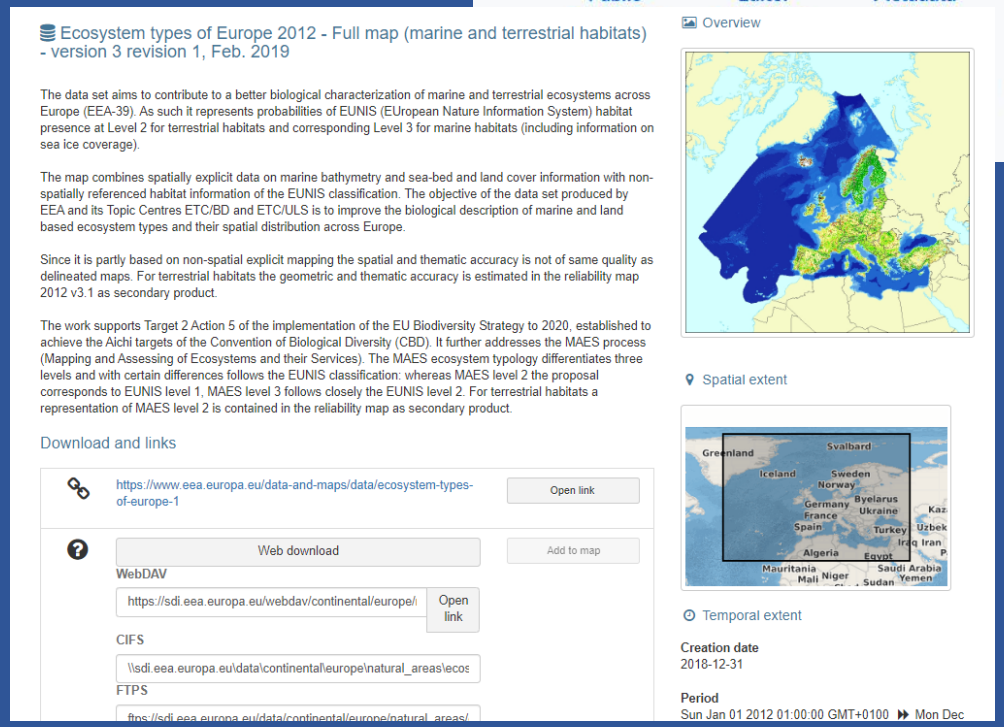


EEA SDI

The EEA catalogue of geospatial datasets

Jose Miguel RUBIO IGLESIAS, Mauro MICHIELON
European Environment Agency

EEA - The European Environment Agency

What?

- The provision of reliable, relevant, targeted and timely information to policy-making agents and the public.

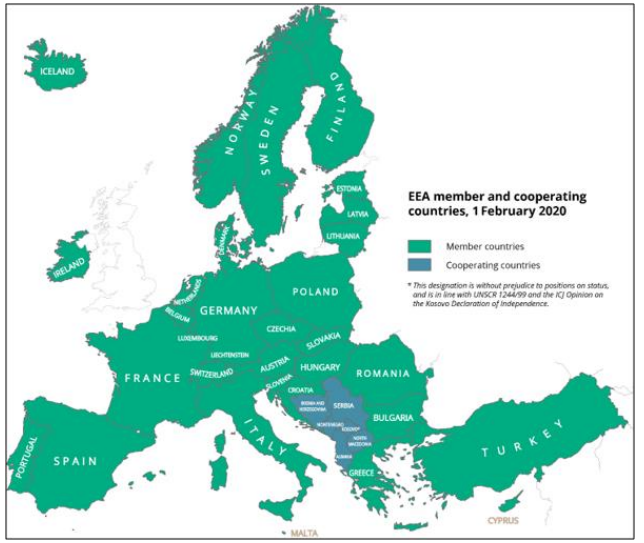
Why?

