

## GEONETWORK Workshop – 23 June 2020




The banner features a satellite image of Europe with the EEA logo and the text 'SDI - Geospatial data catalogues'.

  
**Public**

  
**Editor**

  
**Metadata**

  
**Thematic catalogues**  
Discover and download by themes (BETA)

  
**Samba registration**  
One time registration with Eionet credentials

  
**Drop us an email**  
sdi@eea.europa.eu

### Ecosystem types of Europe 2012 - Full map (marine and terrestrial habitats) - version 3 revision 1, Feb. 2019


The data set aims to contribute to a better biological characterization of marine and terrestrial ecosystems across Europe (EEA-39). As such it represents probabilities of EUNIS (European Nature Information System) habitat presence at Level 2 for terrestrial habitats and corresponding Level 3 for marine habitats (including information on sea ice coverage).


The map combines spatially explicit data on marine bathymetry and sea-bed and land cover information with non-spatially referenced habitat information of the EUNIS classification. The objective of the data set produced by EEA and its Topic Centres ETC/BD and ETC/ULS is to improve the biological description of marine and land based ecosystem types and their spatial distribution across Europe.

Since it is partly based on non-spatial explicit mapping the spatial and thematic accuracy is not of same quality as delineated maps. For terrestrial habitats the geometric and thematic accuracy is estimated in the reliability map 2012 v3.1 as secondary product.

The work supports Target 2 Action 5 of the implementation of the EU Biodiversity Strategy to 2020, established to achieve the Aichi targets of the Convention of Biological Diversity (CBD). It further addresses the MAES process (Mapping and Assessing of Ecosystems and their Services). The MAES ecosystem typology differentiates three levels and with certain differences follows the EUNIS classification: whereas MAES level 2 the proposal corresponds to EUNIS level 1, MAES level 3 follows closely the EUNIS level 2. For terrestrial habitats a representation of MAES level 2 is contained in the reliability map as secondary product.

