

Open source geospatial software powering policy implementation: the INSPIRE central infrastructure components

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FOSS4G 2021 – 1 October 2021

INSPIRE Directive

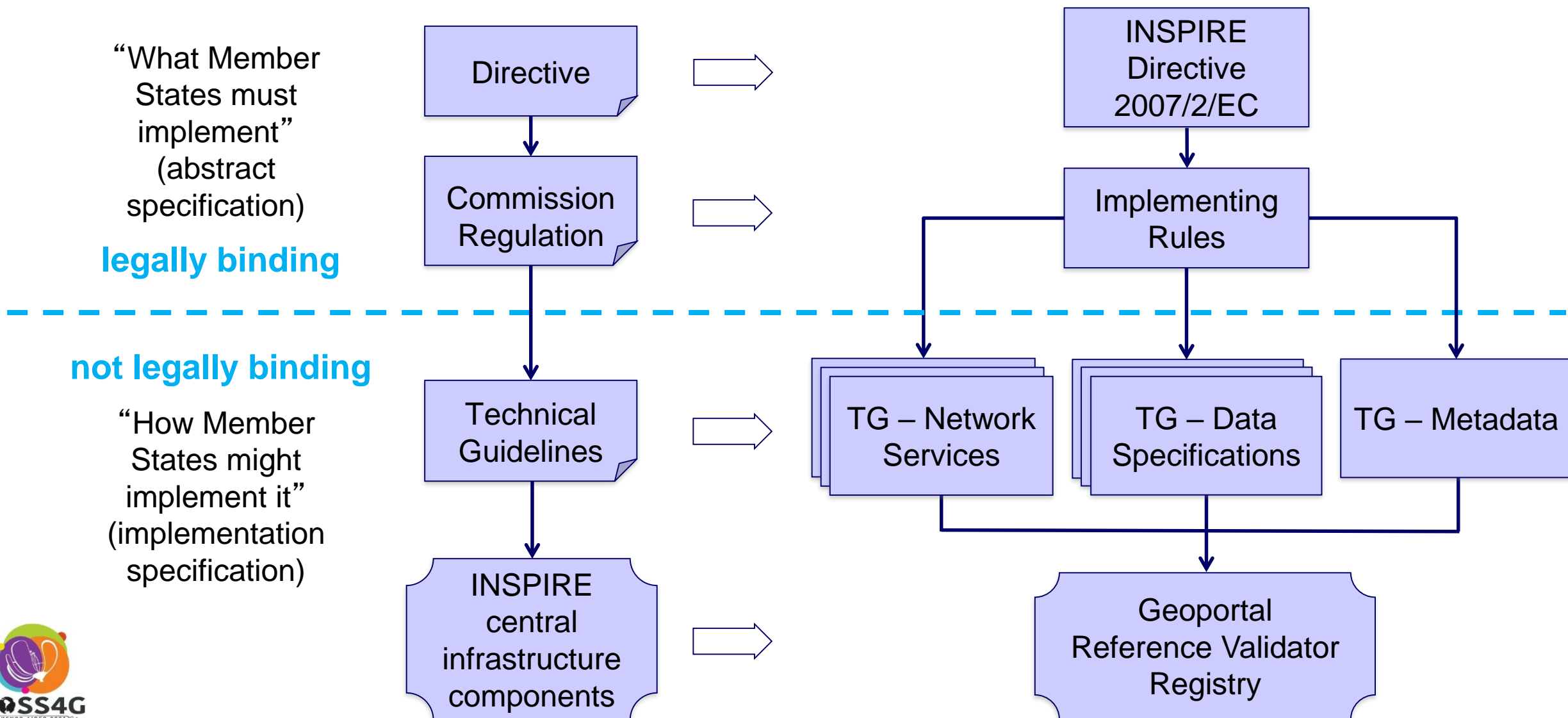
DIRECTIVE 2007/2/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 14 March 2007

establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)

