Sharing FAIR soil data

Licenses

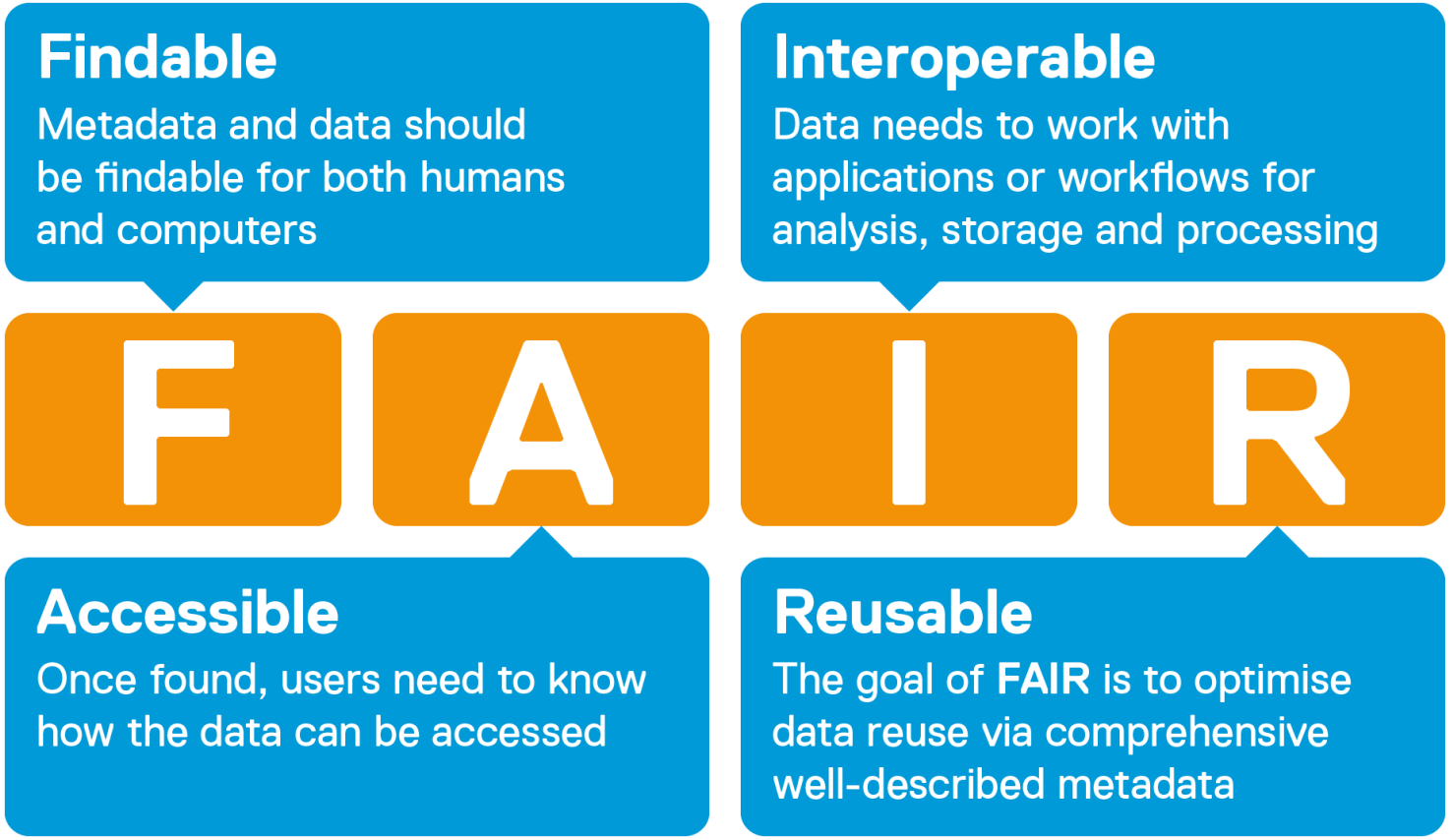
Maria Fantappiè (maria.fantappie@crea.gov.it)

EJP SOIL
European Joint Programme

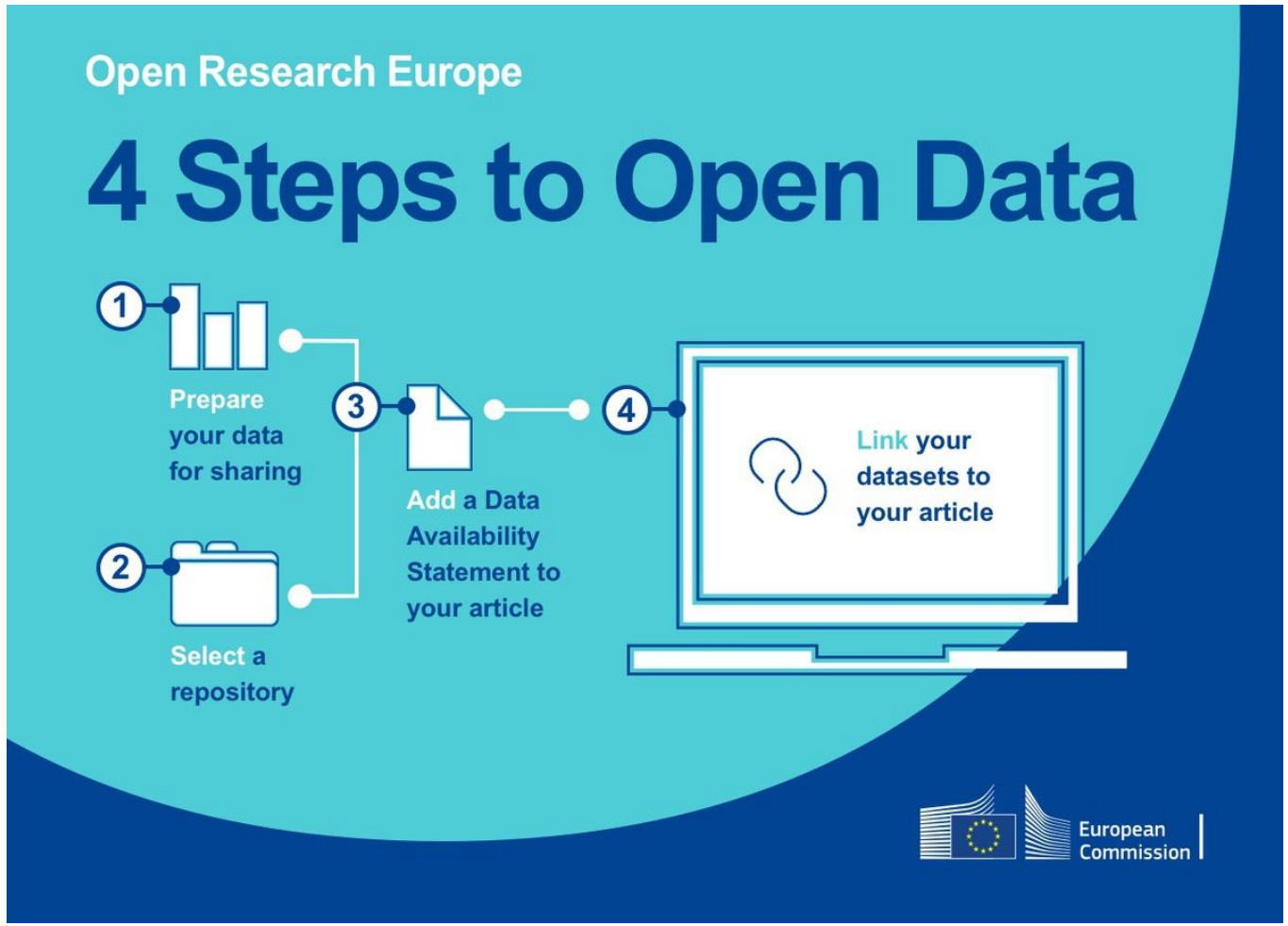
EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

DATA MANAGEMENT PLAN EJPSOIL

The data produced under EJPSOIL with H2020 fundings follows FAIR principles



Open Access requirements for data underlying publications



Open Access as soon as possible

- Deposit data (and metadata) in an eligible Repository
- Provide DOI -> dataset becomes a publication
- **CC BY license**
- Link dataset to article, link article to dataset
- NOT as supplementary material with publisher
- Add EJPSOIL as a keyword in the metadata

DATA MANAGEMENT LEGAL ASPECTS

Background data

Data produced **OUTSIDE THE EJP SOIL programme** by project partners

The data owners define the sharing rules.

Specific agreements to be produced and signed by the data owners.
In the D6.2 of EJP SOIL:
a draft template of agreement with a list of possible sharing rules to facilitate the sharing.

EJP SOIL data

Data produced **INSIDE THE EJP SOIL programme** by ALL THE EJP SOIL WPs and by ALL THE EJP SOIL PROJECTS

Sharing rules defined in the Grant Agreement and Consortium Agreement of EJP SOIL.

Open access (CC-BY) at the end of the project, respecting an embargo period (to get results published).
Intellectual properties rights respected.

permanent repositories

NOTE THAT: The sharing rules for site **coordinates** are in all cases respected, following the **national legislations.**

4) MAKE DATA REUSABLE =>> Use standard and open licenses

- Include the data license in the metadata:
  - **OPEN LICENSE** like **CC-BY** must be used **for datasets produced under EJPSOIL (H2020)**
  - for datasets produced under EJPSOIL (H2020), **it has to be declared if any further specification is needed** (e.g. for the anonymization of soil coordinates, in the name of which national legislation)
  - When you are using **background datasets** with different sharing rules, first make a sharing agreement with the data owner, than publish the sharing agreement, and mention in the metadata the citation of the agreement that you have made. You can the sharing agreement template produced and published by EJPSOIL as annexed to the D6.2

Revised D6.2 and new templates

- **ANNEX 3 – LICENSE AGREEMENT TEMPLATE (for soil data produced under EJP SOIL programme)**

1. The data is deposited in the following permanent research data repository ……..

2. The Licensors shares the data with the Customer under Creative commons CC BY license;

3. In respecting the CC BY license the Customer will give credit to the Licensors by using the following citation ……..

4. The georeferenced soil point data eventually shared by the Licensors with the Customer for validation purposes, including associated metadata, follows the data sharing rules of the respective national legislations, which can constitute an exception to the adopted CC BY license, and in particular the georeferenced soil point data of the following countries …….. cannot be shared online by the Customer, nor can be shared with third

- **Annex 4. SOIL DATA SHARING TEMPLATE TOWARDS JRC ESDAC BASED ON THE INSPIRE DIRECTIVE (for soil data produced outside EJP SOIL, a general template)**

Preamble (based on legislation)

Definitions (among the definition also the subject of the agreement is defined*)

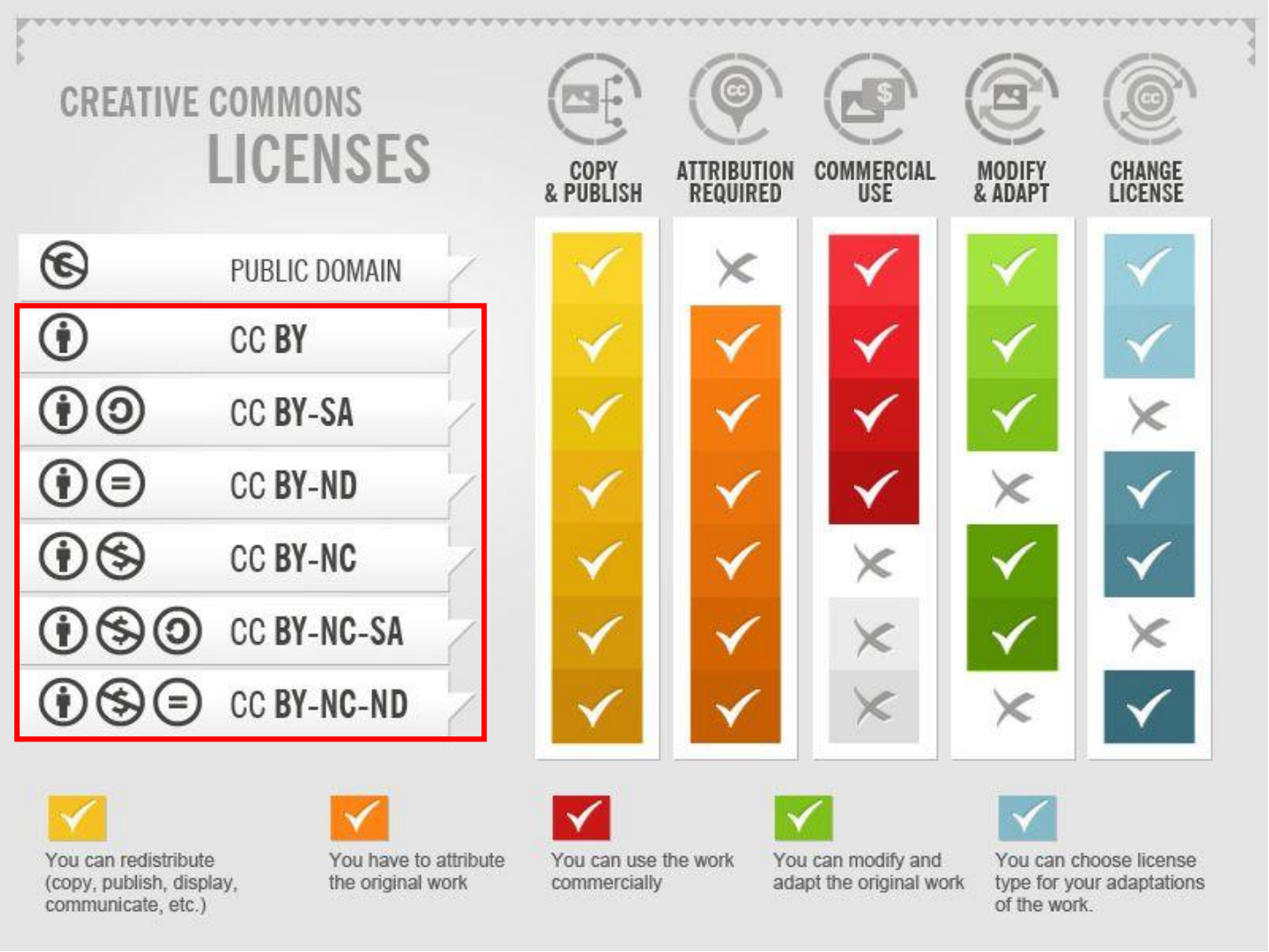
Grant (use**, access and delivery, liability, processing of personal data, assignment and sub-licensing, sub-contracting,

warranties, security, force majeure, conflict resolution, applicable law and jurisdiction, termination)

*the metadata of the subject, that is, the soil data object of the agreement, is described in APPENDIX 1

