EUROGEO WORKSHOP 2023

The Climate Change EIFFEL pilots: pursuing Green Deal goals and potentially enriching the Green Deal Data Space

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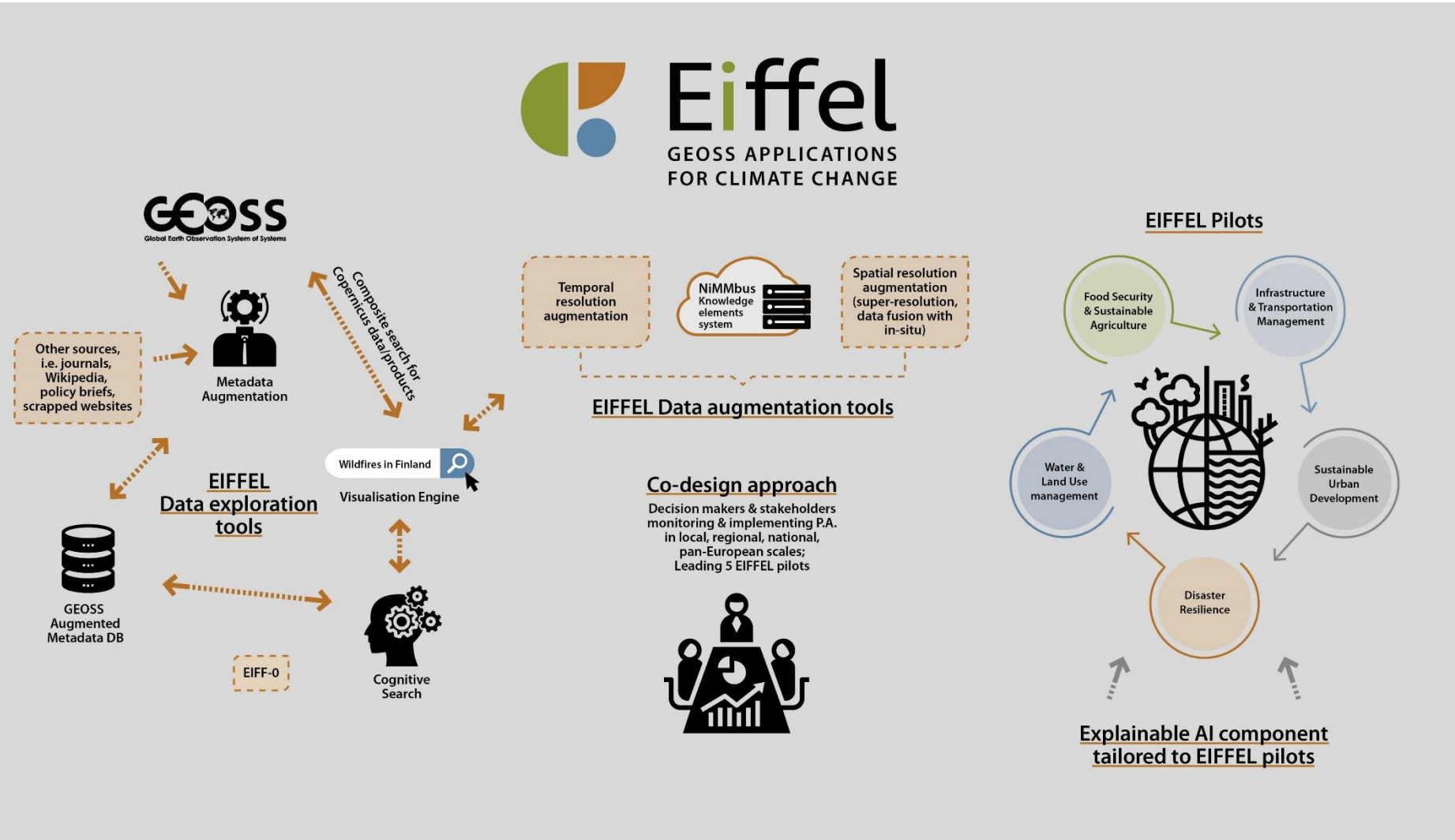
BOLZANO 2-4 OCTOBER 2023

eurac research

Institute of Atmospheric Pollution Research
National Research Council of Italy

European Commission

EUROGEO WORKSHOP 2023



LC-CLA-19-2020 - Integrated GEOSS climate applications to support adaptation and mitigation measures of the Paris Agreement

