



Project Fact Sheet

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Geo-Education for a sustainable geothermal heating and cooling market (**GEOTRAINET**)

Programme area: Heating and cooling

Status: Finish

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Objective: To develop the training of professionals involved in Ground Source Heat Pump installations (GSHP) for a sustainable geothermal heating and cooling market

Benefits: To support the geothermal heating and cooling market in Europe through the training of professionals involved in Ground Source Heat Pumps installations. From the different groups of professionals involved in a GSHP installation, the GEOTRAINET project focuses on two target groups: designers (those who carry out feasibility and design studies, including geology) and drillers (who make the boreholes and insert the tubes).

Keywords: Geothermal Heating and Cooling

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Budget: € 952.004 (EU contribution: 75%)

Contract number: IEE/07/581/S12.499061



Geo-Education
for a sustainable geothermal
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Short description

Ground Source Heat Pumps (GSHP) contribute greatly to energy saving and emission reduction. In Europe, a sustainable market has only been established in few countries including Sweden, Switzerland, Germany and Austria. One of the barriers to a sustainable and growing geothermal market is the lack of appropriately skilled personnel, and the quality of design and drilling are not always satisfactory. Furthermore to keep quality up, a need for a certification programme for the GSHP workforce has been identified.

The GEOTRAINET project, supported by the European Commission's IEE programme ("Altener"), aims to develop a European-wide educational programme as an important step towards the certification of geothermal installations. The vision of the GEOTRAINET project is that the training and certification programs will be recognised all over Europe and provide benchmark standards for consistent voluntary further education in the field of shallow geothermal in all participating countries. The training is essential for people interested in becoming shallow geothermal accredited designer and drillers.

Expected and/or achieved results

The main results of the project are:

- Created an international platform of experts on Geothermal Energy Heating and Cooling to provide the knowledge required for the education on this area by training courses
 - Researched into data currently available and useful for GSHP installers
 - Evaluation of skills required to design, drill and install GSHP
- Creation of curricula and programmes, for designers and drillers on shallow geothermal facilities
- Creation of training tools, didactic materials to support the training and testing and optimization of the materials
 - GEOTRAINET training manual for Designers of shallow geothermal systems
 - GEOTRAINET training manual for Drillers of shallow geothermal systems
 - Presentations for training courses: Designers and Drillers
 - Best Practice Database of Ground Source Heat Pump Systems
 - Fact sheet on ground source HP technologies
- Launching training courses, twelve practical training courses in eight European countries:
 - Four training courses for trainers
 - Four training courses for designers
 - Four training course for drillers
 - 380 participants in the training courses from 22 European countries
- Developed an e-learning platform for shallow geothermal applications:
 - E-learning course for training designers of shallow geothermal systems
- Improved access to geological data needed for the design of Geothermal Energy Heating and Cooling installations
- Developed a European structure for training
- Developed a proposal for a European certification framework

Lessons learnt

The 3 main lessons learnt from GEOTRAINET project are:

- ***The outcomes of the project were strengthened by wide participation in its activities.*** The group of experts was drawn from professionals with the full range of qualifications and experience relevant to the sector of GSHP. The expert platforms created provided a very complete vision of the curricula necessary for designers and drillers. By working together, experts from different countries and with different backgrounds have provided a very rich exchange of practice between the countries. Similarly, the involvement of course participants from different countries and with a range of experience and qualifications has provided a very rich forum for the GSHP sector. The feedback of the participants in the courses has allowed refinement and improvement of the course programmes.
- ***A strong demand exists from the GSHP market in the countries represented by the project partners for training activities for designers and for drillers.*** The twelve courses held during the project period could not accommodate the large number of applications who wished to attend. The demand for certification also appears to be very high, especially in the countries with less developed GSHP markets.
- ***The demand for courses in other European countries is also high.*** There have been more countries expressing interest in organising courses than the eight countries planned during the GEOTRAINET project period. Based on the impact of the European Directive on promotion of the use of energy from renewable sources, there is a very high demand to provide training courses in all EU countries. There is also a strong demand for European education and certification, to support similar quality standards of the training and mobility of professional in Europe. The GEOTRAINET Education and Certification Structures delivered by the project will be an important reference for this demand

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