#### Download and links

 <https://www.eea.europa.eu/data-and-maps/data/ecosystem-types-of-europe-1>

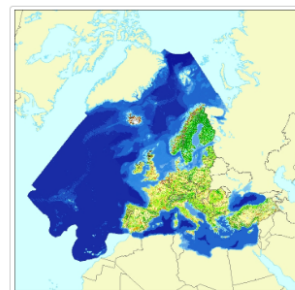


**WebDAV**

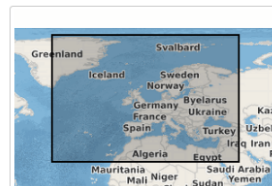
**CIFS**

**FTP**

#### Overview



#### Spatial extent



#### Temporal extent

**Creation date**  
2018-12-31

**Period**  
Sun Jan 01 2012 01:00:00 GMT+0100 ▶ Mon Dec

# EEA SDI

## The EEA catalogue of geospatial datasets

**Jose Miguel RUBIO IGLESIAS, Mauro MICHIELON**  
**European Environment Agency**

# EEA - The European Environment Agency

## What?

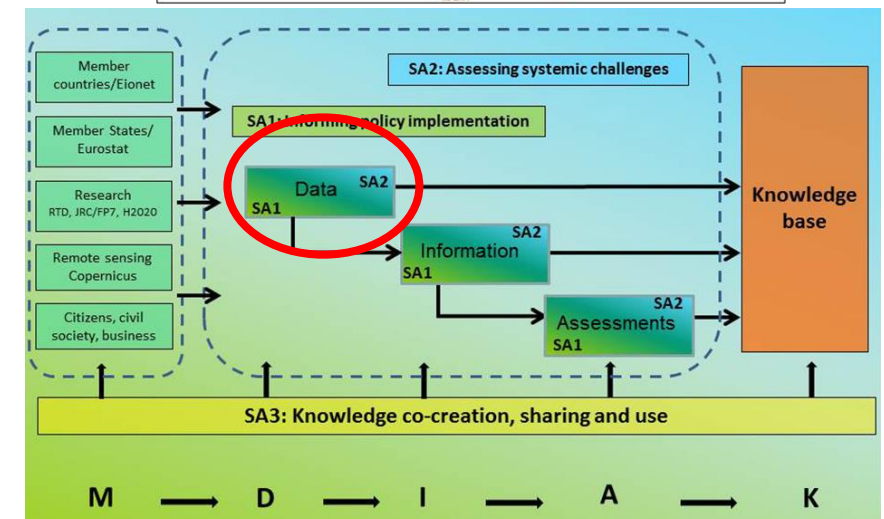
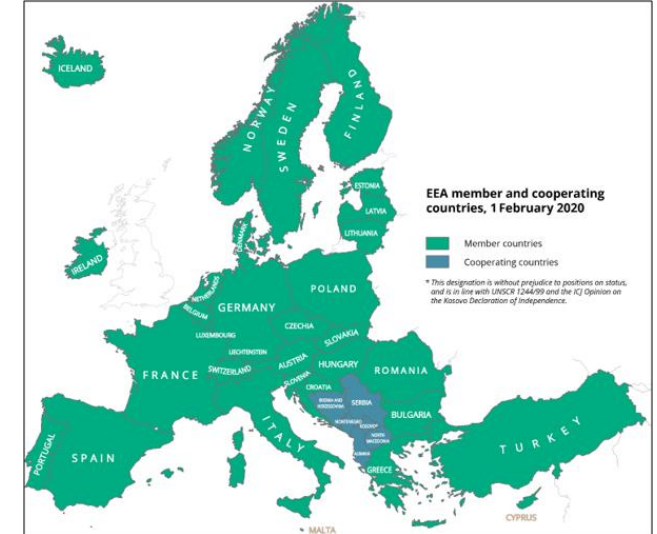
- The provision of reliable, relevant, targeted and timely information to policy-making agents and the public.

## Why?

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

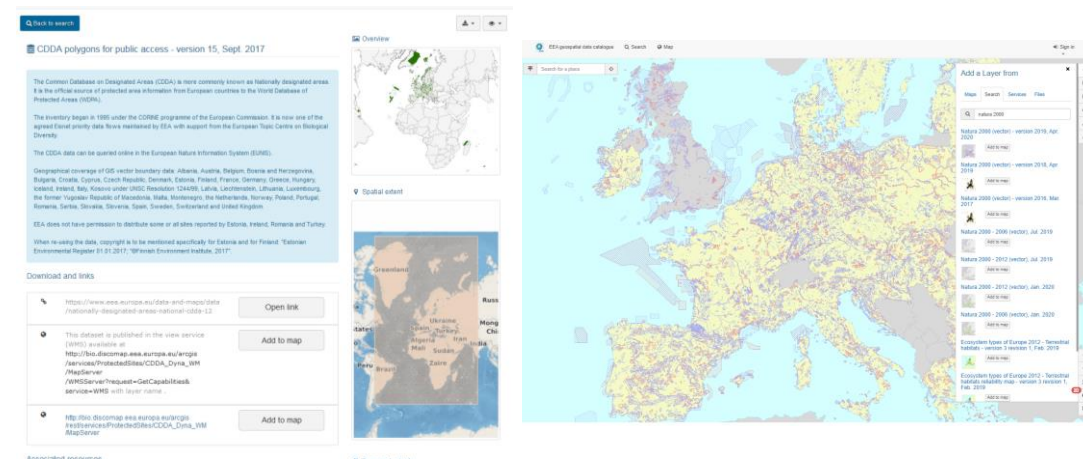
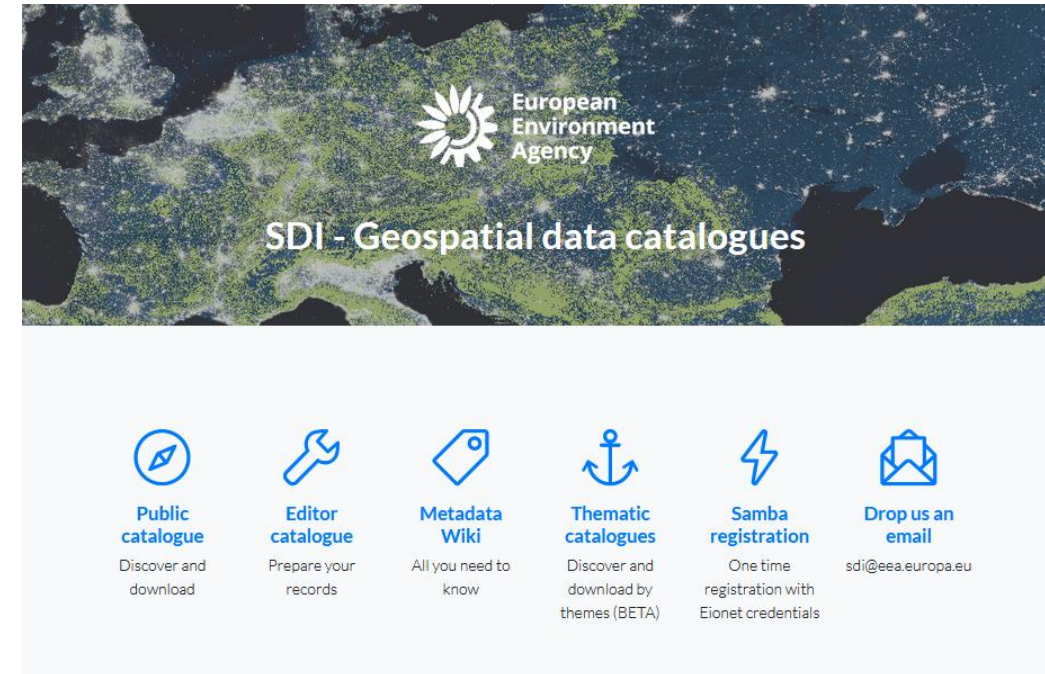
## How?

