EUROGEOSURVEYS

Monitoring and Mapping Groundwater Systems in Europe

The viewpoint of EGS

40 Years Listening to the Beat of the Earth

MISSION

Provision of public Earth science knowledge to support:

- ✓ EU's competitiveness
- ✓ Social well-being
- ✓ Environmental management
- ✓ International commitments

OUR TEAM

Expert Groups

Earth Observation and Geohazards

GeoEnergy (including CCS)

Marine Geology

Mineral Resources

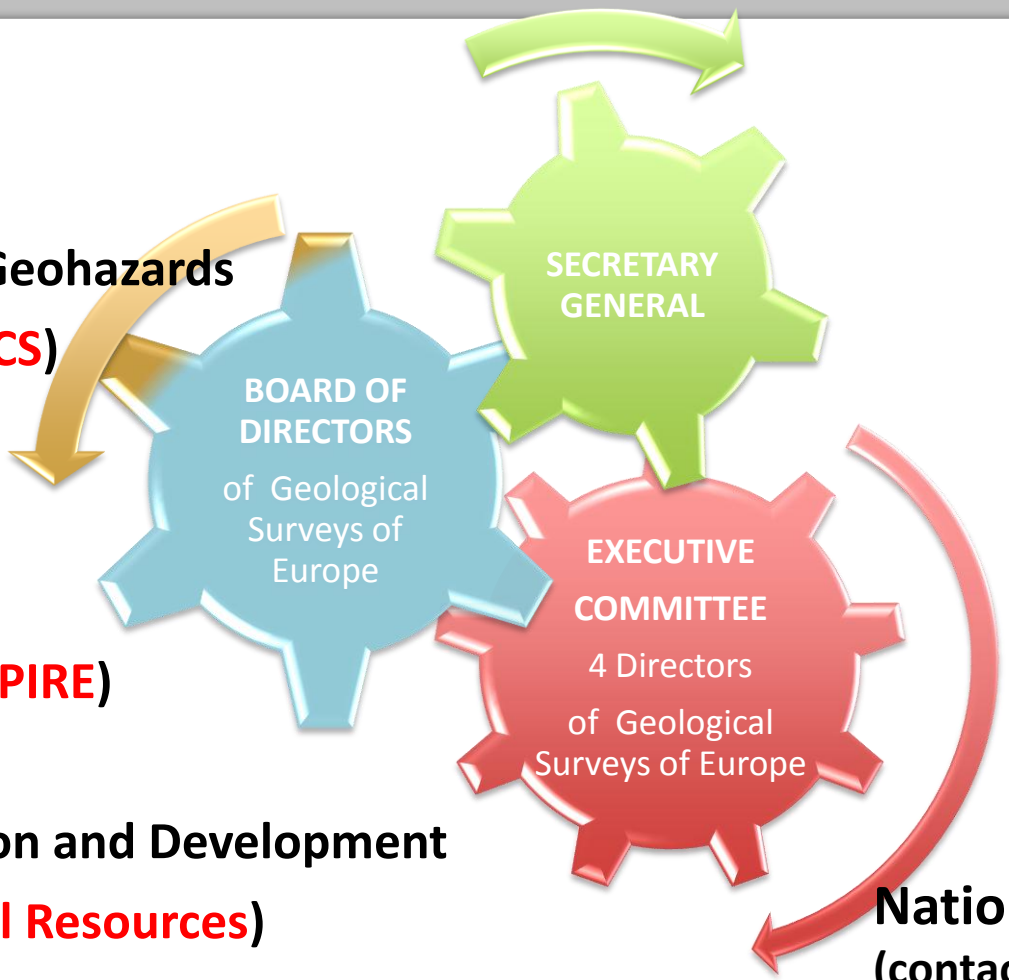
Water Resources

Spatial Information (INSPIRE)

Geochemistry

International Cooperation and Development

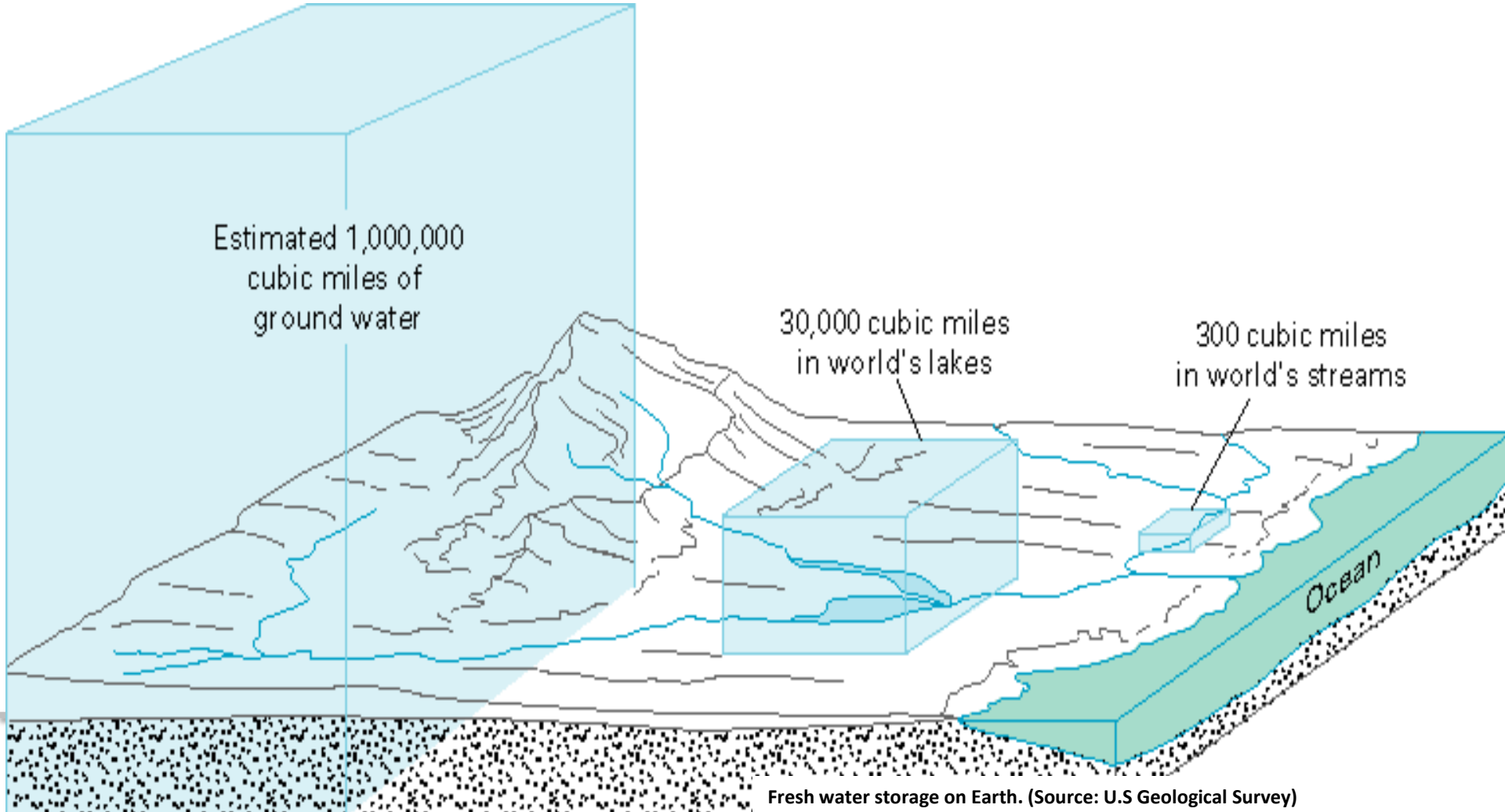
Superficial Deposits (Soil Resources)



National Delegates
(contact persons of each Geological Survey)

Earth's fresh water resources consist mostly of glaciers ice caps and groundwater

Rivers and lakes constitute a very small part of the total global freshwater volume.