**for the Use in the APPENDIX 2 is the check-list of sharing rules

Copyright licenses



Tool to help you choose the right license: https://creativecommons.org/choose/

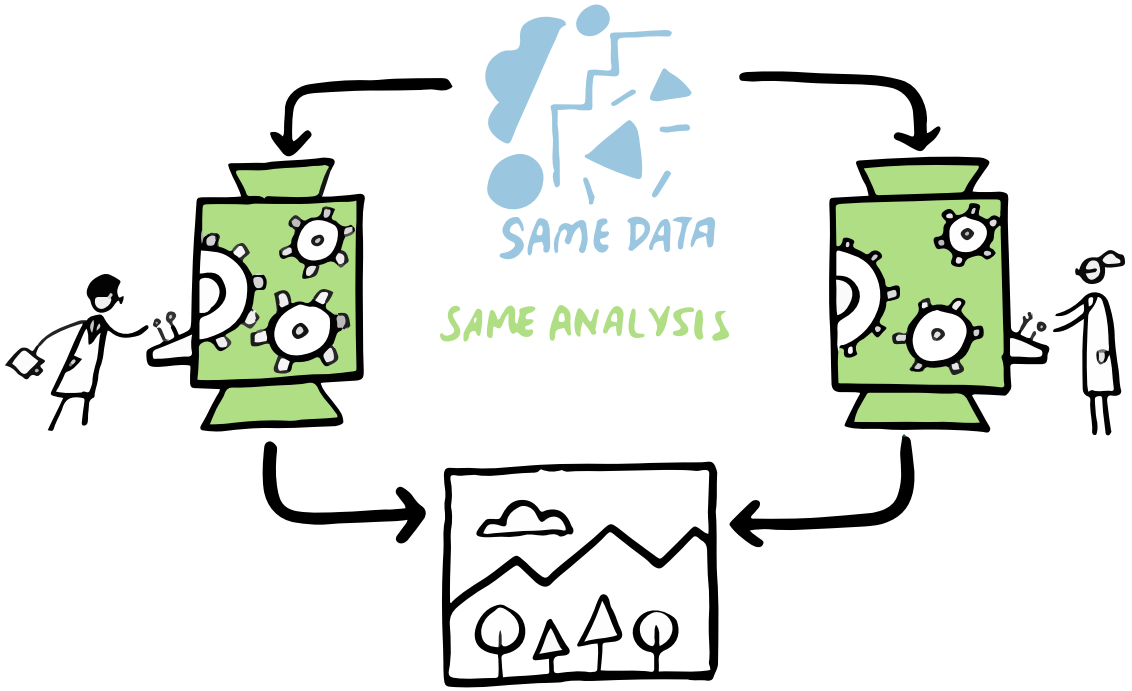
Licensing examples

- France: CC-BY 2.0
- SoilGrids, global maps: CC-BY 4.0
- GSP FAO, global maps: CC-BY 3.0
- WP6 maps: CC-BY 4.0

- Scripts: on Git, reproducibility

- Horizon policies:

AS OPEN AS POSSIBLE



Modified after Scriberia
https://doi.org/10.5281/zenodo.3332807

Further information

Open Access requirements and guidelines for H2020 projects:

https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

Questions: anna.besse@wur.nl

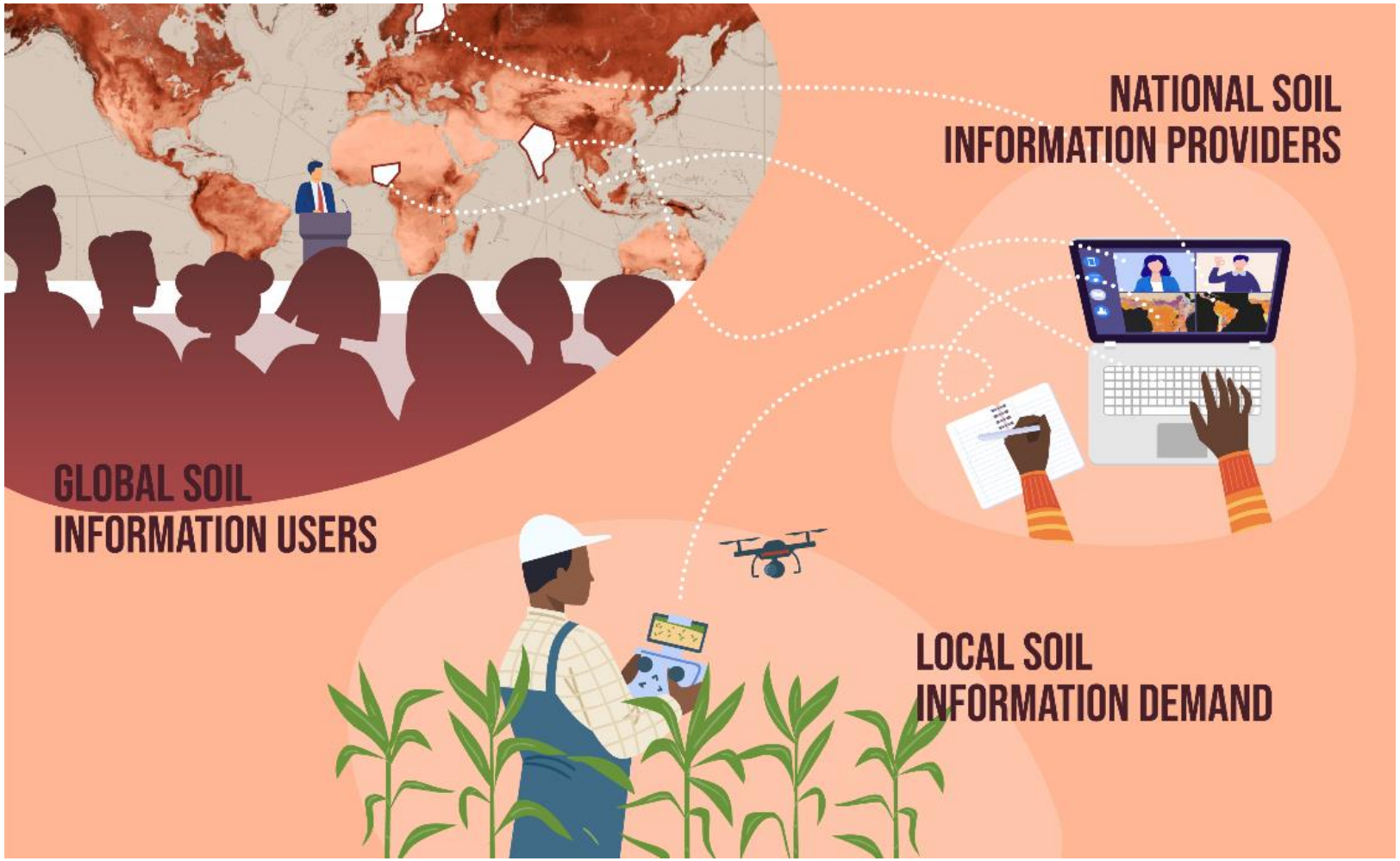
EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

Hands on soil data information and sharing Datasets and metadata of EJP SOIL projects

How to make them available, where, and next steps

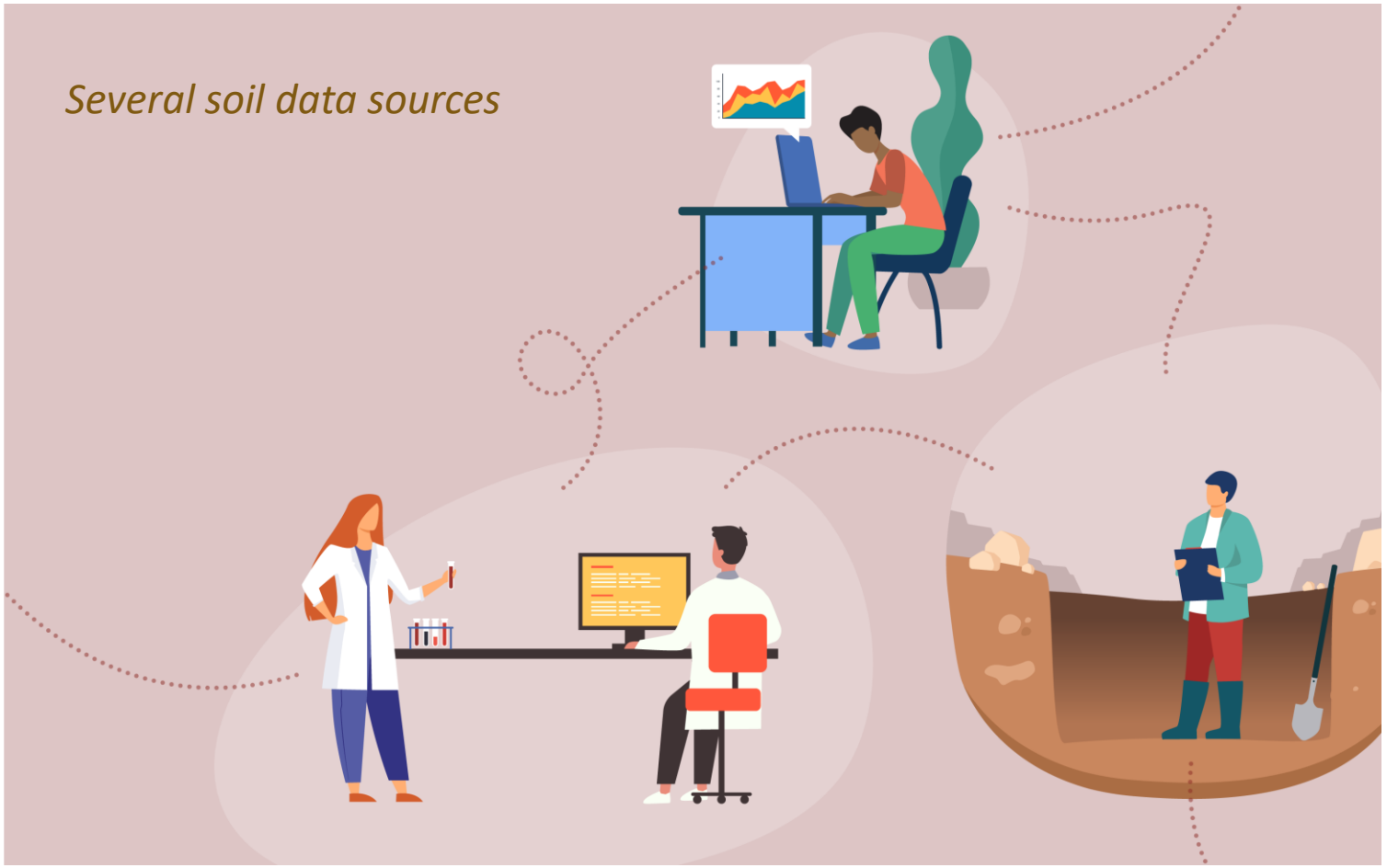
Fenny van Egmond, Paul van Genuchten, Maria Fantappiè, and the whole EJP WP6 TEAM

