone and the trachytes from the Guilherme Moniz polygenetic volcano. Urban GeoRoutes are considered to be a powerful educational resource, easily accessible, low-cost, suitable for different audiences (including visitors) and easily adapted/replicated in other urban centers, including in rural areas.

Keywords: Urban Route, Educational Resource, Cultural Heritage, Geodiversity

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Strengthening the Construction of Geo-cultural Village, Promoting Sustainable Development of Local Economy and Society

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Fangshan UNESCO Global Geopark of China, the first Global Geopark located in the capital city of a nation, has achieved great progress in terms of geo-heritage protection, geo-science research and popularization, and region sustainable development by geo-tourism.In recent years, on the basis of geoheritage protection and geoscience research and popularization, and with the requirements of the National instructions for the construction of geo-cultural villages, Fangshan UGGp has focused on strengthening the construction of geo-cultural villages and made a great achievements. Through the construction of geo-cultural villages, we have attracted schools at all levels and travel agencies to carry out geoscience popularization travel in cultural village, boosting the development of agriculture, planting and geo-tourism in cultural village, increasing the employment and income of local residents, and promoting the sustainable development of local economy and society.

Keywords: Geopark, Geosciece popularization, Geo-culture village, sustainable development

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Reference:

Guidline of China Geological Survey on vigorously promoting the construction of geological culture villages (towns)