Fresh water storage on Earth. (Source: U.S Geological Survey)

Responding to EU requests

European Innovation Partnership on Raw Materials COM(2012) 85 final:

"For many years the basic geological exploration and mapping in the EU has been carried out by **national geological surveys** that have to **operate within the constraints of national frameworks and regulations**. **Today, the full benefits of an appropriate coordination or even integration of some of the activities of the EU's different 27 geological surveys has not been achieved**. Yet, innovative thinking based on **increased networking and cooperation** offers a huge potential to move forward. Setting **European standards** will facilitate the creation of a **uniform EU geological knowledge base**, and can also lead to a **more cost-effective development and use of required modern technologies**, such as **satellite-based resource information** and **advanced 4D computer modelling systems**."

Making in-situ data available

A number of projects is being carried out by The Geological Surveys of Europe

Is their continuation ensured after the end of each project?

Are those projects connected and their results interoperable?

How can the EU really benefit of this huge amount of in-situ data?

THE GEOSCIENTIFIC COMMUNITY IS PROBABLY, AT THE MOMENT, THE WORLD LARGEST PROVIDER OF IN-SITU DATA


ONE
Geology

Background

20th September 2011

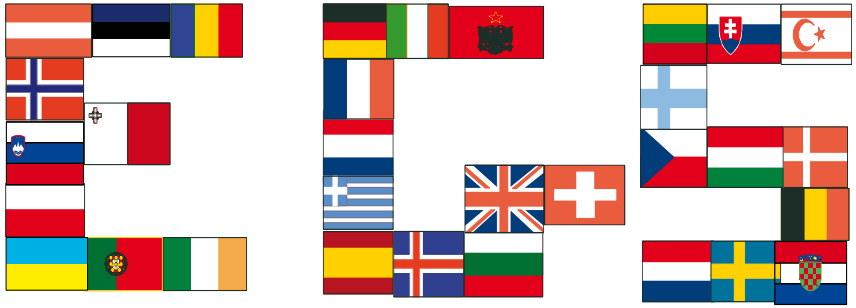
Unanimous resolution by the EuroGeoSurveys Directors at their 31st General Meeting in Warsaw:

OneGeology-Europe shall become the basis for the European Geological Database, owned and sponsored by EGS.

EUROGEOSURVEYS

32 NGSO

from across Europe



Work force of

SEVERAL THOUSANDS

Over 1 billion euro annual budget

Responding to EU needs

Towards a European Geological Data Infrastructure?

EMODnet
European Marine Observation and Data Network

Geo-Seas

GEO-SEAS

Pan-European marine geoscientific e-infrastructure

EMODnet

European Marine Observation Data NETwork

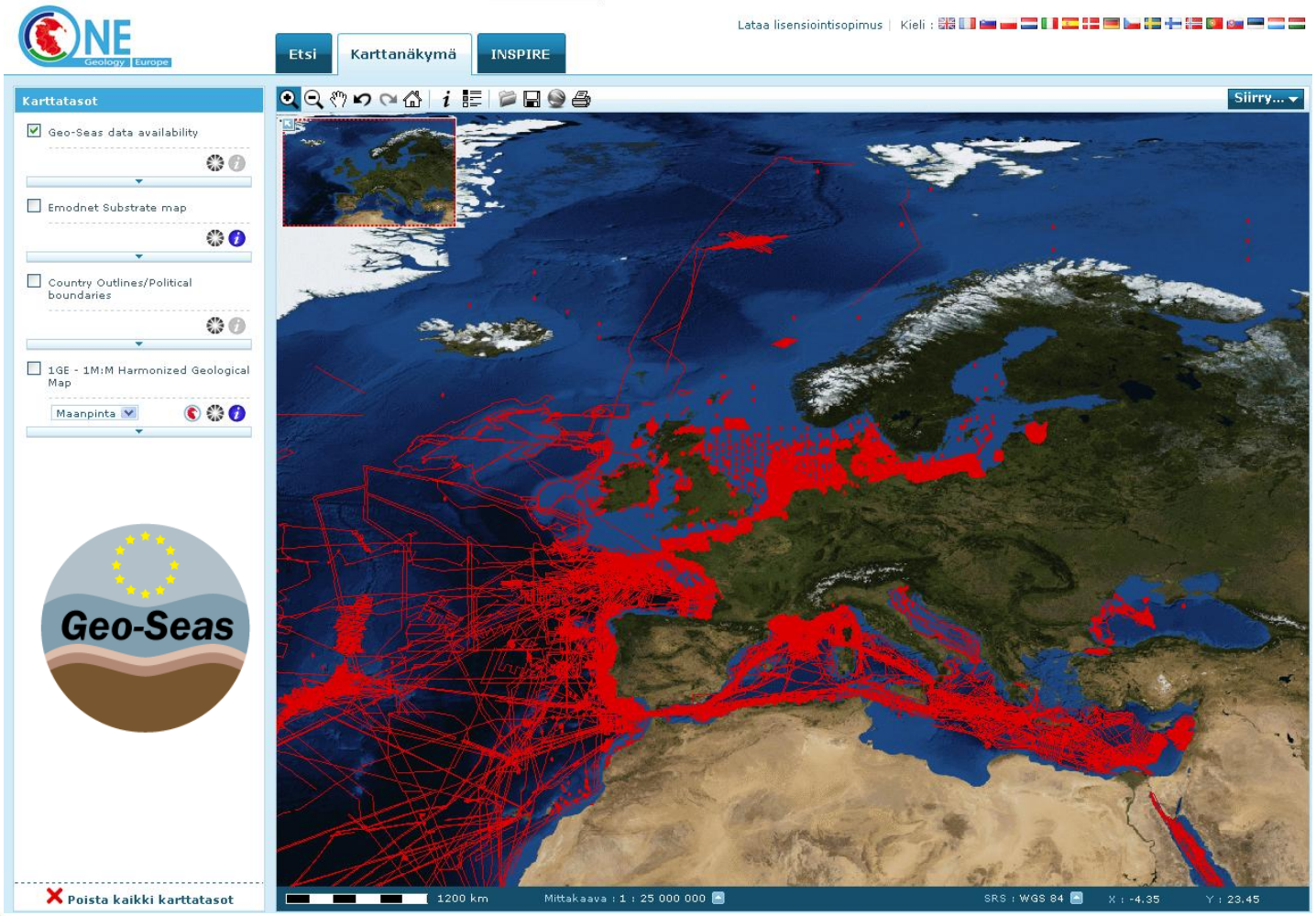
GEO-SEAS

Improved discovery and access to federated marine geological and geophysical data and data products via a dedicated web based portal

Improved interoperability of geological and geophysical data with other data and data products

Underpinning European and global Directives and/or programmes e.g. INSPIRE, GEOSS and GMES

1G-E portal
importing WMS services from Geo-Seas



EMODnet

To provide access to observations and highlight gaps

Investment 2008-2010: €6,450,000

Expected benefits in long-term (impact assessment):
€300 million annually by reducing operating costs