The needs

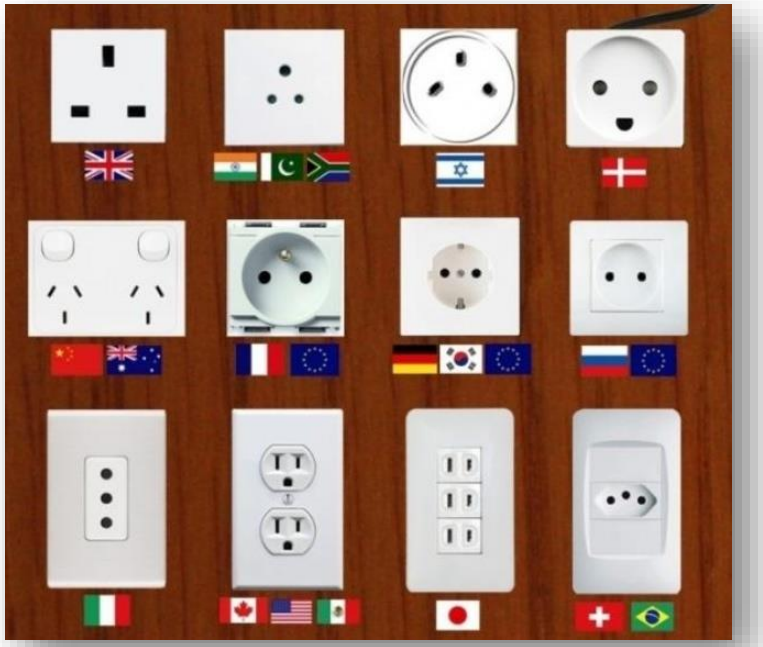


Picture by ISRIC

Many data being produced



The problem



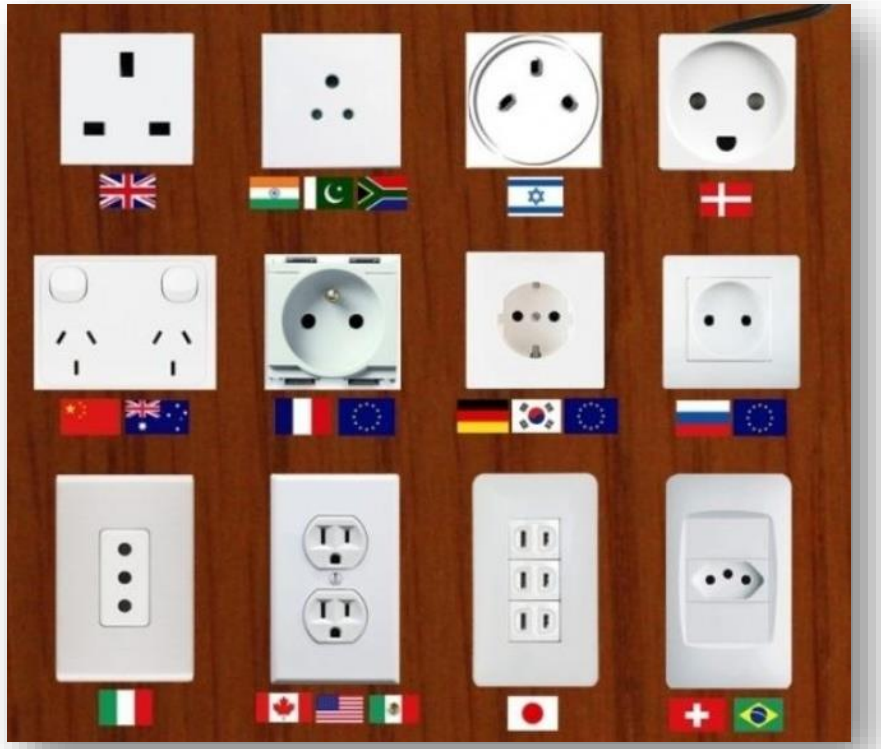
+

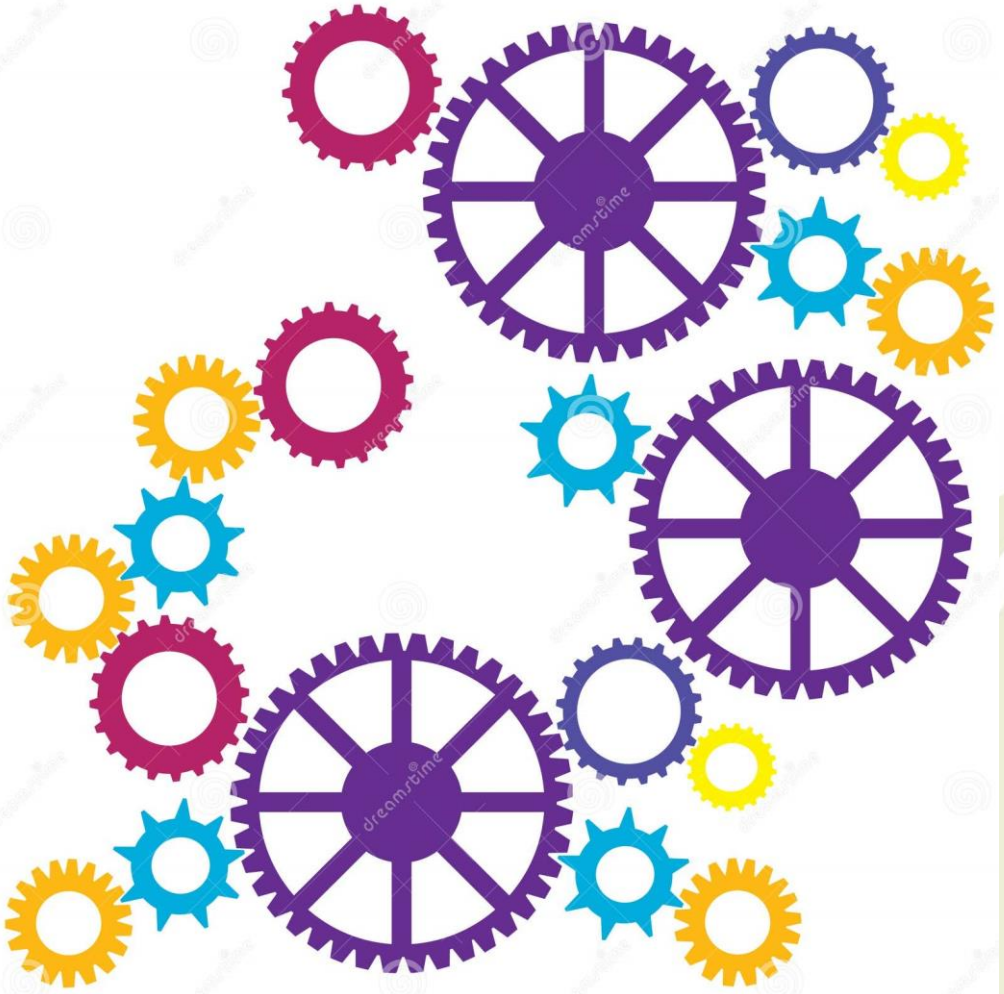
Currently: each (new) project defines own data models, makes tools, licenses, several build a platform: undesirable for re-use.

Standardisation and harmonisation in collection, storage, analysis and exchange is needed together with reliable and affordable data acquisition methods at scale.

Slide courtesy: Peter Wilson (CSIRO)

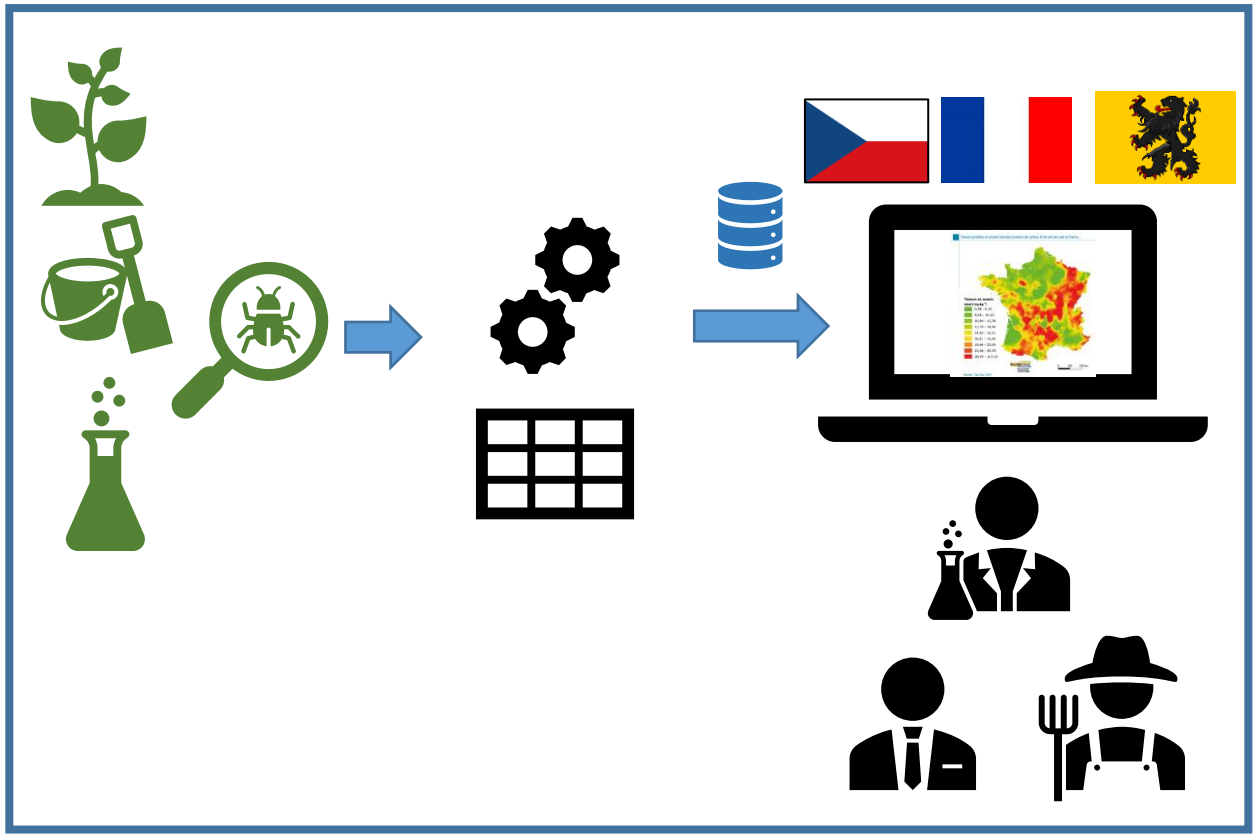
The dream for soil data and information





Scientific research outcomes towards the production and sharing of standardised and harmonised EU-soil data

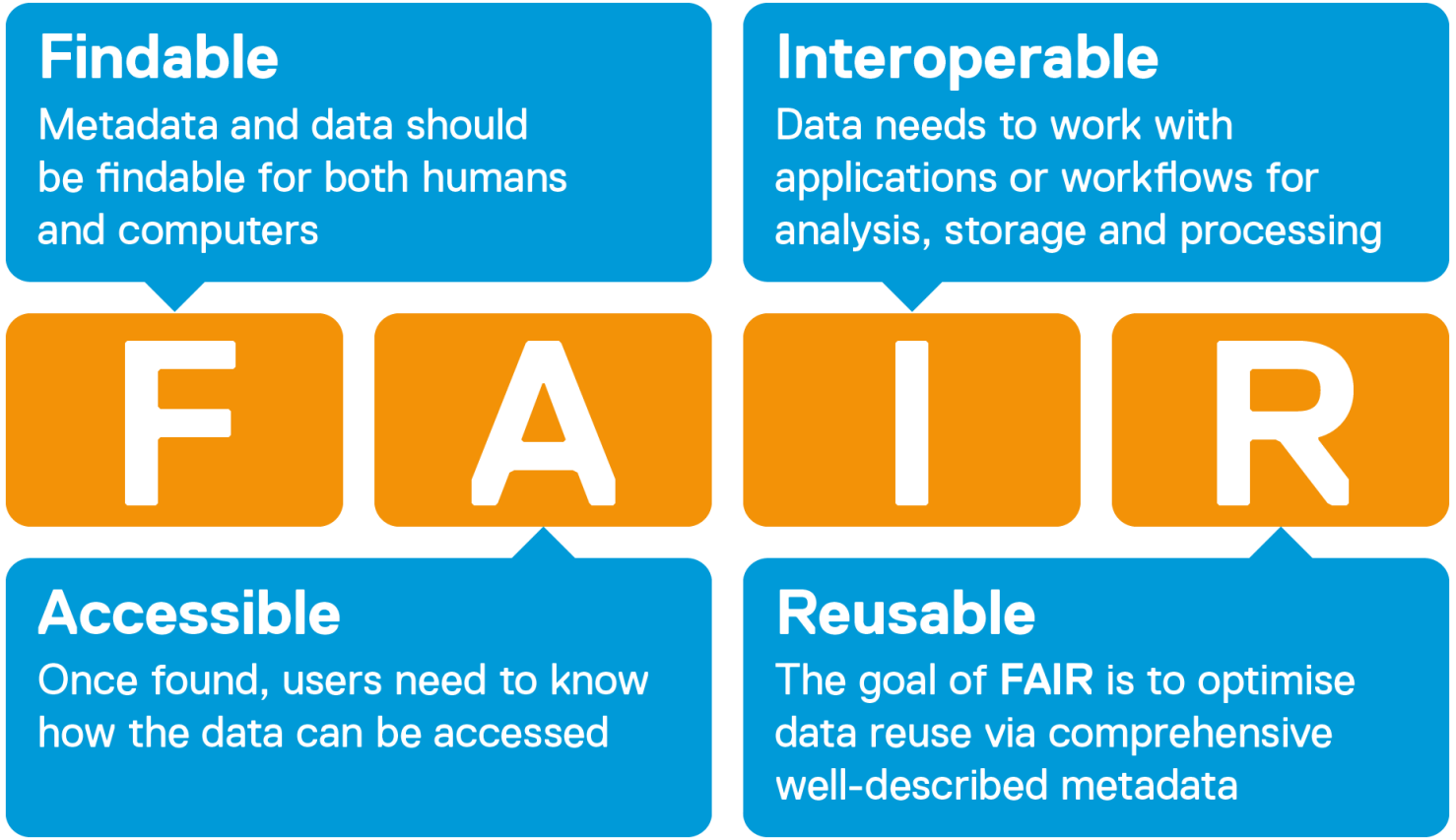
Data exchange



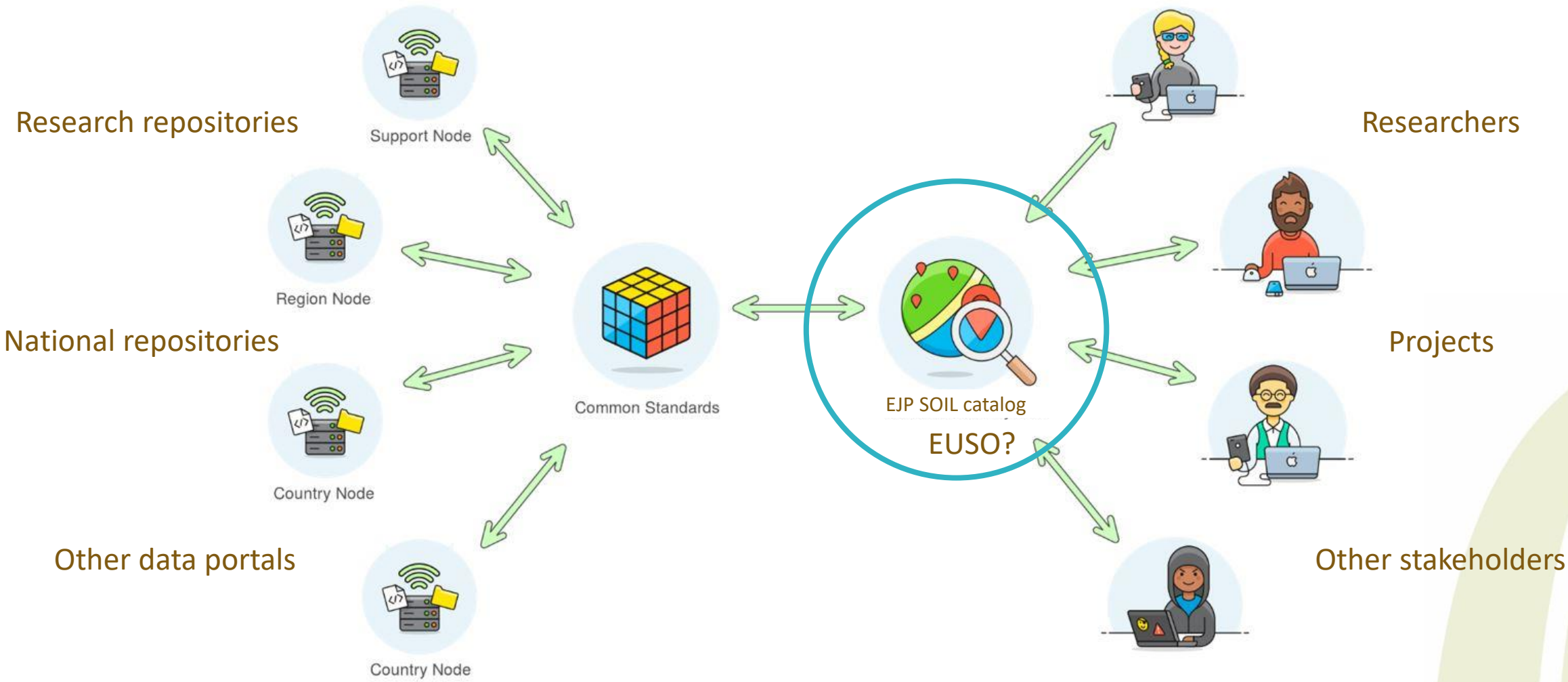
Common language

FAIR helps

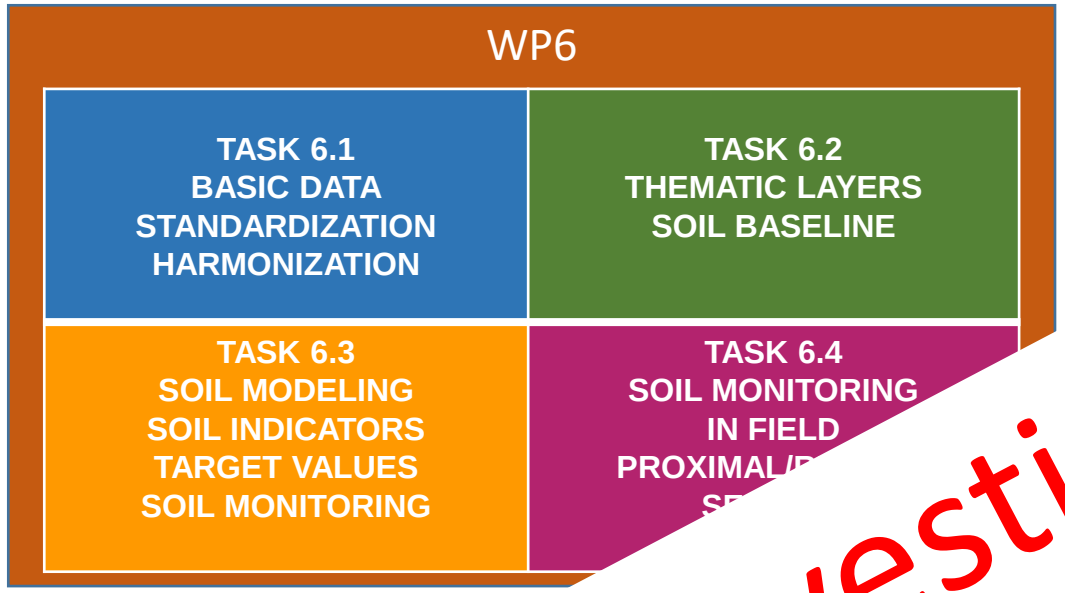
Data management plan of EJP SOIL:
The data produced under EJPSOIL with H2020 fundings follows FAIR principles



EJP SOIL distributed system design for Europe



WP6 DONE AND TO DO



COMPLETED DELIVERABLES
D6.1 Report on harmonized procedures fo… …on of databases and maps
D6.2 Report on the nati… …icultural soil data sharing and national monitoring activiti…
D6.3 R… …LUCAS programme in accordance with …

Harvesting year!