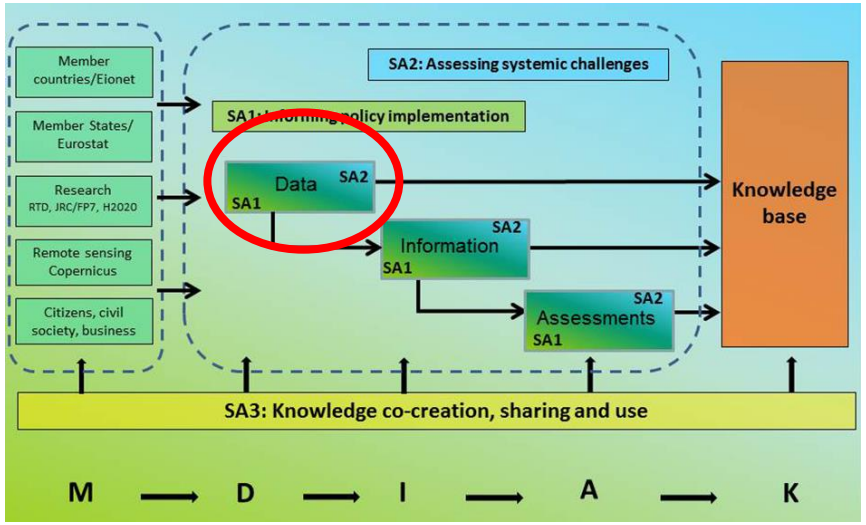
- To help achieve significant and measurable improvements in Europe's environment and to support sustainable development.

How?

- EEA/Eionet partnership (25 years!)
- 38 (32 + 6) countries, 400 institutions, 1000 experts