Increasing competition and opportunities

Contribution to innovation and growth

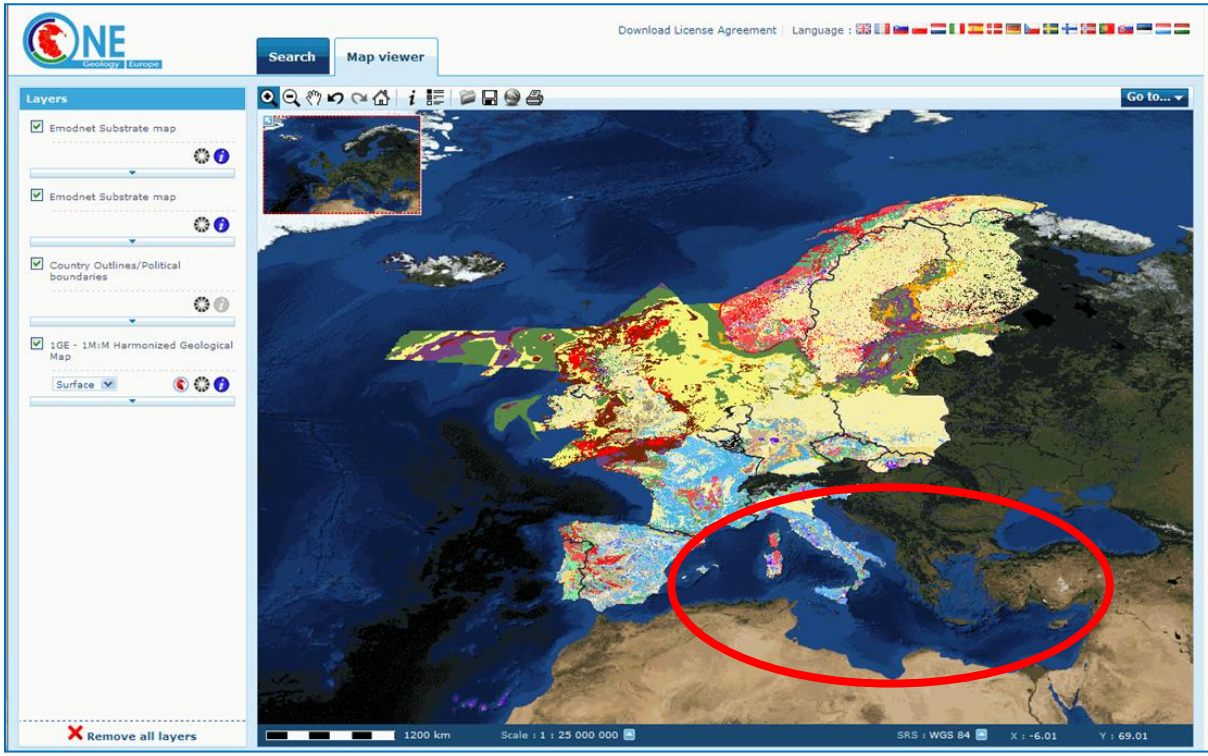
rtals

40 Years Listening to the Beat of the Earth

EMODnet
European Marine Observation Data NETwork

EMODnet
European Marine Observation and Data Network

EMODnet-Geology 2013-2016:
€4,200,000

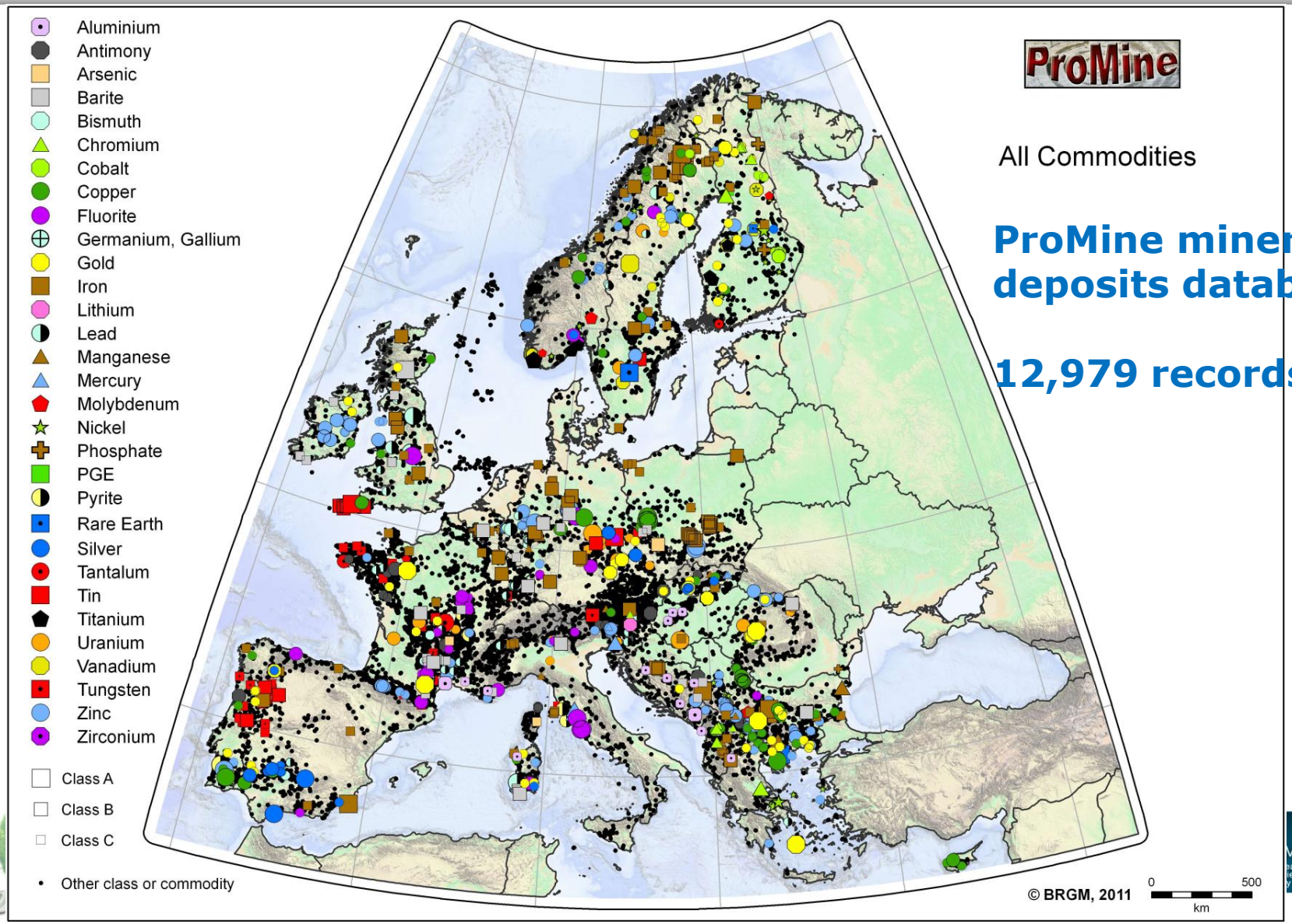


The ProMine project

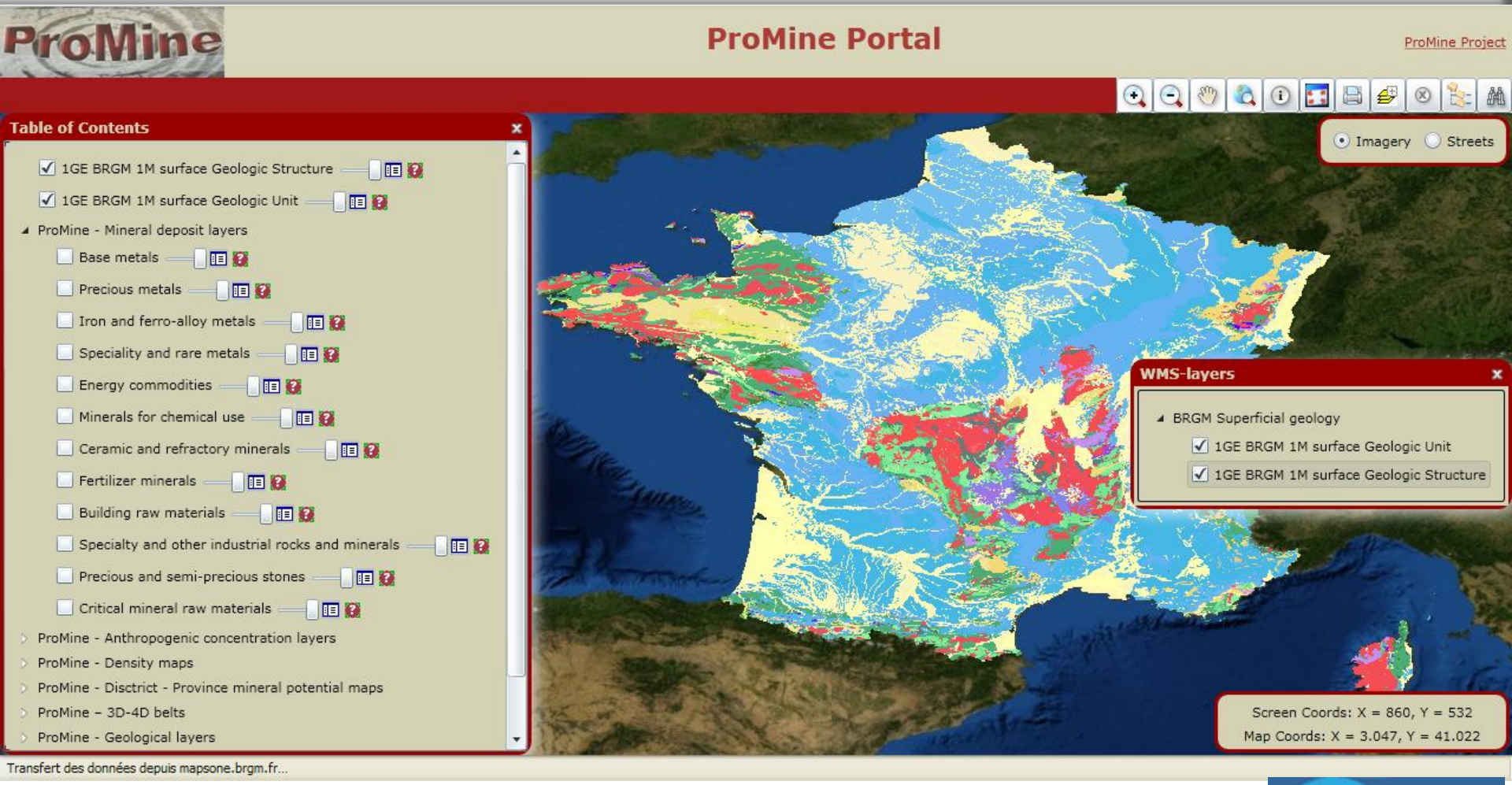
"Nano-particle products from new mineral resources in Europe" 2009-2013