…tware framework for a shared agricultural soil information system (confidential for …SOIL partners and commission services)
D6.5 Guidelines for accounting and mapping agricultural soil carbon, fertility and degradation changes at different scales

WP6 tools

Results available at:
https://ejpsoil.eu/soi… …onitoring-mapping-and-modelling

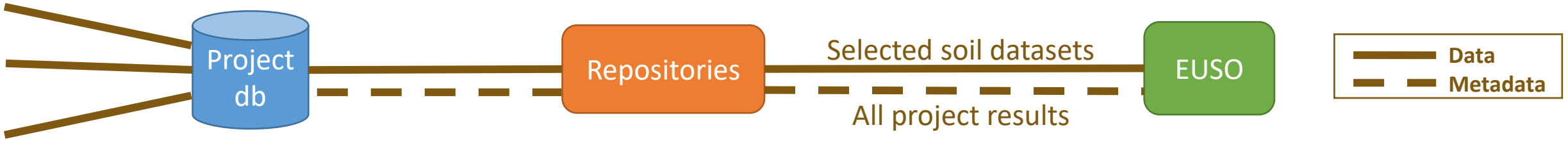
THE FINAL GOAL
D6.6 Geodatabase on agricultural soil properties including SOC and agricultural soil functional properties related to water and nutrients
D6.7 Procedure for mapping of agricultural potential in different present and future climate conditions
D6.8 Final version of the agricultural soil information system for EU populated with the final version of project datasets

EJPSOIL metadata catalo g structure

EJPSOIL metadata in catalog online and compiled

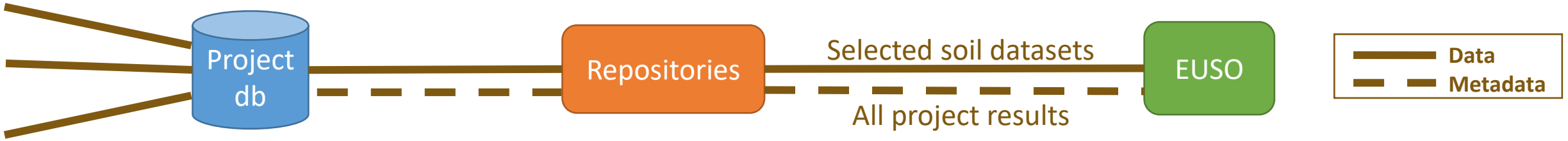
EJP SOIL
European Joint Programme

Tools for steps in the soil information workflow (towards D6.4)



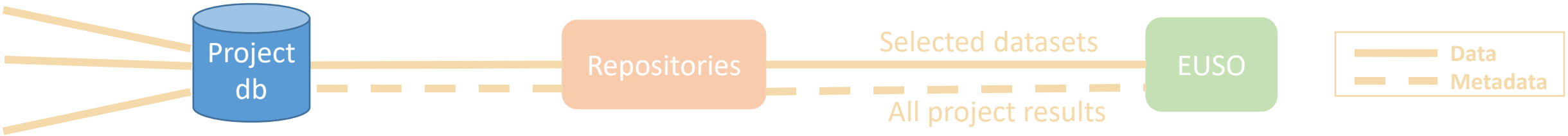
- We propose some tools that can be used:
  - Wiki with guidance on soil data provisioning options
  - Template for standardized relational database model available
  - (Technical issues in INSPIRE solved and GloSIS data exchange model evolved)-> usable ontology
  - Codelists (standardized machine-readable definitions or vocabulary)
  - Metadata template derived from standards
  - Metadata EJP SOIL catalog now populated with EJP SOIL and other stocktakes and EJP SOIL project metadata

Proposed (meta)data workflow and catalog(s)



Wiki with guidance on soil data provisioning options:
https://ejpsoil.github.io/soildata-assimilation-guidance/

Data model



- Template for relational database available based on ISO 28258:
  - 90 % similar to INSPIRE domain model and
  - uses international codelists,
  - easily extendible to fit project needs
- https://git.wur.nl/isric/databases/iso28258-public/

Repositories

- Minimum requirements repositories:
  - Persistent (>20 yr guaranteed) repositories (e.g. ZENODO for research, national repositories)
  - Include metadata required by repository + to fulfill ISO19139/ DataCite/ DCAT standard
  - Include data license (advised CC-BY)
  - You get a DOI that you can use to cite the dataset
- When more restrictive: data sharing licensing templates available (between partners and to JRC) in D6.2

GloSIS documentation

- Submission to Semantic Web Journal https://www.semantic-web-journal.net/content/glosis-global-soil-information-system-web-ontology

- New documentation pages https://rapw3k.github.io/glosis/

Journal Title 0 (0) 1
IOS Press

GloSIS: The Global Soil Information System Web Ontology

Raul Palma [a,*], Bogusz Janiak [a], Luís M. de Sousa [b], Kathi Schleidt [c], Tomáš Řezník [d], Fenny van Egmond [b], Johan Leenaars [b], Dimitrios Moshou [e], Abdul Mouazen [f], Peter Wilson [g], David Medyckyj-Scott [h], Alistair Ritchie [h], Yusuf Yigini [i] and Ronald Vargas [i]

[a] *Poznań Supercomputing and Networking Center - PSNC, Poznań, Poland*
E-mails: rpalma@man.poznan.pl, bjaniak@man.poznan.pl
[b] *ISRIC - World Soil Information, Wageningen, The Netherlands*
E-mails: luis.desousa@isric.org, fenny.vanegmond@isric.org, johan.leenaars@isric.org

https://rapw3k.github.io/glosis/

glosis

GloSIS

This repository contains the Global Soil Information System (GloSIS) v1.0 ontology network, derived from the source UML data model, and modelled in line with best practices and methodologies, reusing existing standard models and ontologies.

Documentation

All modules in this web ontology are documented individually with HTML pages generated with the WiDoco tool. These pages can be accessed at https://rapw3k.github.io/glosis/.

Configuration files for WiDoco are generated automatically with a bespoke tool. Documentation pages are maintained in the docs folder.

Ontology modules documentation

- Glosis Main module
- Glosis Common module
- Glosis Surface
- Glosis Site-Plot module
- Glosis Profile module
- Glosis Layer-Horizon module
- Glosis Observation module
- Glosis Procedures codelist
- Glosis Units of measurement codelist
- Glosis observable properties codelist
- ISO28258 module

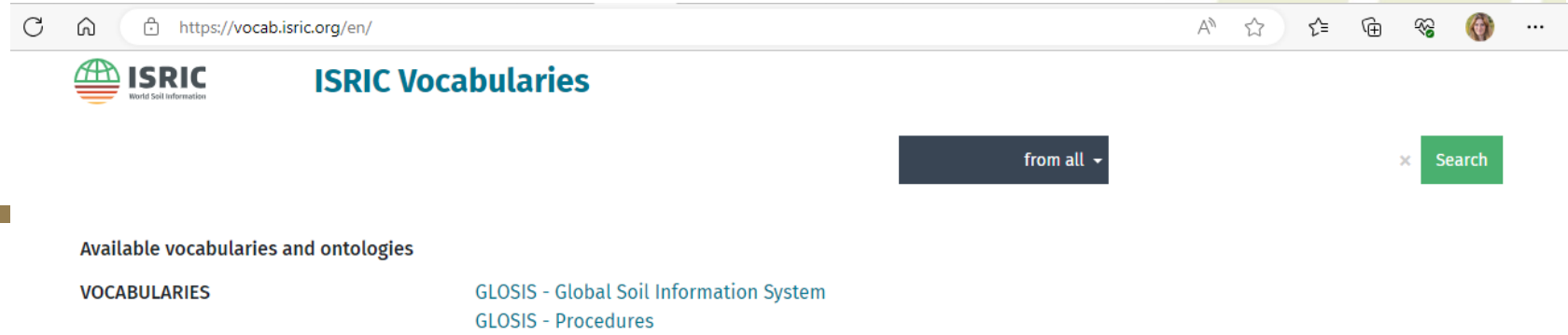
Citing

Cite as:

> Palma R., Janiak B., Reznik T., Schleidt K., Kozel, J., De Sousa L., Egmond F., Mouazen A. M., Moshou, D. (2020) Global Soil Information System (GloSIS) Ontology. SIEUSOIL project. http://w3id.org/glosis/model

Data (definition) harmonization - Codelists

- Codelist use facilitates harmonized data and data model mapping: machine readable standardised definitions
- International codelists on soil:
  - (WRB, FAO Guidelines for Soil Description)
  - now on SKOSMOS based on GloSIS ontology: https://vocab.isric.org/glosis_cl
- National codelists in national repositories: mappings encouraged
- Guidance for developing (additional) codelists: https://ejpsoil.github.io/soildata-assimilation-guidance/cookbook/code-listsExtension/



Proposed (meta)data workflow and catalog(s)

- Proposed metadata workflow for project metadata and possibly for a EUSO metadata repository
- Metadata catalog is now populated with EJP SOIL and other stocktakes and EJP SOIL project metadata: https://catalogue.ejpsoil.eu/

Discovery of soil data in Latvia

https://catalo

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to substances that
serve as nutrients fo
the plants, there are
also pollutants

https://catalogue.ejpsoil.eu/collecti

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European Joint

Home / Collections / EJPSoil catalog

Digital soil da

Latvia | EJP Country survey | Dataset

profile sampling, samples from top

Contacts

Ministry of Agriculture of the Re
Role: pointOfContact
country: Latvia

Temporal

Created: 1960-1991
Updated: 2023-06-14
Temporal extent: 1960-1991

External identification

- https://geolatvija.lv/geo/p/319

Links

55b9911957f49ed6ce0

csw 3.0.dev0

in digital form (parcel-specific,no).

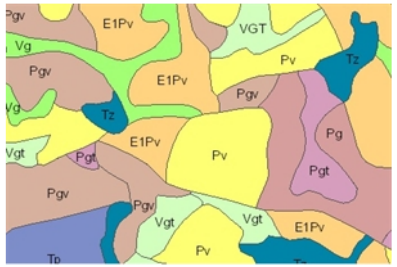
the E
Polyg

https://geolatvija.lv/geo/p/319

LV EN Mana darba vieta

GEO Latvija.lv

Kartes pārlūks | Ģeoprodukti | Karšu galerija | Teritorijas attīstības plānošana | Metadatu katalogs +



Lauksaimniecībā izmantojamo zemju augsnes Latvijā ir kartētas laika periodā no 1960. līdz 1991. g. vairākās kārtās, dažādos laika posmos, izmantojot dažādas augšņu klasifikācijas mērogā 1:10 000, kā rezultātā iespējamas atšķirības starp rajoniem.

Eiropas ekonomiskās zonas projekta „Nacionālās sistēmas pilnveidošana siltumnīcefekta gāzu inventarizācijai un ziņošanai par politikām, pasākumiem un prognozēm" (Nr. 4.3-23/EEZ/INP-002) zinātniskā pētījuma projekta "Ilgtspējīga zemes resursu pārvaldības veicināšana, izveidojot digitālu augšņu datubāzi" rezultātā laika periodā no 2014. gada septembra līdz 2016. gada martam tika veikta esošo ģeodēzisko koordinātu (LKS 92) piesaiste un datubāzes izveide Valsts zemes dienesta Centrālā arhīva materiālos esošajiem 746 augsnes dziļrakumiem.

Lejupielādes datne "Augsnes dziļrakumi" ietver informāciju par dziļrakuma numuru, gadu, integrēto augsnes granulometrisko sastāvu, virskārtas augsnes granulometrisko sastāvu, apakškārtas augsnes granulometrisko sastāvu, brīvo kalcija karbonātu sastopamības dziļumu.

Augsnes dziļrakumi (lejupielādes datne)

Zemkopības ministrija

Ģeoprodukta tips: Lejupielādes datne

Ģeotelpiskā informācija par lauksaimniecībā izmantojamo zemju augsnēm Latvijā, kas kartētas laika periodā no 1960. līdz 1991. g. vairākās kārtās dažādos laika posmos, izmantojot dažādas augšņu klasifikācijas mērogā 1:10 000. Informācija iegūta, digitalizējot Latvijā pieejamās vēsturiskās augšņu kartes. Atbildīgais par karšu uzturēšanu: Zemkopības ministrija.