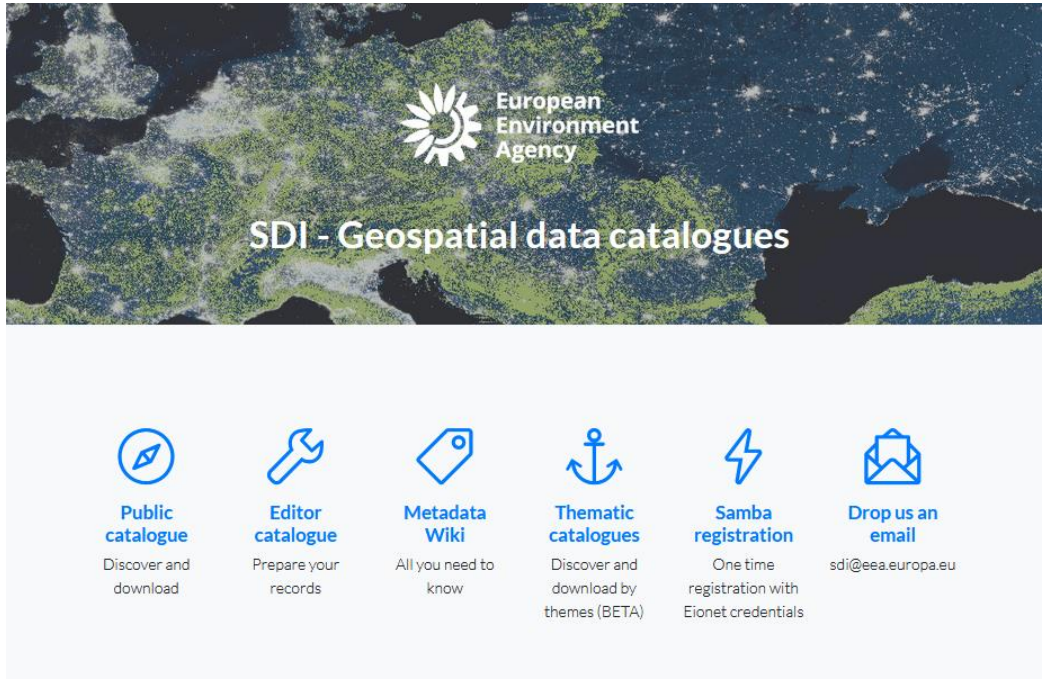
European Environment Agency

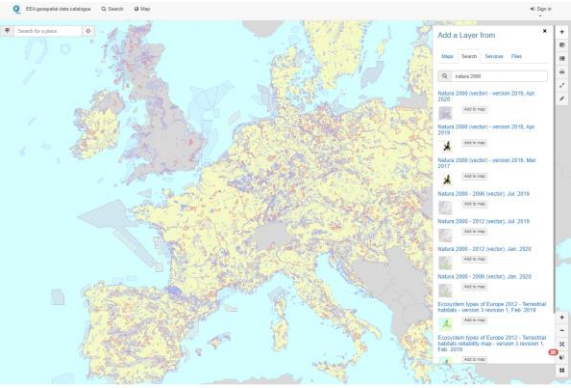




EEA SDI The EEA catalogue of geospatial datasets – the basics

- Operational since 2012
- Provides a **standard description** (metadata) of **spatial datasets** produced or used by EEA
  - EEA metadata profile (ISO-19115/19139 and INSPIRE MD TG2.0)
  - Only metadata of **datasets** (with exceptions)
- Stores reference versions of pan-European **spatial datasets** (EEA geospatial data warehouse)
  - Many different spatial formats (SHP, GPKG/SQLITE, GDB, GML, TIFF)
- **More than 1400 datasets** available
  - Historical and latest versions
  - Public and restricted datasets
  - Examples: Copernicus Land, datasets from reporting, datasets underpinning maps used in reports or briefings
- **Thematic portals** depending on user needs
- **CSW interface** exposed to GEOSS portal and Copernicus
- Related work: SDI wiki, bi-monthly **SDI newsletter**…





EEA SDI The EEA catalogue of geospatial datasets – the basics

- **EEA branch** aligned with GeoNetwork version **3.10**
  - In GitHub: https://github.com/eea/geonetwork-eea/tree/eea-3.10.x
- Developments in EEA branch revert to **GeoNetwork community**:
  - Contributions to TG 2.0 alignment, link to the registries, OpenLayers updates, portal functionalities, user/featured searches, Elastic Search…
- **Two instances** in production
  - Catalogue (https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search)
  - Editor (https://sdi.eea.europa.eu/editor-catalogue/srv/eng/catalog.search#/home)
- SDI datasets stored in a **file system** + **spatial database** running on Linux
  - File-based storage system accessible via CIFS (internally), NextCloud ("web download"), spatial database PostgreSQL and PostGIS
- **The catalogue is public** – but download from SDI storage and use of SDI Editor only with authentication (Eionet password)
- **Version 4.0.0-alpha.1** in testing environment