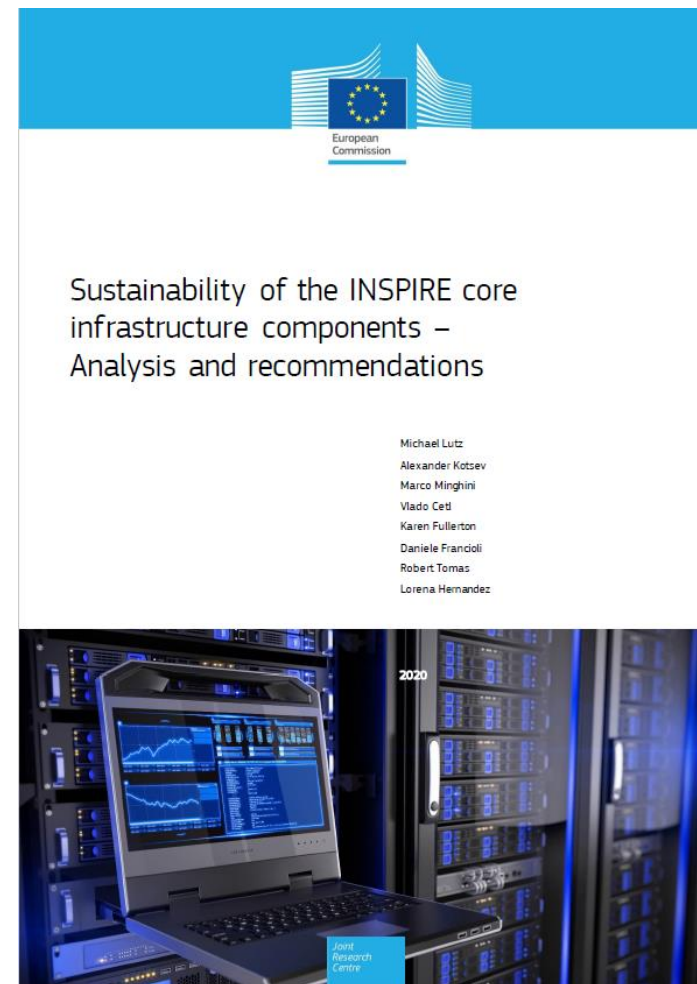
- Aims to create a **European SDI** to support EU environmental policies aligned with the current **green and digital** policy context.
- Provides a comprehensive framework for **interoperability of spatial data**:
 - **data** & service sharing
 - data & service discovery (**metadata**)
 - **network services**
- based on the SDIs established and operated by the EU Member States.

Implementing Rules, Technical Guidelines and central components



INSPIRE central infrastructure components

- Sustainable evolution of the INSPIRE central infrastructure components by:
 - focusing on the **INSPIRE specificity** and not on mainstream tool development
 - using of existing, mature **open source** software
 - harmonising the approach for **helpdesks**
 - extensively using the **cloud** to host the tools
 - improving transparency and dialogue with Member States
 - building **strategic partnerships** with stakeholders & communities (incl. OSGeo)



INSPIRE Geoportals

INSPIRE Geoportal

- Central point of access to all data shared under INSPIRE:
 - harvests national catalogues (does not store any data)
 - allows to search, view and download datasets
 - available filters:
 - priority datasets for environmental reporting
 - INSPIRE data themes



The screenshot shows the INSPIRE Geoportal website. At the top, there is the European Commission logo and the text 'INSPIRE GEOPORTAL' and 'Enhancing access to European spatial data'. Below this is a navigation bar with links for 'Home', 'Priority Data Sets Viewer', 'Thematic Viewer', 'Harvesting status', and 'Find out more about'. The main content area features a 'Welcome to the INSPIRE Geoportal' section, followed by a paragraph explaining the portal's purpose and a list of three key functions: monitoring data set availability, discovering data sets based on metadata, and accessing data sets. Below this is a paragraph about metadata harvesting and a link for feedback. Two application preview cards are shown: 'Priority Data Sets Viewer' and 'INSPIRE Thematic Viewer', each with a map icon and a brief description of their functionality and a 'Browse' button.

INSPIRE GEOPORTAL
Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal

[Home](#) [Priority Data Sets Viewer](#) [Thematic Viewer](#) [Harvesting status](#) [Find out more about](#)

Welcome to the INSPIRE Geoportal

The INSPIRE Geoportal is the central European access point to the data provided by EU Member States and several EFTA countries under the INSPIRE Directive. The Geoportal allows:

- monitoring the availability of INSPIRE data sets;
- discovering suitable data sets based on their descriptions (metadata);
- accessing the selected data sets through their view or download services.

The metadata used in the Geoportal are regularly harvested from the discovery services of EU Member States and EFTA countries. The status of harvesting is available [here](#).

