



# DIGITAL 9<sup>th</sup> International Conference on UNESCO Global Geoparks

제9차 유네스코 세계지질공원 총회

12-16 December, 2021

Jeju Island UNESCO Global Geopark, Republic of Korea

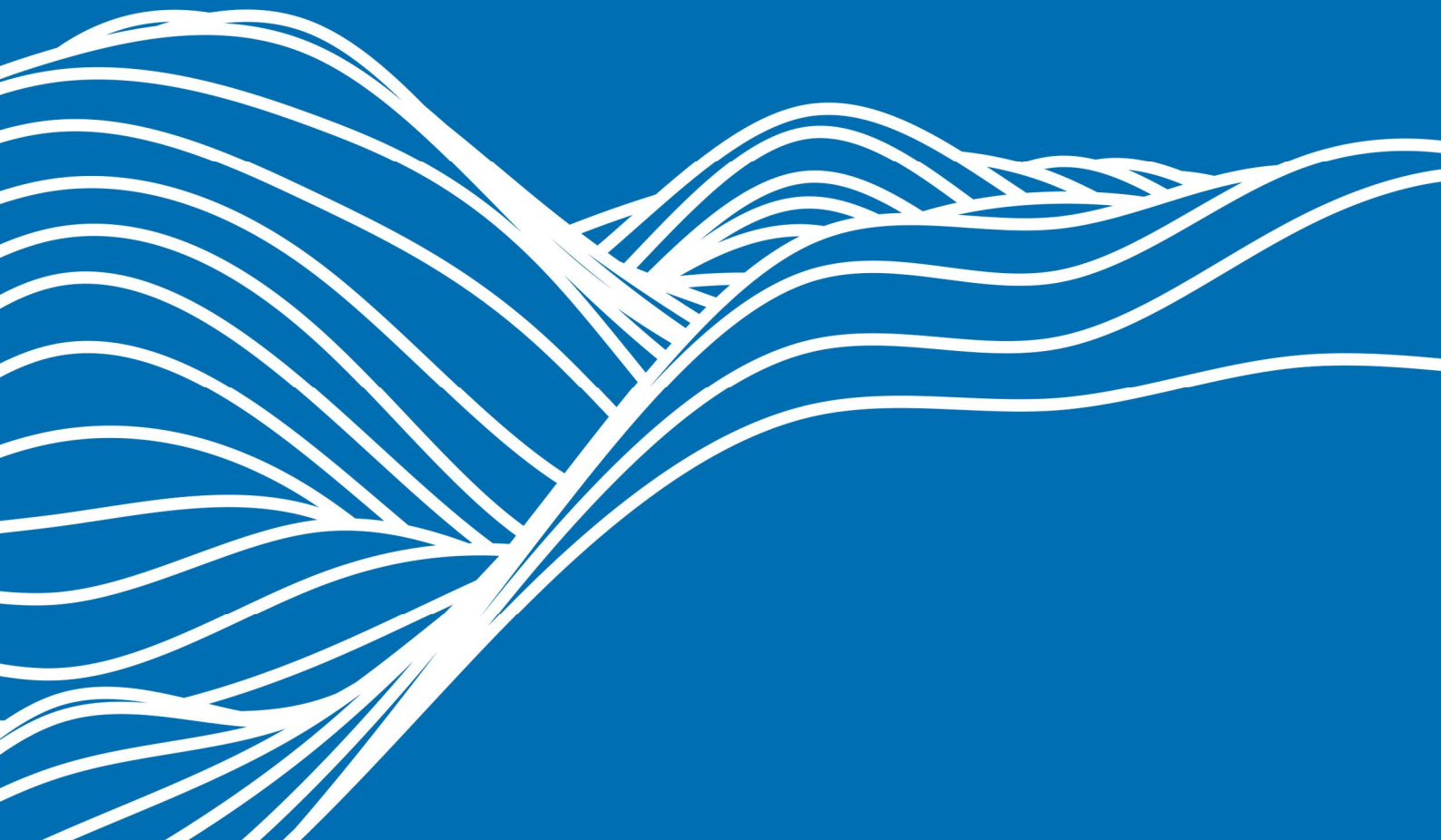
2021.12.12-16, 제주도 세계지질공원

## *FUN GEOPARK IN JEJU*

**Jeju** 제주특별자치도  
Jeju Special Self-Governing Province

DIGITAL 9<sup>th</sup>  
International Conference  
on UNESCO Global Geoparks

# Abstract



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# DAY 2

12.15

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## Communicating Geopark heritage and activities to the broad public using social networks. Lesvos island UNESCO Global Geopark as a Case Study