- Total budget: 17 M €
- 27 partners from 11 EU countries
- To ensure that all potential mineral resources within EU are fully documented in a GIS-based resource assessment and modelling system

The ProMine project



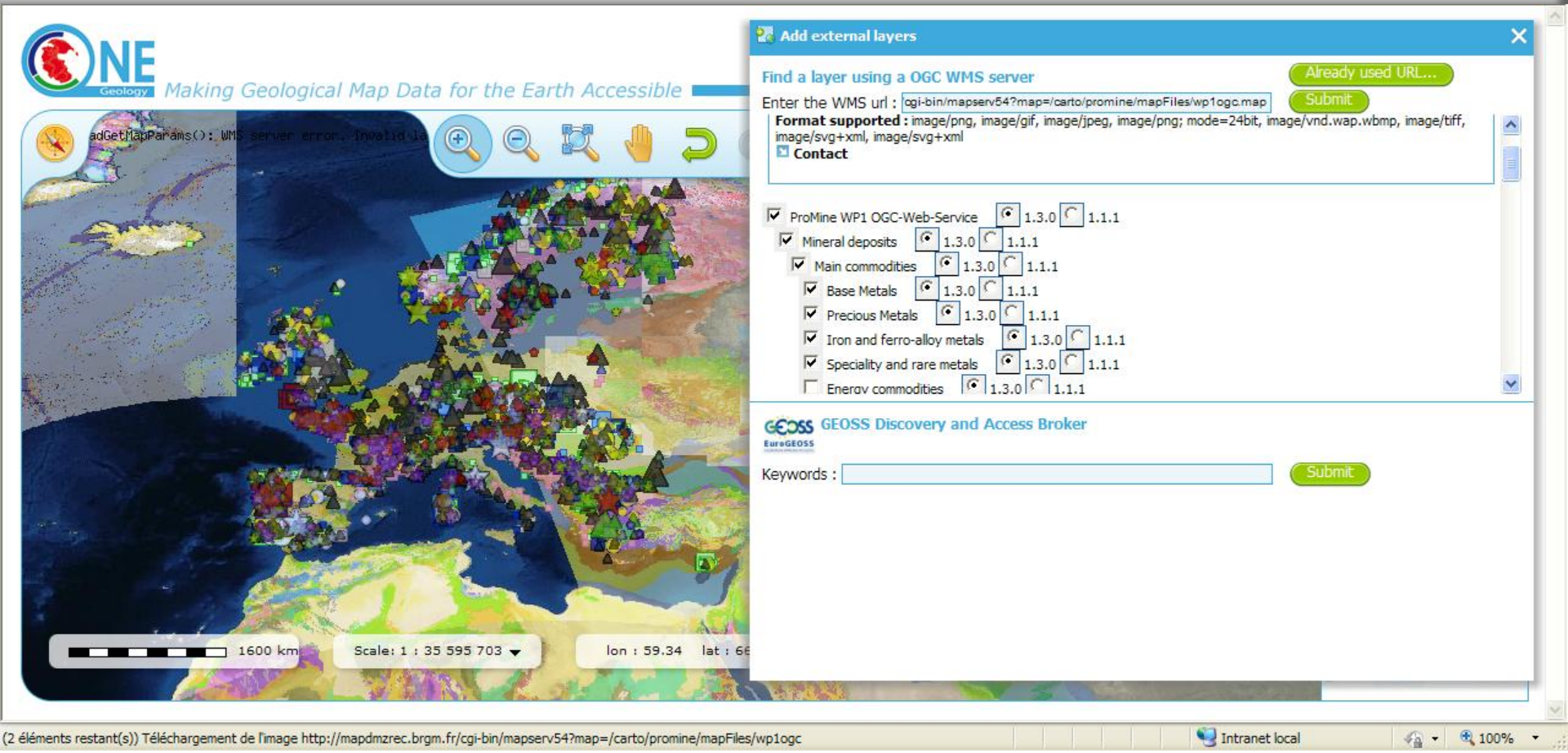
The ProMine project



Adding in the ProMine Portal external WMS: Geological map of France from

EuroGeoSurveys - The Geological Surveys of Europe

The ProMine project



Adding ProMine WMS to the OneGeology-Europe Portal

EUROGEOSOURCE

for sustainable and secure supply of energy and minerals

A multilingual Web GIS System that brings harmonised information on Energy and Minerals resources