European Environment Agency

GeoNetwork opensource

OpenLayers

GeoServer

esri ArcGIS

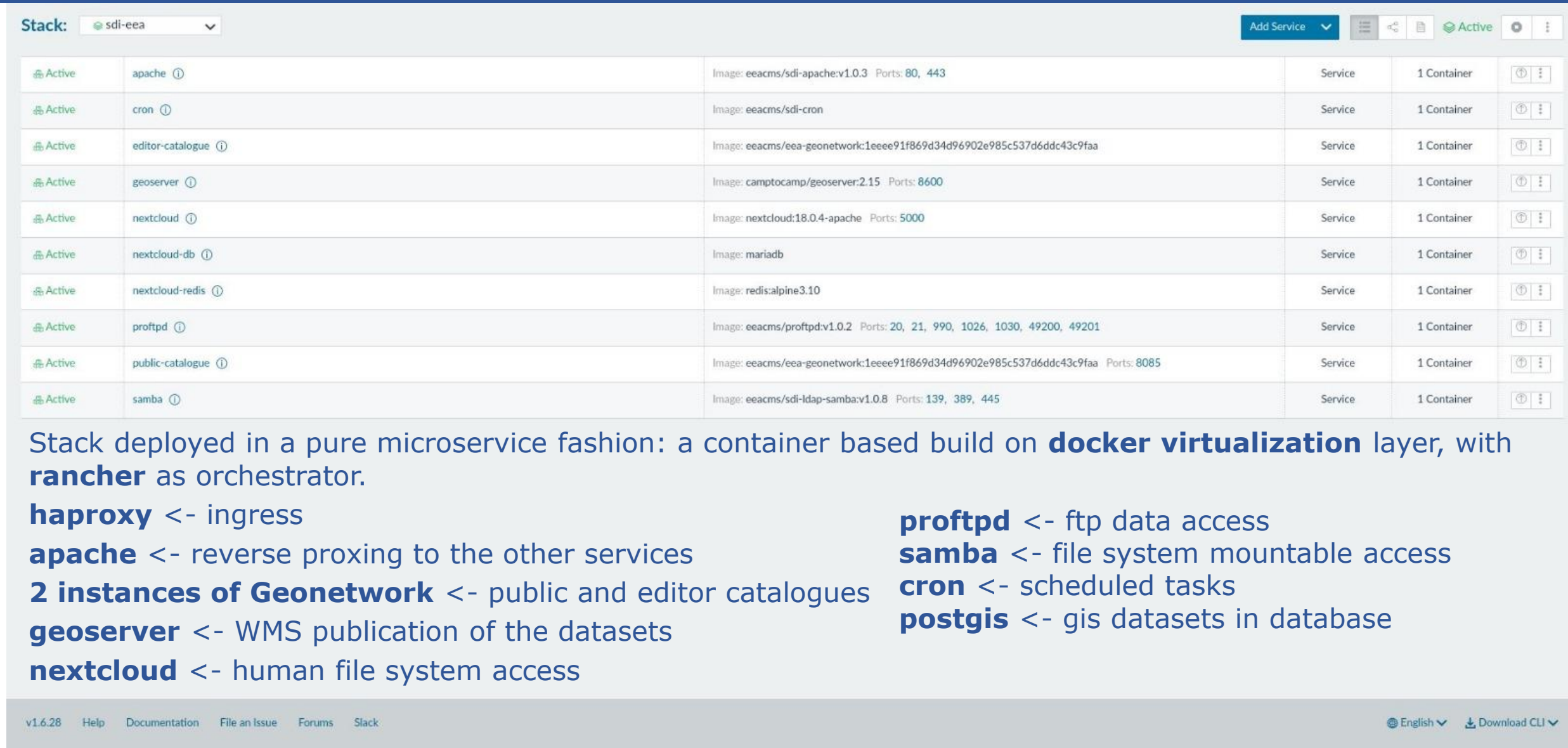
elastic

Nextcloud

PostGIS

Apache

EEA SDI The EEA catalogue of geospatial datasets – our stack



Stack deployed in a pure microservice fashion: a container based build on **docker virtualization** layer, with **rancher** as orchestrator.

haproxy <- ingress

apache <- reverse proxing to the other services

2 instances of Geonetwork <- public and editor catalogues

geoserver <- WMS publication of the datasets

nextcloud <- human file system access

proftpd <- ftp data access

samba <- file system mountable access

cron <- scheduled tasks

postgis <- gis datasets in database

EEA SDI The EEA catalogue of geospatial datasets – landing page

https://sdi.eea.europa.eu/

Public catalogue
Discover and download

Editor catalogue
Prepare your records

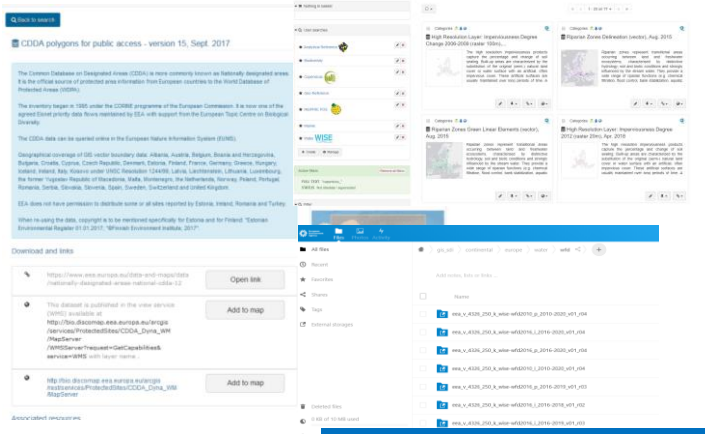
Metadata Wiki
All you need to know

Thematic catalogues
Discover and download by themes (BETA)

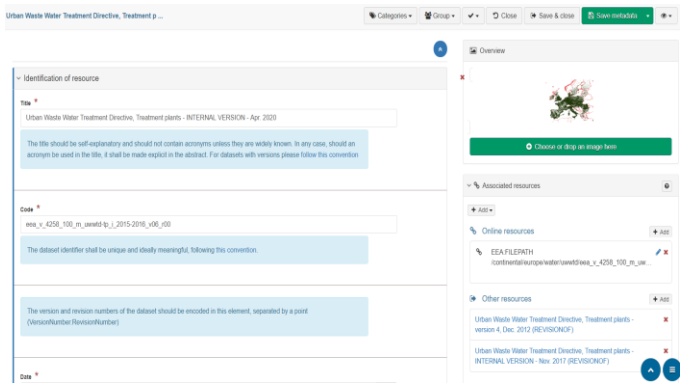
Samba registration
One time registration with Eionet credentials