NIKOLAOS ZOUROS<sup>1</sup>, DIMITRIOS BLOUKAS<sup>2\*</sup>, KONSTANTINABENTANA<sup>2</sup>,

*University of the Aegean<sup>1</sup> Greece, Natural History Museum of the Lesvos Petrified Forest<sup>2</sup> Greece, Natural History Museum of the Lesvos Petrified Forest<sup>2</sup> Greece,*

UNESCO Global Geoparks promote geological heritage protection and promotion and the sustainable local economic development mainly through geotourism. In order to stimulate the geotourism development in the area, it is crucial that a UNESCO Global Geopark has visibility. Visitors as well as local people need to be able to find relevant information on the UNESCO Global Geopark operation and activities. As such, UNESCO Global Geoparks need to create a comprehensive communication strategy in order to communicate and promote their natural and cultural heritage as well as their activities and services. The implementation of such a communication strategy needs the establishment and operation of a professional communication office and the development of a variety of communication tools such as a dedicated website, presence in social media, press releases, publications (leaflets, guides, books). A UNESCO Global Geopark should also have a corporate identity. Lesvos Island UNESCO Global Geopark is located at the Northeast Aegean Sea, Greece and is one of the first recognized Geoparks of the Global Geoparks Network. The Natural History Museum of the Lesvos Petrified Forest is the management body responsible for the operation of the Lesvos island Geopark. The Geopark communication office is responsible for the implementation of the Lesvos Geopark communication strategy. Lesvos Geoparks communication was till recently mainly focusing on print media, TV, radio, and billboard advertising. While those channels are still important, especially during COVID pandemic the importance of digital media and social networks increased. Recognizing that digital communication is crucial to branding Lesvos Geopark, our communication strategy is now well-versed in digital platforms, such as social networks. The Geopark communication office prepares the annual communication plan which includes the main activities and events organized during the year. This annual plan is divided in monthly and weekly communication plans with detailed information on the planned communication actions such as press releases, social media posts, social media campaigns, email newsletters, running banner ads. The implementation of communication plans are accompanied by detailed weekly report on the realization of the communication actions which permits the evaluation of their effectiveness. In this presentation the results of the Lesvos Geopark communication are presented and evaluated.

**Keywords:** Geoparks, Communication, Lesvos island, Social networks

**Corresponding author:** nzour@aegean.gr

**Reference:**

Zouros N. (2004) The European Geoparks Network. Geological heritage protection and local development. Episodes vol 27, No 3, pp 165-171 Martini G, Zouros N, Zhang J, Jin X, Komoo I, Border M, Watanabe M, Frey ML, Rangnes K, Van TT, Melo JPP, Patzak M, Hilario A, Nakada S, Sá AA. UNESCO Global Geoparks in the "World after": a multiple-goals roadmap proposal for future discussion. Episodes -0001;0-. <https://doi.org/10.18814/epiiugs/2021/021002>

## Lesvos Petrified Forest As A Tool For Climate Education In Lesvos Island UNESCO Global Geopark

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*Konstantina BENTANA<sup>1\*</sup>, Nikolaos ZOUROS<sup>1</sup>, Ilias VALIAKOS<sup>1</sup>,*

*Natural History Museum of the Lesvos Petrified Forest<sup>1</sup> Greece, Natural History Museum of the Lesvos Petrified Forest<sup>1</sup> Greece, Natural History Museum of the Lesvos Petrified Forest<sup>1</sup> Greece,*

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The protected area of the Petrified Forest in Lesvos Island UNESCO Global Geopark consists of unique educational geosites. It contains records of the composition of the flora during the Miocene and at the same time it keeps records of the climate change through geological time. The Lesvos Petrified Forest is a particularly effective pedagogical tool to engage school students with climate change through on site exploration. Fossils, geological data and today's plants provide invaluable opportunities to create authentic experiences to school children to understand the consequences of climate change. In the Petrified Forest of Lesvos, students research the climate changes through geological time and learn about its effects on the ecosystems of the Miocene and today's ecosystems. The purpose of this paper is the presentation of the educational program "Climate change: Learning about the consequences by studying the Petrified Forest of Lesvos" and the educational materials that have been designed. Through a variety of educational activities main target of the educational programme is to encourage school students to explore the causes and aspects of climate change, to sensitize them on the effects of climate change, to explore our responsibilities as a society and as individuals and to stimulate them to take action.