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



# 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



# EEA SDI The EEA catalogue of geospatial datasets – our stack

Stack: <span>sdi-eea</span>		<a href="#">Add Service</a> <span>📄</span> <span>📄</span> <span>📄</span> <span>Active</span> <span>⚙️</span> <span>⋮</span>			
🟢 Active	apache ⓘ	Image: eeacms/sdi-apache:v1.0.3 Ports: 80, 443	Service	1 Container	ⓘ ⋮
🟢 Active	cron ⓘ	Image: eeacms/sdi-cron	Service	1 Container	ⓘ ⋮
🟢 Active	editor-catalogue ⓘ	Image: eeacms/eea-geonetwork:1eeee91f869d34d96902e985c537d6ddc43c9faa	Service	1 Container	ⓘ ⋮
🟢 Active	geoserver ⓘ	Image: camptocamp/geoserver:2.15 Ports: 8600	Service	1 Container	ⓘ ⋮
🟢 Active	nextcloud ⓘ	Image: nextcloud:18.0.4-apache Ports: 5000	Service	1 Container	ⓘ ⋮
🟢 Active	nextcloud-db ⓘ	Image: mariadb	Service	1 Container	ⓘ ⋮
🟢 Active	nextcloud-redis ⓘ	Image: redis:alpine3.10	Service	1 Container	ⓘ ⋮
🟢 Active	proftpd ⓘ	Image: eeacms/proftpd:v1.0.2 Ports: 20, 21, 990, 1026, 1030, 49200, 49201	Service	1 Container	ⓘ ⋮
🟢 Active	public-catalogue ⓘ	Image: eeacms/eea-geonetwork:1eeee91f869d34d96902e985c537d6ddc43c9faa Ports: 8085	Service	1 Container	ⓘ ⋮
🟢 Active	samba ⓘ	Image: eeacms/sdi-ldap-samba:v1.0.8 Ports: 139, 389, 445	Service	1 Container	ⓘ ⋮

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

**haproxy** <- ingress

**apache** <- reverse proxying 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

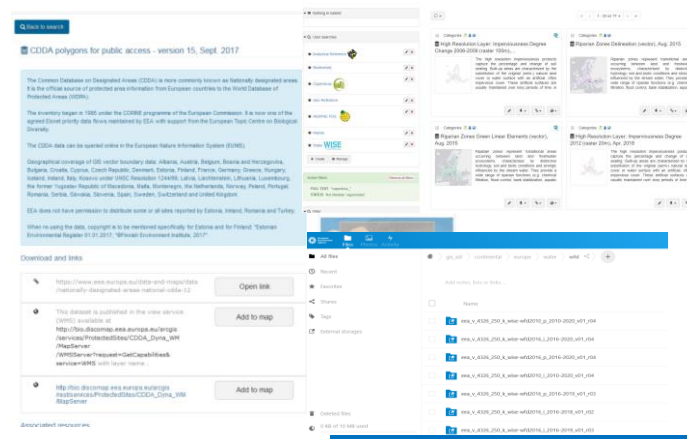
**samba** <- file system mountable access

