Iceland Liechtenstein Norway **Active citizens** fund

Rural Karst - Romania

In Romania, there are 131.119 km2 on underground karst, and 6.594 km2 of surface-level karst. Many of our local communities **rely on karst aquifers as their main source of water**. And yet they are the most vulnerable and the most misunderstood in terms of assesing their quality. Pollution from nearby illegal landfill sites, and agriculture that is practiced in the proximity of karst springs and caves affects the quality of drinking water for these communitites.

Neither the local population, nor the institutions have knowledge on how to test the water and how to address the problem. Fortunately, Explorers Caving Association has experience working with these problems, for which reason this project was initiated.

We aim **to involve 6.040 citizens from across the country** in the protection of karstic environment during 18 months of project activities. Most of them will be school children, but also their teachers, local authorities, and 500 cavers, who will help us connect with those who can benefit from our knowledge. Our focus here will be the local authorities of towns and villages situated nearby karst environment, and we expect to establish a long-term collaboration with approximately 1000 citizens.

Activities

Our plan is to educate and to inform the stakeholders and the population at large about **the importance, value and vulnerability of karst environment**, and to achieve this our communication strategy has 3 parts:

1. Creating original and interesting learning materials
2. Connecting to the stakeholders and presenting them our work
3. Meeting in person at workshops and conferences

Connecting in person with the stakeholders at workshops and conferences

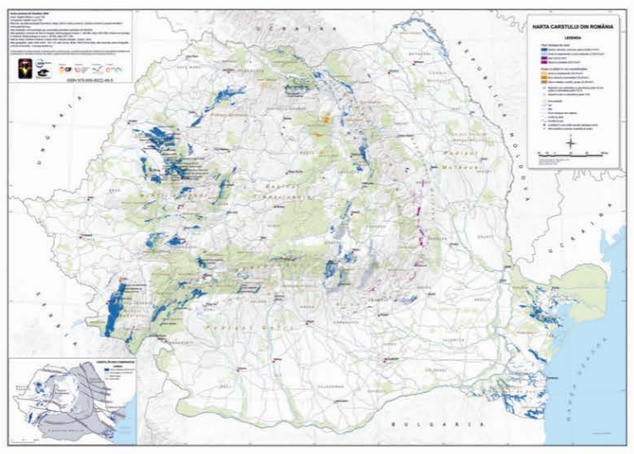
1. In the spring of 2023 we are organising the **"Conference on the Protection of Karst Environment".** For this occasion we are preparing a couple of publications about **the last 60 years of activity** within Explorers Caving Association.

There will be panels with experts, we will meet other cavers and government officials, to discuss :

- our role in the conservation of natural resources
- how we document karst areas
- nature photography, archeology, paleontology
- and much more!

2. This summer (2022), we organised a course called **"The Innovation Workshop".** Here, we invited young people from underdeveloped communities to learn about karstology, cave vulnerability, hydrology, pollution, and nature photography.

Children in Romania who live in rural areas are more prone to **not have access to a good education because of poverty**. That is why they also have a higher school drop-out rate. So, for many of those attending the "Innovation Workshop", this has been **their first summer camp**, as they do not have the means to go anywhere on vacation. And for those who will be joining their teachers on the field trip, it may be the first such experience. **We hope this will strengthen their enjoyment of school and their hope for the future.**



Planning the youth summer-school required us to pay a lot of attention to detail. Maybe the most challenging part was **the rehabilitation of Cărbunari Ecological Education Centre**, a building that we own and that we use for holding courses on the natural values of Nera Gorge-Beușnița National Park.

The extensive repairs were planned as part of the Rural Karst project, and so we had to be ready to receive our young participants in time.

The Educational Materials

We will publish :

- posters for understanding what the karst environment is
- a book called "The Young Caver's Guide" on how to start caving safely, science, and ecology. We regard this as a step further in Romanian STEM education, merging classroom knowledge with real-life applications.
- a second book called "Hydrogeology and Vulnerability of Karst"
- two publications summarizing the 60 years of activity within Explorers Caving Association

What is new and never before done:

We are trying to create a **3D model of a cave in Romania**, which will be explored from a computer, phone or tablet. At various points inside the virtual cave, a video will appear, in which a cave specialist will explain various aspects of the karst environment.

To achieve this we are using LIDAR technology, which in itself is not new, but it has never been used in a Romanian cave.

All of the above, books, posters and the 3D software will reach all our 6.000 stakeholders, teachers, students, local authorities and environmental workers across the country.

The Innovation Workshop - Youth STEM Education

It is worth mentioning that we aim to educate youth, to create the next generation of cave explorers and of young people capable of taking civic action in their communities.

We are contacting **135 schools** nation-wide. Almost always, the schools that are located near karst environments are also found in extremely underdeveloped communities.

With the help of **biology and geography teachers**, we will offer and explain the project learning materials.

And to make it all the more meaningful, the children will go on **field trips** with their teachers, wherever they live, as they are all located close to an area of interest.

They will learn about the science and the beauty of caves and karst, and they will be instructed on how to assess the level of degradation and pollution of caves.

Most importantly, they will be capable of **assessing the quality of their water source**, if it happens to be a karst aquifer.

In turn, we will gather information sent back to us by those involved in this project, and we will notify the National Environmental Guard in regards to the ecological problems we discover.

Project implemented by:

Project implemented by Explorers Caving Association with the financial support of the Active Citizens Fund Romania, programme funded by Iceland, Liechtenstein and Norway through the EEA Grants 2014-2021.

https://www.exploratorii.org