Project Information

EIFFEL

Grant agreement ID: 101003518

DOI
10.3030/101003518

Start date	End date
1 June 2021	31 May 2024

Funded under
SOCIETAL CHALLENGES - Climate action, Environment, Resource Efficiency and Raw Materials

Total cost
€ 4 999 466,25

EU contribution
€ 4 999 466,25

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https://www.eiffel4climate.eu/

A Green Deal project because

Pilot 1

Water & Land-Use Management

Regional Scale & Cross-border

From Farm to Fork* and *Biodiversity through NBS and Soil Organic Carbon modeling

Pilot 2

Sustainable Agriculture

National Scale

From Farm to Fork and Climate neutrality through Soil Organic Carbon modeling/agricultural practices at parcel level

Pilot 3

Infrastructure & Transport Management

Regional Scale

Environmentally friendly transport, Blue economy, Zero Pollution through Copernicus/AI cruise ship management

Pilot 4

Sustainable Urban Development

Local / Regional Scale

Renovation wave, Renewable Energy, Environmentally friendly transport, Zero Pollution (AQ co-benefits) through distinct urban GHG mitigation applications

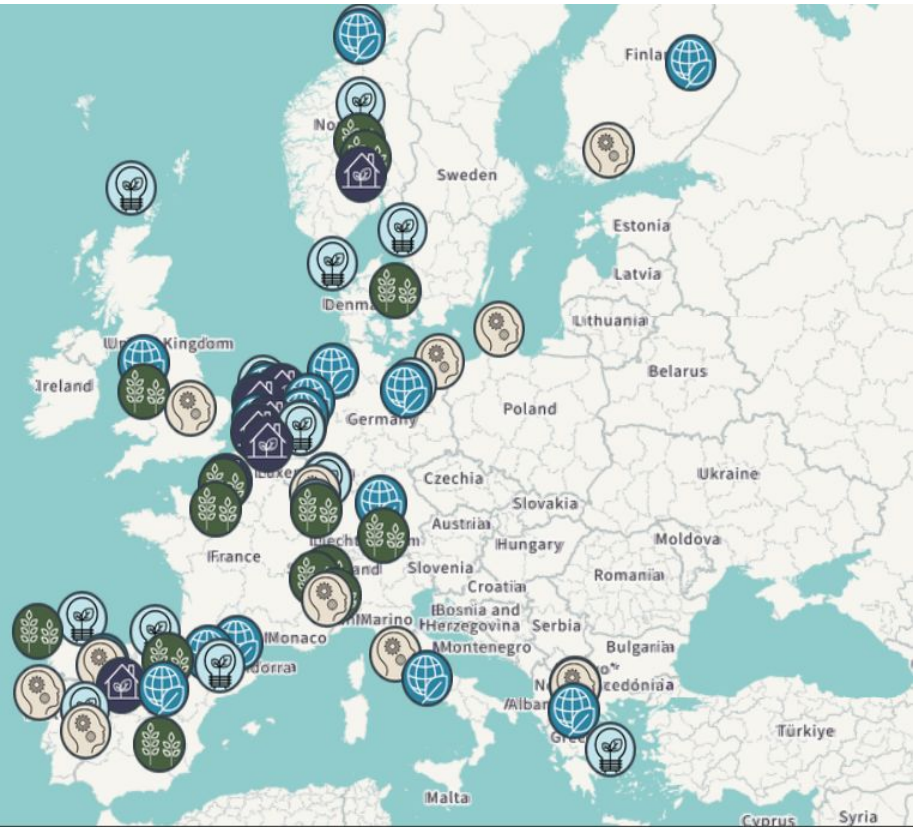