**cron** <- scheduled tasks

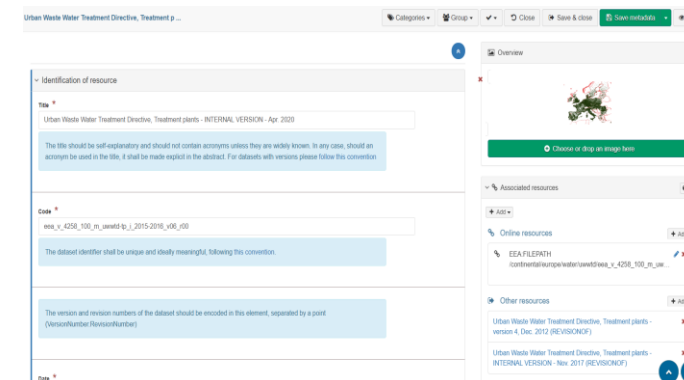
**postgis** <- gis datasets in database

# EEA SDI The EEA catalogue of geospatial datasets – landing page

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



Main catalogue



Metadata editor

## 4. How to use the SDI

### 4.1 Discover data sets

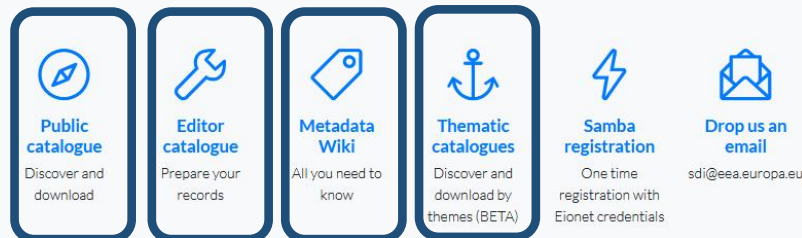
- The **public catalogue** is the EEA tool to discover any geospatial data set used, produced, published or acquired by the EEA, both public or internal. It technical specifications.
- The **thematic catalogues** facilitate the access to a subset of geospatial data sets available in the SDI that are filtered by specific themes or keywords (The welcome page of any of the catalogues available always includes a search bar, the predefined options to browse by INSPIRE Themes, topics and n searches.



SDI Wiki



SDI nodes



[sdi@eea.europa.eu](mailto:sdi@eea.europa.eu)

# EEA SDI The EEA catalogue – Metadata editor

Copy of template EEA metadata template created at ...

Categories Group

Close Save & close Save metadata

Overview

Choose or drop an image here

Associated resources

Add

When available, please add the link to the web download using the Web address (URL) protocol, to the WMS GetCapabilities and corresponding layer using "OGC:WMS" protocol as well as the link to the ESRI Rest service using the "ESRI:REST" protocol. Links for internal access, the graphic overview and related data sources will be added by the SDI Team during the registration process.

Validation

For more details about how to create EEA metadata using the Editor please read the SDI Editor User Guide. Elements with a \* are mandatory with respect to the EEA metadata guidelines.

If you have any questions, please contact sdi[at]eea.europa.eu.

Identification of resource

Title \*

Copy of template EEA metadata template created at 2020-06-18 09:08:14

The title should be self-explanatory and should not contain acronyms unless they are widely known. In any case, should an acronym be used in the title, it shall be made explicit in the abstract. For datasets with versions please follow this convention

Code \*

[Provider\_DataType\_EpsgCode\_ScaleResolution\_ScaleResUnit\_DatasetShortName\_PublicOrInternal\_TimeCoverage\_]

The dataset identifier shall be unique and ideally meaningful, following this convention.

Version \*

[VersionNumber.RevisionNumber]

The version and revision numbers of the dataset should be encoded in this element, separated by a point (VersionNumber.RevisionNumber)

Date \*

Creation dd/mm/yyyy

Publication dd/mm/yyyy

Set at least the creation date for the dataset, and publication date if the dataset is published on the EEA website. There shall be not more than one date of creation and publication. Optionally, date of last revision can be added when relevant.