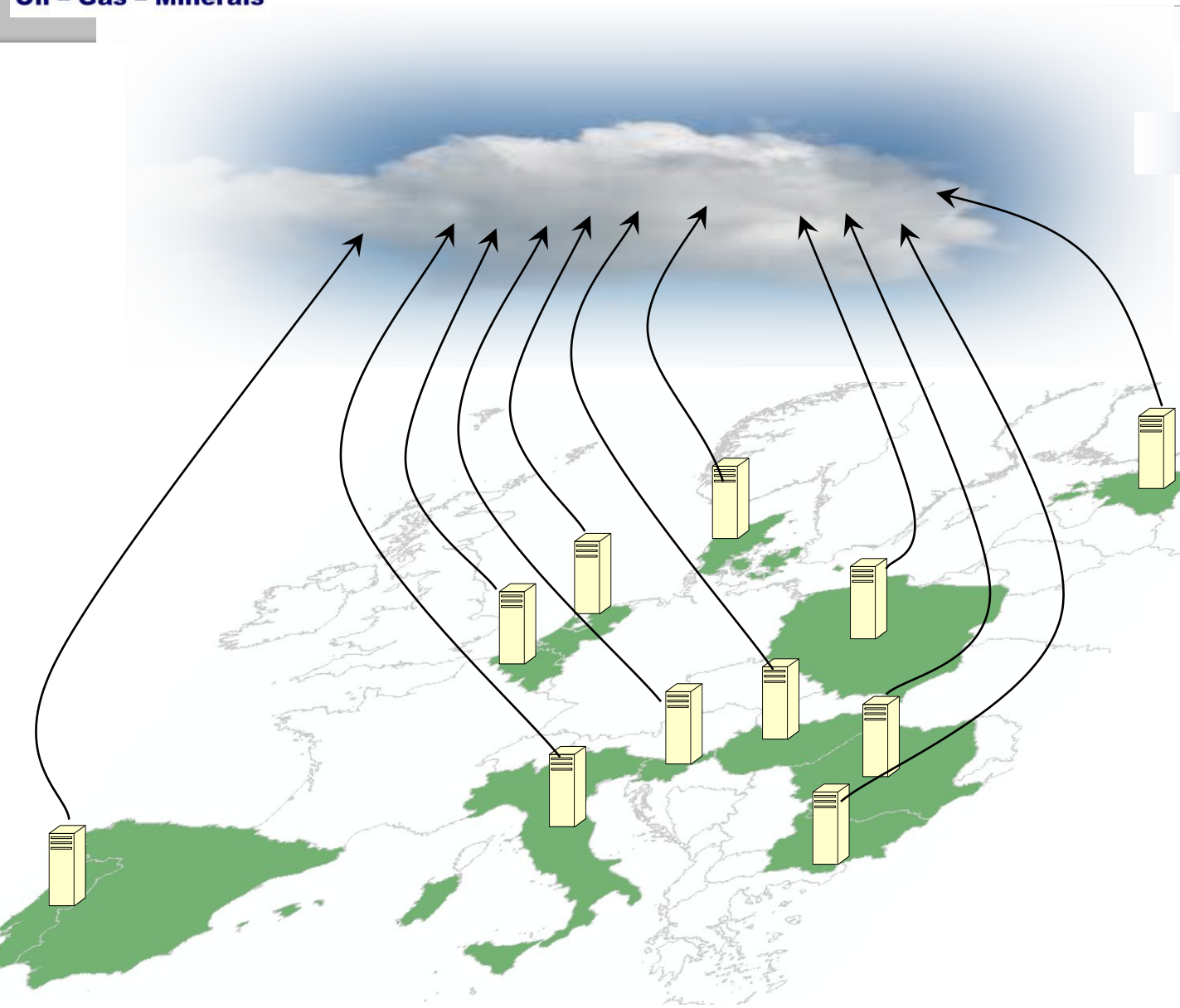
To your desktop

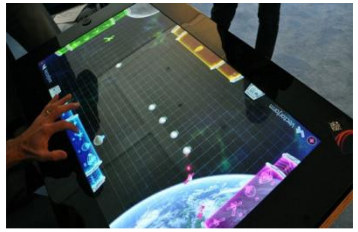
Main data

- Energy (oil and gas) and Minerals (including aggregates)
- Production and industrial sites
- Geological reserves
- SPBA atlas: Petroleum geology for Northwest and central Europe