Pilot 5

Disaster Resilience. Drought, forest fire & pest risk assessment

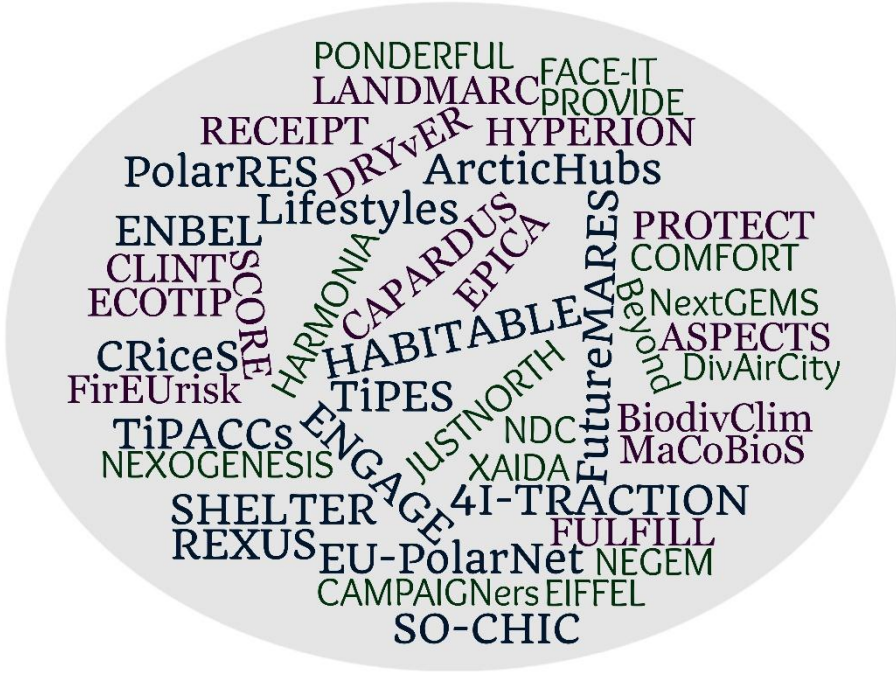
Regional / National Scale

Biodiversity Strategy through multi-hazard analysis of forest fires and pest outbreaks

Not a Green Deal project per se



73 'Green Deal' projects (last Horizon2020 Call)



64 more from the EIFFEL Call *(H2020-LC-CLA-2018-2019-2020 through CORDIS)*

Download projects as open data

Datasets of all projects and participating organisations funded under Horizon Europe or Horizon 2020

Download all Horizon Europe projects

Download all Horizon 2020 projects

Download all FP7 projects

What about the rest? How does one get the Green Deal 'tag'? How does one connect with the Green Deal Data Space?

A GEO project by design

Call: “Integrated GEOSS climate applications to support adaptation and mitigation measures of the Paris Agreement”

EIFFEL says: Revealing The Role Of GEOSS As The Default Digital Portal For Building Climate Change Adaptation & Mitigation Applications

Pilot applications are ***mostly*** **based on GEOSS/Copernicus data**. Explanation is offered when not.

