



GSEU

GEOLOGICAL SERVICE | FOR EUROPE

WP3 - Geothermal energy & underground storage inventory

Internal Kick off Meeting

Online 3rd November 2022

Maayke Koevoets

TNO



Funded by
the European Union



The Geological Surveys of Europe

TNO



Geological Survey
of the Netherlands

www.geologicalservice.eu



Content

- **Agenda**
- **Structure, Tasks & Team**
- **Strategic Objectives & Expected Impacts**
- **Financials**





Agenda

| Time | Topic | Speakers |
|--------------------------------|---|--|
| Session 1: Introduction | | |
| 14:05-14:30 | Welcome and introduction of WP3 | Maayke Koevoets (TNO) |
| 14:30-15:00 | Task 3.1 Inventory of databases for Sustainable Geo-Energy Capacities | Vit Hladik (CGS) |
| 15:00-15:30 | Task 3.2 Pan-European Online Atlas of Sustainable Geo-Energy Capacities | Paula Canteli (IGME) |
| 15:30-16:00 | Task 3.3 Knowledge and Competence Hub for Sustainable Geo-Energy Capacities | Gregor Goetzl & Cornelia Steiner (GBA) |
| 16:00-16:10 | <i>Coffee Break</i> | |
| Session 2: | | |
| 16:10-16:40 | Open discussion & recap | Moderated by Maayke Koevoets (TNO) |
| 16:40-16:55 | Next steps – expectations, milestones & events calendar | Maayke Koevoets (TNO) |
| 16:55-17:00 | Wrap up | Maayke Koevoets (TNO) |
| CLOSE | | |