Kartes mērogs 1:10000

Licencēšanas noteikumi

Atvērto datu licence (CC 4.0)

→ ĢEOTELPISKIE DATI

→ METADATI

↓ DATŅU SARAKSTS

Filtrēt pēc datņu nosaukuma

Atcelt izvēli

Dzilrakumu_profili_AP 70,34 KB

Lejupielādēt

What we need you to do with EJP SOIL project datasets (towards D6.8)

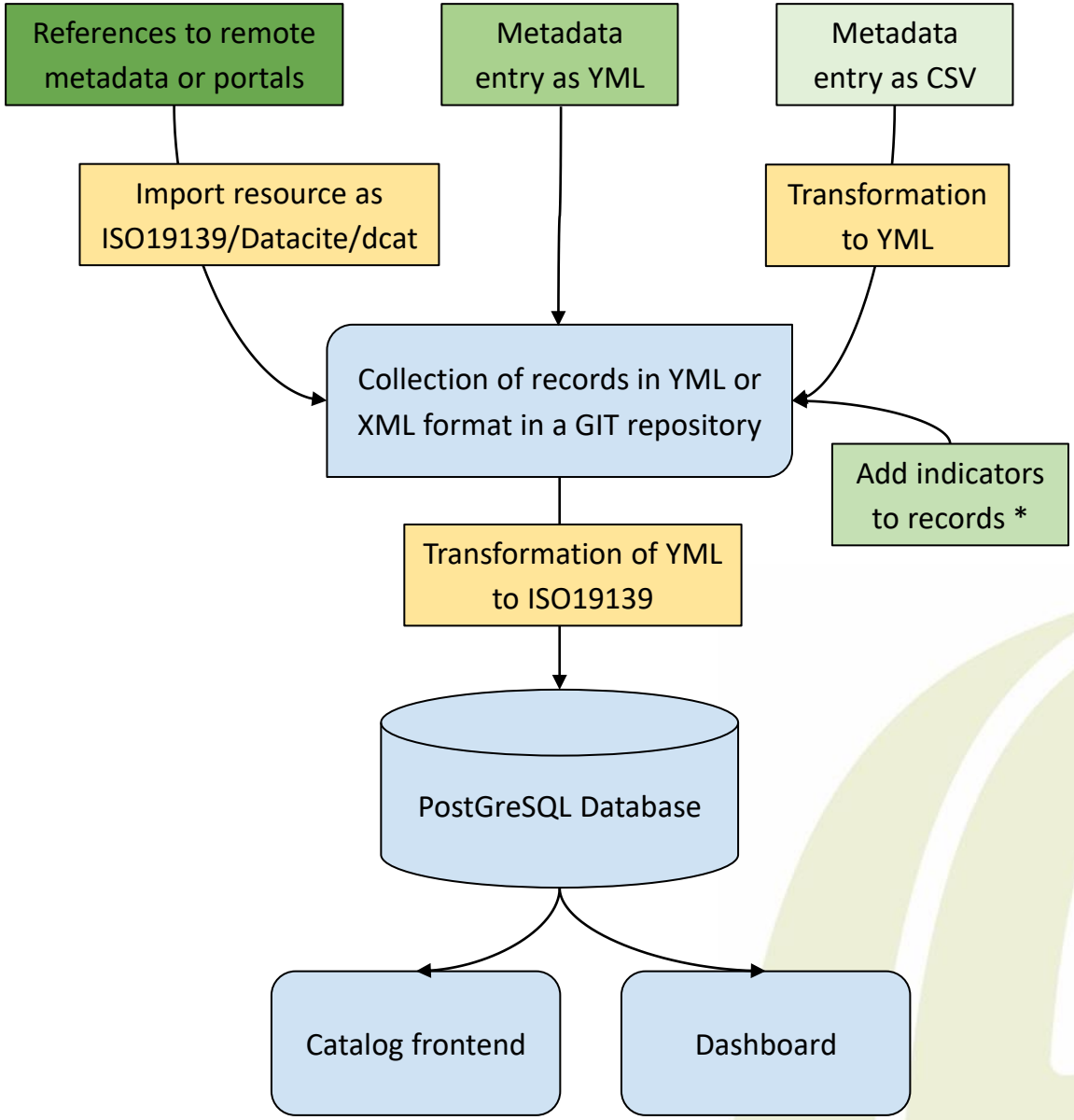
- Make them available online -> persistent repository
- Annotate them with metadata -> the EJPSOIL metadata template is based on standards and tools (ISO19139/ DataCite/ DCAT standard)
- Assign a license -> CC-BY or argument why not
- Make them recognizable as EJP SOIL datasets -> add ‘EJPSOIL’, ‘projectname’ to keywords AND upload metadata/ DOI to EJP SOIL metadata catalog
- If feasible, map or standardise to a common exchang
  e.g. INSPIRE, GloSIS or a national one in case of national data
- In conclusion: make them FAIR

Metadata workflow (tech)

- Flexible, participatory system, traceable, reproducible metadata
- Now populated with EJP SOIL and other stocktakes and EJP SOIL project metadata

- Catalog frontend can be any, e.g.:
  - pycsw
  - GeoNetwork
  - ESDAC Drupal website
  - CKAN

- Dashboard can be any, e.g.:
  - Apache Superset
  - EUSO Dashboard
  - Other software



* User feedback, additional annotation, quality checks

Metadata standards

Community	Metadata format	Metadata Tools	Catalogues
Academia	DataCite (DOI)	Dataverse	zenodo.org, search.dataone.org
Open Data / Semantic web	DCAT	CKAN, BRegDCAT	https://data.europa.eu
GeoSpatial / INSPIRE	ISO19115:2003	GeoNetwork, ArcGIS, pycsw	https://geoportal.org, https://inspire-geoportal.ec.europa.eu
Earth Observation	STAC	STAC Browser	explorer.digitalearth.africa/stac
Search engines	Schema.org	Rich results test	https://datasetsearch.research.google.com

Metadata standards to use

- Use an existing metadata standard

or

- Use the EJP SOIL WP6 template which is an extension of existing standards (ISO 19115:2013 and DataCite)

and

- Use EJPSOIL and relevant keywords from relevant thesauri (Agrovoc, Gemet, Cordis) and

EJPSOIL, project acronym, soil property, region, country, etc.

EJPSOIL

Metadata creation options

- **Option 1: Maintain metadata at the source**
  - **Embed metadata in the resource**
  - **Maintain a separate metadata file for every datafile, service or application, with the same name in that folder**

- Option 2: Metadata creation as part of upload to a repository (e.g. https://zenodo.org/, https://recherche.data.gouv.fr/en (former INRAE DataVerse)
  - Guidance document on how to use available metadata properties in Zenodo to create a metadata record which matches the EJP Soil Metadata profile: https://ejpsoil.github.io/soildata-assimilation-guidance/cookbook/zenodo.html

- Option 3: Create metadata for existing resources in MS Excel
  - If resources are available that do not have metadata the EJP SOIL metadata Excel template can be used.

Metadata template excelfile

	A	B	C	D	E	F	G	H	I	J	K
1											
2	nr	Identification	EUSO Data WG subgroup	Context	Title	Abstract	Format	Extent (geographic)	Reference period - Start	Reference period - End	Access constraints
3		*Unique identification of the dataset (A UUID, URN, or URI, such as DOI)*	*The EUSO subgroups which contributed to this record*	*Context: (e.g. EU-Project SOILCARE, EJP-Soil, Literature, ESDAC, etc.)*	*Short meaningful title*	*Short description or abstract (1/2 page), can include (multiple) scientific/technical references*	*File Format in which the data is maintained or published*	*Geographical coverage (e.g. EU, EU & Balkan, ...)*	*Reference period for the data - Start*	*Reference period - End; empty if ongoing*	*Indicates if the data is publicly accessible or the reason to apply access constaints*
4	1										
5	2										
6	3										
7	4										
8	5										
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10	7										
11	8										
12	9										
13	10										
14	11										
15	12										
16	13										
17	14										

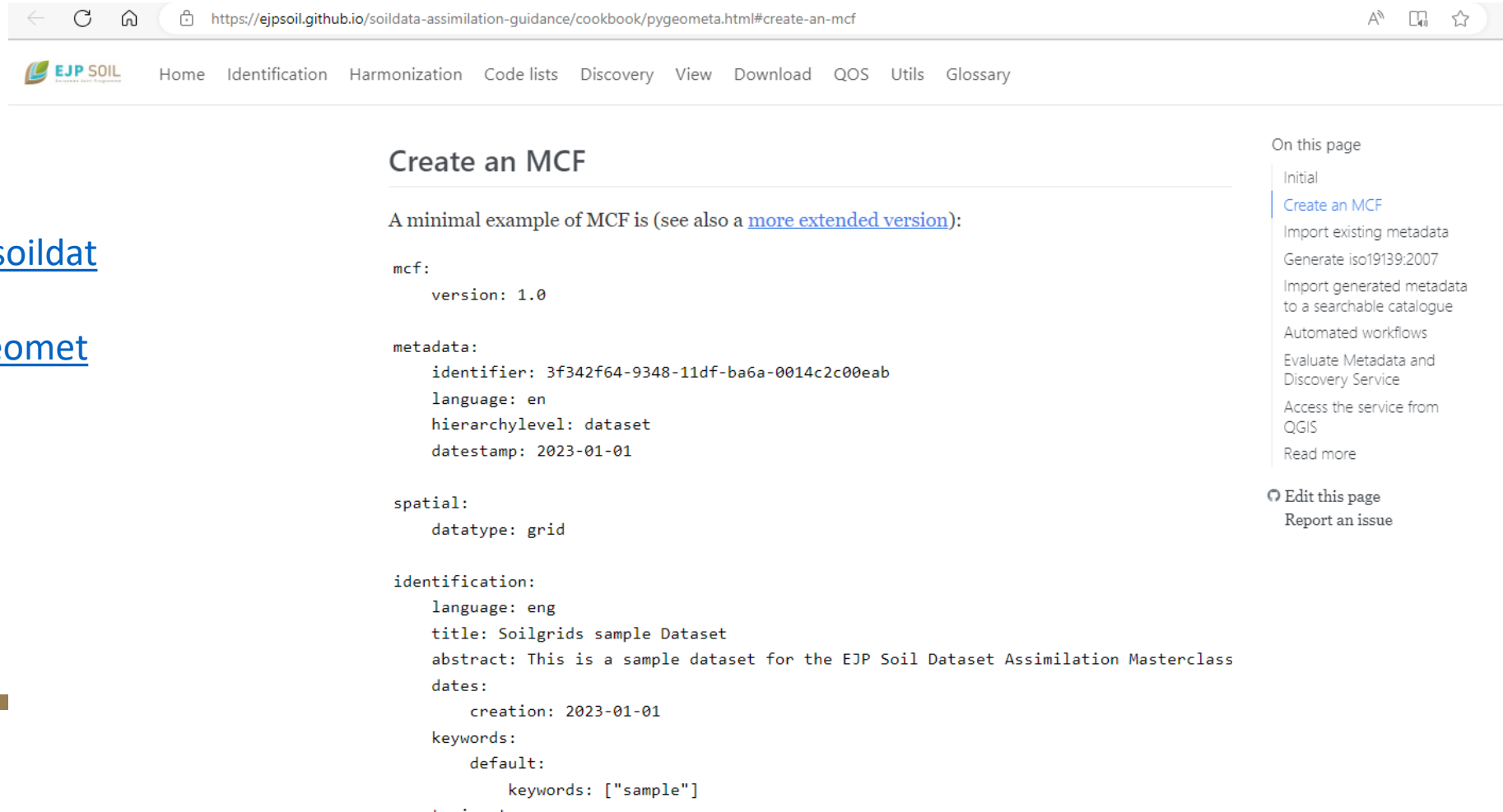
EJP/EUSO Metadata Profile for Soil Datasets

Label	Cardinality	Codelist	DataCite	Description
Identification	1-1		yes	Unique identification of the dataset (A UUID, URN,
EUSO Data WG subgroup	0-n	yes		The EUSO subgroups which contributed to this rec
Context	0-n	yes		Context: (e.g. EU-Project SOILCARE, EJP-Soil, Litera
Title	1-1		yes	Short meaningful title
Abstract	1-1		yes	Short description or abstract (1/2 page), can includ
Format	0-1	yes	yes	File Format in which the data is maintained or pub
Extent (geographic)	0-1		yes	Geographical coverage (e.g. EU, EU & Balkan, ...)
Reference period - Start	0-1			Reference period for the data - Start
Reference period - End	0-1			Reference period - End; empty if ongoing
Access constraints	1-1	yes		Indicates if the data is publicly accessible or the re
Usage constraints	1-1	yes	yes	Indicates if there are legal usage constraints (licen
Keywords	0-1		yes	Keywords; separated by ';'
Contact	1-n		yes	One Contact per line; name; organisation; email; r
Source	0-n			Source is a reference to another dataset which is u
Lineage	1-1			Statement on the origin and processing of the data

Easy to use format: .mcf (yaml)

- Possible to make and edit in a text editor or MDME
- Save with .yml extension

https://ejpsoil.github.io/soildata-assimilation-guidance/cookbook/pygeometa.html#create-an-mcf

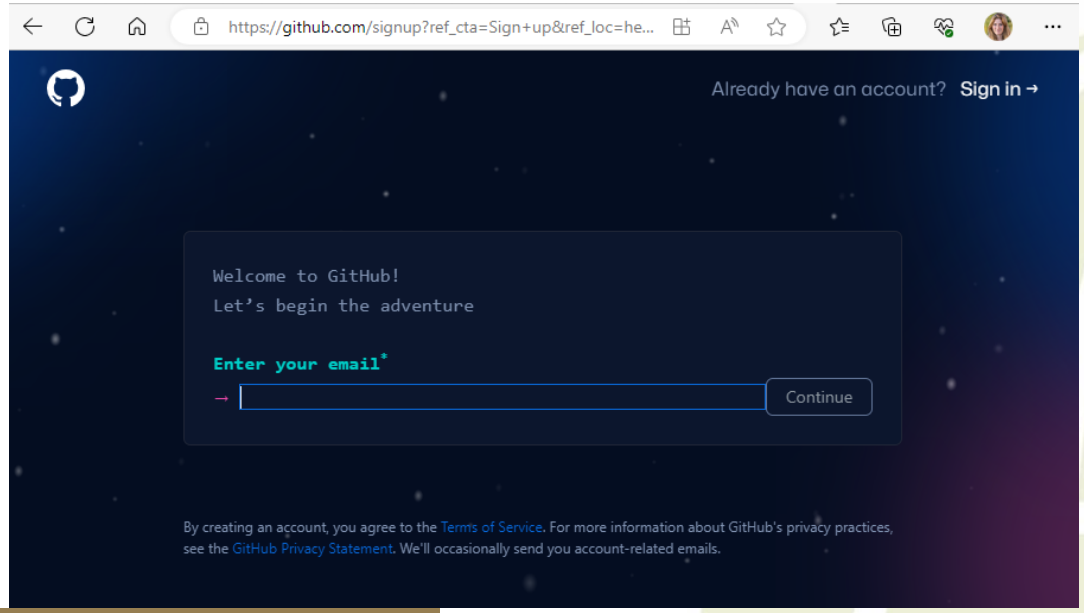


Upload of metadata to the EJP SOIL Github

- For now: manual at https://github.com/ejpsoil/ejpsoildatahub
- A next step is an automated process which can collect metadata from various locations. As part of the collection process, you can run central validations on the metadata, and suggest improvements to the data stewards

- What you need: a github account, preferably institutional

- Reasons to choose github:
  - Participatory, allows editing by users, incl. feedback
  - Persistent
  - Keeps history, versioning
  - Metadata maintained together with data (location, process)
  - Open source
- Easily transferable (if needed at project end)



Github

- Go to: https://github.com/orgs/ejpsoil/repositories and https://github.com/ejpsoil/ejpsoildatahub

- Create a **Github issue** to suggest an improvement to the content of the catalogue. In case you add new metadata content, you can add it to the issue as a **file attachment**.
- Create a **Pull Request** which implements the actual improvement. A pull request is prepared in a dedicated branch in a personal fork of the repository. Read more about pull requests in the Github Documentation.

In both cases community members can pick up the request, review, implement or merge the change to the repository. The ability to merge change requests requires elevated privileges on the repository.

https://github.com/ejpsoil

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Netherlands https://ejsoil.eu @EJPSOIL

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EJP Soil

Welcome at one of the collaborative effort spaces of the EJP Soil project.

EJP SOIL is a European Joint Programme Cofund on Agricultural Soil Management contributing to key societal challenges including climate change, water and future food security.

The objectives are to develop knowledge, tools and an integrated research community to foster climate-smart sustainable agricultural soil management that:

- Allows sustainable food production
- Sustains soil biodiversity
- Sustains soil functions that preserves ecosystem services

Read more

Read more about the project in Cordis or the project website

EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

View as: **Public**

You are viewing the README and pinned repositories as a public user.

You can pin repositories visible to anyone.

You can hide the tasks we've suggested on this page and bring them back later.

Discussions

Set up discussions to engage with your community!

