

EUSO Working Group on Data Hub SG

Fenny van Egmond, Paul van Genuchten, Rachel Opitz, Nikolai Svoboda, Marjan Bevelander, Roselie Wijtenburg, Jandirk Bulens, Fenny van Egmond, Zizis Gagkas, Ester Miglio, Calogero Schillaci, Marc van Liedekerke, Christian Murray, Ialina Vinci, Christine Le Bas, Maria Fantappiè, Paul Henning Krogh, Angela Fiore and more



EJP SOIL
European Joint Programme

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WAGENINGEN
UNIVERSITY & RESEARCH

Mission of the EUSO

- To provide a **dynamic and inclusive platform** that supports EU soil-related policymaking.
- To provide the relevant Commission Services, together with the broader soil user community, with the **knowledge and data flows** needed to safeguard and restore soils.
- To support, and benefit from, EU Research & Innovation on soils while raising societal awareness of the value and importance of soils to the lives of citizens.
- closely collaborate with relevant EU Agencies (e.g. EEA, EFSA, ECA) and Horizon Europe's Soil Mission.

....to support EU policies by ensuring that the Commission is able to fully capitalise on the information made available through **integrated data flows by transitioning from simply monitoring to understanding.**

Aims of the Sub-Group

As a start:

- To compile a list of national (or regional if a national set doesn't exist) authoritative datasets
- To think about basic requirements or functionality the EUSO Hub should have in order to bring together the data sources that are envisaged

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Requires also to:

- Define authoritative
- Discuss and define standards and guidelines to be used in the hub
- Incorporate needs and suggestions from other EUSO Data subgroups
- Align with ongoing initiatives and projects (ESDAC, INSPIRE portal, INSPIRE, EEA, EJP SOIL, EOSC, GloSIS, ESP, etc.)
- Propose technical implementation option(s)

Soil data sharing
(Marc van Liedekerke, Calogero Schillaci JRC)

Establishment of EUSO data integration working group
Chair: JRC, Marc Van Liedekerke
EUSO Working group: five informal and voluntary; in consecutive stages, a more formal approach could be envisaged (eg. when establishing an "official" soil monitoring system in EU)

EU-Projects: create an exhaustive list of EU soil related projects (Christine le Bas)

Follow EU Soil Monitoring and EU indicators activities (Antonio Bispo)

EJP-Soil: screen the EU-wide soil datasets proposed by EJP-Soil for future inclusion in EUSO (Maria Fantappiè)

Data from Literature: Review of literature to identify EU-wide soil related datasets; description, contacts, digital availability for the public (Calogero Schillaci)

Hub: definition of a possible web-based interface from which, through browsing and for each EU country, the user can link to digital soil resources in that country. Envisaged are soil properties / threats / functions. (Fenny van Egmond)

Principle

Don't start from scratch, but work with what is already in place:

- Hub
 - Datasets
 - Portals (national, regional, others)
 - Repositories
 - Standards for metadata (INSPIRE metadata (ISO), DCAT, DataCite)
 - Standards for data exchange (OGC, others)
- Conceptual work in EJP SOIL WP6, but extended
- : Develop set-up based on this principle and use cases



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Progress

- Several meetings, diverse group
- Definition of aims, expectations
- Definition of authoritative
- First list of national or regional portals
- Further compilation planned based on known resources ([EJP SOIL D6.1 report](#), INSPIRE Portal)
- Metadata template (Excel and Github (xml) [hub/portals.csv at main · EuSoilObservatory/hub · GitHub](#))
- Exchange of good practices, technical discussions on functionality started:
 - Persistent
 - Maintained
 - (Enforced) metadata standards
 - Interoperability?
- First listing of use cases



Definition of authoritative

For many practitioners, the term usually means that the **data was produced or is approved by some authority**, but has different meanings in various communities.