Drop us an email
sdi@eea.europa.eu

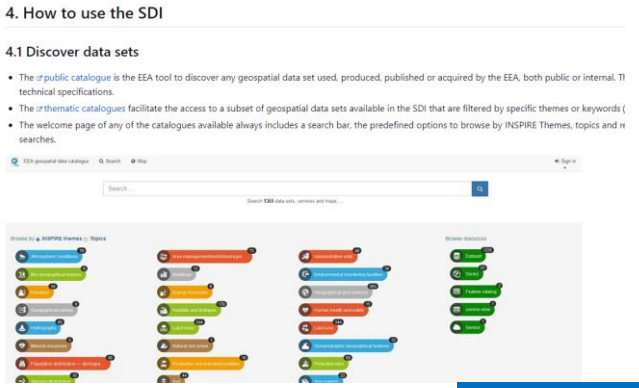
sdi@eea.europa.eu



Main catalogue



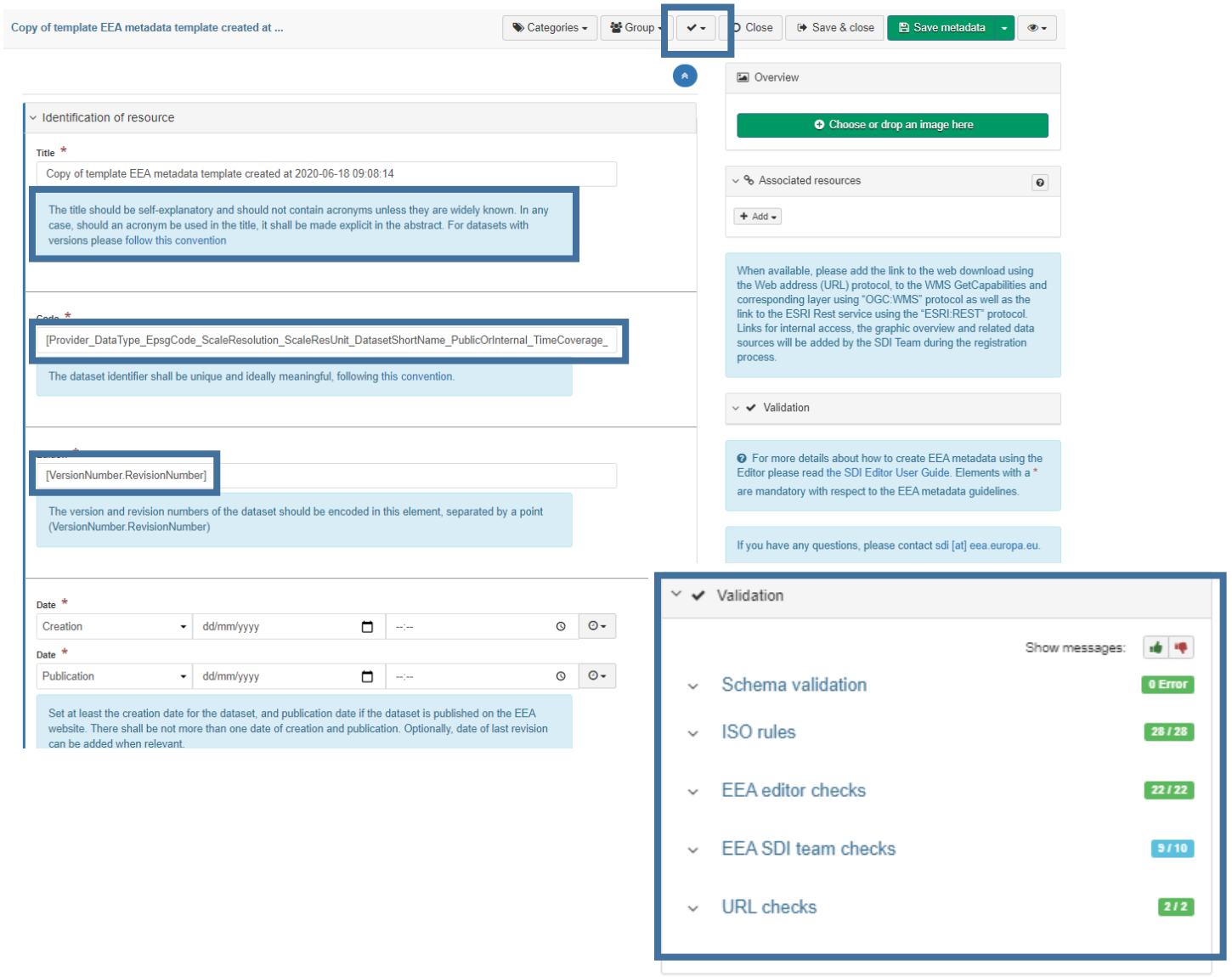
Metadata editor



SDI Wiki

SDI nodes

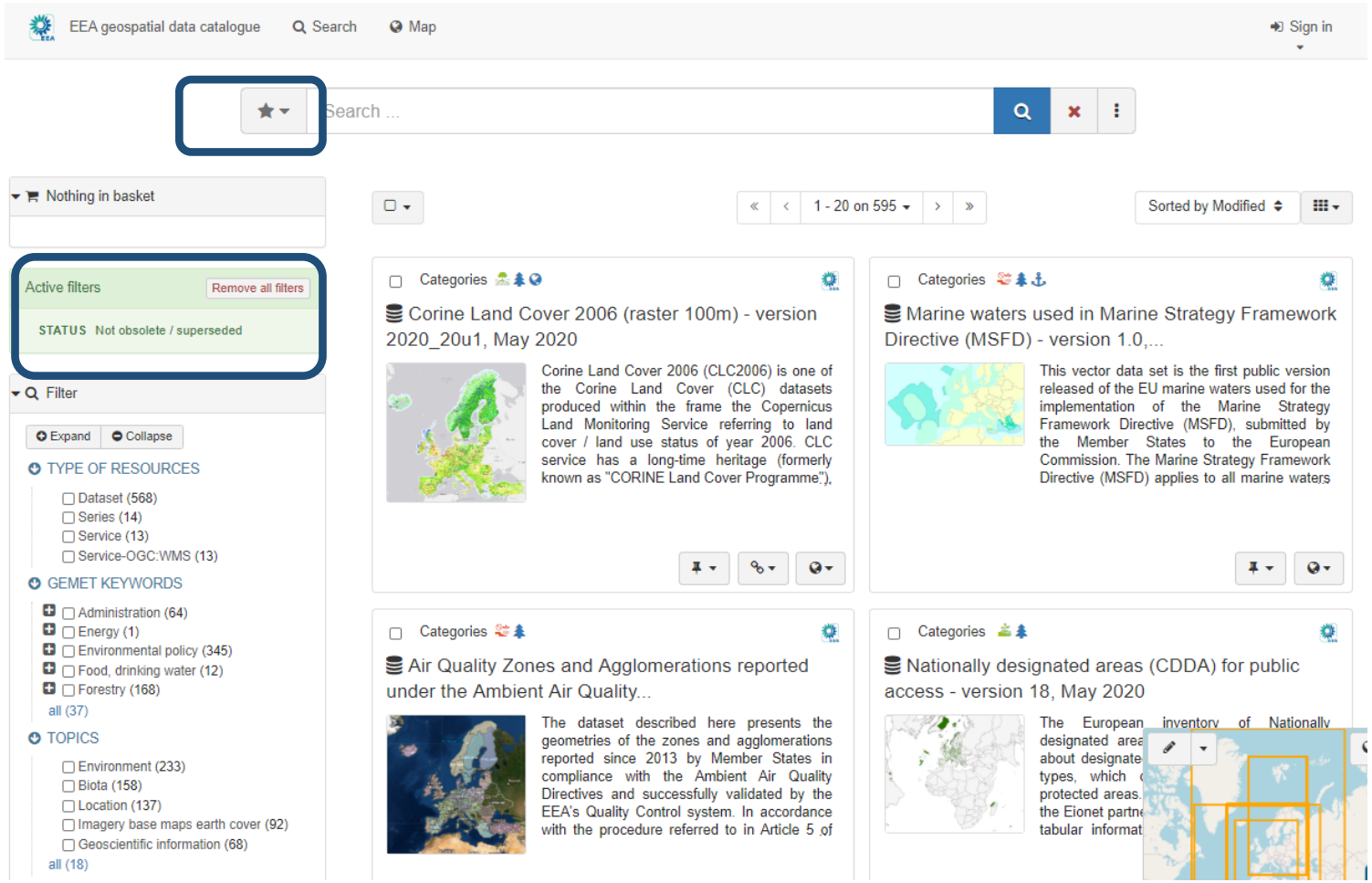
EEA SDI The EEA catalogue – Metadata editor



EEA customised editor

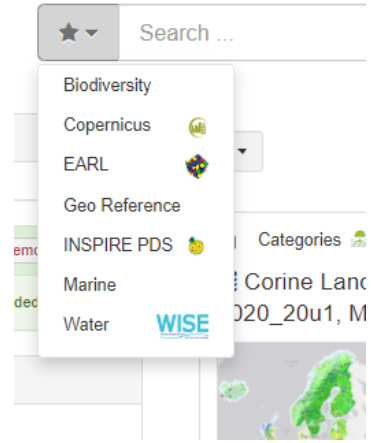
- EEA customised view (”EEA”) + default ones
- Short explanations on each metadata element for guidance (blue boxes)
- EEA template with pre-filled elements:
  - Dataset identifier structure
  - Contact points
  - Keywords (spatial scope)
  - INSPIRE Conformity statement
  - Use Access constraints (EEA data policy)
  - Possible options for online resources
- Different set of validation checks available for each type of user (editor vs admin)
- INSPIRE validator (only metadata of datasets)
- SDI Editor guidelines available in the SDI Wiki.