Validation

Show messages: 0 Error

Schema validation 0 Error

ISO rules 28 / 28

EEA editor checks 22 / 22

EEA SDI team checks 3 / 10

URL checks 2 / 2

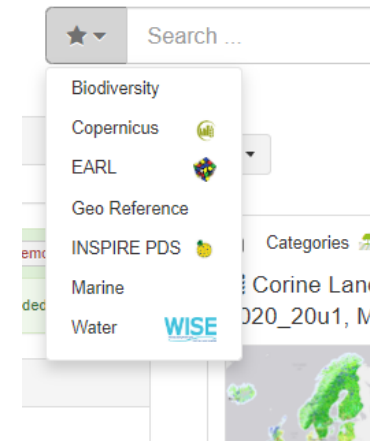
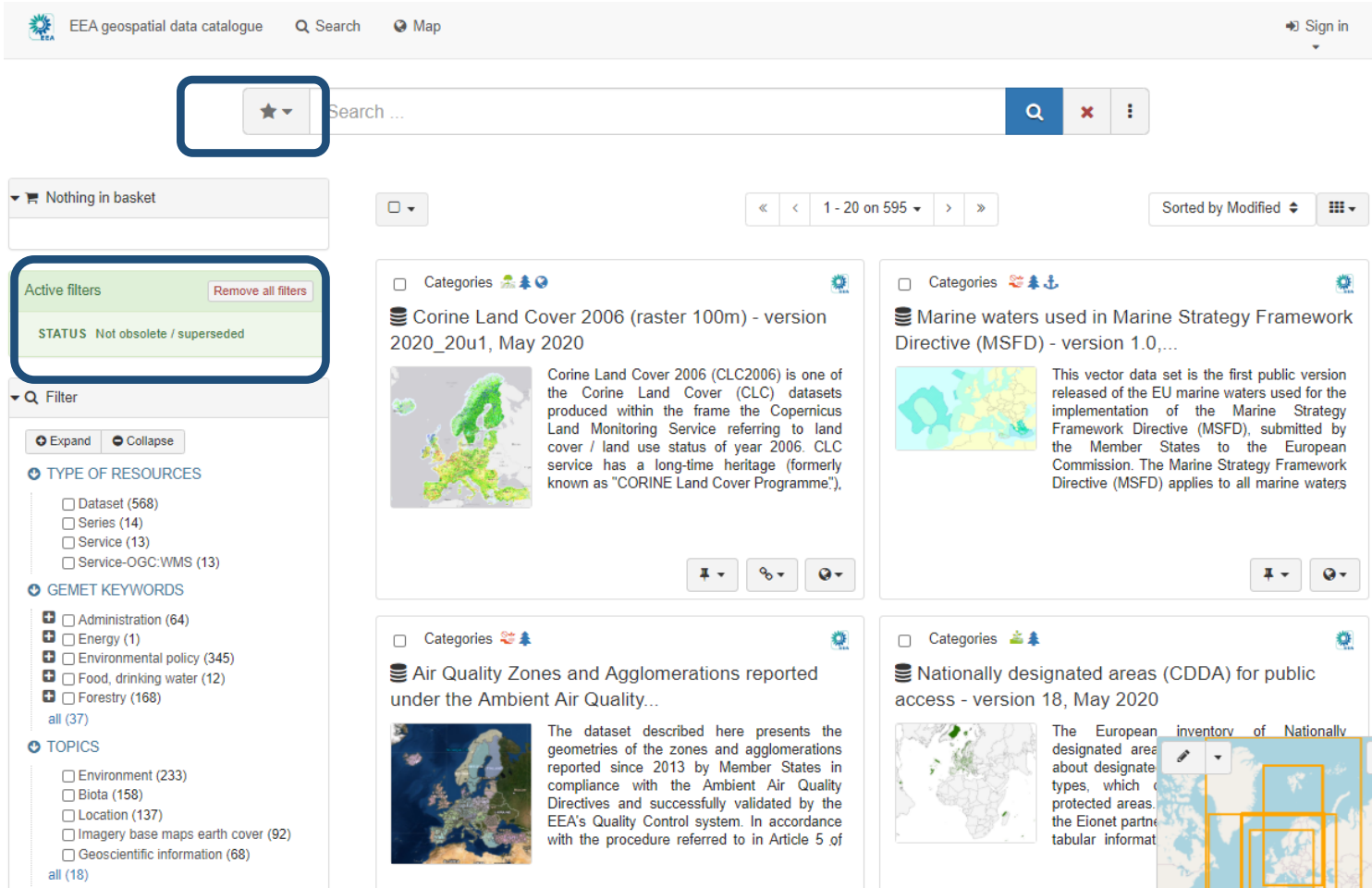
## EEA customised editor

- 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.