Aspects of authoritativeness mentioned:

- Data is quality assessed
- Data is made available easily, e.g. at a URI, for a considerable time period
- Data collection is mandated by an authority and/or legislation
- Data and procedures are standardised
- Metadata is provided standardised and publicly available
- Authoritative references are archival, corroborated and sanctioned



The subgroup recommends to **adopt a loose inclusive definition of authoritative data**. But, from a more practical side, **recommends to limit the initial efforts of the hub group to authoritative datasets with a high FAIR score**, datasets which are already well documented and available

Metadata template

- Is a subset of ISO19139
- Submitting according to ISO19139, DCAT, DataCite is also possible
- Template in Excel or directly via Git
- In time: use Git as a file repository
[hub/portals.csv at main · EuSoilObservatory/hub · GitHub](https://github.com/EuSoilObservatory/hub/portals.csv)
- For now submit to the Git (by doing a pull request) or send an email

Metadata template

GitHub navigation bar with search and repository links.

Search or jump to... / Pull requests Issues Marketplace Explore

EuSoilObservatory / hub (Public) Edit Pins Watch 0

<> Code Issues 1 Pull requests 1 Actions Projects Wiki Security Insights Settings

Repository navigation: main hub / datasets / portals.csv Go to file

pvgenuchten add service url austria Latest commit b903117 12 days ago History

1 contributor

File statistics: 19 lines (19 sloc) | 3.42 KB Raw Blame

Search this file...

	name	link	country	description
2	BRO	https://www.broloket.nl/ondergrondgegevens	the Netherlands	TNO on behalf of the dutch government provides various datasets related to soil via this portal
3	eBod	https://bodenkarte.at/	Austria	Soil portal of Austria
4	KOGIS	https://www.geo.admin.ch/boden	Switzerland	Switzerland presents various geological and soil themes in this portal
5	Grundvand	http://miljoeGIS.mim.dk/spatialmap?profile=grundvand	denmark	A series of soil related maps
6	SoilmapBulgaria	http://www.issapp-pushkarov.org/	Bulgaria	Soil institute of Bulgaria makes available the national soil map
7	ENVI atlas	http://envi.azo.hr/?topic=3	Croatia	map portal with various soil related themes
8	INSPIRE Geoportal	https://inspire-geoportal.ec.europa.eu/	Europe	A portal which collects environmental data in the scope of INSPIRE directive from memberstates
9	EEA data portal	https://www.eea.europa.eu/data-and-maps	Europe	A portal for environmental data
10	ESDAC	https://esdac.jrc.ec.europa.eu/resource-type/datasets	Europe	
11	Eurostat	https://ec.europa.eu/eurostat/data/database	Europe	
12	European-data-portal	https://data.europa.eu	Europe	
13	Bonares	https://maps.bonares.de/mapapps/resources/apps/bonares	Europe	The BonaRes Portal is a central product of the BonaRes Centre for soil research aiming at a central and targeted
14	SoilBioStore	https://soilbiostore.au.dk/	Denmark	Soil microarthropod and earthworm data collected by scientists at Department of Bioscience, Aarhus University
15	ScotlandsSoils	https://soils.environment.gov.scot	Schotland	Data and information on Scotland's soils.