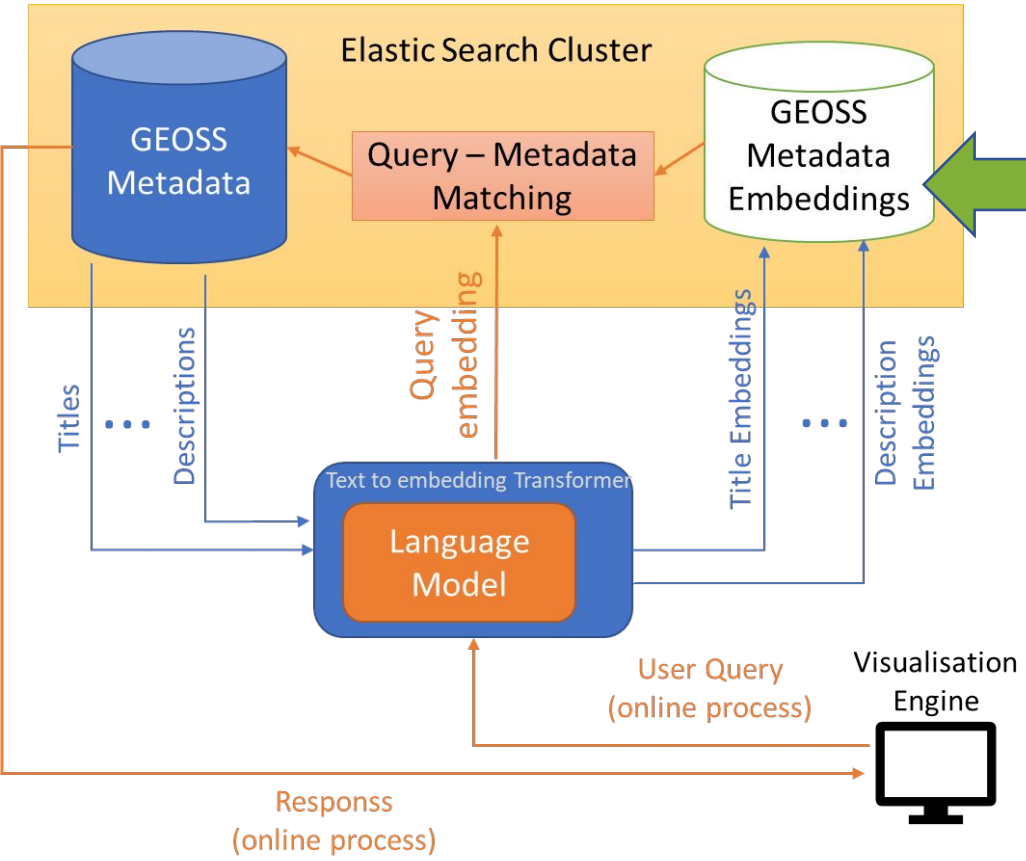
EIFFEL will create at least **3 Knowledge Packages in the GEO Knowledge Hub** (and also link with Climate-ADAPT).

EIFFEL aims to **improve GEOSS portal search capacity** in line with EAG recommendations (through the GIDTT and GPP)

In the process, bring **more partners closer to GEO** (including e.g. the GEO Data Sharing Principles and the compatible licenses)

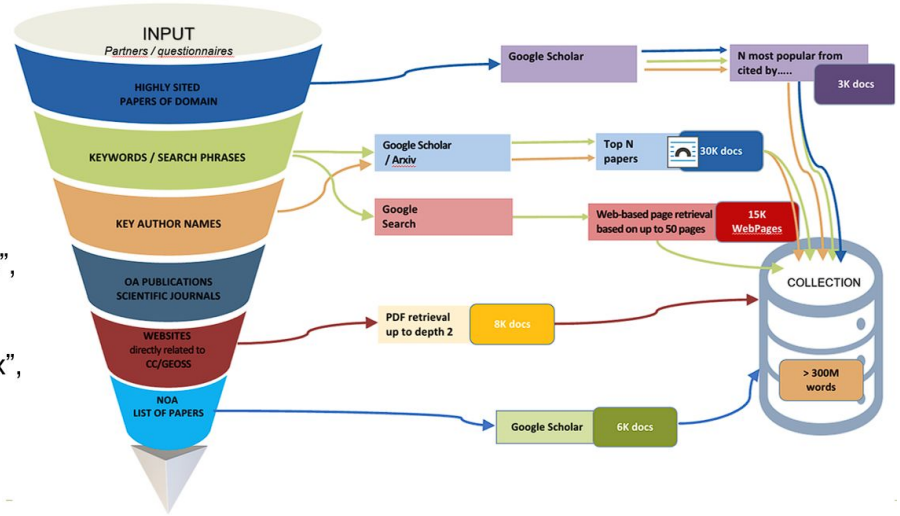
Can these activities/experience be leveraged when connecting with the Green Deal Data Space?

