



# Newsletter #1

March 2019

Dear Readers,

## Coordinator:



ELTE

## Partners:



GTK



UMIL



Welcome to the first issue of the ENeRAG newsletter, which aims to provide you up-to-date news on project results and information about the upcoming activities and events.

The ENeRAG – Excellency Network Building for Comprehensive Research and Assessment of Geofluids project – is a Widespread/Twinning project funded by the European Union's Horizon 2020 research and innovation programme, which aims institutional networking. The project brings together excellent consortium partners – the Geological Survey of Finland (GTK) and University of Milan (UMIL, Italy) – who will closely collaborate with the Eötvös Loránd University (ELTE, Hungary) to improve its scientific excellence, to significantly strengthen research and innovation capacities in geofluids' research and aligned geological resource assessment of groundwater, geothermal energy and hydrothermal mineral resources.



groundwater



geothermal energy



hydrothermal mineral resources

The ENeRAG raises the research profile and excellence of ELTE in comprehensive understanding, tracing and modelling of geofluid systems focusing on their interrelationships through staff exchanges, organisation of sessions and attendance on high-level international conferences; through joint open access publications. It will ensure filling the networking gaps and deficiencies of ELTE, and enhance the S&T and innovation capacity in the field of sustainable development and eco-friendly exploitation of geofluids and their resources by training workshops, innovative video trainings, summer and winter schools, expert visits, laboratory and field trainings.

We hope that you will follow our project updates and success in the coming years.



The ENeRAG project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810980.

# Kick-off events

In the course of the project starting events on 27th November 2018 an internal workshop was organised for the consortium partners. Representatives of the partner institutions gave short introductory presentations on their research experiences, current research topics, facilities. The participants exchanged views and started to plan in more detail the future work. In the afternoon a short field excursion was organized to visit the Gellért Hill (Budapest), where the hydrogeological, geothermal and mineral characteristics of the Buda Thermal Karst system were introduced.



On the next day during the Opening conference the ENeRAG project was introduced to the public, industrial partners, colleagues and students. Separated panel discussions were held related to the three main topics of the project, i.e. groundwater, geothermal energy and mineral resources. The main aim of the discussion was to talk about the possible cooperation in the frame of ENeRAG with stakeholders in order to prepare a guideline and help to improve practical solutions due to ENeRAG in the future. The afternoon session was dedicated only to the partners in the form of work package planning meeting, where schedule, tasks, deliverables and milestones were discussed in detail.



Project and Innovation Management Training course was held on the last day by colleagues from the GTK. The main objective of the course was to provide basic information on the European Union's Framework programmes and their management covering day-to-day as well as financial and legal management issues. The ultimate objective of these training workshops is to provide improved management capability of ELTE in order to compete successfully for national, EU and international research funding.



Visit our website and the [photo gallery](#) to get an impression about these days!





# Recent and upcoming activities

## Student Competition

[Problem Solver Competition](#) call was announced in December 2018 by the ENeRAG project in collaboration with the Regional Groundwater Flow Commission of International Association of Hydrogeologists (RGFC-IAH) and the József & Erzsébet Tóth Endowed Hydrogeology Chair (Dept. of Geology, ELTE, Budapest, Hungary). The aim of this competition is to encourage students to learn about geofluid systems and utilize the acquired information in solving practical problems. The competition will be organized on two scales, i.e. in Hungary and internationally, with two rounds in each. The first round will be an online test of the basic knowledge on system approach based on provided readings, which allows for the qualification to the second round. The best groups will receive a topic about the practical aspects and application of system approach of geofluids. This topic will have to be worked out as a 15 minute presentation. Teams are invited to give a presentation and answer the questions in a special event, scheduled to the beginning of November 2019. Valuable prizes will be awarded for the best student groups. The Hungarian round has been already started, with 10 groups, who will complete the online test in April.

In the framework of capacity development, the first candidate of the student exchange program has been started her work at the University of Milan. New knowledge and skills on statistical modelling for groundwater vulnerability will be acquired and exported to ELTE.



## Student Exchange

## Conference session

The ENeRAG project supports a session entitled “[Geofluids as natural resources or sources of contamination: Research and Innovation](#)” on the upcoming [EGU conference](#) in April 2019. 7 oral and 22 poster presentations are in the program, which enables fruitful scientific discussion related to the topic.



## MAR systems

In the frame of ENeRAG project, a [booklet about Managed Aquifer Recharge \(MAR\) systems](#) was prepared for the Hungarian industrial partners and experts working in the area of water management. Furthermore, establishment of a Hungarian MAR database was started, in order to complement the [global inventory](#) of MAR systems, which has limited information on Hungarian sites.



# Upcoming events

Field symposium

Between 27 and 31 May a field symposium on shallow hydrothermal processes, fluid flow systems and resources will be held in Hungary. After a one-day-long introductory lecture series, the field trip will be guided to key sites related to the shallow levels of epithermal systems (Velence-, Matra-, Tokaj Mts.) and to the active and ancient fluid system in the Buda Hills, Hungary.



ENeRAG project will support a session entitled “Groundwater resource management” on the [FLOWPATH conference](#) held in 12-14 June in Milan, Italy. It is also a good opportunity for the project collaborators to discuss further research cooperation and widespread scientific dissemination.



Conference session

Summer school

Following the conference the Italian colleagues will organize a summer school to enhance sustainable approach in vadose zone hydrology and groundwater vulnerability. The two-week-long event will focus on the peculiarity of groundwater flow in unsaturated media and its related investigation tools, on Managed Aquifer Recharge(MAR) and on the statistical approach in groundwater vulnerability.



ENeRAG and ENeRAG & RGFC-IAH intend to support 2 sessions entitled “Advanced modelling tools for subsurface hydrology: from vadose zone to deep environments” and “Innovative approaches for understanding groundwater flow systems” on the 46th [IAH Congress](#) held in 22-27 September in Malaga, Spain.



UNIVERSITY OF MALAGA

Congress session

Contact ENeRAG through the media platforms of the project:

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