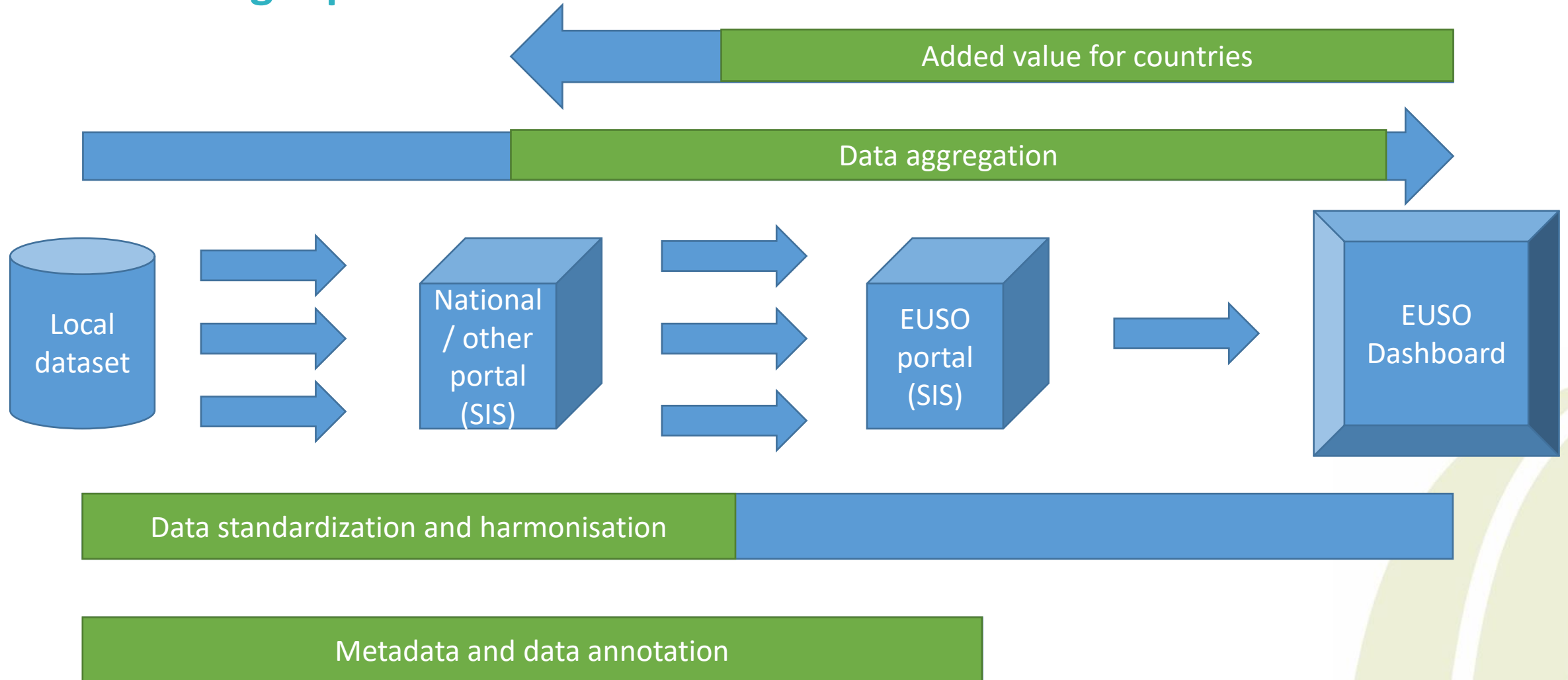
Challenges

- Agreed upon setup
- Find and annotate relevant datasets
- How to reach all relevant institutions and stakeholders
- Stimulate data sharing of relevant datasets (coordinates discussion etc., trust)
- Bring together very different data (format, structure)
- Derive information from assembled data
- Others?

Some EJP SOIL progress related to this infrastructure topic

[EJP SOIL - Towards climate-smart sustainable management of agricultural soils](#)