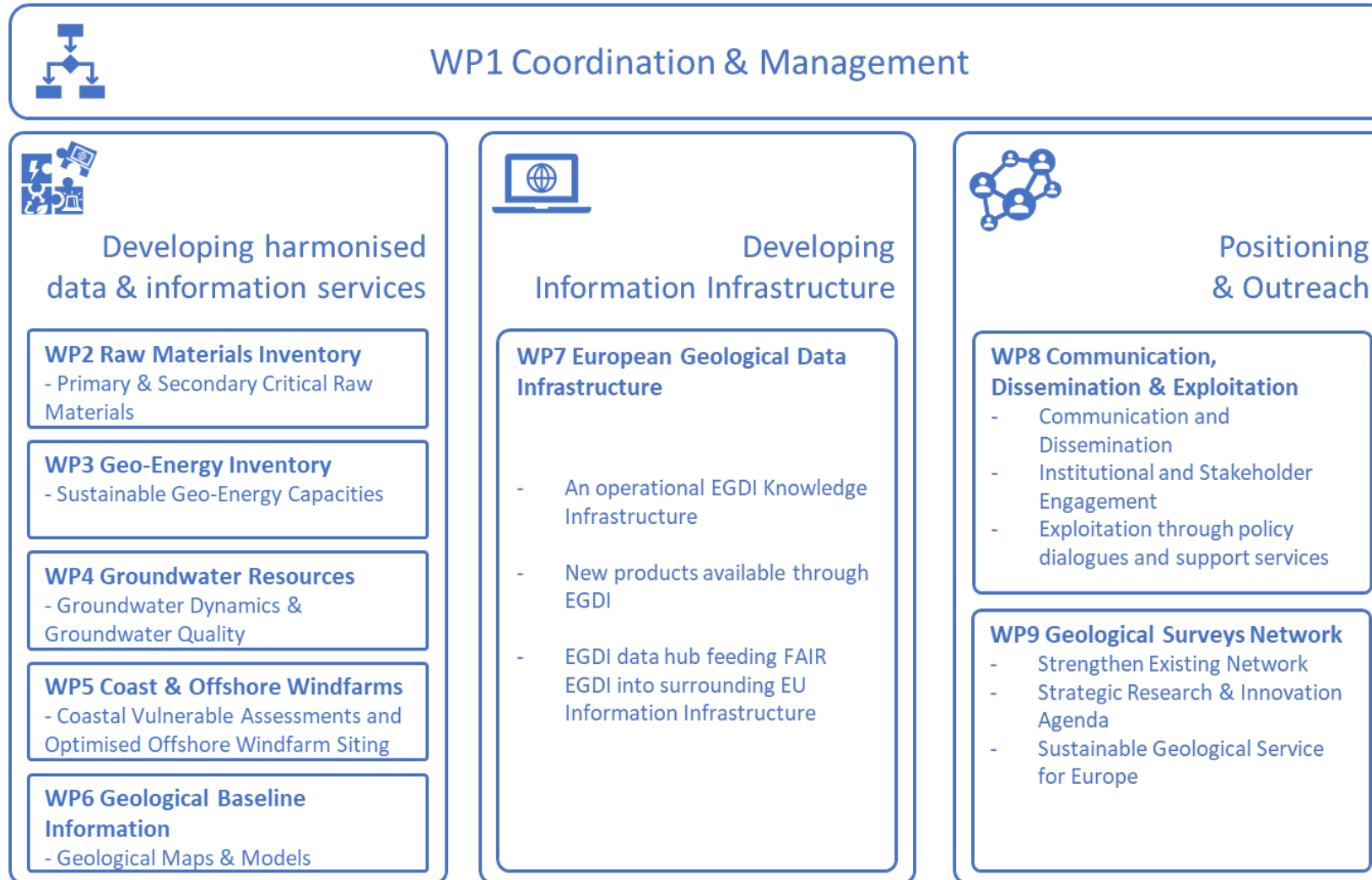


STRUCTURE, TASKS & TEAM





Structure





Tasks

- T3.1: Inventory of databases for SGECS
- T3.2: Pan-European Online Atlas for SGECS
- T3.3: Knowledge and Competance Hub for SGECS





Team

Work package 3 lead

Maayke Koevoets (TNO)



Task 3.1 leads

Vit Hladik (CGS)

Annamaria Nador (SARA)



Task 3.2 leads

Paula Canteli (IGME)

Ignasi Herms (ICG)

Elsa Ramalho (LNEG)

Joao Carvalho (LNEG)



Task 3.3 leads

Gregor Goetzl (GBA)

Vit Hladik (CGS)





Partners

TNO (NL)

LNEG (PT)

RBINS (BE)

IGS (UA)

GeoZS (SL)

FZZG (BA)

SGU (SE)

SGIDS (SK)

LGT (LT)

CGS (CZ)

GBA (AT)

UKRI-BGS (UK)

AGS (AL)

GZS (RS)

BGR (DE)

SWISSTOPO (CH)

ISOR (IS)

MFE (MT)

IGME (ES)

SARA (HU)

ISPRA (IT)

PGI-NRI (PL)

GSI (IE)

IGR (RO)

GSD (CY)

SGL (LU)

LGBA (DE)

ICGC (CAT)

GEUS (DK)

RU (IT)

BRGM (FR)

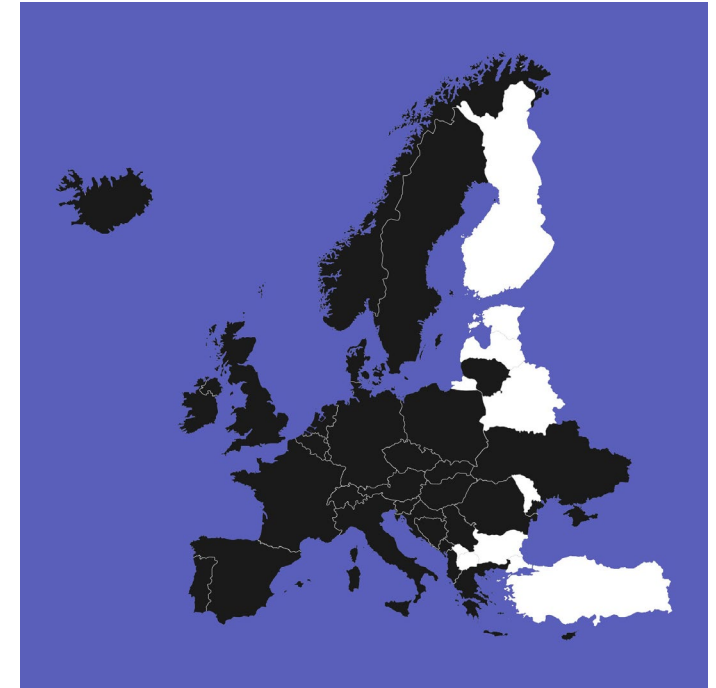
UAG (UA)

HGI-CGS (HR)

NGU (NO)

HSGME (GR)

LfU (DE)





STRATEGIC OBJECTIVES & EXPECTED IMPACTS





Strategic objectives & expected impacts

Sustainable Geo-Energy Capacities (SGEC):

1. Geothermal energy and storage of heat and cold
2. Subsurface storage of CO₂
3. Subsurface buffering of sustainable energy carriers (hydrogen, compressed air)

Primary objectives for WP 3

Inventory of information on SGECs.

