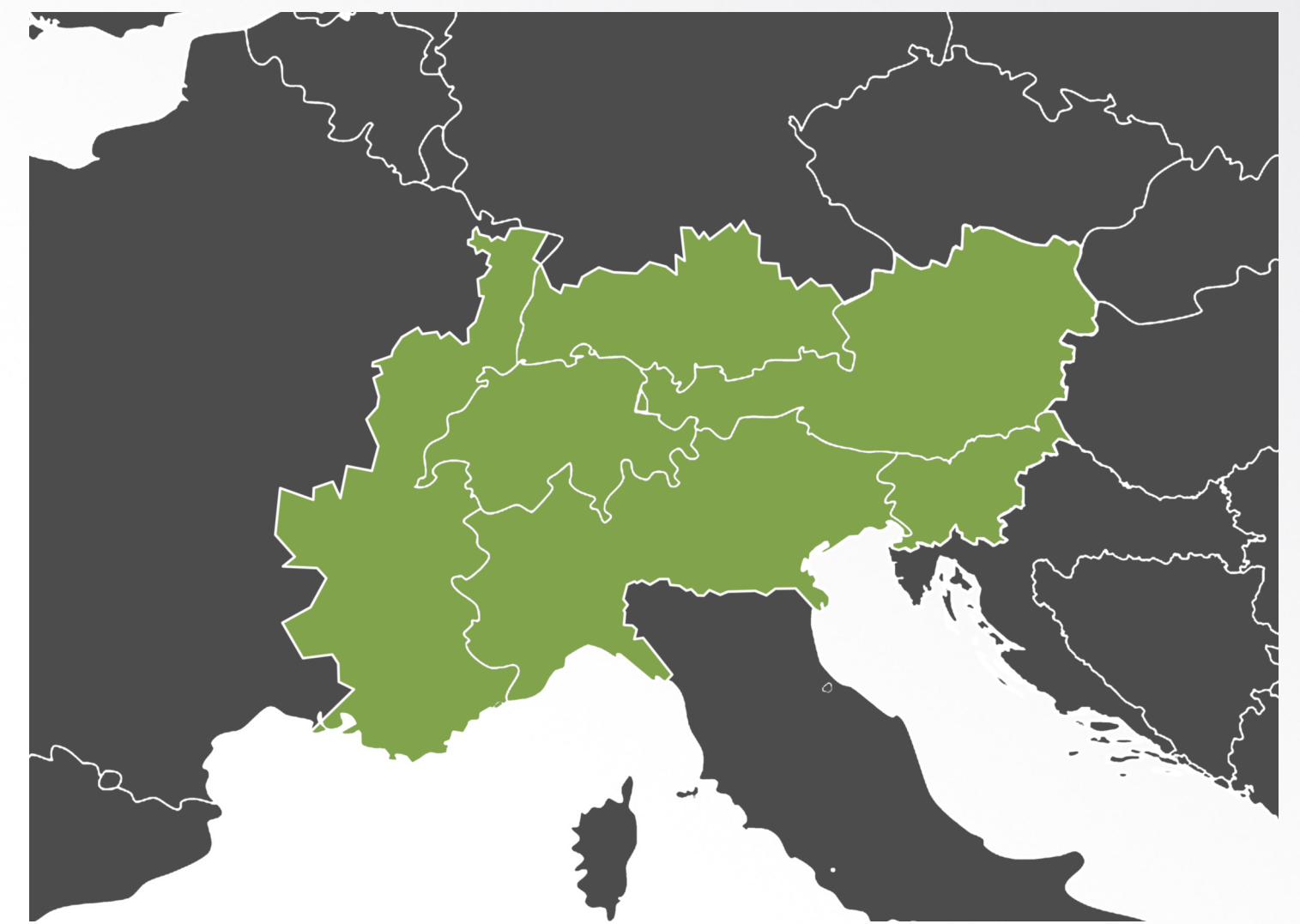


Alpine Regions are facing the challenges of an **increasing energy demand** and the need to **reduce CO₂ emissions** and **fossil fuel consumption**. Shallow geothermal systems (<400 m depth) can provide **heating and cooling** for a wide variety of buildings with a **renewable and sustainable energy source**. However, this potential is **still scarcely known and used**.

The GRETA project (2016-2018) aims at unlocking the potential of Near-Surface Geothermal Energy (NSGE) in the Alpine Space through the **exchange of best technical and regulatory practices**, the **identification of most suitable territories** for these installations and the development of guidelines for the **integration of NSGE into energy planning**.