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**Keywords:** Geopark, Climate, Education, Lesvos Petrified Forest

**Corresponding author:** kon.bentana@gmail.com

**Reference:**

Bentana, K, Zouros, N. (2020). Educational Activities to Enhance Geomorphological Heritage Sites in Lesvos UNESCO Global Geopark. Online Conference "The role of geomorphology in modern society", 16 December 2020, Book of proceedings, 53-57. Bentana, K., Zouros, N., Valiakos, I. (2019). Geoparks and education for the Sustainable Development: Educational Programs in Lesvos Island UNESCO Global Geoparks. 2nd International Conference on the UNESCO Global Geoparks of Greece and Cyprus, Nicosia, Cyprus, 16-18 May 2019, 30-31. Zouros, N., Bentana, K., Valiakos, I., Vasileiadou, K, Thomaidou, E. (2015). Lesvos Geopark Guide. Natural History Museum of the Lesvos Petrified Forest, 168 p. Zouros, N., Valiakos, I. (2015a). New findings in the Petrified Forest of Lesvos Global Geopark: Geoconservation and public awareness, 4th Asia-Pacific Geoparks Network, San'in Kaigan Symposium, Toyooka, p. 22. Zouros, N. (2009). Natural History Museum of the Lesvos Petrified Forest Exhibition Guide. Natural History Museum of the Lesvos Petrified Forest, 156 p.

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## Travelling through a pandemic: the GEOclimHOME-PRO exchanges continued during the Covid-19 outbreak.

*Ilaria SELVAGGIO<sup>1\*</sup>, Luigi PEROTTI<sup>2</sup>, Patrizia BALZARINI<sup>3</sup>, Mikko KIUTTU<sup>4</sup>, Sophie JUSTICE<sup>5</sup>,*

*Sesia Val Grande UNESCO Global Geopark<sup>1</sup> Italy, University of Turin, Earth Sciences Department<sup>2</sup> Italy, "IstitutoCobianchi" HighSchool<sup>3</sup> Italy, Rokua UNESCO Global Geopark<sup>4</sup> Finland, Chablais UNESCO Global Geopark<sup>5</sup> France,*

GEOclimHOME-PRO ("Geoheritage and climate change for highlighting the professional perspective") is a 3-year Erasmus+ project (2018-2021) involving secondary schools from three European UNESCO Global Geoparks: Rokua in Finland, Sesia Val Grande in Italy and Chablais in France. The project's aims are: a) to increase the awareness of climate change and b) to improve students' understanding of the active and passive roles of man towards the environment. Based on contents from national school curricula and the international sustainable development goals (SDGs), the educational activities enhanced students' awareness of social responsibility, in order to stimulate their active citizenship and to help discover new job opportunities addressing the local and global needs of sustainable development, future and life-style. A strong point of the project is its educational methodology. The students are deeply engaged through transnational exchanges where they are involved in seminars and practical experiences with researchers. They are mainly working in groups to collect data and to elaborate final talks for sharing results with other students, families, teachers and geoparks educators. This practical approach revealed a weakness of the project during the Covid pandemic: it was either impossible or really hard to travel around Europe and meet people. To address this situation was a great challenge. Project activities were suspended during the 2020 lockdown. Thereafter, different pandemic rules in each country and uncertainty about future restrictions required new "ready for anything" plans: teachers and educators arranged new programmes, including real meetings with school and the local Geopark staff, or virtual meetings between the schools and regions, also organizing a mixed one (both real and virtual activities), opened by a common online conference. Therefore, cooperation between Geopark, school and research institutions within the GEOclimHOME-PRO project provided an unexpected way to directly experience the "resilience" we encourage for facing local and global effects of climate changes.

**Keywords:** education, Geopark, pandemic, climate change, cooperation

**Corresponding author:** selvaggio.ilaria@gmail.com

**Reference:**

Selvaggio I., Perotti L., Balzarini P., Olsbo R. Kiuttu, M. Justice S., Viani C., Giardino M. Travelling through a pandemic the geodimhome-PRO exchanges continued during the Covid-19 outbreak. In: Digital 9th International Conference on UNESCO Global Geoparks, 2021, December 12-16, Jeju Island UNESCO Global Geopark, Republic of Korea.