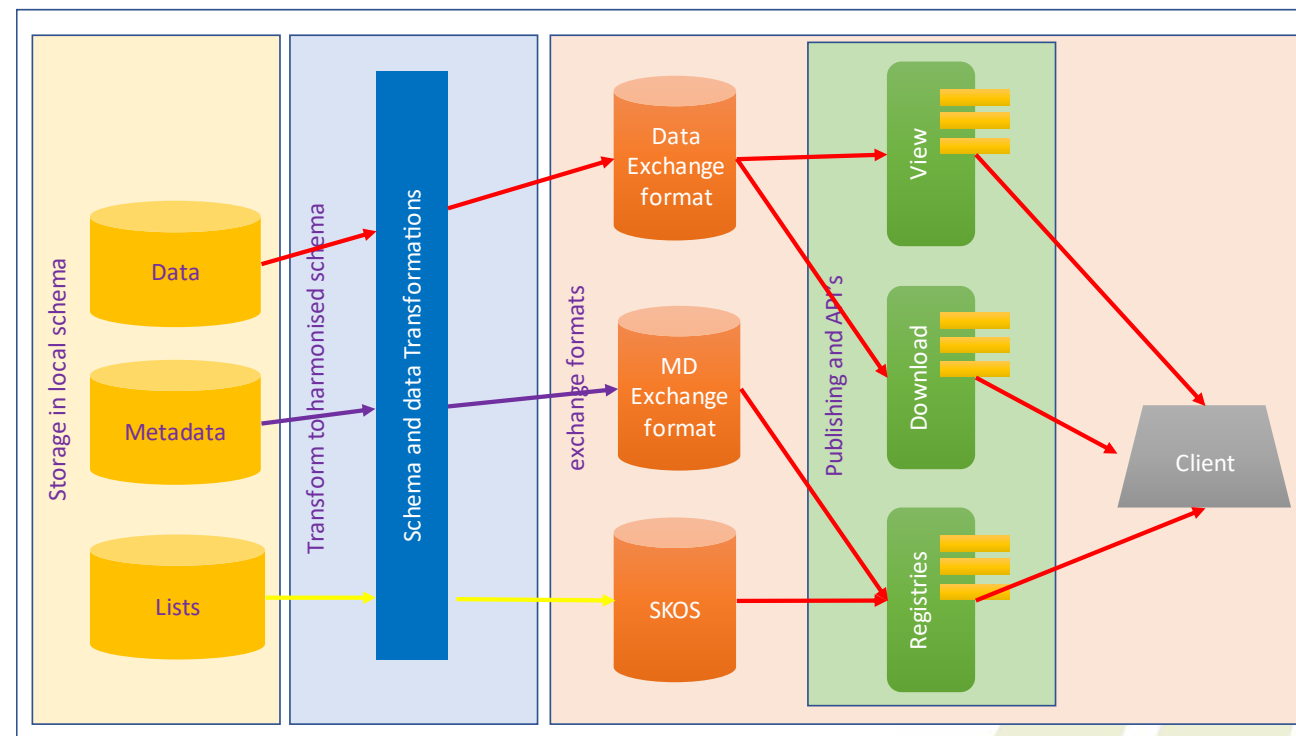
General design questions for the soil data infrastructure



Where to do which activity needs to be decided

Soil data infrastructure design proposal and functionalities

- Keep data (maintained) at the source & harvesting from existing (national and other) portals and (research) repositories
- Make all data FAIR and protected
- Minimum requirements for portals/repositories: persistent repository, metadata, open license (CC-BY unless standard, with INSPIRE exceptions respected)
- It facilitates the ((conceptual) data model) mappings to data standards (like INSPIRE or other international standards)
- Deploy an open source access metadata catalog Platform
- Expandible towards more functionality such as: dashboard, mapping, aggregating, reporting



To be tested with end-users AND data owners use cases, added value for both

NO ONE SIZE FITS ALL:
DEPENDING ON COUNTRY NEEDS AND CAPABILITIES



**WP5
Capacity
Building at
Wageningen**
6-8 April
2022 &
24-26
January 2023

**Revising
technical
requirements
(CN)
document
Incl. hub**



**Data
serving
Wiki
document
in concept
(steps and
options)**



**Fixing
INSPIRE
soil issues
(coverage,
codelists)**

**Tender for
transfor-
mation
software
to assist
countries
who need**

Enabling countries to serve INSPIRE
compliant soil databases:
Towards the Soil Distributed System

D6.8 Final version of the agricultural soil information system for EU populated with the final version of project datasets. **BY DECEMBER 2024**