EIFFEL Cognitive Search Engine in GEOSS Platform



Newly included terms in the language model

"basin", "distribution", "parameters", "factors", "regions", "environmental", "variables", "emissions", "simulation", "atmospheric", "correlation", "modelling, "measurement", "estimation", "greenhouse", "radiation", "percentage", "climatic", "cooling", "rainfall", "regression", "gases", "pollution", "meteorological", "dioxide", "flux", "anthropogenic", "indicator", "humidity", "ocean", "baseline", "ecosystems", "renewable", "hydrological", "sustainable", "socioeconomic", "CO2"



Fine-tuned for climate change based on domain experts (EIFFEL partners). Scalable.

Eiffel
GEOSS APPLICATIONS FOR CLIMATE CHANGE

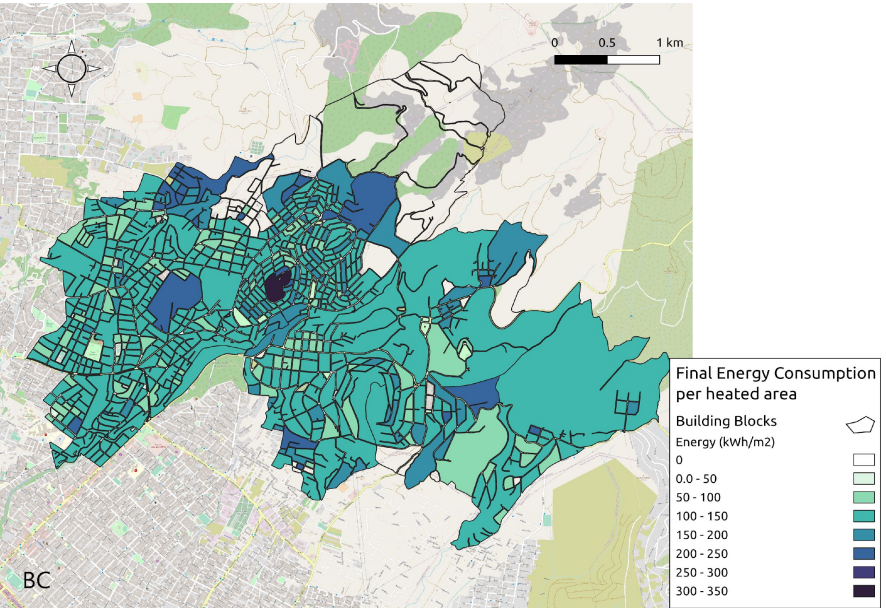
GEOSS PLATFORM PLUS

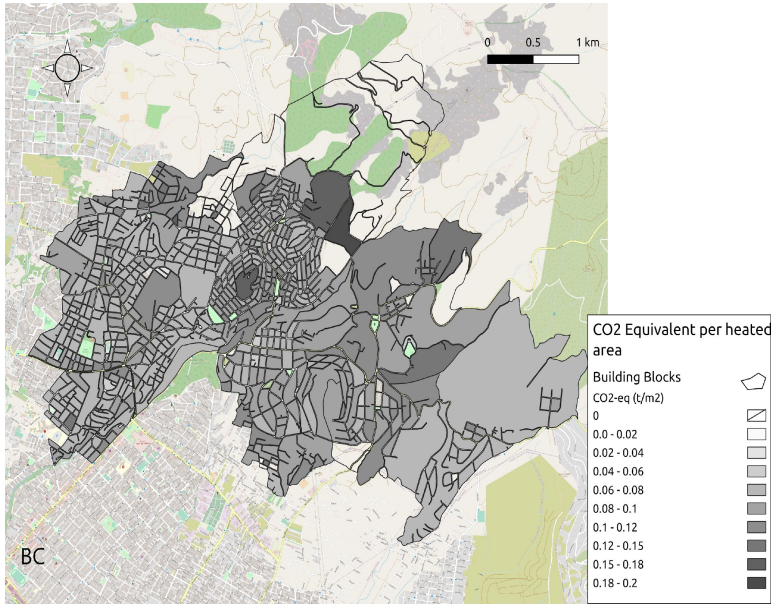
Working relationship with GPP. Implementation of a fusion-DEMO.