- Build, expand and maintain a standardised integrated European SGEC database
- Deploy and maintain a standardised integrated European atlas SGECs
- Develop knowledge for subsurface management and planning of storage sites for SGECs





Strategic objectives & expected impacts

Impacts

Database and Atlas:

- Improved planning, regulation and decision making towards a responsible and effective uptake of SGECs
- Improved alignment of cross-border SGEC developments in response to clean energy and climate actions
- Secured access to future insights and updates on SGECs resulting from national and European research

Knowledge and Competence Hub:

- Accelerated development of new insights on SGECs in countries with emerging exploration activities
- Improved fact- & science-based dialog with public and policy on planning and deployment of SGECs
- Ongoing prioritization of National and European Research agendas aimed at SGEC R&D





FINANCIALS





Team

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|------|------|-------|------|----------|-----|---------|-----------|---------|------------------|------|-----------|------|------|-------|-----|-------|-------|------|-----|------|-------|------------|-----|----|
| WP nr. | 3 | | | | | | | | | | Lead beneficiary | | | | | | | | | | TNO | | | | | |
| WP Title | Geothermal energy & underground storage inventory | | | | | | | | | | | | | | | | | | | | | | | | | |
| Part. Nr. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| Short name | EGS | TNO | AGS | VG | BRGM | UKRI-RGS | MFE | HGI-CGS | RBINS | PGI-NRI | ICGC | CGS | GSI | IGME | BGR | GeoZS | JUZ | FZZG | ISPRA | RU | GIU | IGS | IGMOF | UAG | GTK | |
| PM/part. | 0 | 32,8 | 25,0 | 0 | 18,5 | 25,0 | 3,0 | 22,5 | 10,5 | 17,5 | 31,8 | 44,8 | 4,5 | 32,8 | 10,5 | 19,0 | 8,0 | 16,0 | 14,0 | 9,0 | 0 | 11,0 | 0 | 4,5 | 0 | |
| Part. Nr. | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| Short name | GZS | GSD | NGU | LVGMC | SGU | GEUS | IGR | MBFSZ | Swisstopo | HSGME | LNEG | LGT | GBA | SGL | RF | GDNW | EGT | SGIDS | LGBA | BLFU | VMM | ISOR | IPMA | Jardfeingi | NPD | |
| PM/part. | 13,0 | 1,0 | 11,0 | 0 | 12,0 | 18,5 | 3,0 | 22,8 | 1,6 | 18,0 | 27,3 | 10,0 | 32,3 | 1,0 | 0 | 0 | 0 | 18,0 | 4,0 | 0 | 0 | 10,5 | 0 | 0 | 0 | |
| Start month | 1 | | | | | | | | | | | | End month | | | | | | | | | | | | | 60 |