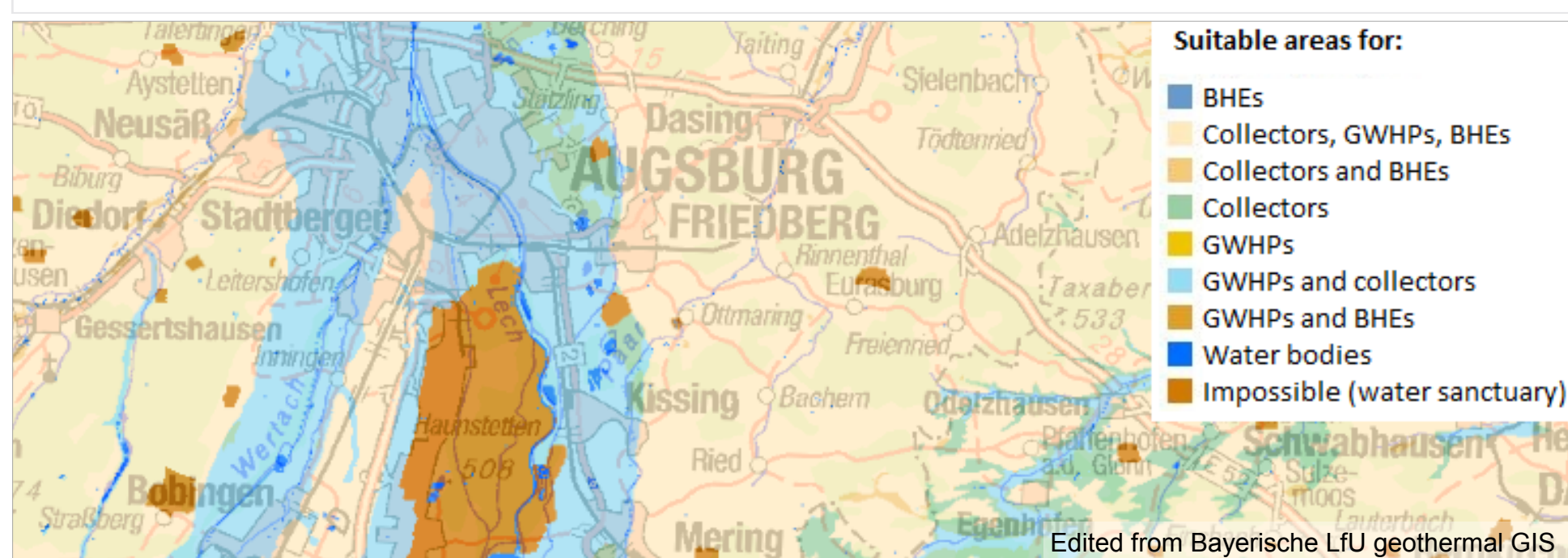


The Alpine Space area

GRETA objectives

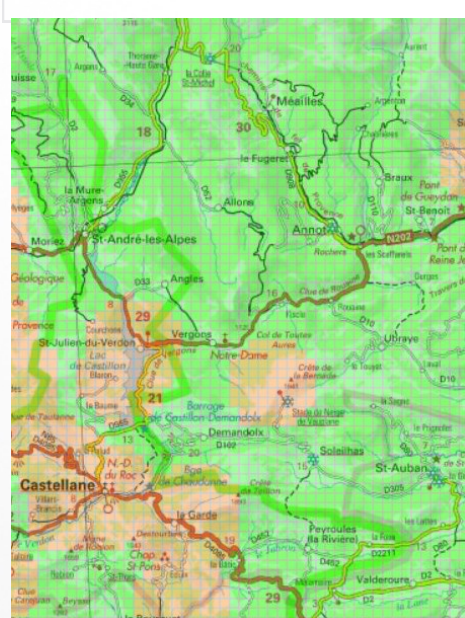
Identify Near-Surface Geothermal Energy Potential

- A large-scale “**traffic-light map**” will enlighten zones where critical phenomena may occur, such as artesian aquifers, swelling clay layers, etc.. Local regulations will also be taken into account.
- In the 6 **case study areas**, NSGE potential will be **quantitatively estimated**.
- Both maps will be freely accessible through a **Web-GIS tool**.



Foster transnational knowledge exchange

- Country-specific and local regulations** will be reviewed and a guideline for a **harmonised regulation** at Alpine Space level will be developed, integrating **best practices** and **feedback from stakeholders**.
- The wide variety of **NSGE applications** will be demonstrated collecting data from **best technical practices** in the Alpine Space for building heating and cooling, swimming pool heating, underground thermal energy storage, railroad de-icing, etc.