Euro Geo Source
Oil – Gas – Minerals

Distributed WEB system

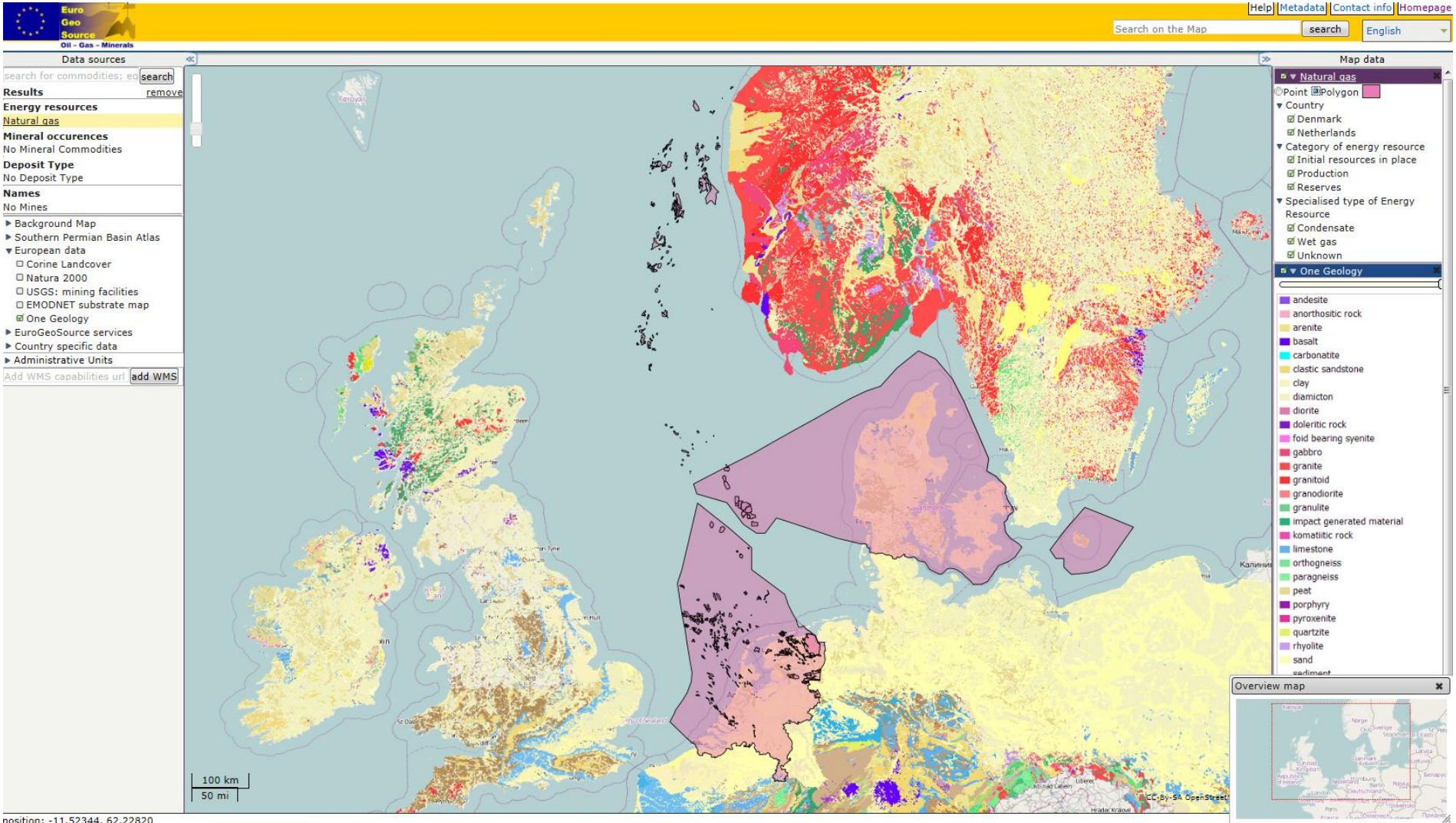




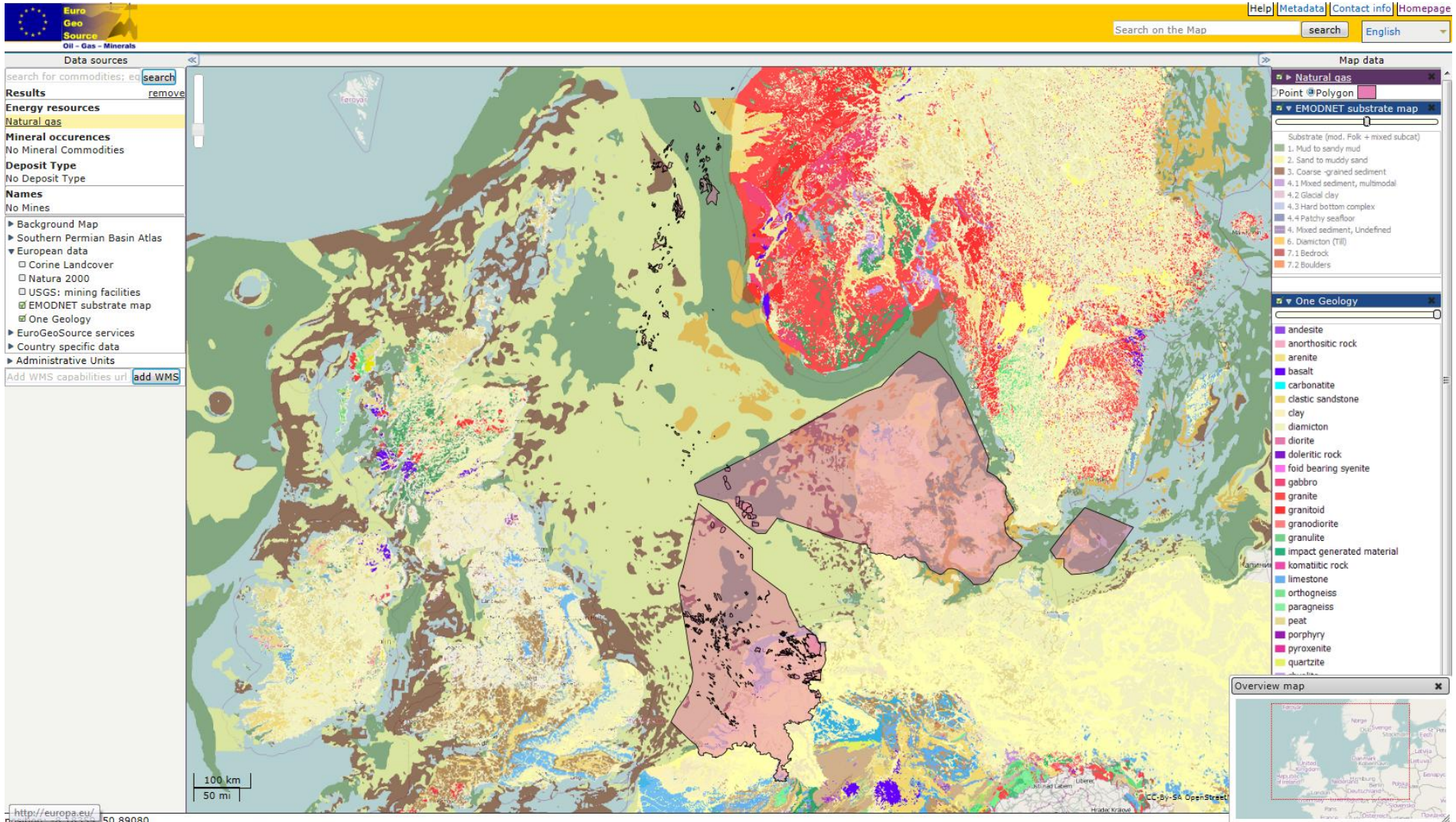
Euro Geo Source
Oil – Gas – Minerals

EUROGEOSURVEYS
European Geoscience for Society

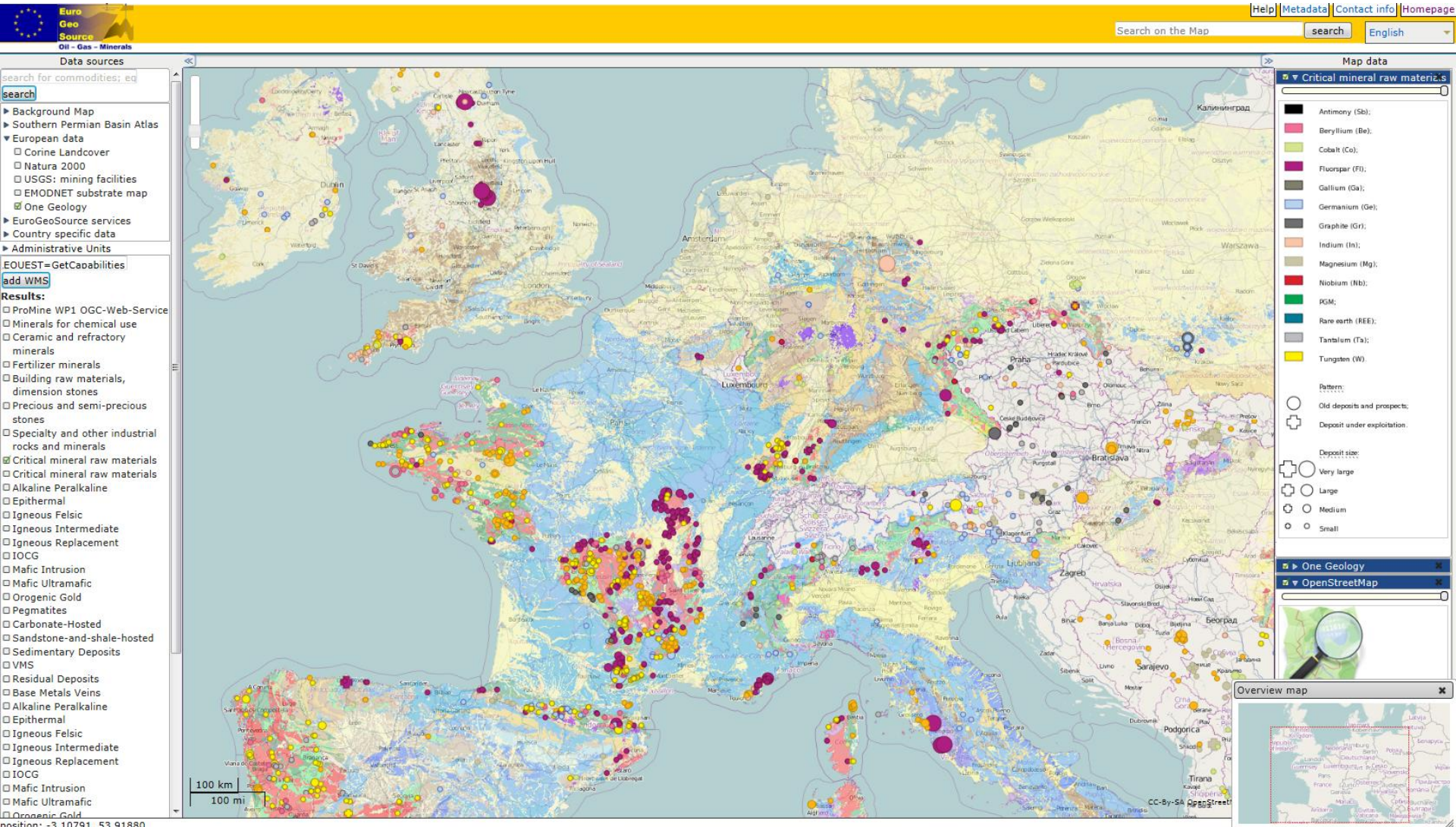
EuroGeoSource portal uses OneGeology-Europe