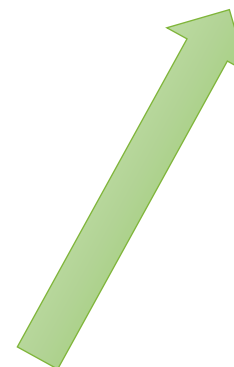




Budget

| Name of beneficiary | Country | Efforts (Person Months) | Personnel costs (€) | Subcontracting costs (€) | Other direct costs (purchase costs) | | | Indirect costs | Total eligible costs | Requested EU contribution to eligible costs | Own resources | Total estimated income |
|---------------------|---------|-------------------------|---------------------|--------------------------|-------------------------------------|---------------|-------------------------------------|----------------|----------------------|---|---------------|------------------------|
| | | | | | Travel and subsistence (€) | Equipment (€) | Other goods, works and services (€) | | | | | |
| TNO | NL | 33,0 | 290533 | 0 | 4500 | 0 | 0 | 73758 | 368791 | 258154 | 110637 | 368791 |
| GBA | AT | 32,5 | 204750 | 0 | 4500 | 0 | 0 | 52313 | 261563 | 183094 | 78469 | 261563 |
| ICGC | CAT | 32,0 | 170784 | 0 | 4500 | 0 | 0 | 43821 | 219105 | 153374 | 65732 | 219105 |
| CGS | CZ | 45,0 | 168206 | 0 | 4500 | 0 | 0 | 43176 | 215882 | 151117 | 64765 | 215882 |
| IGME | ES | 33,0 | 165000 | 0 | 4500 | 0 | 0 | 42375 | 211875 | 148313 | 63563 | 211875 |
| BGS | UK | 25,0 | 151612 | 0 | 4500 | 0 | 0 | 39028 | 195140 | 136598 | 58542 | 195140 |
| GEUS | DK | 18,5 | 142315 | 0 | 4500 | 0 | 0 | 36704 | 183518 | 128463 | 55056 | 183518 |
| BRGM | FR | 18,5 | 138750 | 0 | 4500 | 0 | 0 | 35813 | 179063 | 125344 | 53719 | 179063 |
| LNEG | PT | 29,5 | 138650 | 0 | 4500 | 0 | 0 | 35788 | 178938 | 125256 | 53681 | 178938 |
| NGU | NO | 11,0 | 88000 | 0 | 4500 | 0 | 0 | 23125 | 115625 | 80938 | 34688 | 115625 |
| SGU | SE | 12,0 | 86400 | 0 | 4500 | 0 | 0 | 22725 | 113625 | 79538 | 34088 | 113625 |
| ISOR | IC | 10,5 | 84000 | 0 | 4500 | 0 | 0 | 22125 | 110625 | 77438 | 33188 | 110625 |
| SGUDS | SK | 18,0 | 82529 | 0 | 4500 | 0 | 0 | 21757 | 108787 | 76151 | 32636 | 108787 |
| GSB-RBINS | BE | 10,5 | 80800 | 0 | 4500 | 0 | 0 | 21325 | 106625 | 74638 | 31988 | 106625 |
| BGR | DE | 10,5 | 78750 | 0 | 4500 | 0 | 0 | 20813 | 104063 | 72844 | 31219 | 104063 |
| GEOZS | SI | 19,0 | 77900 | 0 | 4000 | 0 | 0 | 20475 | 102375 | 71663 | 30713 | 102375 |
| ISPRA | IT | 14,0 | 77000 | 0 | 4500 | 0 | 0 | 20375 | 101875 | 71313 | 30563 | 101875 |
| MBFSZ | HU | 23,0 | 57500 | 0 | 4500 | 0 | 0 | 15500 | 77500 | 54250 | 23250 | 77500 |
| HGI-CGS | HR | 22,5 | 54000 | 0 | 4500 | 0 | 0 | 14625 | 73125 | 51188 | 21938 | 73125 |
| PGI-NRI | PL | 17,5 | 49000 | 0 | 4500 | 0 | 0 | 13375 | 68875 | 46813 | 20063 | 68875 |
| HSGME | GR | 18,0 | 31193 | 0 | 4500 | 0 | 0 | 8923 | 44617 | 31232 | 13385 | 44617 |
| FZZG | BA | 25,0 | 31250 | 0 | 4100 | 0 | 0 | 8838 | 44188 | 30931 | 13256 | 44188 |
| RU (Region Umbria) | IT | 9,0 | 30600 | 0 | 4500 | 0 | 0 | 8775 | 43875 | 30713 | 13163 | 43875 |
| GSI | IE | 4,5 | 26550 | 0 | 1500 | 0 | 0 | 7013 | 35063 | 24544 | 10519 | 35063 |
| IGS | UA | 11,0 | 22110 | 0 | 3209 | 0 | 0 | 6330 | 31649 | 22154 | 9495 | 31649 |
| LGT | LT | 10,0 | 19828 | 0 | 4500 | 0 | 0 | 6082 | 30410 | 21287 | 9123 | 30410 |
| LAGB | DE | 4,0 | 20000 | 0 | 3000 | 0 | 0 | 5750 | 28750 | 20125 | 8625 | 28.750 |
| GZS | RS | 13,0 | 18200 | 0 | 4500 | 0 | 0 | 5675 | 28375 | 19863 | 8513 | 28375 |
| AGS | AL | 25,0 | 18750 | 0 | 3000 | 0 | 0 | 5438 | 27188 | 19031 | 8156 | 27188 |
| SWISSTOPO | CH | 1,5 | 15500 | 0 | 1000 | 0 | 0 | 4125 | 20625 | 14438 | 6188 | 20625 |
| IGR | RO | 3,0 | 10800 | 0 | 3000 | 0 | 0 | 3450 | 17250 | 12075 | 5175 | 17250 |
| MFE | MT | 3,0 | 10500 | 0 | 3000 | 0 | 0 | 3375 | 16875 | 11813 | 5063 | 16875 |
| UAG | UA | 4,5 | 9059 | 0 | 3000 | 0 | 0 | 3015 | 15073 | 10551 | 4522 | 15073 |
| GSD | CY | 1,0 | 4610 | 0 | 1500 | 0 | 0 | 1528 | 7638 | 5346 | 2291 | 7638 |
| JUZ | ME | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SGL | LU | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| EGT | EE | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GTK | FI | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GSNM | MK | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KGS | KO | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LVGMC | LV | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VSEGEI | RU | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NRW | DE | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lfu | DE | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NPD | NO | 0,0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | | 568,0 | € 2.655.429 | € 0 | € 133.809 | € 0 | € 0 | € 697.309 | € 3.486.547 | € 2.440.583 | € 1.045.964 | € 3.486.547 |

| | |
|----------|-----|
| task 3.1 | 26% |
| task 3.2 | 53% |
| task 3.3 | 22% |





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Thank you for you attention!



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