

1st EU Soil Observatory Stakeholder Forum

Workshop on data integration/sharing in EUSO

Wednesday 20 October 2021, 10:00 – 12:30 (virtual)

Moderator: Marc Van Liedekerke, European Commission Joint Research Centre – ESDAC
Rapporteur: Calogero Schillaci, European Commission Joint Research Centre



SLI.DO #EUSO2

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Housekeeping

Meeting is being recorded and streamed, and will be publicly available on <https://webcast.ec.europa.eu/>

WEBEX: Raise your hand if you want the floor.

WEBEX: Please mute microphone when not speaking.

WEBEX: Please tell your name and affiliation when given the floor.

Please put camera on when speaking.

Communication/questions from WEBEX:

- Raise your hand to get the floor
- Through <https://www.sli.do/>, CODE: **#EUSO2**
- (Through WEBEX chat)

Communication/questions when following in streaming: Through <https://www.sli.do/>, CODE: **#EUSO2**

This workshop - outline

This workshop is about new data/information that we would like to see incorporated in the EU Soil Observatory (as an extension of the European Soil Data Centre);

- Introduction & pose 3 questions to be addressed
- 5 'seed' presentations: some points of view on EU wide soil data in EUSO
- Contributions from the floor
- Questions from the floor on presentations
- Discussion on 3 questions
- Establishment of EUSO data integration working group
- Next steps & conclusions

This workshop

This workshop is about new data/information that we (JRC and stakeholders) would like to see incorporated in the EU Soil Observatory (as an extension of the European Soil Data Centre);

The **vision** is a data repository and an open data platform where the public at large can access **soil related datasets** and the supporting documentation, **at EU scale**.

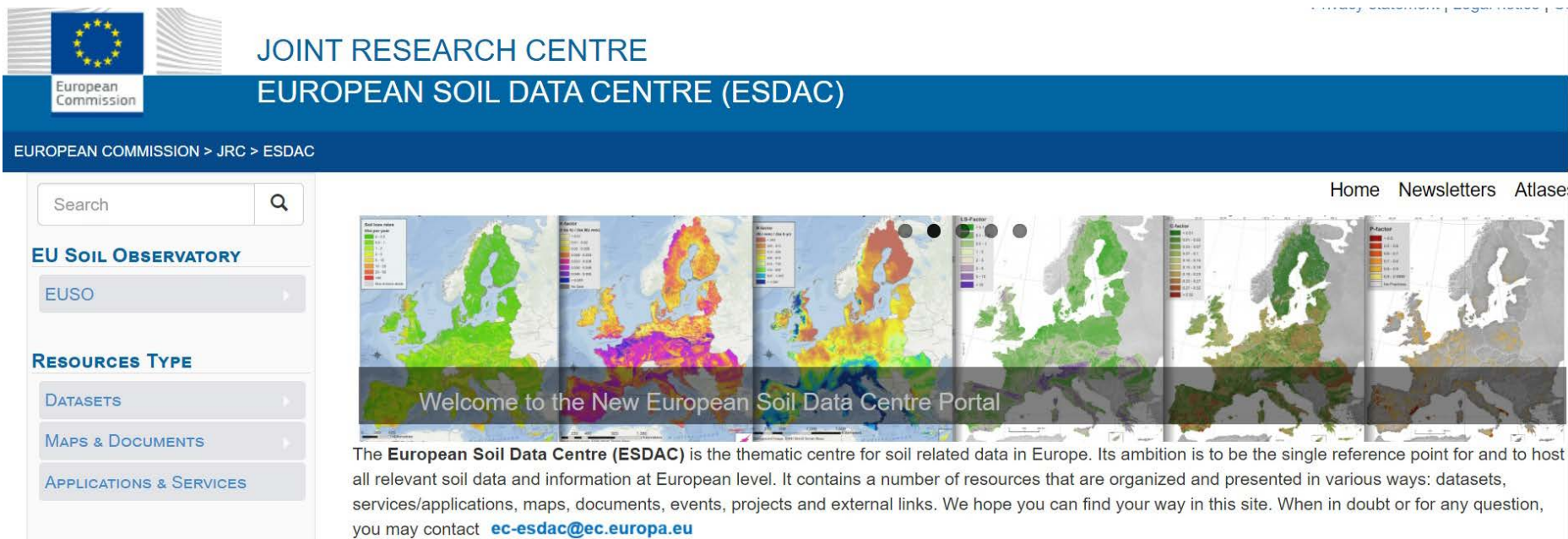
The **mission**: *(tentative)*

'EU-scale soil data:

if you can't find them through ESDAC, you can't find them anywhere'

Building on ESDAC:

- a one-stop shop for soil data at EU-scale
- a long-term commitment by JRC (since 2006),
- it is providing EU and European-wide datasets, and associated documentation
- permanent and timely active helpdesk,
- continuous updates and news (Newsletters)
- wide audience; mailing lists (for ESDAC and EUSO)
- popular; most visited website in JRC
- Data are FAIR (findable: try Google “European soil data xxx”!)