…and EMODnet-Geology substrate map



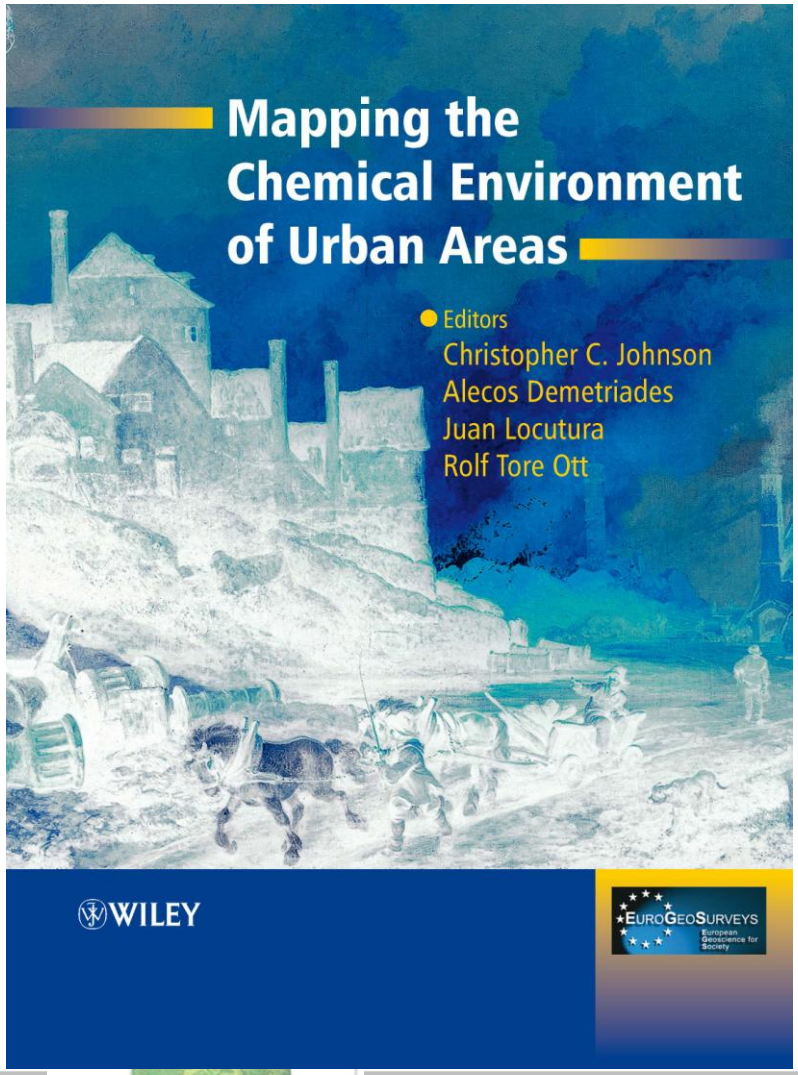
…and ProMine data… etc…

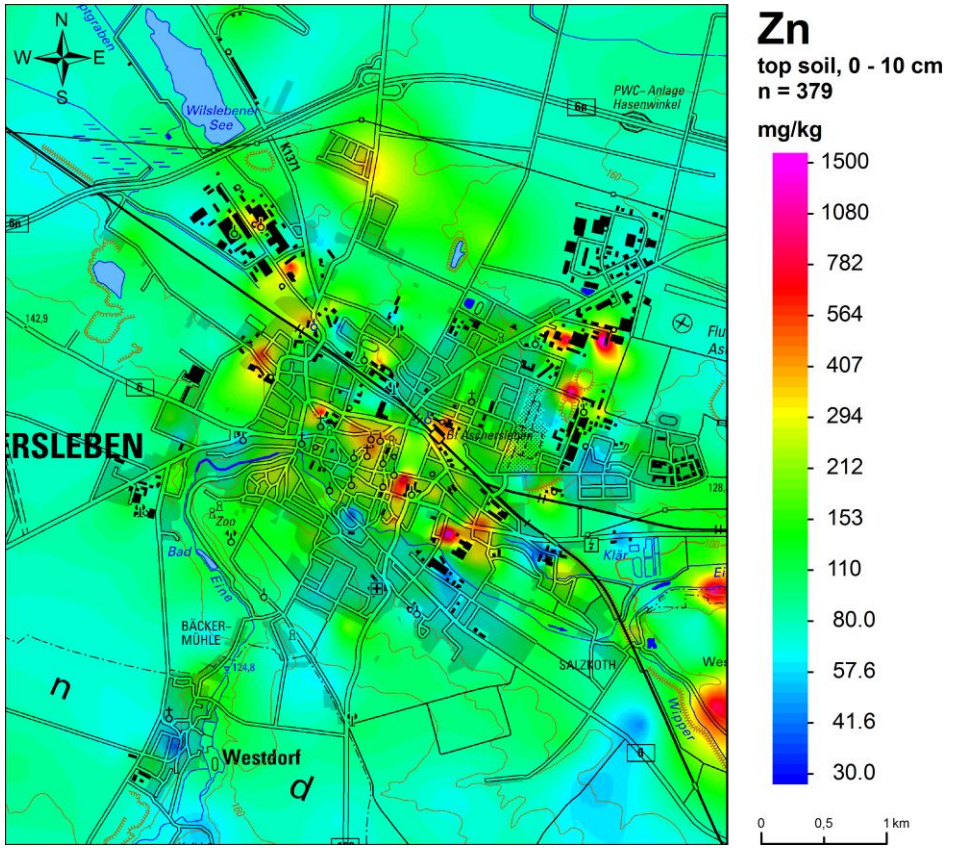


PANGEO


PanGeo
Made Ground
Click here for detailed information
Hazard Category: Man Made (Anthropogenic) Ground Instability
Hazard Type: Made Ground
Determination Method: Potential Instability
Confidence: High
Area (sq km): 0.114
Observed Start Date: 09/02/2012
Observed End Date: 12/02/2012
Estimated Population: 101 - 1000
InspireID: PGGH_Roma_026
Town: Rome
Country: Italy
ISPRA
PanGeo Licence
Hazard Categories
Deep Ground Motions
Natural Ground Instability
Natural Ground Movement
Anthropogenic Ground Instability
Other
Unknown
Google earth

Urban Geochemistry – URGE Project





Zinc (Zn) in the topsoils (0-10 cm) of Aschersleben, Germany

EO-MINERS

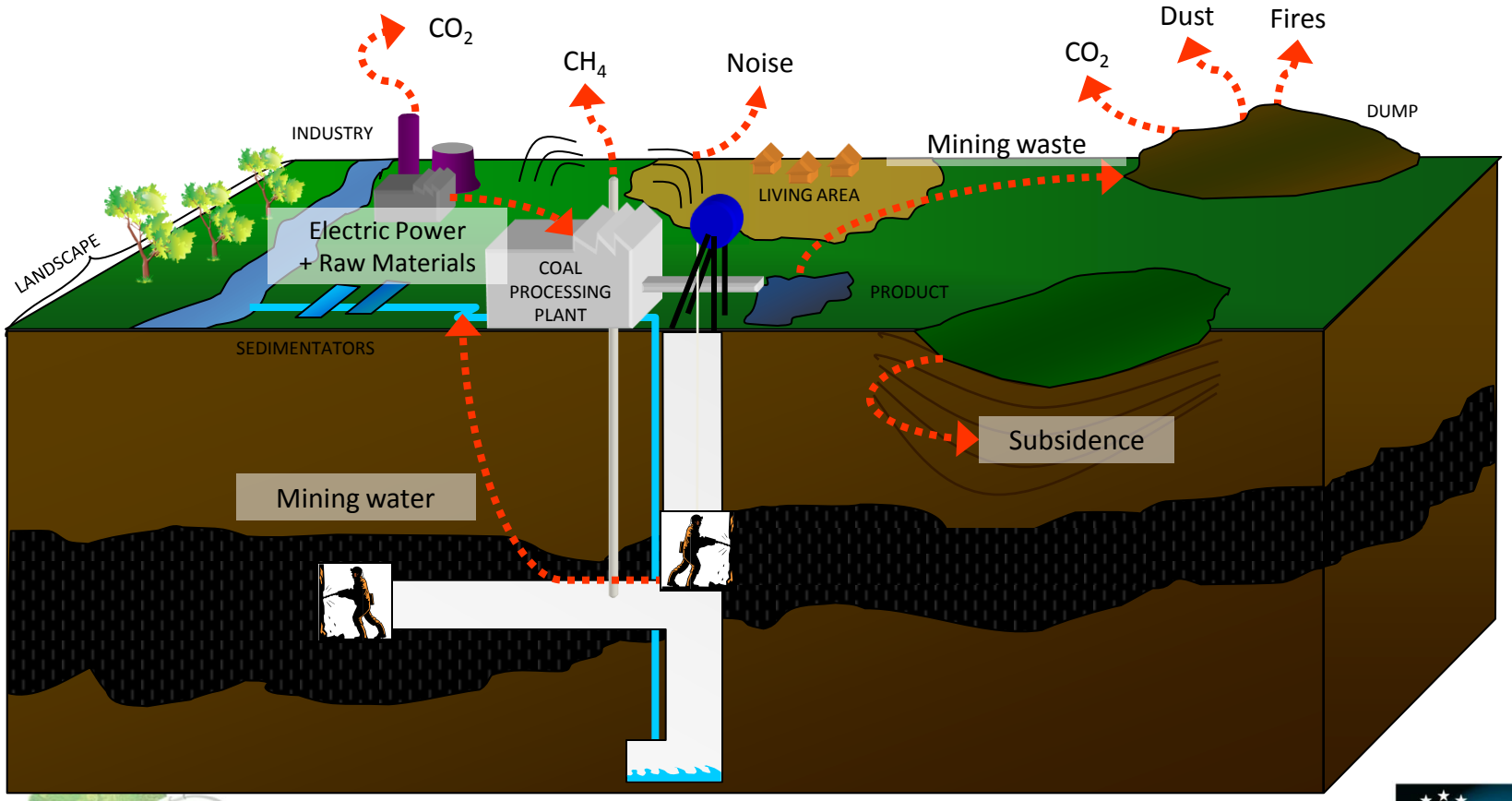
Earth Observation for Monitoring and Observing Environmental and Societal Impacts of Mineral Resources Exploration and Exploitation

A concept for the future

I²Mine	• marks the start of a series of development activities aiming to realise the concept of an invisible, zero-impact mine
I²Mine	• will develop innovative methods, technologies, machines and equipment for economical, ecological and safe exploitation of mineral raw materials in the EU
I²Mine	• will contribute to securing the supply of mineral raw materials for Europe in a sustainable way and reduce the import dependency
I²Mine	• will improve the competitiveness of the extractive sector in Europe as well as the competitiveness of European equipment suppliers