## Sharing Heritage by Community; The Process of Community-based Documental Movie Making in Kauhajoki.

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*Marketta NUMMIJÄRVI<sup>1\*</sup>,  
Lauhanvuori - Hämeen kangas UNESCO Global Geopark<sup>1</sup> Finland,*

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Topic: Popularizing Scientific Knowledge for Public Education \* Geoparks– Promoting Local Awareness & Appreciation by Community-based Movie Making Sharing Heritage by Community; The Process of Community-based Documental Movie Making in Kauhajoki. Pentti Kakkori, Jussi Kleemola, Marketta Nummijärvi, Tatu Siltanen, Mauri Turunen The Community Heritage Group of Kauhajoki & the Lauhanvuori-Hämeen kangas Geopark Association, South-Ostrobothnia, Finland Kauhajoki is one of the 9 municipalities that has established the Lauhanvuori-Hämeen kangas Unesco Global Geopark in Finland. For many years, there has been a group of active professionals that has voluntarily collected information about local nature, cultural heritage, livelihoods and local history and has formed massive amount of information into easily accessible materials in many forms. The products are printed and digitized popularized publications, Internet pages including many media (kauhajoki.net), 11 5-minute-long videos and at last, a 70-minute-long documental movie. About 200 local amateur and professional volunteers have been involved in the process of composing the materials over years. The compiling product, the movie, was composed of several shorter videos of selected topics. The videos were based on the multi-year-collection of local heritage and information. The topics included extraordinary local geology; the local topography and landscapes; the special geological formation and valuable nominated cultural landscape of Hyypänjokilaakso; up-stream water system and ground water; the diversity of forest and wetland nature; the year cycle of a mire; the special formation of Katikka ravine; the art of farming on the plains and rising highland cattle; the character, urban structure and architecture of the town center. The movie has been presented to over 1000 10-16-year-old school children in Kauhajoki and to many interest groups in private shows. In addition, about 500 people have attended public presentations of the movie. It has widened the understanding and appreciation of local nature and heritage among all age groups, especially among the young children and youth. The local involvement has made the movie-making possible and deepened the experience. These Geopark activities have drawn wide regional attention and will be available permanently to the visitors of the future Geopark Centre that is now under preparation in Kauhajoki. Corresponding author: Marketta Nummijärvi, +358-40-481-0003 Marketta Nummijärvi is the chairperson of the board of Lauhanvuori - Hämeen kangas UNESCO Global Geopark Email: [marketta.nummijarvi@kauhajoki.fi](mailto:marketta.nummijarvi@kauhajoki.fi)

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**Keywords:** Lauhanvuori-Hämeen kangas UNESCO Global Geopark, Kauhajoki, community-based documental movie, local heritage

**Corresponding author:** [marketta.nummijarvi@kauhajoki.fi](mailto:marketta.nummijarvi@kauhajoki.fi)

**Reference:**

Pentti Kakkori, Jussi Kleemola, Marketta Nummijärvi, Tatu Siltanen, Mauri Turunen The Community Heritage Group of Kauhajoki & the Lauhanvuori-Hämeen kangas Geopark Association, South-Ostrobothnia, Finland

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## The Island of Biševo: Geoheritage and Coexistence of Humans and Nature (UNESCO Global Geopark Vis Archipelago, Dalmatia, Croatia)

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*Tvrtko KORBAR<sup>1\*</sup>,  
Vis Archipelago UNESCO Global Geopark<sup>1</sup> Croatia,*