Feedback regarding the functionality as well as data set availability is welcome [here](#).

Priority Data Sets Viewer



Credits: Map data: Google | Map style: snazzymap | Icons: Nick Roach

The application displays the availability and provides access to the selected priority data sets **1** used for environmental reporting. It allows filtering by environmental domain, environmental legislation and country, as well as individual priority data sets.

[Browse Priority Data Sets](#)

INSPIRE Thematic Viewer



Credits: Map data: Google | Map style: snazzymap | Icons: INSPIRE

The application displays the availability and provides access to all EU MS data sets falling under the scope of INSPIRE Directive filtered by data themes and countries (i.e. Annex I, II and III).

[Browse INSPIRE Thematic Data Sets](#)

INSPIRE Geoportal

- Filtering for priority datasets:
 - by environmental domain

Environmental Domains

Explore Member States' priority data sets grouped by the following Environmental Domains or individual data sets.

Domains Thematic Grouping List of data sets

Environmental Domain	Description	Individual Data sets	Downloads	Views
Air	Covers ambient air quality and cleaner air for Europe ...	113	46	38
Nature	Covers conservation of natural habitats and wild fauna and flora, wild birds...	310	215	198
Water	Covers the Water Framework Directives, Urban waste water, bathing water...	864	532	457
Noise	Covers ambient noise quality and noise for Europe...	409	247	228
Waste	Covers the landfill of waste, waste from extractive industries, soil...	28	13	14
Industrial emissions	Covers industrial emissions...	90	38	36
Industrial accidents	Covers industrial accidents...	26	20	20

INSPIRE Geoportal

- Filtering for priority datasets:
 - by environmental domain
 - by environmental legislation

Environmental Reporting Legislation

Explore Member States' priority data sets grouped by related e-Reporting legislation.

<p>Directive 1999/31/EC Landfill of Waste Directive</p> <p>35 10 11</p>	<p>Directive 2000/60/EC Water Framework Directive</p> <p>527 362 285</p>	<p>Directive 2002/49/EC Noise Directive</p> <p>504 323 321</p>	<p>Directive 2006/21/EC Extractive Waste Directive</p> <p>11 7 8</p>
<p>Directive 2006/7/EC Bathing Water Directive</p> <p>28 19 18</p>	<p>Directive 2007/60/EC Floods Directive</p> <p>479 175 278</p>	<p>Directive 2008/50/EC Air Quality Directive</p> <p>113 46 38</p>	<p>Directive 2008/56/EC Marine Strategy Framework Directive</p> <p>78 56 40</p>
<p>Directive 2009/147/EC Birds Directive</p> <p>96 63 62</p>	<p>Directive 2010/75/EU Industrial Emissions Directive</p> <p>43 18 17</p>	<p>Directive 2012/18/EU SEVESO III Directive</p> <p>26 20 20</p>	<p>Directive 86/278/EEC Sewage Sludge Directive</p> <p>14 4 4</p>
<p>Directive 91/271/EEC Urban Waste Water Treatment Directive</p> <p>94 70 70</p>	<p>Directive 91/676/EEC Nitrates Directive</p> <p>61 39 45</p>	<p>Directive 92/43/EEC Habitats Directive</p> <p>200 131 115</p>	<p>Directive 98/83/EC Drinking Water Directive</p> <p>31 14 12</p>
<p>Recommendation 2014/70/EU Recommendation on hydraulic fracturing</p> <p>8 4 4</p>	<p>Regulation (EC) 166/2006 European Pollutant Release and Transfer Register</p> <p>51 23 22</p>	<p>Regulation (EU) 1143/2014 Invasive Alien Species Directive</p> <p>28 22 22</p>	<p>Regulation (EU) 2017/852 Mercury Regulation</p> <p>5 1 1</p>
<p>EEA Annual Work Programme Nationally designated areas - CDDA</p> <p>47 34 37</p>	<p>National legislation National biogeographical regions</p> <p>20 13 13</p>		

INSPIRE Geoportal

- Filtering for INSPIRE data themes:

INSPIRE Data Themes

Explore all Member States' INSPIRE data sets by selecting an INSPIRE data theme.

