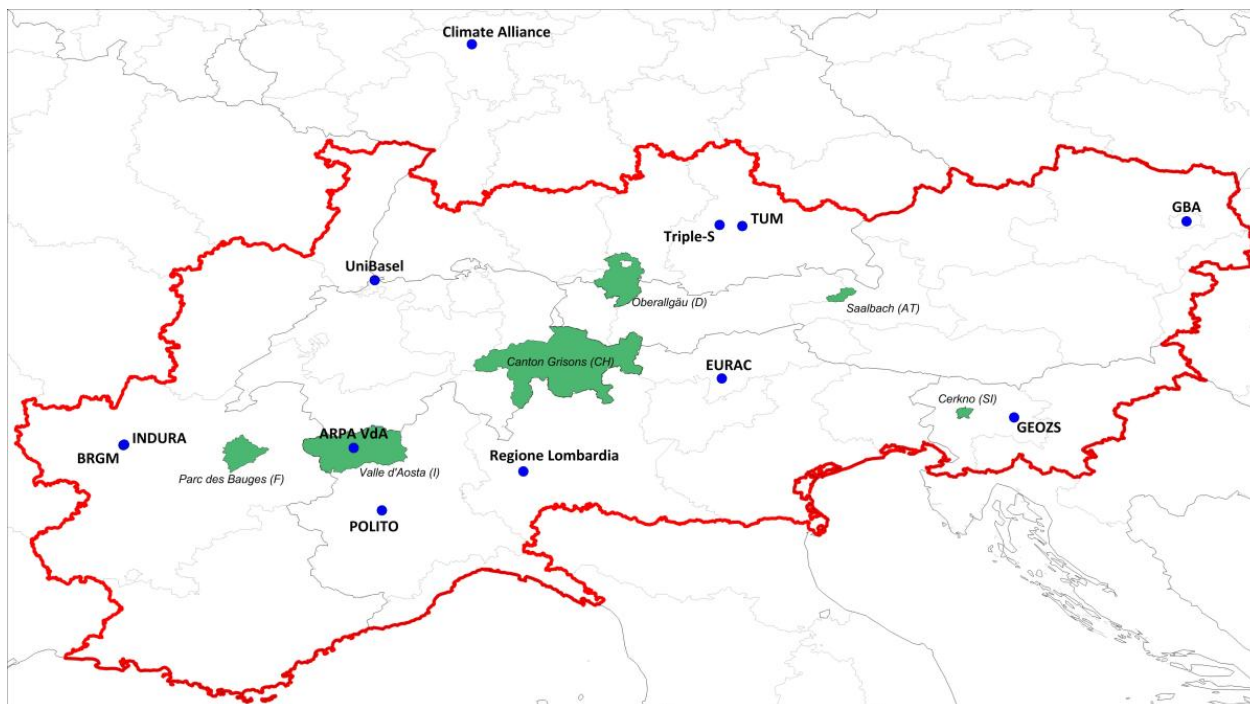


## Data Collection about Case Studies



\* Mandatory fields

1. Name of the case study \*

2. Contact person \*

*Name, email address, phone*

3. Description of main reasons of interest in Near Surface Geothermal Energy and in GRETA project (max 250 words) \*

4. Total population in the case study [reference year: 2015] \*

5. Number of municipalities within the case study area with population \*

Class of inhabitants	Number of municipalities per class	Total inhabitants per class
< 1000		
1000 – 5000		
5000 – 10 000		
10 000 – 50 000		
50 000 – 100 000		
> 100 000		

6. Area of the case study [km<sup>2</sup>] \*

7. Employs per economic sector in the study area \*

Economic sectors	Number of employs per economic sector	Total GDP per economic sector
Agriculture		
Industry		
Craft		
Commerce		
Tourism		
Service		

8. Description of geological characteristics of the case study area (max 250 words). Please provide an indication of outcropping lithologies/formation (i.e., in the upper 100 m layer), aquifers (if possible, information on confined/artesian aquifers) \*

To create a harmonized description please use following keywords and terms:

- Lithology: limestone, dolostone, marl, evaporite, metamorphic, volcanic, plutonic, / conglomerate, sandstone, siltstone, claystone / gravel, sand, silt, clay (after standard legend, e.g. IAH)
- Porosity: intergranular, fissured, fissured and karstic
- Description of layers by aquifer / non aquifer: aquifer ( $k > 10^{-6}$  m/s), aquitard ( $10^{-6} > k > 10^{-9}$  m/s), aquiclude ( $k < 10^{-9}$  m/s)
- Description of aquifer by permeability from the point of view of shallow geothermal energy use: elevated permeability ( $\geq 10^{-3}$  m/s), moderate permeability ( $\sim 10^{-4}$  m/s), weaker permeability ( $< 10^{-5}$  m/s)
- Description of aquifer type: unconfined, confined, artesian, two or multilayered
- Presence of: gas occurrences, mineral water, thermal water

9. Availability of geo-referenced vector or raster data (with specified Datum): \*

*You can tick more than one option*

- administrative boundaries more recent than 2013 (we already have vector data for Municipalities and NUTS update to 2013 provided by EU)
- main roads
- geological maps
- hydrogeological maps (groundwater levels)
- temperature and velocity of groundwater flow
- land use (if at an higher resolution and more recent than available Corine Land Cover data: resolution 100 m and update to 2006 – pay attention that they were published in 2013)
- Buildings destination/use
- Buildings year of construction
- Buildings volume
- Building energy certification (cadastral data, building energy assessment)
- other: \_\_\_\_\_

10. Are the following areas present in the case studies? *You can tick more than one option.* \*

- protected areas for natural conservation (Natura 2000 area/ Nature protected ecosystem area / Natural values/...)
- protected areas for landslides
- protected areas for avalanches
- protected areas for aquifer recharge and drinking water wells
- areas endangered by
  - flooding
  - erosion
  - unstable ground
  - contaminated soil
  - gas occurrences

11. Are geo-referenced vector or raster data (with specified Datum) about special areas available? *You can tick more than one option.* \*

- protected areas for natural conservation (Natura 2000 area/ Nature protected ecosystem area / Natural values/...)
- protected areas for landslides
- protected areas for avalanches
- protected areas for aquifer recharge and drinking water wells
- areas endangered by
  - flooding
  - erosion
  - unstable ground
  - contaminated soil
  - gas occurrences

12. Availability of energy-related data: \*

Energy consumptions:

- MWh per year by energy vector (electricity, natural gas, heating oil, ...)
  - MWh per year by previous mentioned economic sectors
  - For which years are this data available? (i.e. 2014 or 2012-2015)
- 

Energy consumptions and production for existing Near Surface Geothermal plants:

- cadaster/registry of geothermal plants already installed and/or of ongoing projects
  - MWh<sub>el</sub> consumed per year
  - MWh<sub>th</sub> produced per year
  - For which years are this data available? (i.e. 2014 or 2012-2015)
- 

Local energy production (both thermal and electrical)

- MWh per year by source (renewable and not)
  - For which years are this data available? (i.e. 2014 or 2012-2015)
- 

13. Is there an energy plan<sup>1</sup> in place (at the case study level)? \*

- yes, there is an energy plan in place
- the energy plan is not yet approved but under development
- no, there is not an energy plan in place

14 Availability of information about the energy plan:

- year of approval of the energy plan: \_\_\_\_\_
- presence of objectives related to the exploitation of renewable energy sources
- presence of objectives related to the exploitation of Near Surface Geothermal Energy

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<sup>1</sup> The Energy Plan is a document describing the main strategies and actions to improve the energy performance (energy efficiency, renewable production) in a certain area.

15. How many municipalities have elaborated the Sustainable Energy Action Plan (SEAP) in the framework of the Covenant of Mayors? \_\_\_\_\_

How many of those plans contain objectives related to the exploitation of Near Surface Geothermal Energy? \_\_\_\_\_

16. Availability of economic data: \*

- energy prices of the different energy vectors
- presence of subsidies and/or incentives for renewable energy sources
- costs information for small/medium and large size NSGE plant
- other: \_\_\_\_\_

17. Are there public debates about renewable energy sources and/or about Near Surface Geothermal Energy?

18. Are there ongoing projects about Near Surface Geothermal Energy in public buildings and/or touristic facilities?

19. Did inhabitants oppose the planning and implementation of energy plants? If yes, to which technology and energy source was the opposition related?

20. Comments and other information relevant for the GRETA project