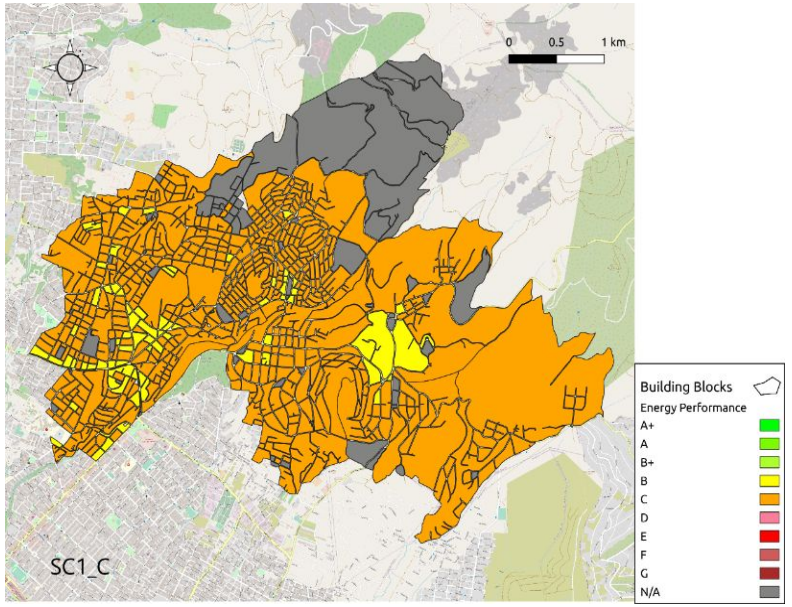
Natural Language Processing NLP-based cognitive search (Large Language Model) for GEOSS datasets

What has NLP done for the Green Deal Data Space?

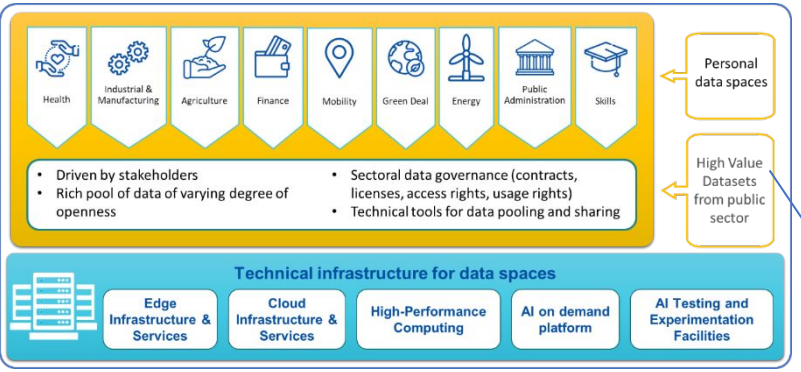
Datasets of High Value indeed







Buildings energy efficiency. 3 Tier approach: TIER I: Using statistical data provided by the Hellenic Statistical Authority (ELSTAT), TIER II: Using detailed Earth Observation (EO) data, TIER III: Using publicly available EO and statistical data



Acquiring microdata took more than a year. EIFFEL advocates for the importance of HVD. How can the Green Deal Data Space benefit efficiently?

Open Data Directive Regulation (European Strategy for data) for High Value Datasets: six categories of such high-value datasets: geospatial, earth observation and environment, meteorological, statistics, companies and mobility.