Annex I

<p>Addresses — Def.: Location of properties based on address identifiers, usually by road name, house number, postal code.</p> <p>323 39 124</p>	<p>Administrative units — Def.: Units of administration, dividing areas where Member States...</p> <p>812 89 233</p>	<p>Cadastral parcels — Def.: Areas defined by cadastral registers or equivalent.</p> <p>7956 66 56</p>	<p>Geographical grid systems — Def.: Harmonised multi resolution grid with a common point of origin...</p> <p>139 19 10</p>
<p>Geographical names — Def.: Names of areas, regions, localities, cities, suburbs...</p> <p>1194 73 88</p>	<p>Hydrography — Def.: Hydrographic elements, including marine areas and all other water bodies and items related...</p> <p>1273 259 227</p>	<p>Protected sites — Def.: Area designated or managed within a framework of international, Community and Member States' ...</p> <p>1248 352 376</p>	<p>Coordinate reference systems — Def.: Systems for uniquely referencing spatial information in...</p> <p>156 18 11</p>
<p>Transport networks — Def.: Road, rail, air and water transport networks and related ...</p> <p>1792 384 562</p>			

Annex II

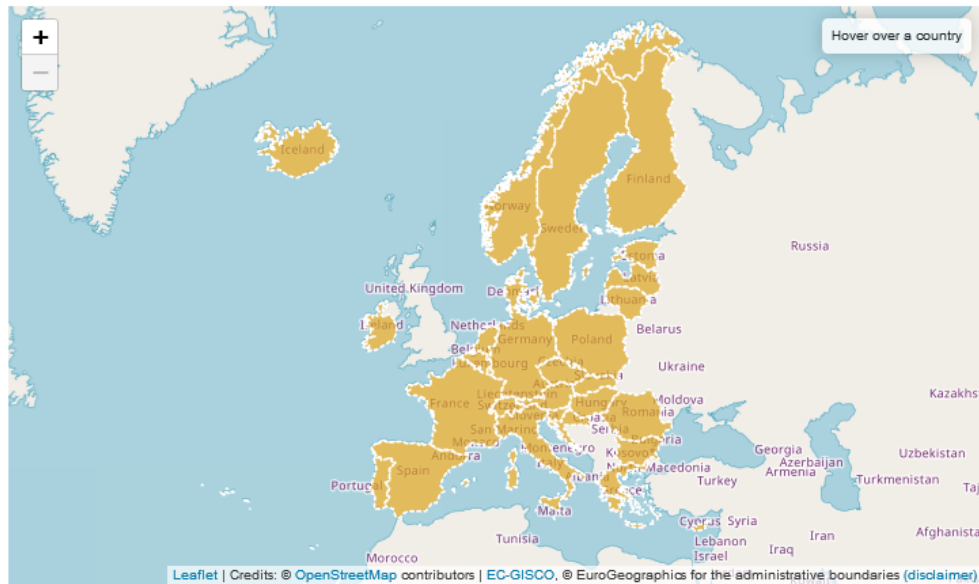
<p>Elevation — Def.: Digital elevation models for land, ice and ocean surface...</p> <p>884 99 231</p>	<p>Geology — Def.: Geology characterised according to composition...</p> <p>1197 245 310</p>	<p>Land cover — Def.: Physical and biological cover of the earth's surface...</p> <p>937 199 206</p>	<p>Orthoimagery — Def.: Geo-referenced image data of the Earth's surface, from either...</p> <p>1138 66 109</p>
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Annex III