The screenshot shows the homepage of the European Soil Data Centre (ESDAC). At the top, there is a header with the European Commission logo and the text "JOINT RESEARCH CENTRE EUROPEAN SOIL DATA CENTRE (ESDAC)". Below this is a navigation bar with "EUROPEAN COMMISSION > JRC > ESDAC". A search bar is located on the left. The main content area features a row of six thematic maps of Europe, each with a legend. A large banner across the maps reads "Welcome to the New European Soil Data Centre Portal". Below the banner, a paragraph of text describes the center's mission and provides contact information: "The **European Soil Data Centre (ESDAC)** is the thematic centre for soil related data in Europe. Its ambition is to be the single reference point for and to host all relevant soil data and information at European level. It contains a number of resources that are organized and presented in various ways: datasets, services/applications, maps, documents, events, projects and external links. We hope you can find your way in this site. When in doubt or for any question, you may contact ec-esdac@ec.europa.eu". On the right side, there are links for "Home", "Newsletters", and "Atlas". At the bottom right, there is a logo for the European Commission.

ESDAC datasets

<https://esdac.jrc.ec.europa.eu/resource-type/datasets>

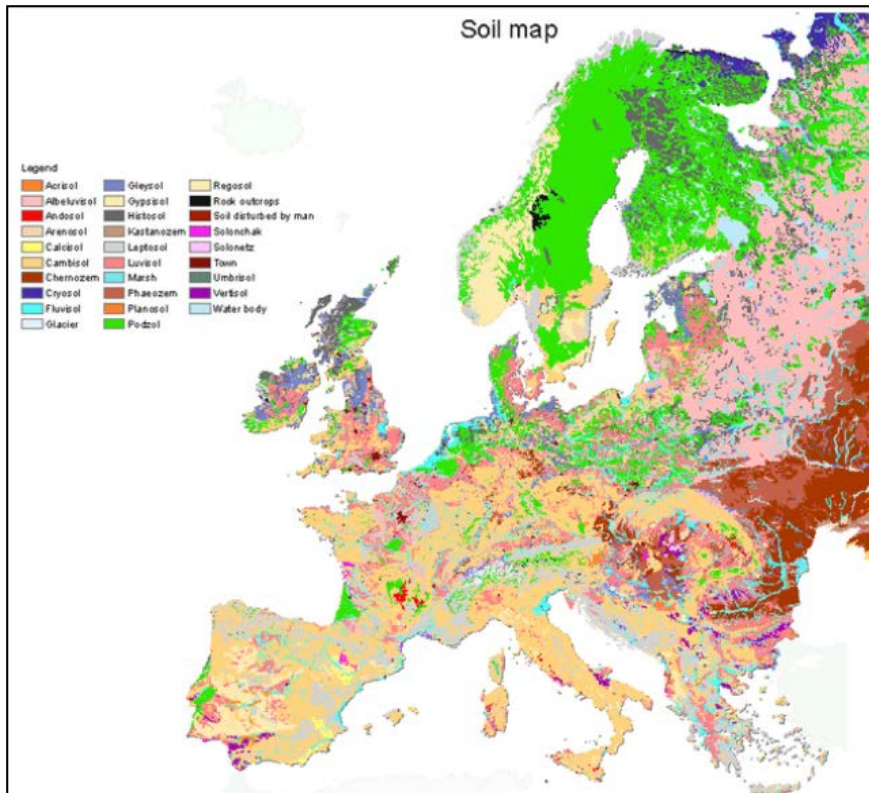
ESDAC at this moment hosts many datasets, categorized broadly as:

- The European Soil Database (2004) and derived data; (**ESBN**)
- LUCAS soil data for 2009/2012 and 2015 (soon also 2018) (**Eurostat**)
- **In-house** modelling data at EU-scale (soil properties, threats, functions);

along with peer-reviewed JRC publications and EU reports

European Soil Database

- Around since year 2000
- Scale 1:1,000,000
- Vector and rasterized (1km; interpretation)
- Many properties
- For continental or regional use



On the basis of the 2009 **LUCAS soil data**, maps have been created using advanced techniques;

Topsoil physical properties - 500m rasters

Clay, Sand, Silt (%)
 Coarse Fragments (%)
 Bulk Density ($T\ m^{-3}$)
 Available Water Capacity

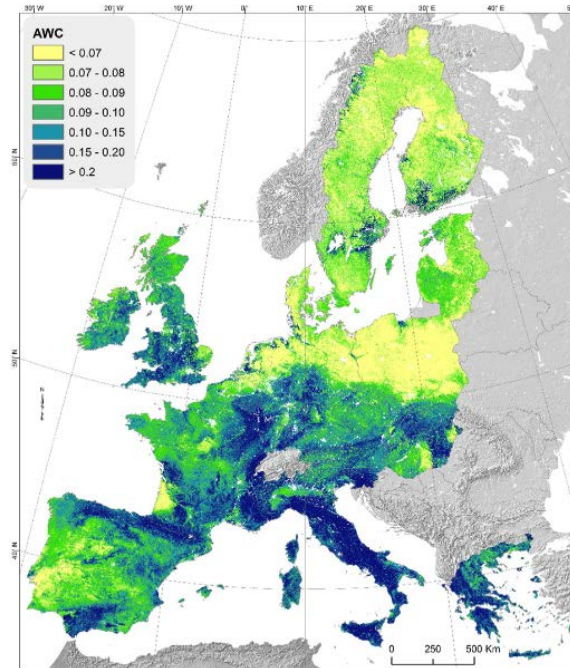


Fig. 11. Map of Available Water Capacity for the topsoil fine earth fraction.

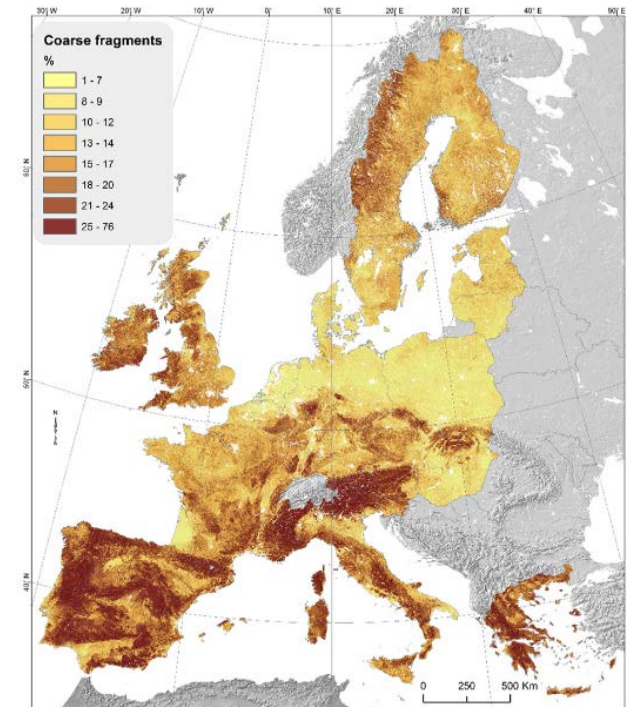


Fig. 6. Topsoil (0-20 cm) coarse fragments (%) content modelled by Multivariate Additive Regression Splines.

In relation to the European Soil Observatory, we strive to continue/extend ESDAC by the following services:

- **Host any kind of EU wide soil data** that can underpin EU soil indicators and contribute to the monitoring of soils at EU level;
- **Contribute to deriving** spatial and statistical **indicators** that can feed into **dashboards** to give overview of soil state in EU;
- **Contribute to the set-up of data flows** that generate EU-wide harmonized soil data.

Where to get data?

- **EU research projects** (SOILCARE, LANDMARK, ISQAPER, EJP, etc.): typically generate EU wide datasets that at the end of the project are not accessible to public users. Our objective is to make them accessible.

If not data, then metadata and links to such data.