EEA SDI The EEA catalogue – search interface



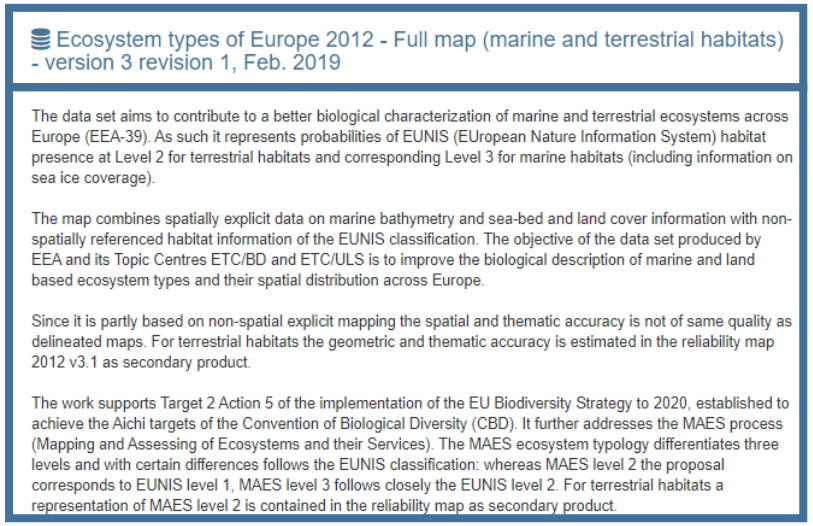
EEA search user interface

- By default – only records not obsolete or superseded
- Featured searches (public)



- User searches (if signed in)

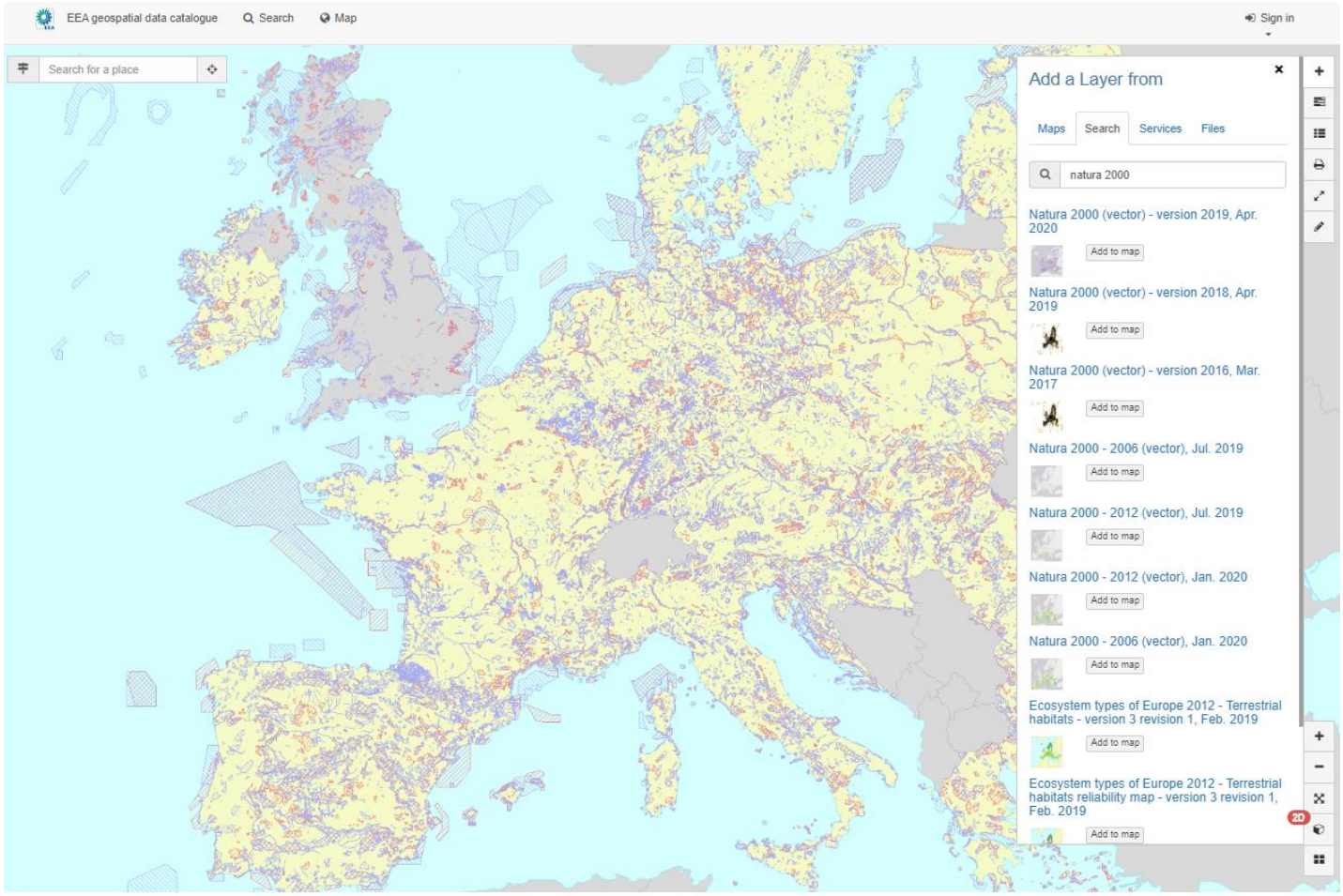
EEA SDI The EEA catalogue – EEA Metadata content