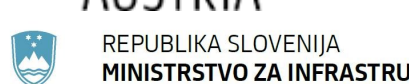


Integrate NSGE into local policies

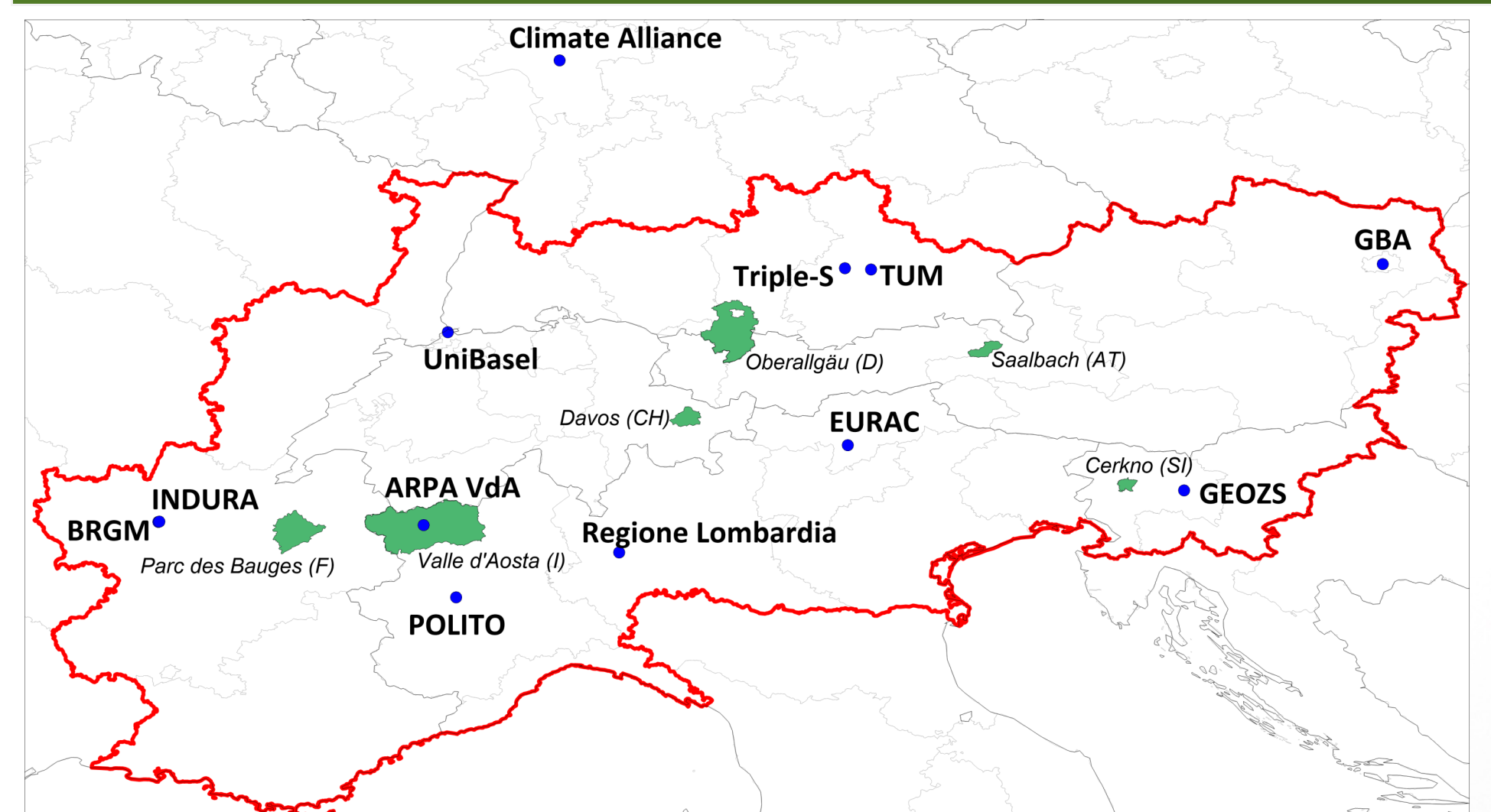
- A **methodology** for the **integration of NSGE** into local **Energy Plans** will be developed.
- The methodology will be tested on 3 **pilot areas** among the 6 case studies, assessing the economic, technical and environmental feasibility of **NSGE installations** based on heating/cooling demand, interactions with other activities such as agriculture and tourism, and identifying **scenarios** that can **foster the replacement of fossil fuels with NSGE**.
- A **GIS application** will be developed, along with a **guideline for the integration of NSGE** into planning procedures, targeted at both local policy makers and technical staff.

GRETA outlook

- Observers** and **stakeholders** are asked for **opinions** and **experiences**, and their **needs** orientate the features developed in GRETA.
- In a constant **feedback loop** all project partners collect the users' opinions, experiences and expectations, with support of the project's scientific mediator.
- Project results will be summarized in the multi-language **CESBA-Wiki**, ensuring the durability of the project results.



Further investigations on case study areas



- The project activities will focus on **case study areas** to collect best practice examples, data on NSGE utilization, and for detailed assessment of NSGE potential.
- The areas reflect the **diversity of energetic stakes** in the Alpine Space: space-constrained valleys, remote infrastructures (e.g. ski stations), etc.

NSGE professionals: How to get involved in GRETA?

- The official Kick-off Meeting for Observers and Stakeholders will take place on **04th of October 2016** in Munich. You can still register to meet us there!
- Focus groups will be organized at national levels to get feedback on the project activities. Presentations of the GRETA project activities will be held by Partners at conferences and other public events.

Get in touch !

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