- **Future LUCAS SOIL campaigns data** (point data; derived maps)
- **Data from from EU Soil Monitoring activity (see EUSO WG)**
- **Data from Indicators/Dashboard activity (another WG needed?)**
- **EU-wide data possibly compiled on the basis of National data,**
if harmonized according to specifications (e.g structurally: INSPIRE)
(an excellent example is the GSP series of global soil maps: GSOC, GSOCseq ...)
- **EU wide data or reference to data associated to peer-review publications**

Beyond EU-wide data

It may be useful to create a **hub** for accessing (not hosting) **national soil data in EU**

A compendium of sites where to find soil property/functions/threats data in EU countries

- In principle should be available: **INSPIRE** Directive is into force since 21 October 2020:
 - soil data (ANNEX III) should be discoverable, viewable and downloadable via network services; **metadata** important
- Which are the **essential** and authoritative **soil data** at country level?
- EJP (European Joint Programme – SOIL) could help?

Other data?

Data on EU soil research (already handled by many projects, e.g. Bonares)?

Data **on** EU-funded projects (at least a list of such projects with abstracts and links)?

Intellectual Property Rights (IPR)

For any dataset to host or to point to:

Clarification of the Intellectual Property Rights (IPR) is an issue!

Data and information from EU-projects cannot be simply transferred to Commission servers; authors must give their explicit consent. Who are the authors?

There are no precise rules specified in the EU project Grant Agreement

Job for lawyers.

Technically

ESDAC as repository: continue to store static data + documentation

Commonly accepted and usable formats (e.g. shapefiles, geoTiff, ...); INSPIRE?

Currently: no plans to integrate the various datasets in a common database

Many geographic datasets (maps) →

we will offer:

- visual exploration of data through a web MapViewer (but not sure of real usefulness)
- WMS (web mapping service) links will be provided; no WFS

Questions to be addressed

Question1:

what else would you see as essential data that EUSO should incorporate?
And where/how to get it?

Question2:

how could a working group concretely assist us? And, as this would be voluntary: what is in it for WG members?

Question3:

who could contribute?

- EU projects
- Representatives of EU countries? for identifying authoritative soil data and provide suitable documentation/metadata
- Soil Mission?
- EU soil related networks?
- Other ... ?

Thank you for your attention

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<https://ec.europa.eu/jrc/en/eu-soil-observatory>

5 'seed' presentations

The integration of EU-project results in EUSO

(Maria Jose' Amaral, (EU Research Executive Agency))

EJP-SOIL as soil data provider to EUSO

(Maria Fantappie' (CREA Italy) and Fenny Van Egmond (ISRIC, the Netherlands))

Is there a role for the European Soil Partnership in contributing to the data in EUSO?

(Maria Fantappie' (CREA Italy), Chair of the ESP Pillar-4 on data)

Is there a role for EU national soil data organizations in contributing to EUSO?

(Antonio Bispo, INRAE, France)

EEA perspective on soil data integration and exchange

(Rainer Baritz, Soil EEA)

- **Contributions from the floor?**
- **Questions from the floor on presentations?**
- **Discussion on the 3 questions**
- **Establishment of EUSO data integration working group**
- **Next steps & conclusions**

Discussions on the 3 questions

Question1:

what else would you see as essential data/information that EUSO should incorporate?

Question2:

where could a working group concretely assist us? And, as this would be voluntary: what is in it for you?

Question3:

who could contribute?

- EU projects
- Representatives of EU countries? for identifying and documenting with metadata the authoritative soil data-Soil Mission?
- EU soil related networks?
- Other ... ?

Establishment of EUSO data integration working group

Chair: JRC, Marc Van Liedekerke

EUSO Working group: in a first stage informal and voluntary; in consecutive stages, a more formal approach could be envisaged (e.g. when establishing an 'official' soil monitoring system in EU)

? Maybe small *subgroups*, to work on specific aspects (EU-projects; IPR; hub to link to national data, ...)

Proposal: that persons/organizations that want to contribute **actively** send a mail to marc.van-liedekerke@ec.europa.eu, with their intentions.

Among these persons: look for candidates to become Vice Chair (1 or 2)); vote by WG members per email.

Conclusions & Next steps

JRC to write the minutes of the workshop;

JRC to identify some core tasks that could be done by the WG;

JRC to solicit participation in WG, and possibly sub-groups; ask which specific contribution can be made;

JRC to organize a follow-up workshop to discuss the details and organize better

Any last questions?

1st EUSO Stakeholder Forum, 19-21 October 2021

Now ... Lunch Break

**Back at 14:00 CEST
for session on "soil erosion"**



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