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I AM LOOKINGFOR: **A PARTNER (FOR MY PROJECT)** **A PROJECT TO JOIN**

BRIEF DESCRIPTION OF YOUR PARTNER SEARCH (*)

This work focuses on phreatic life (interstitial organisms from saturated layers of shallow, unconfined aquifers near rivers). These communities host bacteria, fungi, protists, worms, crustaceans, insects, but also plant roots. Phreatic communities are indicators of water quality and key controllers of underground pollution.

Please complete the information below depending if you are looking for a partner (to join your project), or a project (you would like to join) – Max 1 page.

DESCRIPTION OF YOUR EXPERTISE /SKILLS

DESCRIPTION OF YOUR PROJECT / THE PROJECT YOU WOULD LIKE TO JOIN

Monitoring phreatic biodiversity in combination with water quality is important for understanding the sources, history and severity of groundwater pollution. Yet, little is known about the geographic distribution, structure and function of these communities and little specific technologies and legislation exist to protect them.

The goals of this project are to understand and protect phreatic communities. We ask four questions:

1. What is the state of phreatic ecosystems (geographic extent, biodiversity, water quality and major pollutants)?
2. How do water quality and life influence each other in phreatic ecosystems?
3. What are the most efficient bio-technologies to restrain phreatic pollution?
4. What legal strategies can protect phreatic ecosystems and keep their water clean?

We will develop a database specialized in phreatic ecosystems and assimilate available data on hydrology, water chemistry and biology. We will map critical phreatic zones in Europe, with regards to groundwater quality, pollutants, water use, recharge, pollution sources, life abundance and biodiversity (based on classical and molecular phylogeny). The most important types of pollutants monitored will be organic carbon, nitrogen, phosphorus, heavy metals, fecal coliforms and microbial heterotrophs. We will analyze the effect of overlying vegetation and pollution on underground phreatic species and the effect of phreatic biosystems on water pollutants. We will develop an autonomous solar-powered and field-deployable station to treat polluted water from interstitial habitats. We will study landscape management strategies for protecting biodiversity and water quality in phreatic ecosystems. We will evaluate the efficiency of current legislation and propose strategies for protecting phreatic biodiversity

DESCRIPTION OF THE EXPERTISE/SKILLS YOU ARE LOOKING FOR IN YOUR PROJECT

We are looking for partners with experience in:

- data mining
- landscape management strategies and current legislation
- phreatic pollution
- phreatic ecosystems
- water treatment
- pollution caused by agriculture

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