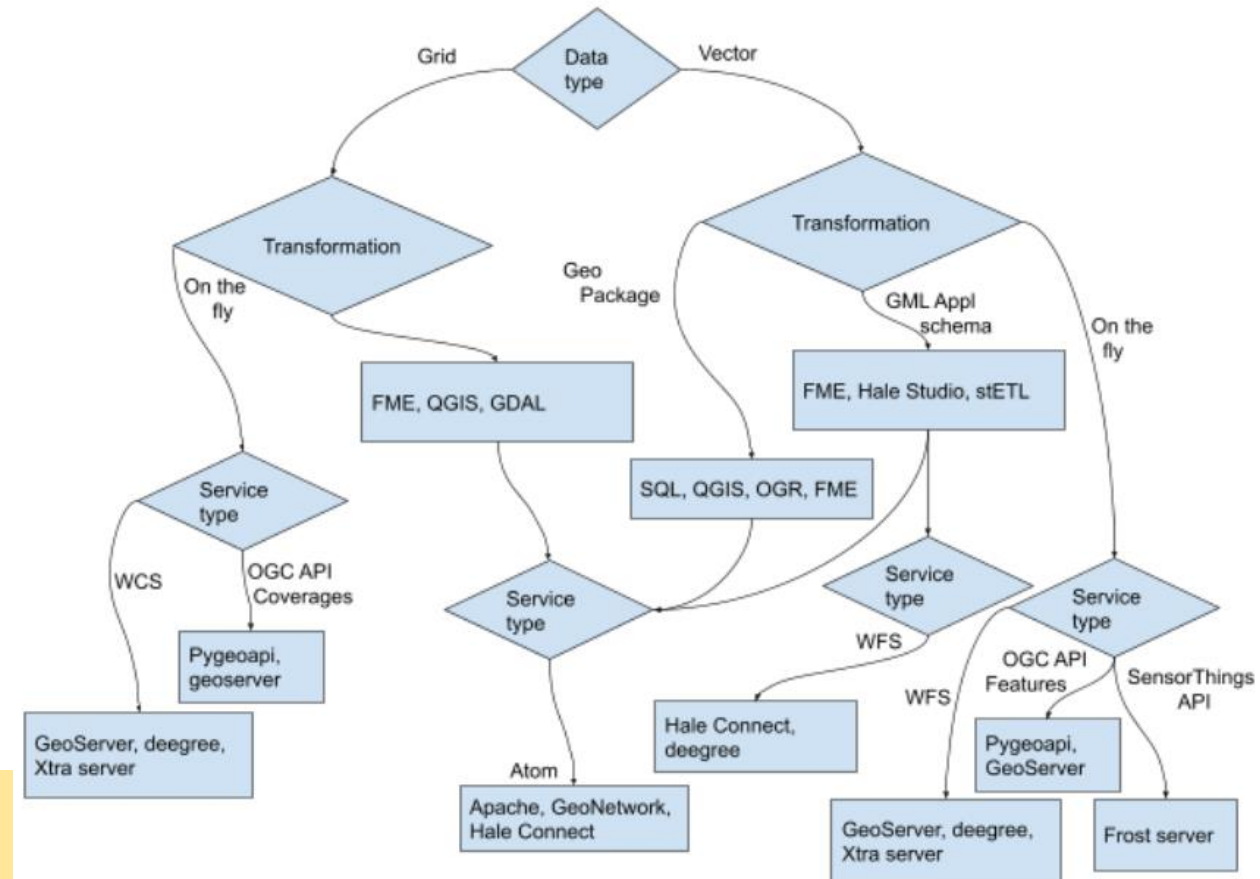
IN COLLABORATION WITH



European Environment Agency



Various product options which provide INSPIRE Download Services



**Thanks a lot and we look forward to work with
you!**

Any questions?

fenny.vanegmond@wur.nl



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