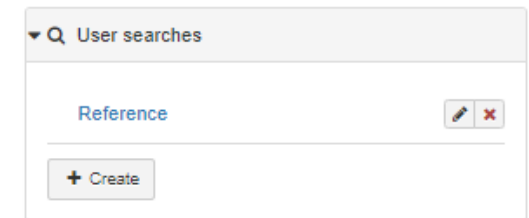
# EEA SDI The EEA catalogue – search interface

## 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

## Ecosystem types of Europe 2012 - Full map (marine and terrestrial habitats) - version 3 revision 1, Feb. 2019


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### Download and links

 <https://www.eea.europa.eu/data-and-maps/data/ecosystem-types-of-europe-1> Open link

 **Web download** Add to map

**WebDAV**


Open link


**CIFS**

Open link

**FTPS**


Open link

 This dataset is published in the view service (WMS) available at [https://bio.discomap.eea.europa.eu/arcgis/services/Ecosystem/EcosystemTypeMap\\_v3\\_1\\_FullMap/MapServer/WMServer?request=GetCapabilities&service=WMS](https://bio.discomap.eea.europa.eu/arcgis/services/Ecosystem/EcosystemTypeMap_v3_1_FullMap/MapServer/WMServer?request=GetCapabilities&service=WMS). Add service layer to map

 **ESRI REST service** Add to map

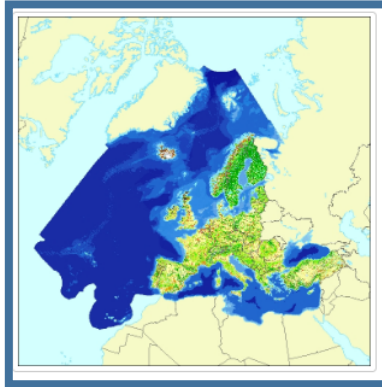
[https://bio.discomap.eea.europa.eu/arcgis/rest/services/Ecosystem/EcosystemTypeMap\\_v3\\_1\\_FullMap/MapServer](https://bio.discomap.eea.europa.eu/arcgis/rest/services/Ecosystem/EcosystemTypeMap_v3_1_FullMap/MapServer)

### Other resources

 **Ecosystem types of Europe - version 2.1, Dec. 2015** Associated resource (revision of)

The data set combines the Corine based MAES (Mapping and Assessment of Ecosystems and their Services) ecosystem classes with the non-spatial EUNIS habitat classification for a better biological characterization of ecosystems across Europe (EEA-39). As... more...

### Overview



### Spatial extent



### Temporal extent

Creation date

2018-12-31

Period

Sun Jan 01 2012 01:00:00 GMT+0100 ▶ Mon Dec 31 2012 01:00:00 GMT+0100

Provided by



Updated:

