

# Managing Urban Shallow Geothermal Energy

## ? MUSE in a nutshell

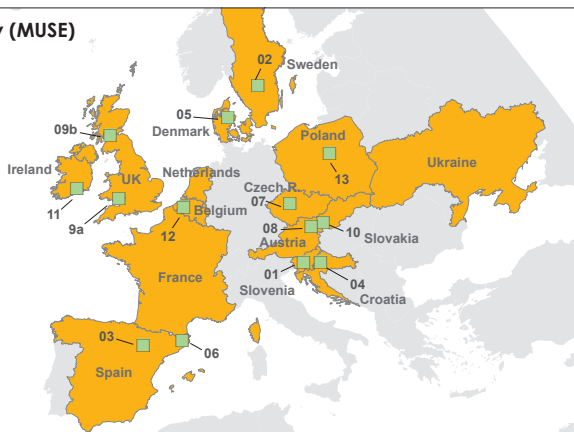
The MUSE project (2018-2021) investigates resources and possible conflicts of use associated with shallow geothermal energy in European urban areas and delivers key geoscientific subsurface data to stakeholders via a user-friendly web based GeoERA Information Platform.



### Managing Urban Shallow geothermal Energy (MUSE)

#### MUSE - Pilot areas

- 01 - Urban area of Ljubljana city (Slovenia)
- 02 - Urban area of Linköping city (Sweden)
- 03 - Urban area of Zaragoza city (Spain)
- 04 - Urban area of Zagreb city (Croatia)
- 05 - Urban area of Aarhus city (Denmark)
- 06 - Urban area of Girona city (Catalonia, NE Spain)
- 07 - Urban area of Prague city (Czech Republic)
- 08 - Urban area of Vienna city (Austria)
- 09a - Urban areas of Cardiff city (Wales, UK)
- 09b - Urban area of Glasgow city (Scotland, UK)
- 10 - Urban area of Bratislava city (Slovakia)
- 11 - Urban area of Cork city (Ireland)
- 12 - Urban area of Brussels city (Belgium)
- 13 - Urban area of Warsaw city (Poland)



## 📣 Key Messages

- Shallow geothermal energy has the potential to significantly support the transition towards decarbonised and self-sufficient European cities
- Efficient and sustainable shallow geothermal energy use requires integrative management and policy concepts
- Existing knowledge and strategies need to be compiled and harmonised for transferring to other urban regions in Europe

## 💡 Our outputs

MUSE provides a comprehensive knowledge base on mapping, managing resources and possible conflicts of use related to shallow geothermal energy in urban areas. This also includes spatial data sets, which will be published at the GeoERA information platform as prototypes for modern web based information systems on shallow geothermal energy use.

MUSE also develops management strategies to ensure an efficient and sustainable application of shallow geothermal energy by minimizing environmental impacts. These outputs may support general framework strategies of cities like sustainable energy action plans.



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## Pilot actions

The developed methods and approaches will be tested and evaluated together with input from local stakeholders in **14 urban pilot areas across Europe** which are representative for different climatic and geological conditions.

The outcomes of the project represent a comprehensive collection of methods, approaches and tools, **which can be transferred to all urban regions in Europe** and be adopted by other organizations.

## Project partners

**Geological Surveys from 16 different European countries** collaborate in MUSE to foster the use of shallow geothermal energy in urban areas.



## Who funds us

MUSE is funded by **GeoERA**, a EU Horizon 2020 research programme with the main goal to contribute to the optimal use and management of the subsurface. GeoERA projects cover the applied geosciences, addressing four themes: GeoEnergy, Groundwater, Raw Materials and Information Platform.

## Find out more about MUSE

<http://geoera.eu/projects/muse/>

## Contact us

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