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Extended Abstracts

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title: **TRANSENERGY – Transboundary Geothermal Energy Resources of Slovenia, Austria, Hungary and Slovakia**

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The aims of the “TRANSENERGY — Transboundary Geothermal Energy Resources of Slovenia, Austria, Hungary and Slovakia” project is to provide implementational tools for enhanced and sustainable use of geothermal resources. The project is carried out on a common geological, hydrogeological, hydrogeochemical and geothermal basis, ensured by the four national geological surveys (MÁFI, SGUDS, GBA, Geo-ZS) of the participating countries in the framework of the CEU Program Priority 3, Area of Intervention 3.1.: “Developing a high quality environment by managing and protecting natural resources”. The project started in April 2010 and will run for 3 years.

A natural resource such as geothermal energy, whose main carrying medium is deep groundwater moving along regional flow paths, is strongly linked to geological structures that do not stop at state borders. Therefore only a cross border approach with the establishment of a joint, multi-national management system will be effective in handling the assessment of geothermal energy and defining the conditions for its sustainable use. The main goal of the project is to provide a user friendly web-based decision support tool (an interactive web portal) which is useful both for decision makers and stakeholders.

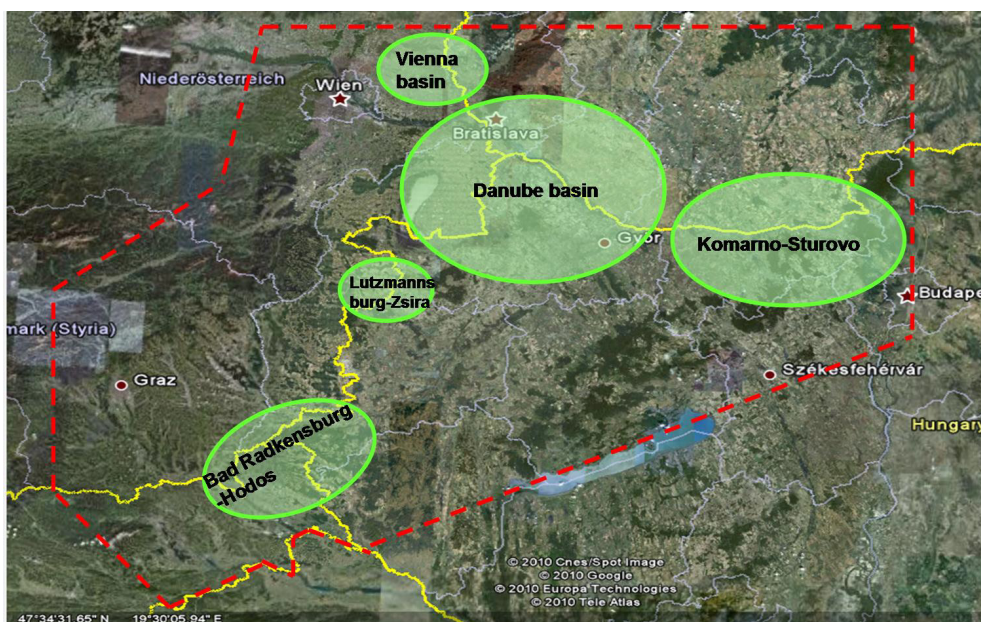


Figure 1. The project area.

The project area (Figure 1) is located in the western part of the Pannonian Basin, and includes five detailed, surveyed regions. The general “supra-regional” model area (red dashed line), includes the thermal karst of the Komarno-Sturovo area (HU-SK), the central depression of the Danube basin (A-SK-HU), the Lutzmannsburg – Zsira area (A-HU), the Vienna basin (SK-A) and the Bad Radkersburg – Hodoš area (A-SLO-HU) project areas.

The activities of the project are divided into the following six, well-defined work packages:

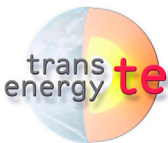
- WP1 — Project management and coordination (MÁFI),

- WP2 — Communication, knowledge management and dissemination (GBA),
- WP3 — Utilization aspects (Geo-ZS),
- WP4 — Transnational data management (SGUDS),
- WP5 — Cross-border geoscientific models (MÁFI),
- WP6 — Implementation tools for transboundary geothermal resource management (GBA).

The input for the implementation tools will be provided by the results of WP3, WP4 and WP5. The main tasks to be performed are the following:

- An evaluation of the results from the TRANSENERGY questionnaire for the actual (thermal water) users and authorities, screening of the utilization needs with special respect to national, EU and international legislation aspects (WP3);
- Collecting and harmonizing geoscientific data, performing additional groundwater sampling, chemical and isotopic analyses, geophysical measurements, and organizing all data in harmonized, multi-lingual shared databases (WP4);
- Producing a range of cross-border geoscientific models (geological, hydrogeological, geothermal) and performing scenario modelling for different extractions of geothermal heat/water (WP5).

In addition to the web-based decision planning tool, which is clearly a transnational tool development, the project will deliver a methodology for joint groundwater management, including utilization maps, summarizing the legal steps and actions towards a harmonized management strategy of transboundary geothermal resources, and a best practice on geothermal use.



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