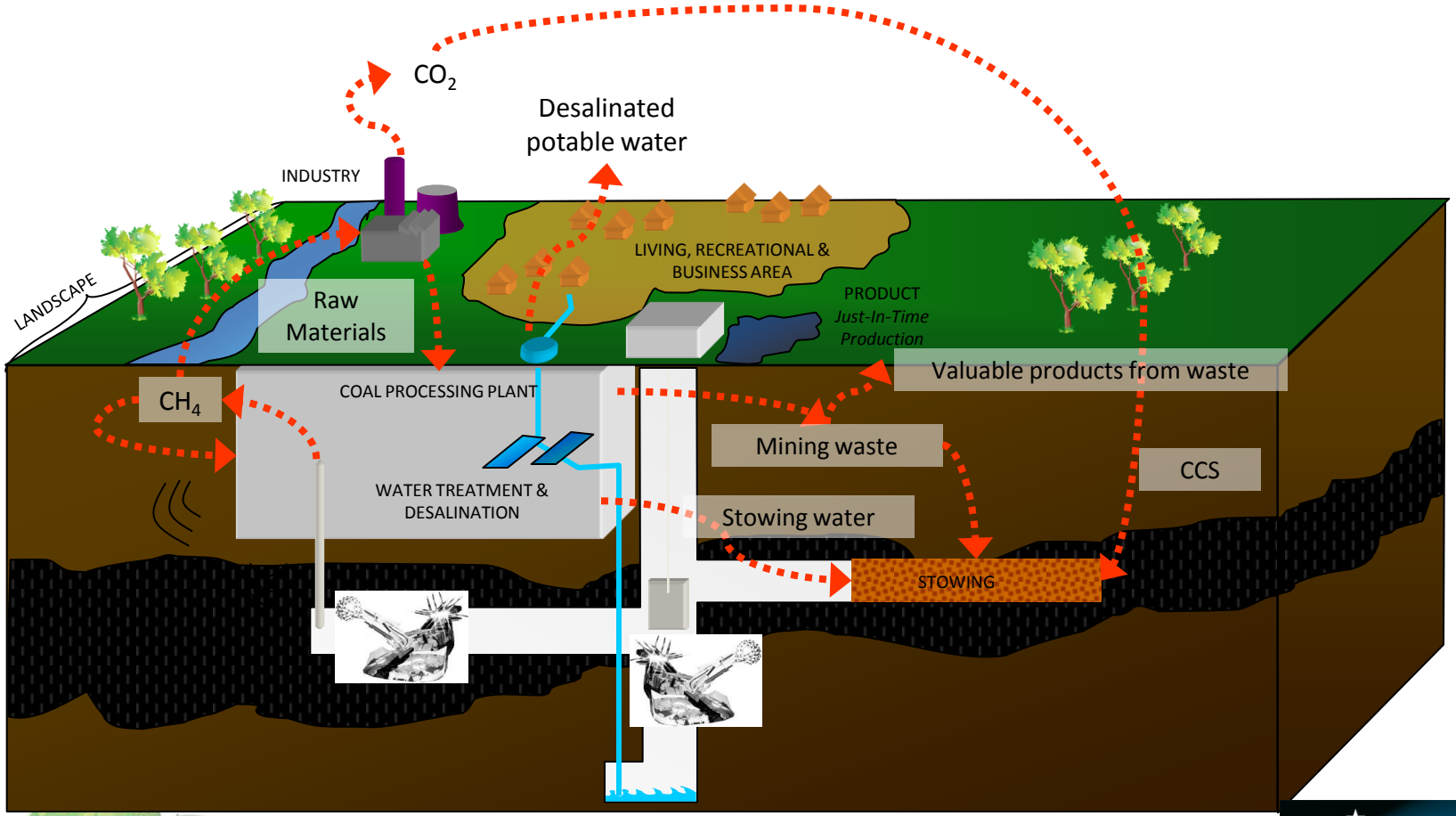
A concept for the future

Today's hardcoal mine
Becoming invisible



A concept for the future

„Invisible" hardcoal mine of tomorrow



SUSTAINABLE AGGREGATES RESOURCE MANAGEMENT
SARMa

- to develop common approach to sustainable aggregate resource management (**SARM**) and
- to ensure sustainable supply mix (**SSM**) planning, at three scales, to ensure efficient and secure supply in SEE

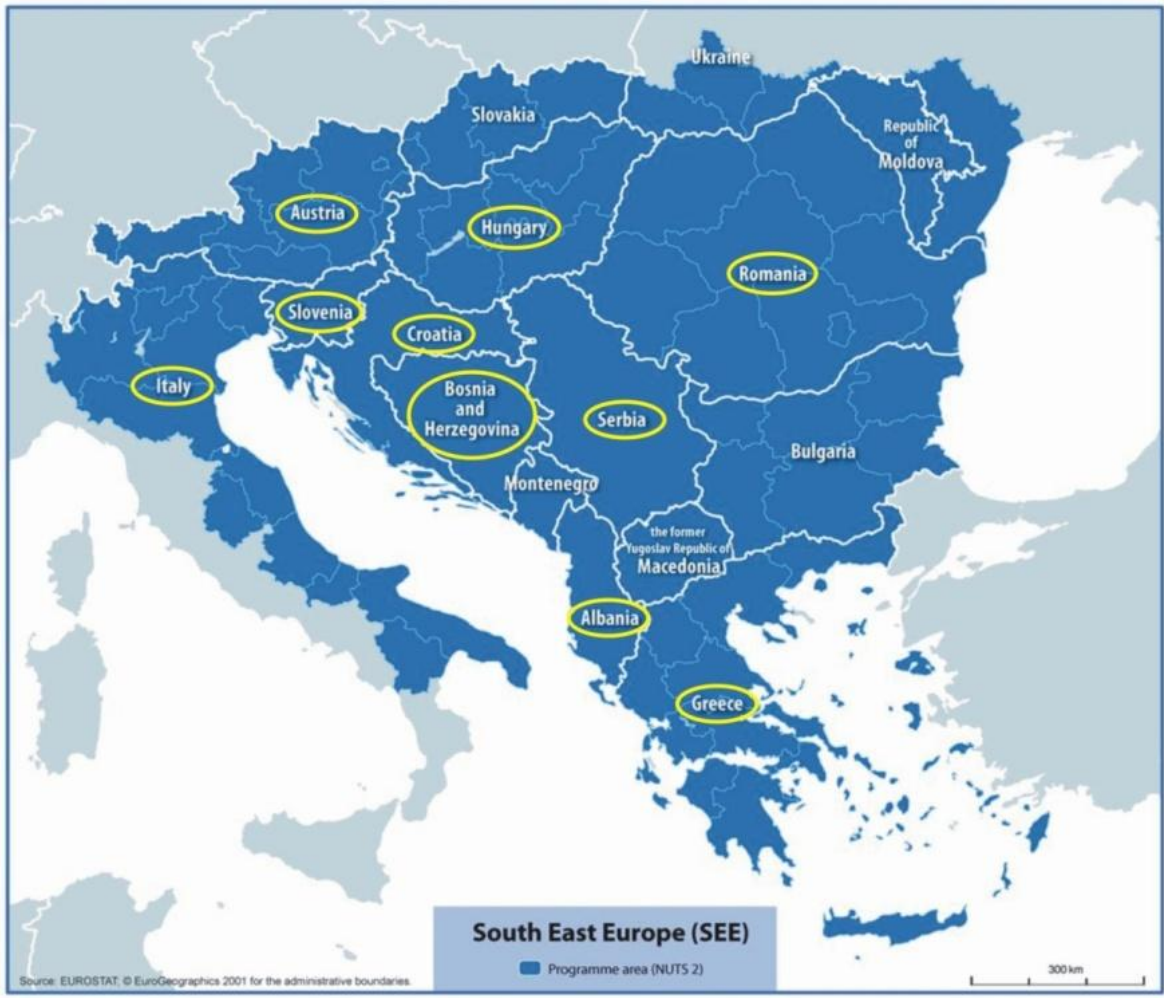
SARM is efficient, low socio-environmental impact quarrying and waste management.

SSM uses multiple sources, including recycled wastes and industrial by-products (slag) that together maximize net benefits of aggregate supply across generations.

SUSTAINABLE AGGREGATES PLANNING IN SOUTH EAST EUROPE (SNAP-SEE)

Geological Surveys:

Albania
Croatia
Emilia-Romagna (Italy)
Greece
Romania
Slovakia
Slovenia



Responding to EU needs

Towards a European Geological Data Infrastructure?

GROUNDWATER IS NOT THERE…

…YET

THANK YOU FOR YOUR ATTENTION!