6 months ago

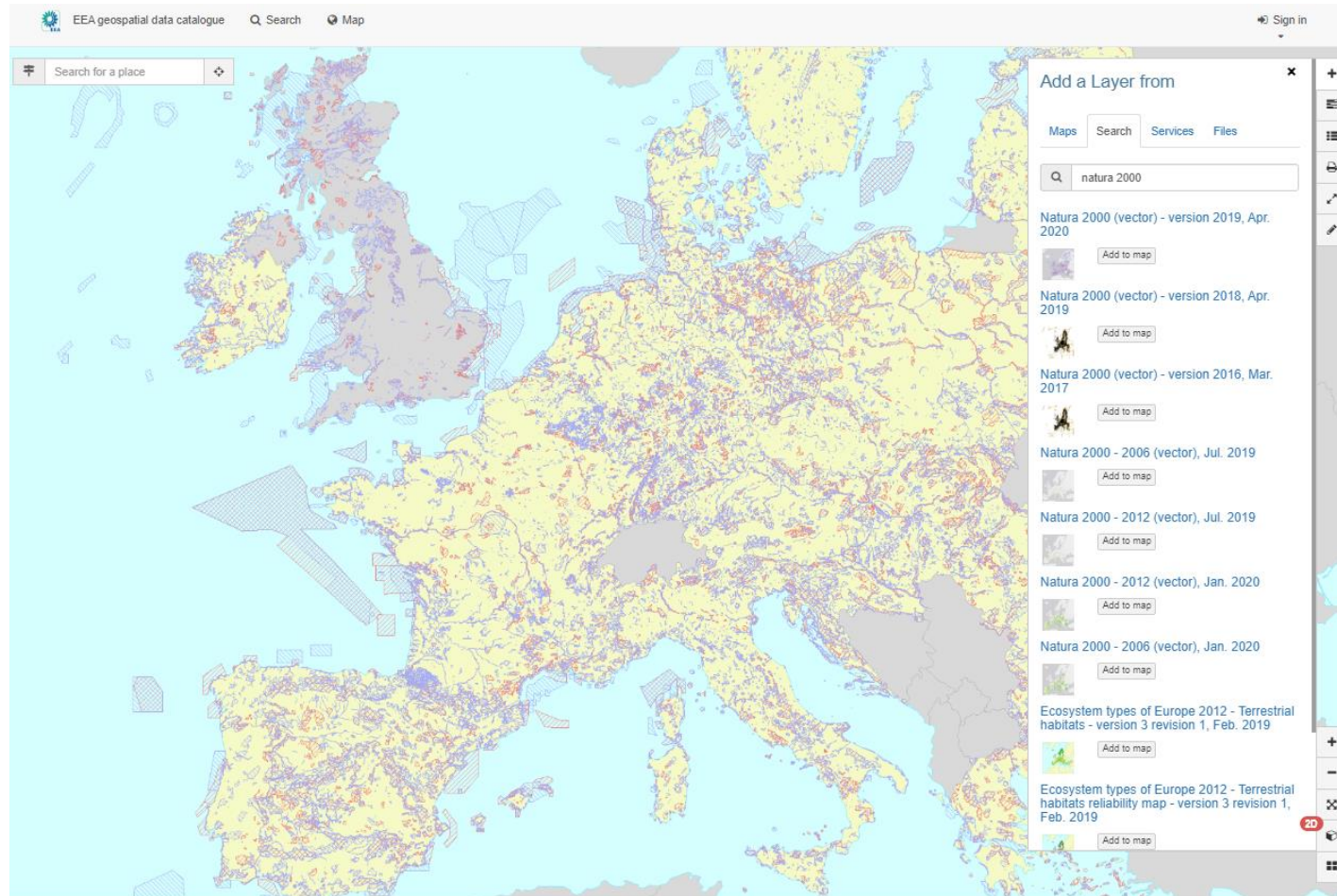
Share on social sites



## Standard EEA metadata content

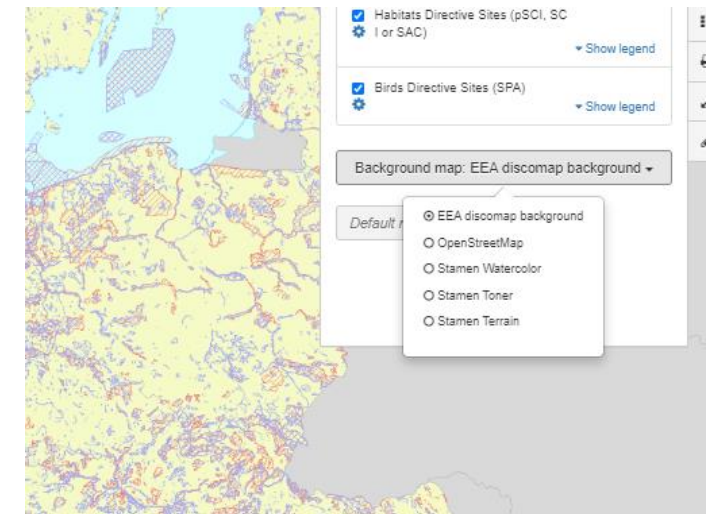
- Titles and identifiers are standardised
- Recommended content in abstract
- Graphic overview is obligatory
- Dataset download:
  - When dataset is public – link to EEA website
  - For internal use: Web Download (NextCloud), WebDAV, CIFS, FTPS
- Services: only view services
  - OGC WMS ([Discomap](#))
  - 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)

