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## IFP Energies nouvelles and UNESCO join forces in the field of geoscience for sustainable resource management within the context of the energy transition



**IFP Energies Nouvelles (IFPEN) and UNESCO have signed a framework partnership agreement concerning research and training in the field of geoscience. This collaboration mobilizes IFPEN's expertise to support the priorities of UNESCO's International Geoscience and Geoparks Programme (IGGP), such as the promotion and understanding of the "Earth System" and sustainable use of natural resources.**

### **Research and training in earth sciences, a key priority for the future**

Geosciences play a fundamental role in research activities tackling new energy transition themes, such as the geological storage of CO<sub>2</sub> and hydrogen, geothermal energy, the use of underground resources and the understanding of the interactions between climate changes and ecosystems from the study of sedimentary systems.

Within the framework of this partnership, IFPEN and UNESCO will propose thesis topics in line with these new themes. The aim is to train future research engineers to enable them to overcome the scientific and technological challenges associated with the energy transition.

For Pierre-Franck Chevet, Chairman of IFPEN "This unique partnership gives IFPEN's PhD students access to new research opportunities and study topics and enables them to benefit from UNESCO's global network."

### **A joint geoscience digitalization project**

Since 2019, IFPEN has been developing cutting-edge digital tools to promote geosciences to the general public and contribute to knowledge dissemination in this field.

For example, IFPEN is developing a mobile app enabling users to identify the type of rock they are photographing. IFPEN is also working on an augmented reality tool to conduct a 3D tour of a geological outcrop. This technology will enable the public to visualize aspects such as the faults and sedimentary layers that have marked the formation of the geological environment.

It will be possible to deploy these tools in UNESCO Global geoparks labeled by UNESCO, with two main objectives: to educate geoparks visitors in a fun and entertaining way, but also test and enrich these applications drawing on a participative science approach.

For Shamila Nair-Bedouelle, Assistant Director-General for Natural Sciences at UNESCO: "This partnership will promote earth sciences through the development of the digitalization of geosciences and the use of artificial intelligence for rock and mineral recognition and the creation of virtual geological tours of UNESCO Global Geoparks."

## **Press contacts**

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### ***About UNESCO***

***UNESCO is the UN agency responsible for managing the International Geoscience and Geoparks Programme (IGGP). This program consists of two pillars: the International Geoscience Programme (IGCP), which, for the past 45 years, has brought together geologists from around the world to focus on themes of societal importance, and the UNESCO Global Geopark label that promotes international geological value and local sustainable development.***  
***www.unesco.org/fr/earth-science***

### **Photo Caption (2019)**

Former Dolomite converted in an open-air theater near to the Pozalgua caves, in the Ranero massif (Spanish Basque Country) : a unique place to study geological processes, and, at the same time, to remember the industrial spanish heritage of a region.

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