Turn on discussions

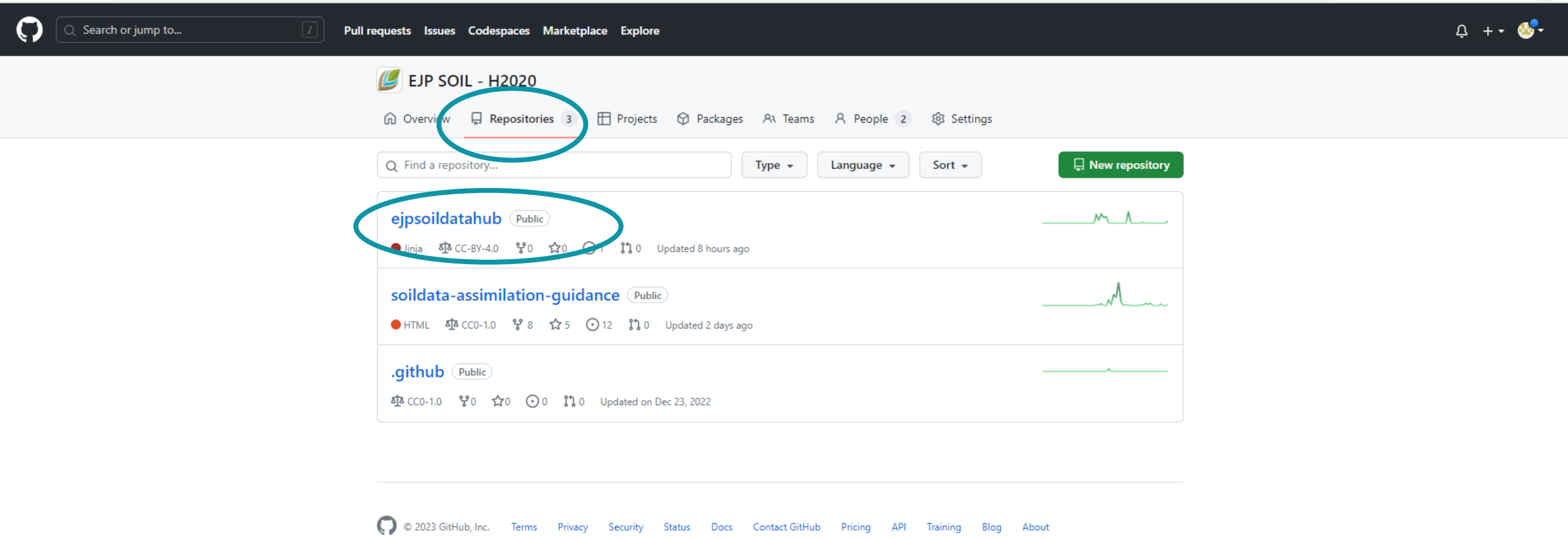
Repositories

soildata-assimilation-guidance
HTML ☆ 5 Updated 2 days ago

ejpsoildatahub
Jinja ☆0 Updated 2 days ago

.github
☆0 Updated on Dec 23, 2022

Create new repository Import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1
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Updated 8 hours ago
soildata-assimilation-guidance
Public
HTML
CC0-1.0
8
5
12
0
Updated 2 days ago
.github
Public
CC0-1.0
0
0
0
0
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https://github.com/ejpsoil/ejpsoildatahub/tree/main

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main | 1 branch | 0 tags | Go to file | Add file | Code

Genuchten add country bounds — b206fd1 2 days ago — 58 commits

.github/workflows	Create GitlabSync.yml	2 days ago
datasets	add country bounds	2 days ago
xml	add readme to xml section	4 months ago
.gitlab-ci.yml	add country bounds	2 days ago
LICENCE-CC-BY	shoud not be on github	4 months ago
README.md	restore gitlab config	2 days ago
index.yml	restore gitlab config	2 days ago
pycsw.cfg	restore gitlab config	2 days ago

README.md

EJP Soil Datahub

This repository is a participative effort to collect and maintain a series of descriptions of soil datasets (metadata) in the EU to facilitate discovery of these resources. As a soil scientist or practitioner you are very much invited to contribute to this effort by creating issues or pull requests with improvement suggestions and/or flagging incomplete content.

If a dataset is already described elsewhere (INSPIRE, OpenAire, ...) a reference should be made to the external source, so the metadata can be automatically synchronised. Use the metadata:dataseturi property to capture a reference to the remote document. For now we support either a DOI or a iso19139:2007 document.

About

No description, website, or topics provided.

Readme
CC-BY-4.0 license
Activity
0 stars
0 watching
0 forks
Report repository

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Languages

Jinja 100.0%

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Notifications Fork 0 Star 0

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Code

main

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- datasets
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  - Czech Republic
  - Denmark
  - EJP Research
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    - 10.5281-zenodo.6473232.yml
    - 10.5281-zenodo.6510954.yml
    - ejpresearch.csv
    - ejpresearch.j2
    - index.yml
  - Estonia
  - Europe
  - France
  - Germany
  - Greece
  - Hungary
  - Ireland

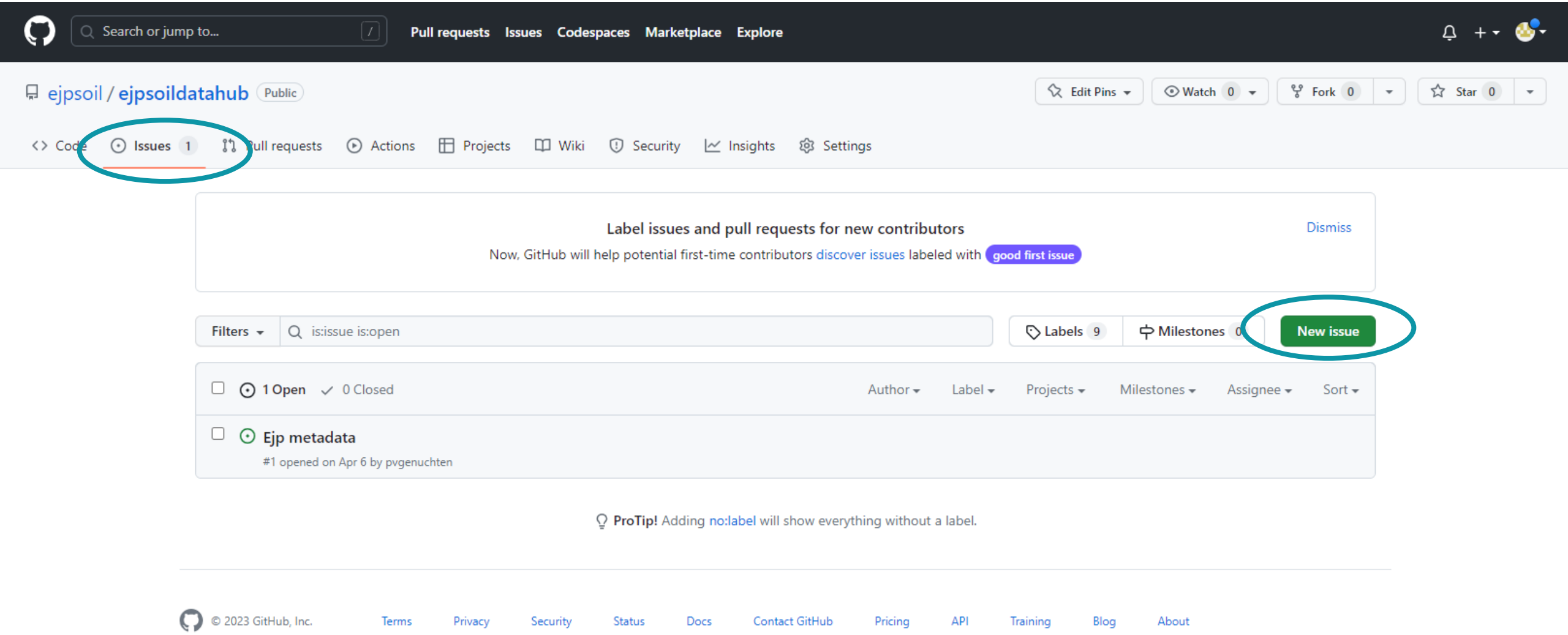
ejpsoildatahub / datasets /

Add file

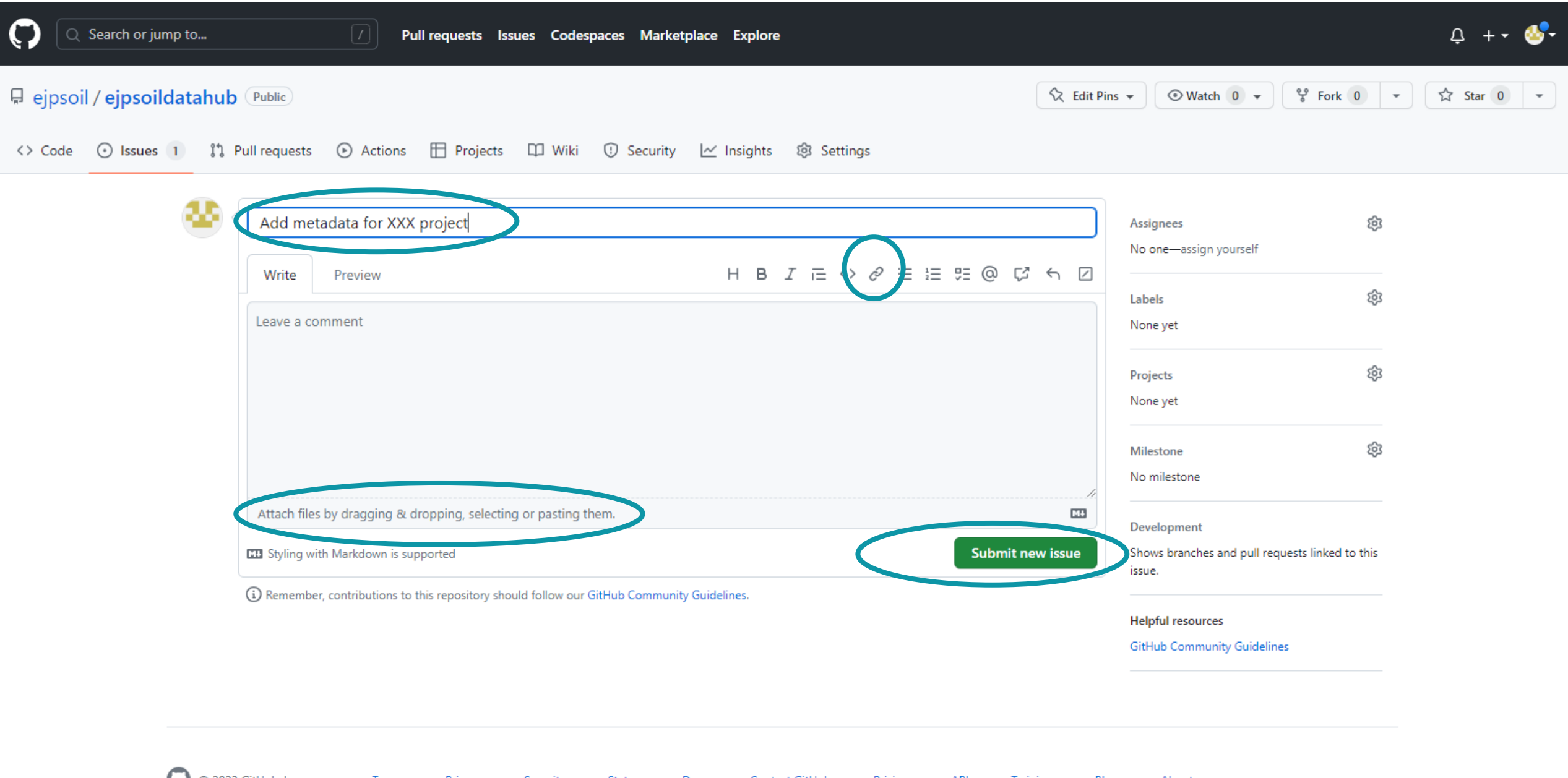
Genuchten add country bounds ✓ b206fd1 · 2 days ago History

Name	Last commit message	Last commit date
..		
Belgium	add country bounds	2 days ago
Czech Republic	add country bounds	2 days ago
Denmark	add country bounds	2 days ago
EJP Research	add country bounds	2 days ago
Estonia	add country bounds	2 days ago
Europe	add country bounds	2 days ago
France	add country bounds	2 days ago
Germany	add country bounds	2 days ago
Greece	add country bounds	2 days ago
Hungary	add country bounds	2 days ago
Ireland	add country bounds	2 days ago
Italy	add country bounds	2 days ago
Latvia	add country bounds	2 days ago