Standard EEA metadata content

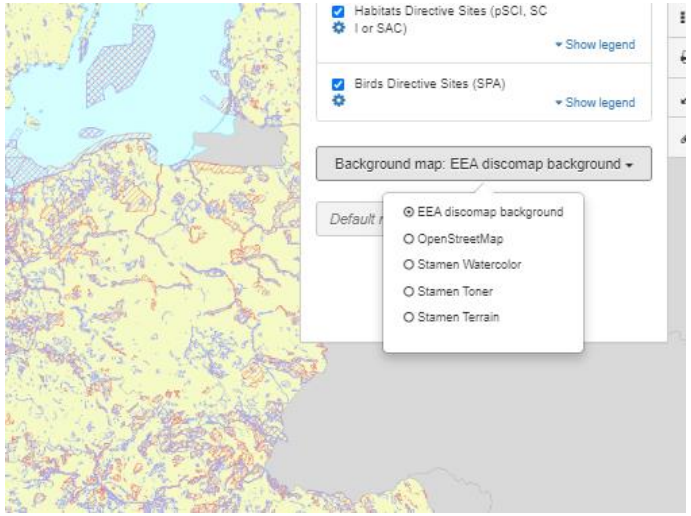
- Titles and identifiers are standardised
- Recommended content in abstract
- Graphic overview is obligatory
- Dataset download:
  - When dataset is public – link to EEA website
  - For internal use: Web Download (NextCloud), WebDAV, CIFS, FTPS
- Services: only view services
  - OGC WMS (Discomap)
  - ESRI Rest services (Discomap)
- Relation between records:
  - Previous versions (”revision of”)
  - Related datasets (”cross-reference”)
  - Source datasets / Is source dataset of
- Special EEA keywords and categories
- All elements explained in the SDI wiki

EEA SDI The EEA catalogue – Map viewer



Use of GeoNetwork Map Viewer

- Recently added
- WMS and REST Discomap services available through the map viewer
- EEA to further contribute to OL support of REST services
- Customised map background (ESTAT-based data)



EEA SDI The EEA catalogue – what's next?

- **Move to GNW 4.x** when stable (already testing)
- Support move to **ElasticSearch** and **OGC OpenAPI Records** implementation for better SEO
- **Continuous improvement** in infrastructure performance (cluster catalogue application - **load balancer**)
- **Merge the two instances into a single one**
- Improve convergence towards **other EEA systems** (website, web services)
- Further **UI customisation** (thematic portals, filters, ranking orders)
- Continue ensuring full **INSPIRE MD compliance**
- Automated generation of WMS for any dataset with **Geoserver**
- Pilot the use of GNW for non-geospatial datasets (towards a full "**EEA data warehouse**")
- Better follow up of catalogue content with **dashboards** (also with communication purposes)

Thank you for your attention

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