



Demonstration of soft stimulation treatments of geothermal reservoirs

In Brief

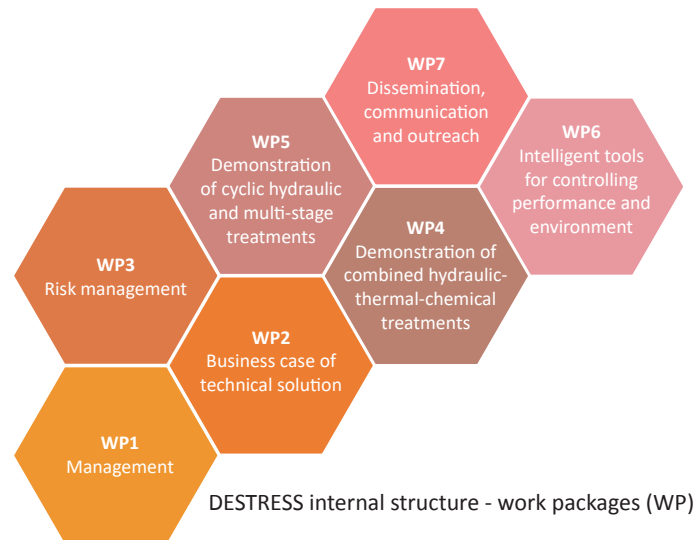
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 691728



About

DESTRESS demonstrates methods of enhanced geothermal systems (EGS). The aim is to expand knowledge and to provide solutions for a more economical, sustainable and environmentally responsible exploitation of underground heat. EGSs allow the enormous untapped potential of geothermal energy to be put to widespread use.

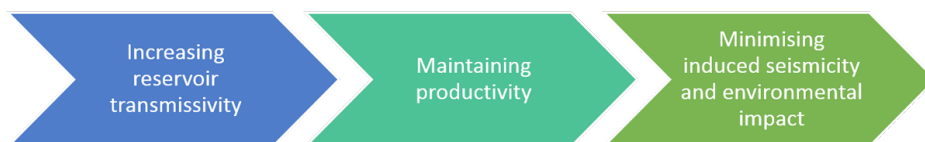
The concepts explored in DESTRESS are based on experiences in previous projects and on scientific progress and developments in other fields, mainly the oil and gas sector. Recently developed stimulation methods will be adapted to geothermal needs, applied to new geothermal sites and prepared for market uptake.



Objectives

The overall objective of DESTRESS is to develop good practices for creating reservoirs with increased transmissivity, sustainable productivity and a minimised level of induced seismicity.

DESTRESS will improve the understanding of technological, business and societal opportunities and risks related to geothermal energy. Existing and new project sites have been chosen to demonstrate the DESTRESS concept. These demonstration sites are using soft stimulation treatments to minimise environmental hazards.

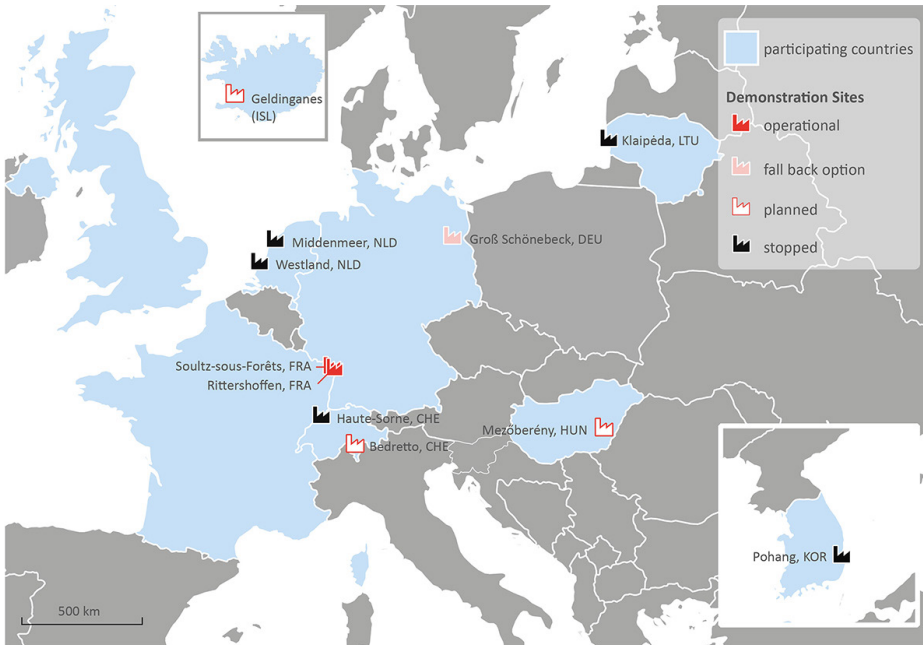


Overall objectives of DESTRESS

How do we define Soft Stimulation?

Soft stimulation is a collective term for geothermal reservoir stimulation techniques. It aims to achieve enhanced reservoir performance while minimizing environmental impacts including induced seismicity. Soft stimulation includes techniques such as cyclic / fatigue stimulation, multi-stage stimulation, chemical stimulation and thermal stimulation.

Demonstration Sites



To demonstrate the DESTRESS concept, several sites with different geological settings and access to a reservoir by means of geothermal wells have been chosen: Soultz-sous-Forêts, Rittershoffen, Bedretto, Geldinganes, and Mezöberény.

As their success is subject to a number of uncertainties, a fallback option has been identified in case of unforeseen developments such as problems with the well drilling: Groß Schönebeck.

Partners and Structure

DESTRESS is a Horizon 2020 supported programme. It brings together an international consortium comprising major academic and research institutions and key industrial players from Europe and South Korea to ensure enhanced EGS technology performance and accelerated market penetration.

Stakeholder Network

DESTRESS' stakeholder network facilitates the exchange of good practices. Become a part of it!
www.destress-h2020.eu/stakeholders

Academic Partners



Industrial Partners



Facts and Contact

Demonstration of Soft Stimulation Treatments of Geothermal Reservoirs

Acronym: DESTRESS

Call: H2020-LCE-2015-2

Topic: Low Carbon Energy, LCE-03-2015: Demonstration of renewable electricity and heating / cooling technologies (IA)

Grant Agreement Number: 691728

Duration: 57 months, 1 March 2016 - November 2020

Estimated Costs: € 25 072 511,25

EU Contribution: € 10 713 408,63

Project Lead: GFZ German Research Centre for Geosciences

Partners: 17 European and East Asian research institutions, universities and industry representatives (large energy suppliers and SMEs)



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www.destress-h2020.eu
destress@sed.ethz.ch