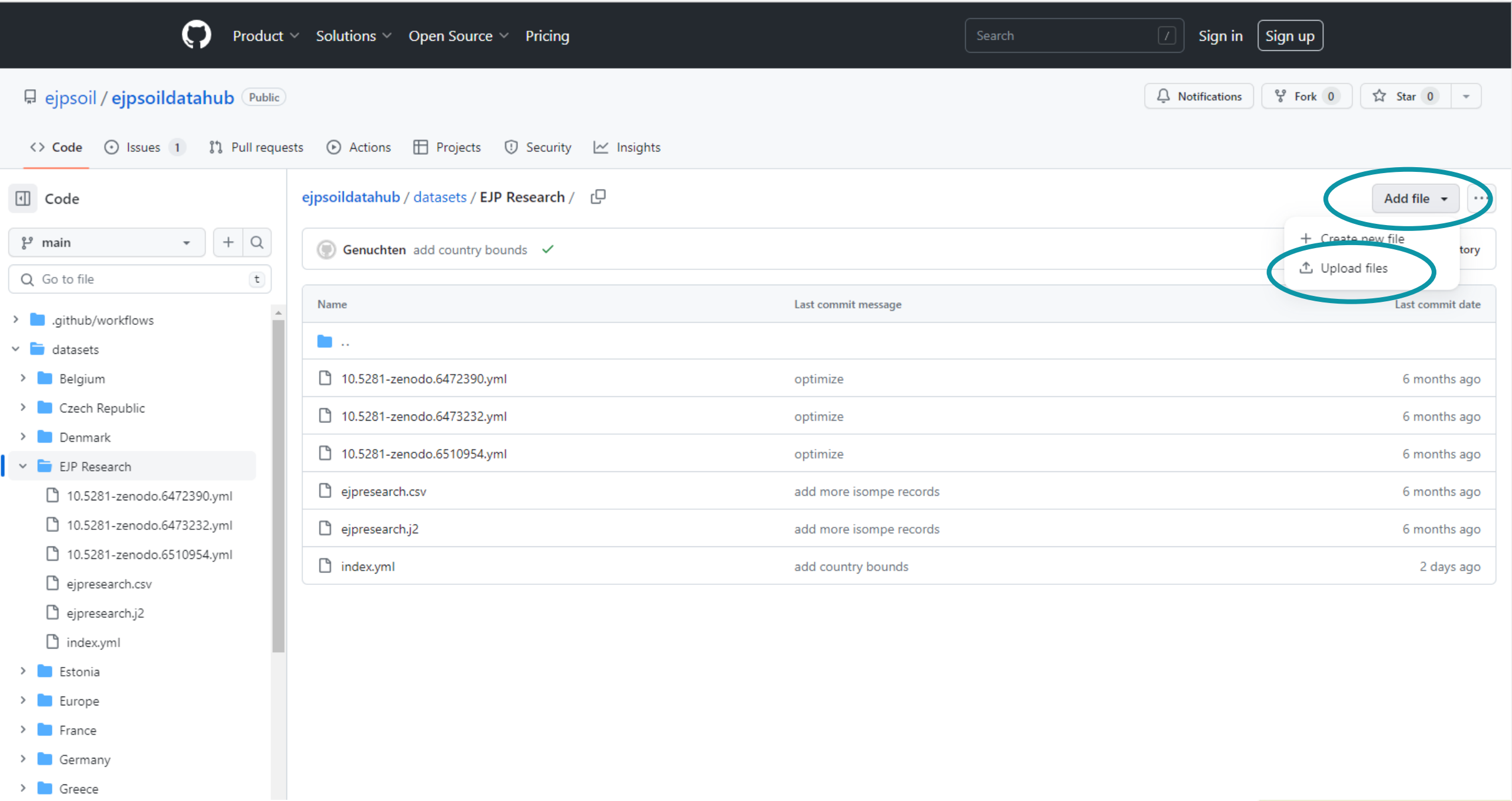
Create an issue to upload your dataset

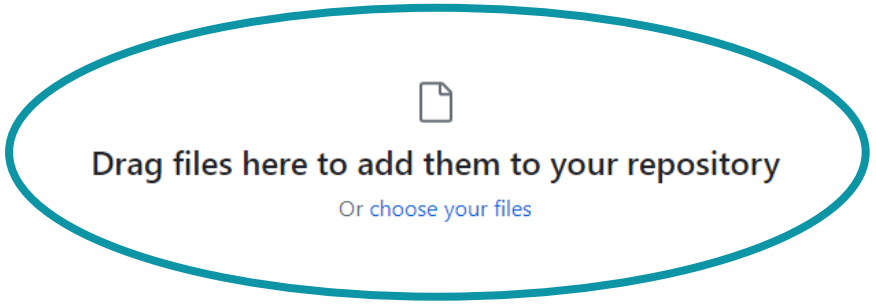


Create an issue to upload your dataset



Or: Add a file directly





Commit changes

Add files via upload

Add an optional extended description...

Commit directly to the `main` branch.

Create a **new branch** for this commit and start a pull request. Learn more about pull requests.

Commit changes Cancel

ps://github.com/ejpsoil/ejpsoildatahub/issues

EJP SOIL European Joint Programme

https://github.com/ejpsoil/ejpsoildatahub/blob/main/datasets/EJP%20Research/10.5281-zenodo.6510954.yml

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ejpresearch.j2
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Estonia
Europe
France
Germany
Greece
Hungary
Ireland

pvgenuchten optimize 7c7b377 · 6 months ago History

Code Blame 102 lines (101 loc) · 4.58 KB Raw

```yaml
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  identifier: 10.5281-zenodo.6510954
  language: eng
  charset: utf8
  hierarchylevel: dataset
  datestamp: May 2, 2022
spatial:
  datatype: grid
  geomtype: grid
  resolution: (raw data linked to a vector layer)
  crs: ETRS89-LAEA
identification:
  language: English
  charset: utf8
  title: Adoption rate of 58 innovative soil management practices
  abstract: 'The dataset is based on survey national experts in soil sciences. The
    survey aimed, among other, to identify the current level of adoption of a list
    of 58 soil management practices in the different countries and Environmental Zones
    across Europe of partners countries or regions, following the classification of
    Rogers (2003). In detail, five qualitative classes were defined: - only by a few
    farmers (e.g., the innovators) (approx. < 2.5% of farmers) - by the early adopters
    (approx. < 16% of farmers) - by an early majority (approx. < 50% of farmers) -
    by a late majority (approx. <84% of farmers) - by all farmers (approx. 100% of
    farmers) The list of 58 soil management practices was established in a preliminary
    inventory done in the framework of i-SoMPE : A preliminary list of well-documented
    Soil Management Practices (SMPs) was set up by reviewing published articles and
    reports from specific European Research projects, also including deliverables
```

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Germany
Greece
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Ireland
Italy
Latvia
Lithuania
Netherlands


```
      of Innovations. 5th ed. New York, NY [u.a.]: Free Press.

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      modification: May 2, 2022
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          - EJP Soil
          - soil
          - soil management
          - agroecological zones
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      organization: cra.wallonie.be
      name: Frederic Vanwindekens
      email: f.vanwindekens@cra.wallonie.be
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      type: application/text/csv
      name: text/csv
    citation:
      description: >
```

EJP SOIL
European Joint Programme

EJPSoil catalogue

"These pages present a set of datasets collected in the scope of the EJP Soil project.

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Soil substances in Germany. In addition to substances that serve as nutrients for the plants, there are also pollutants

Protected areas of Slovenia

Protected areas on a national and local level with the Natura 2000 protected areas in digital form (parcel-specific,no).

Danish Farmers' Refistrations

Danish farmers' crop registrations at field level for the Common Agricultural Policy of the European Union. Polygons and

Soil agrochemical research database of the State Information

Topsoil sampling Sampling depth intervals,0-20 cm

French Soil Monitoring Network (Réseau de Mesures de la Qua

stratified random sampling device (20m by 20m) at 2 layers (3 layers if possible for holorganic layer) plus

CEH Land Cover plus Fertilisers

Mixed sampling type

https://catalogue.ejpsoil.eu/collections/metadata:main/items?q=isompe

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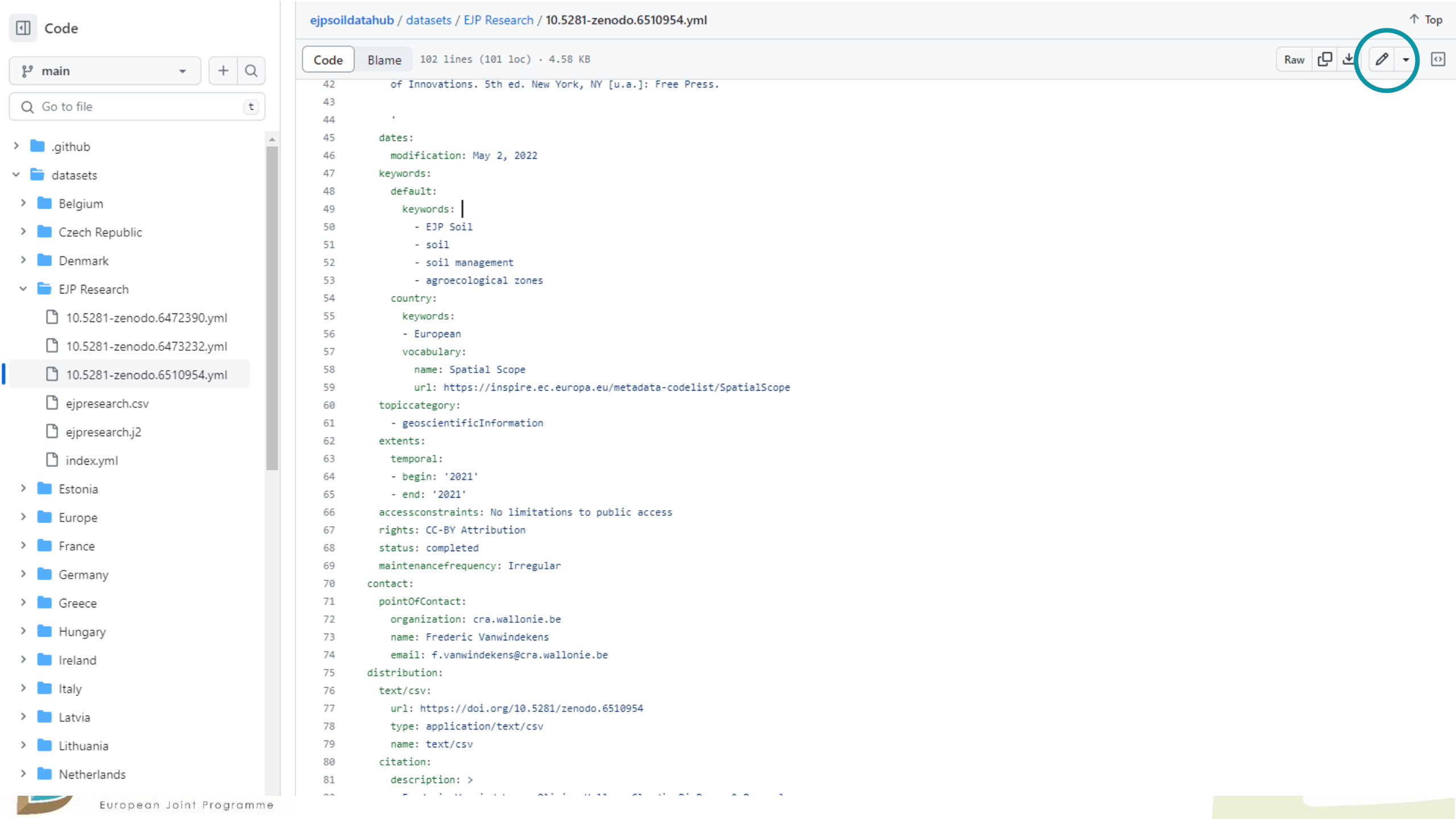
EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695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Top
Code
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dates:
modification: May 2, 2022
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- EJP Soil
- soil
- soil management
- agroecological zones
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- geoscientificInformation
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email: f.vanwindekens@cra.wallonie.be
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name: text/csv
citation:
description: >
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41        and through an public web application References, Rogers, Everett M. 2003. Diffusion
42        of Innovations. 5th ed. New York, NY [u.a.]: Free Press.
43
44        '
45      dates:
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47      keywords:
48        default:
49          keywords:
50            - EJP Soil
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52            - iSOMPE
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54            - soil management
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56        country:
57          keywords:
58          - European
59          vocabulary:
60            name: Spatial Scope
61            url: https://inspire.ec.europa.eu/metadata-codelist/SpatialScope
62      topiccategory:
63        - geoscientificInformation
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66        - begin: '2021'
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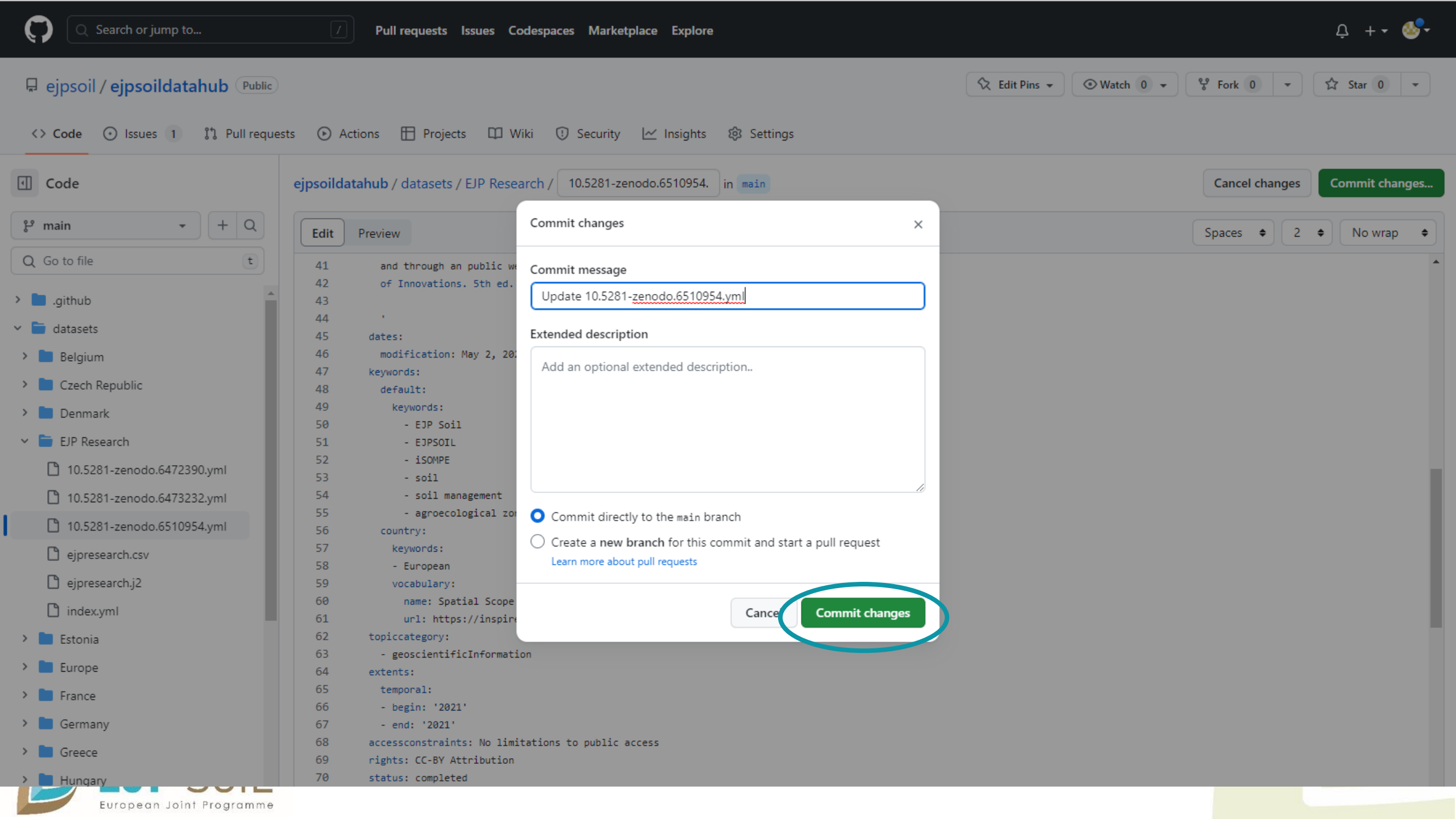
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46 modification: May 2, 20
47 keywords:
48 default:
49 keywords:
50 - EJP Soil
51 - EJPSOIL
52 - iSOMPE
53 - soil
54 - soil management
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57 keywords:
58 - European
59 vocabulary:
60 name: Spatial Scope
61 url: https://inspir
62 topiccategory:
63 - geoscientificInformation
64 extents:
65 temporal:
66 - begin: '2021'
67 - end: '2021'
68 accessconstraints: No limitations to public access
69 rights: CC-BY Attribution
70 status: completed
Commit changes
Commit message
Update 10.5281-zenodo.6510954.yml
Extended description
Add an optional extended description..
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Create a new branch for this commit and start a pull request
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  - Hungary
  - Ireland
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  - Latvia
  - Lithuania

ejpsoildatahub / datasets / EJP Research / 10.5281-zenodo.6510954.yml

Code | Blame | 104 lines (103 loc) · 4.62 KB | Raw

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      - buffer strips and small landscape elements, - crop protection, - crops and crop
      rotations, - organic matter and nutrient management,  - tillage and trafic, -
      water management The data were processed and crossed with the shapefiles of the
      agroecological zones (AEZ) for producing maps of adoption (!! not based on statistics).
      These maps are published in the report and will be shared online in image files
      in the i-SoMPE Community on Zenodo (https://zenodo.org/communities/i-sompe/?page=1&size=20)
      and through an public web application References, Rogers, Everett M. 2003. Diffusion
      of Innovations. 5th ed. New York, NY [u.a.]: Free Press.