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The island of Biševo is the second largest island of the Vis archipelago, which in 2019 became a UNESCO Global Geopark. Biševo geoheritage reflects specific geological history of the central Adriatic. The island is built mainly of stratified Cretaceous to Paleogene carbonate rocks. Over millions of years, these rocks have been forming from subtropical marine life, when large amounts of fossils deposited on the seabed of warm subtropical sea on top of the past Adriatic carbonate platform. Lithification of the carbonate mud and sand during millions of years created layers of carbonate rocks that were raised from the Earth's crust during the Quaternary due to the rise of salt diapirs. Thus, along the shores of the island there are the inclined layers that resemble pages of a stone book, that contains records of geological history from the Age of the Dinosaurs, when the area was connected to Africa, and from the Age of Mammals, when it was closer to Europe. Geologically recently, the stone book was covered with eolian dust, i.e. fine sand deposited by the wind during the last Ice Age, when the most of the present day Adriatic Sea was still a dry steppe. With the rising of the Holocene sea, in combination with the geodynamics of Adriatic microplate (Adria), semi-submerged caves were created. While the Blue Cave is known around the world for its beauty, the mystique of the lesser-known Monk Seal Cave is reinforced by popular geological interpretations of until recently undescribed phenomena, such as the Tectonic Gate and some other specific tectonic features. Modern inhabitants of the islands of Biševo and Vis use these natural resources and try to ensure their survival in coexistence with this geoheritage. With attractive interpretations of still well-preserved but less known inanimate nature and indigenous products grown on a specific geological substrate, the inhabitants plan to attract more visitors through new Visitor Center built on the top of the island, especially pre- and post- of the main summer season. Such a sustainable development of tourism should be the only possible one, in order to continue the successful coexistence of humans and nature on these remote Adriatic islands.

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**Keywords:** Vis archipelago UNESCO Global Geopark, Biševo Island, Stone Book, Blue Cave, sustainable tourism

**Corresponding author:** [tkorbar@hgi-cgs.hr](mailto:tkorbar@hgi-cgs.hr)

**Reference:**

<https://geopark-vis.com/>

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## The Digitization Of Cultural Heritage In The Idrija Geopark

*Maša ČIBEJ<sup>1</sup>\*,  
Idrija Tourism Board<sup>1</sup> Slovenia,*

The Idrija UNESCO Global Geopark boasts an extraordinary cultural heritage originating in the town's mercury mining past and now included in the UNESCO World Heritage List. It reflects Idrija's identity, knowledge, and tradition, and forms the basis of the town's tourism. The principal institutions tasked with the preservation, maintenance, and marketing of the Idrija Geopark cultural heritage are the Idrija Municipal Museum and the Idrija Centre for the Management of Mercury Heritage. The Idrija Geopark cooperates with both institutions to carry out activities for the development of innovative and sustainable tourism products to improve the visibility, awareness, and attractiveness of Idrija's heritage. In the past two years, with funding from the European Regional Development Fund for digital innovations of cultural heritage in leading destinations, we joined forces to develop digitization solutions to make cultural heritage more accessible to modern visitors and contribute to its intellectual accessibility. The lead partner was the Sora Development Agency from the nearby town of Škofja Loka, which forms a single leading destination together with Idrija. The digitized objects from the Idrija region are the kamšt (a wooden wheel used to pump water from the mine) and a rotary furnace (once used to smelt mercury ore). In the past, both objects were significant technological innovations in mercury mining. Today, however, they are difficult to present, as to show their performance live is practically impossible. To remedy this, we collaborated with one of the leading Slovene IT-companies to design 3D models of the kamšt and the rotary furnace with animations of their performance. The models will be available for observation with AR and VR technologies. The use of advanced technological solutions and focus on preserving authenticity have allowed for a digitally enriched experience of immovable cultural heritage that will offer visitors a modern and interactive opportunity to observe Idrija's monuments in a more fascinating, recognizable, and accessible light. The 3D models can also be further used as data for other purposes such as education, monument restoration, and tourism. Cooperation among institutions was a key factor in the success of the project. Only the financial support and the expert contribution of abovementioned heritage-focused institutions, the coordination of the Idrija Tourism Board, the knowledge of the IT-company, and the funding provided by the ERDF and the Municipality of Idrija allowed for the creation of digital solutions that represent a significant contribution to the preservation, presentation, and promotion of cultural heritage. The collaboration fosters the preservation of cultural values, offers new opportunities for their presentation for tourists, experts, and educators, and enhances the digital and hybrid competences of the involved parties.

**Keywords:** digitization, cultural heritage, sustainable tourism, participant collaboration, Idrija Geopark

**Corresponding author:** masa.cibej@geopark-idrija.si

**Reference:**

Straus, M., Starc Peceny, U., Ilijaš, T. (2019). Digitalno inoviranje kulturne dediščine: priročnik za turistične destinacije, <https://tourism4-0.org/wp-content/uploads/2020/01/Priročnik-4-0-Dedisk-heritage-web.pdf>, accessed 12 November 2021. Nova Gorica: Arctur d.o.o.