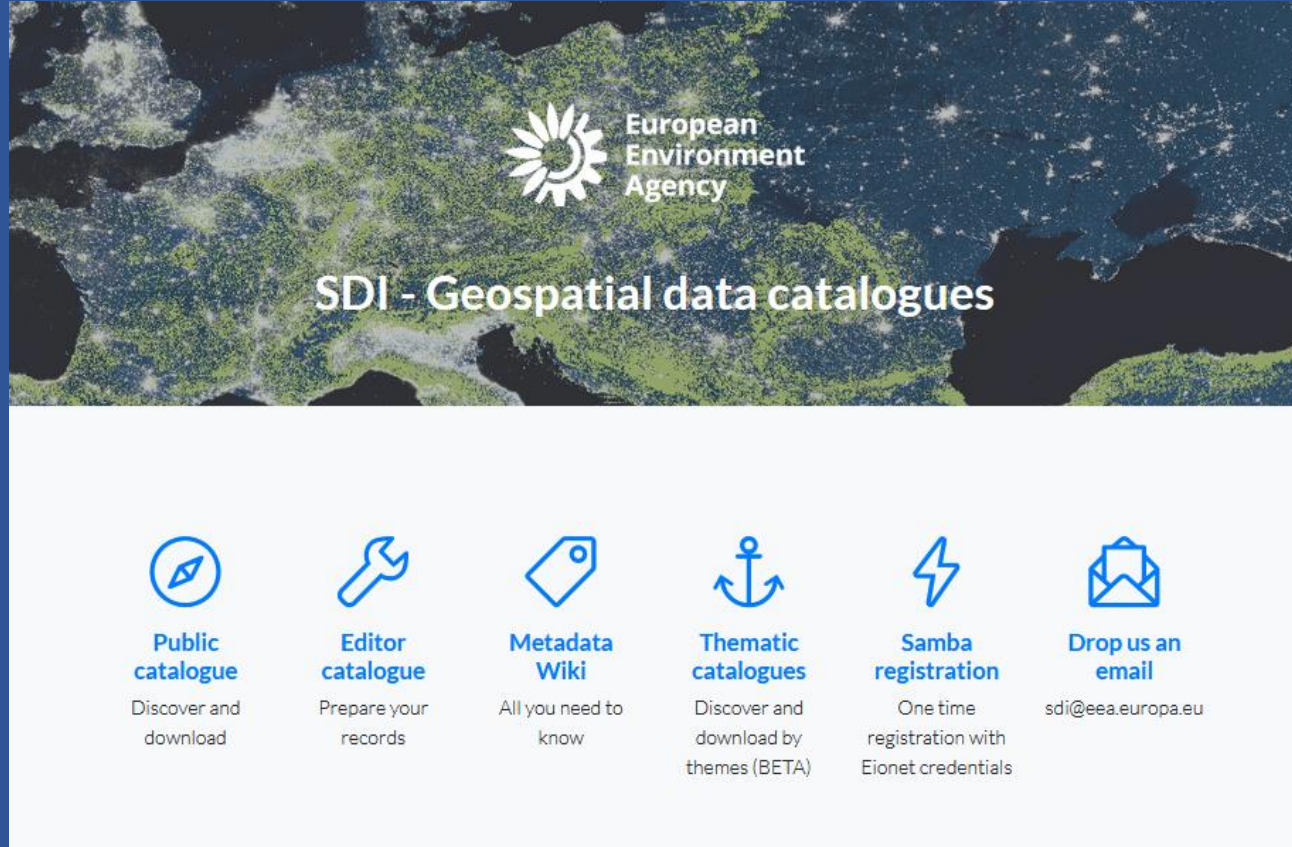


# EEA SDI The EEA catalogue – what's next?

- **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)







The banner features a satellite map of Europe as a background. In the top center, the European Environment Agency logo is displayed, consisting of a stylized sun icon and the text "European Environment Agency". Below the logo, the title "SDI - Geospatial data catalogues" is written in white. The bottom half of the banner is a white rectangular area containing six service icons and their descriptions.

European Environment Agency

SDI - Geospatial data catalogues

					
<b>Public catalogue</b>	<b>Editor catalogue</b>	<b>Metadata Wiki</b>	<b>Thematic catalogues</b>	<b>Samba registration</b>	<b>Drop us an email</b>
Discover and download	Prepare your records	All you need to know	Discover and download by themes (BETA)	One time registration with Eionet credentials	<a href="mailto:sdi@eea.europa.eu">sdi@eea.europa.eu</a>

**Thank you for your attention**

**[sdi@eea.europa.eu](mailto:sdi@eea.europa.eu)**  
**[jose.rubio@eea.europa.eu](mailto:jose.rubio@eea.europa.eu)**