      '
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    modification: May 2, 2022
  keywords:
    default:
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        - EJPSOIL
        - iSOMPE
        - soil
        - soil management
        - agroecological zones
    country:
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      - European
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        name: Spatial Scope
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    - geoscientificInformation
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  rights: CC-BY Attribution
  status: completed
  maintenancefrequency: Irregular
contact:
  pointOfContact:
```

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Title	Description	Type	Date
Adoption rate of 58 innovative soil management practices	Adoption rate of 58 innovative soil management practices	dataset	2023-06-14

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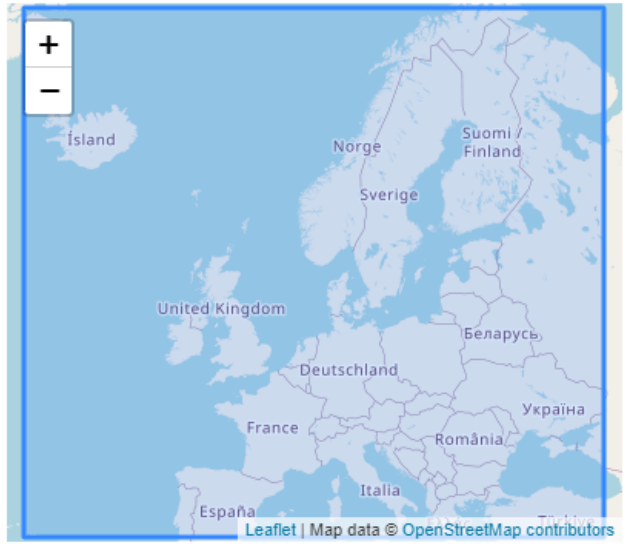

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Metadata workflow in practice: https://catalogue.ejpsoil.eu/ (towards D6.6)

https://catalogue.ejpsoil.e

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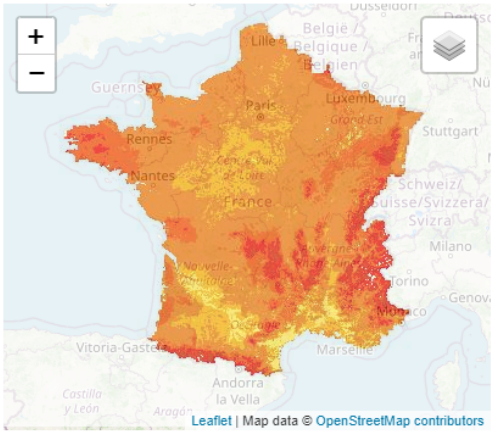
La carte nationale des stocks de carbone des sols intégrée dans la carte mondiale de la FAO

France carbon stock soil type basic soil properties Dataset

Estimation of organic carbon stocks from 0 to 30 cm deep in metropolitan France excluding Corsica



Contacts

Le Bas, Christine - INRA InfoSol
Role: pointOfContact
Email: infosol@orleans.inra.fr
country: France

Temporal

Updated: 5-7-2019
Temporal extent: 5-7-2019

License: ;no conditions apply

Links

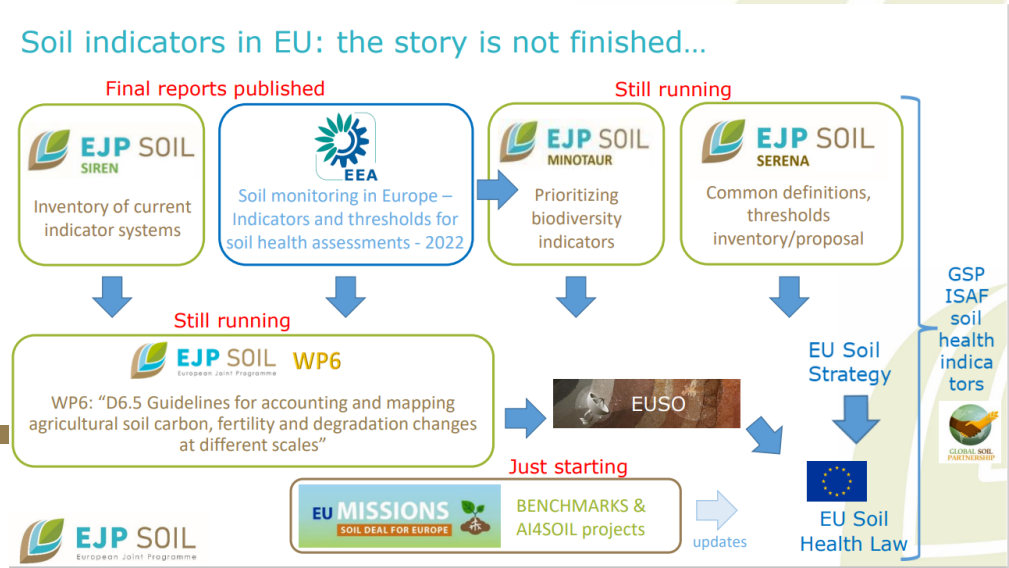
carte_carbone_fao
La carte de la France métropolitaine (hors Corse) des stocks de carbone dans les sols a été préparée par l'INRA dans le cadre d'un exercice mondial piloté par le Partenariat Mondial sur les Sols hébergé par l'Organisation des Nations-Unies pour l'alimentation et l'agriculture, la FAO. La carte ainsi produite, en suivant les spécifications décidées par cette instance, a été intégrée à la carte mondiale des stocks de carbone. Elle exploite une précédente production réalisée dans le cadre du programme Global Soil Map (Mulder et al. 2016) et résulte d'un travail de cartographie numérique par modélisation réalisé à partir des données ponctuelles issues des deux programmes nationaux IGCS et RMQS du GIS Sol. La carte

What we ask you to do:

1. Check and edit the metadata of your national datasets in the EJP SOIL ca
2. Add metadata of any other relevant national soil data to the EJP SOIL catalog
3. Upload the datasets of your (internal and external) projects and WP datasets to a persistent repository
4. Upload the metadata of your (internal and external) projects and WP datasets to the EJP SOIL catalog
5. When you write a paper, deposit the data in a persistent repository and refer to that DOI in the supplementary material (do not upload it to a journal (persistency and ownership/copyright issues))
6. Update the overview of expected data for your (internal and external) projects and WP and preferably already upload the metadata to the EJP SOIL catalog
7. Indicate if you are interested to investigate the options to apply the French lab, research institute, ministry example in your country (email Antonio Bispo)
8. Use the EJP SOIL metadata catalog!

Next steps/activities in WP6

- Test and improve guidance, tooling, standards on data infrastructure where needed (e.g. describe more soil properties (biology possibly icw MINOTAUR, Edaphobase, BENCHMARKS), easy method to apply lab transfer functions, metadata automated harvesting, etc.)
- D6.5 on indicators ongoing
- Webinar on soil indicators for policy makers with WP8 successful: to be continued on soil monitoring, soil mapping for dummies, other topics?
- T5.5 course on soil sensing for researchers: laymen's series and experts' series
- And



LUCAS – National soil monitoring systems intercomparison - LUCAS double sampling campaign

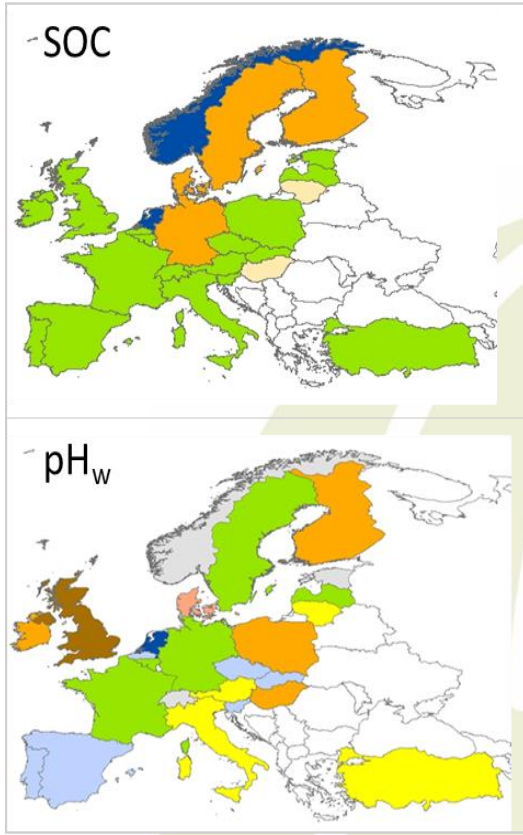
THE EXPECTATION IS PRODUCING LAB METHOD TRANSFER FUNCTIONS

Analytical procedures

- **Double samples obtained from LUCAS 2022** samplers
- Between 100 and 200 sites will be analyzed depending on the countries
- 17 countries involved
- Comparison of EU and national results

Sampling and analytical procedures

- Sampling (on national SMS and/or on LUCAS 2022 points) according to national and LUCAS sampling protocols
- 6 countries involved
- Compare the overall process



Lab methods of national soil data

Mapping EU-wide, EU-harmonized, country-driven maps

- For soil properties: SOC, Texture, pH in water, coarse fragments, ECEC, CaCO3
- Resolution at 100m with the INSPIRE-reference system (ETRS-LAEA)
- 0-20 cm depth

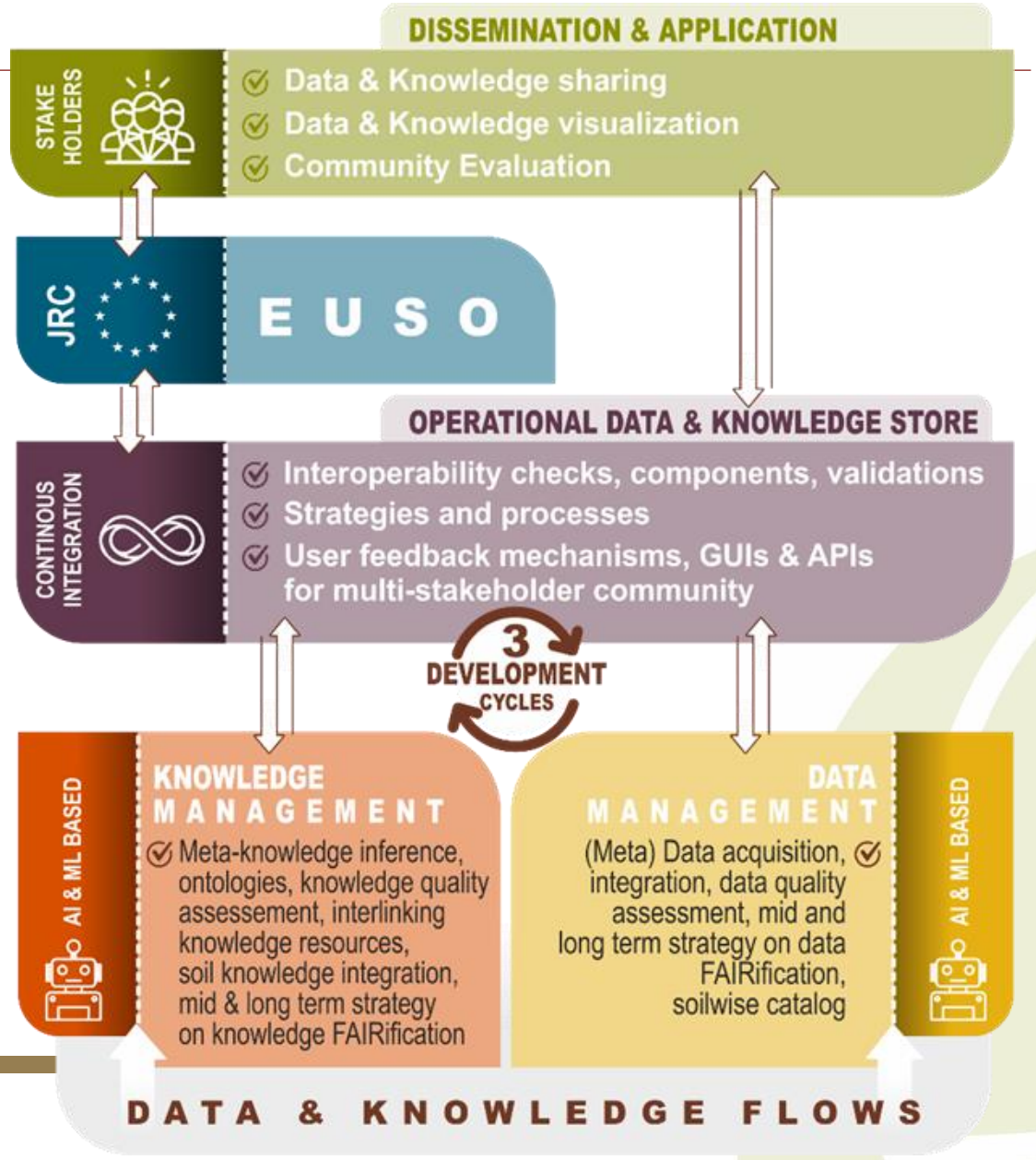
APPROACH	POINT DATA	AUXILIARY VARIABLES	DSM METHOD
EU-WIDE	WOSIS+LUCAS	EU-WIDE	EU-WIDE-SELECTED
EU-WIDE	WOSIS+LUCAS+NATIONAL	EU-WIDE	EU-WIDE-SELECTED
COUNTRY-DRIVEN	WOSIS+LUCAS+NATIONAL	EU-WIDE	COUNTRY-BEST
COUNTRY-DRIVEN	WOSIS+LUCAS+NATIONAL	EU-WIDE+NATIONAL	COUNTRY-BEST
MIXED	2 STEP PROCEDURE, HARMONISING NATIONAL MAPS		

MAPPING STEPS:

1. 100m INSPIRE grid (from ESDAC) **=> DONE**
2. Resampling of EU-wide covariates to that grid, to produce a stack of covariates **=> DONE**
3. Testing 5 approaches to produce EU-maps to select the best in terms of accuracy and EU-wide harmonisation, to produce a DSM-cookbook of best procedures => **INRAE** has produced a **first test on France** using the GlobalSoilMap auxiliary variables. **ISRIC** has produced a **standard scripted digital soil mapping workflow**
4. Distributing the stack of covariates and DSM-cookbook, and first test of its application on pH mapping => **IN 2023, 19 June workshop: still possible to sign up as country representative (2 per country)**
5. Developing transfer functions through LUCAS double sampling => **LUCAS DOUBLE SAMPLING ONGOING**
6. Final production of baseline maps of soil properties => **IN 2023 AND 2024**

SoilWise

- Includes EV ILVO, ISRIC, WUR, INRAE, CIRAD, CREA, DOMG, MU, ZALF, many more
- Knowledge and data repository towards the EU Soil Observatory (EUSO)



SoilWise
KNOWLEDGE & DATA FLOWS

Thank you for your attention. Any questions?

fenny.vanegmond@wur.nl

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