<p>Atmospheric conditions — Def.: Physical conditions in the atmosphere. Includes spatial data based on measurements, on models...</p> <p>253 53 115</p>	<p>Agricultural and aquaculture facilities — Def.: Farming equipment and production facilities (including irrigation systems, greenhouses...</p> <p>156 35 37</p>	<p>Area management / restriction / regulation zones and reporting units — Def.: Areas managed, regulated...</p> <p>1887 701 728</p>	<p>Bio-geographical regions — Def.: Areas of relatively homogeneous ecological conditions with common characteristics.</p> <p>164 37 37</p>
<p>Buildings — Def.: Geographical location of buildings.</p> <p>845 135 122</p>	<p>Environmental monitoring facilities — Def.: Location and operation of environmental monitoring f...</p> <p>799 280 324</p>	<p>Energy resources — Def.: Energy resources including hydrocarbons, hydropower, bio-energy, solar, wind, etc...</p> <p>210 64 67</p>	<p>Habitats and biotopes — Def.: Geographical areas characterised by specific ecological...</p> <p>558 156 173</p>
<p>Human health and safety — Def.: Geographical distribution of dominance of pathology...</p> <p>626 267 292</p>	<p>Land use — Def.: Territory characterised according to its current and future planned functional...</p> <p>64144 40398 40754</p>	<p>Meteorological geographical features — Def.: Weather conditions and their measurements...</p> <p>300 61 127</p>	<p>Mineral resources — Def.: Mineral resources including metal ores, industrial minerals, ...</p> <p>150 60 62</p>
<p>Natural risk zones — Def.: Vulnerable areas characterised according to natural hazards ...</p> <p>1749 249 464</p>	<p>Oceanographic geographical features — Def.: Physical conditions of oceans (currents, salinity, ...</p> <p>206 47 26</p>	<p>Population distribution - demography — Def.: Geographical distribution...</p> <p>203 71 69</p>	<p>Production and industrial facilities — Def.: Industrial production sites, including installations...</p> <p>366 111 114</p>
<p>Species distribution — Def.: Geographical distribution of occurrence of animal an...</p> <p>246 110 114</p>	<p>Soil — Def.: Soils and subsoil characterised according to ...</p> <p>697 168 238</p>	<p>Sea regions — Def.: Physical conditions of seas and saline water bodies ...</p> <p>789 31 32</p>	<p>Statistical units — Def.: Units for dissemination or use of statistical inform...</p> <p>393 130 177</p>
<p>Utility and governmental services — Def.: Includes utility facilities such as sewage, waste ma...</p> <p>1346 385 462</p>			

INSPIRE Geoportal

INSPIRE Data Sets - EU & EFTA Country overview



INSPIRE Geoportal Data Set Statistics

91433

Metadata records

44828

Downloadable Data Sets

46442

Viewable Data Sets

Spatial scope coverage: National Regional

Select a COUNTRY

Austria	630 449 492	Finland	597 88 238	Latvia	166 100 99	Portugal	622 350 496
Belgium	577 377 488	France	218 75 17	Liechtenstein	69 10 12	Romania	103 35 38
Bulgaria	263 97 99	Germany	65393 41149 42184	Lithuania	132 126 59	Slovakia	345 83 96
Croatia	146 10 22	Greece	59 59 59	Luxembourg	304 283 243	Slovenia	91 12 32
Cyprus	42 32 34	Hungary	121 23 20	Malta	150 149 150	Spain	246 75 164
Czech Republic	165 60 87	Iceland	147 7 0	Netherlands	220 126 146	Sweden	245 189 217
Denmark	207 113 99	Ireland	76 0 0	Norway	161 71 28	Switzerland	218 2 4
Estonia	87 41 54	Italy	19470 528 668	Poland	163 109 97		

- Full country overview:
 - number of datasets (metadata)
 - number of viewable datasets
 - number of downloadable datasets
 - filter by national/regional coverage

INSPIRE Geoportal

- Access to single datasets:

Data sets by

Country: DK Denmark

DK 207 | Downloads 113 | Views 99

Filter results by: ▾

Properties:

Downloadable

Viewable

Spatial scope coverage:

National

Regional

Other

[✕ Reset](#)

Title	Show dataset titles in:	Properties
<input type="text" value="Search title"/>	original MD language ▾	
DK Havbundssediment 250.000		
DK Jordartskort 1:200.000		
DK INSPIRE_FloodRiskZone_1000aar		
DK INSPIRE_FloodAreas_2016_2021_1000aar		
DK INSPIRE_FloodRiskZone_100aar		
DK INSPIRE_FloodAreas_2016_2021_100aar		
DK INSPIRE PS Natura 2000 bird protection areas		
DK INSPIRE PS Natura 2000 Habitat Areas		
DK INSPIRE AM Surface Water Bodies WFD (2015 - 2021)		
DK INSPIRE EF Monitoring Stations WFD (2015 - 2021)		
Title		Properties

Show entries Showing 1 to 10 of 207 entries [Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) ... [21](#) [Next](#)

INSPIRE Geoportal

- Access to single datasets:
 - metadata
 - view service
 - download service


Data sets by


Country:  Denmark

 207 |  113 |  99


Filter results by: ▾


Properties:

 Downloadable

 Viewable


Spatial scope coverage:


 National



















































 Regional

Other

[✕ Reset](#)

 Countries ▾

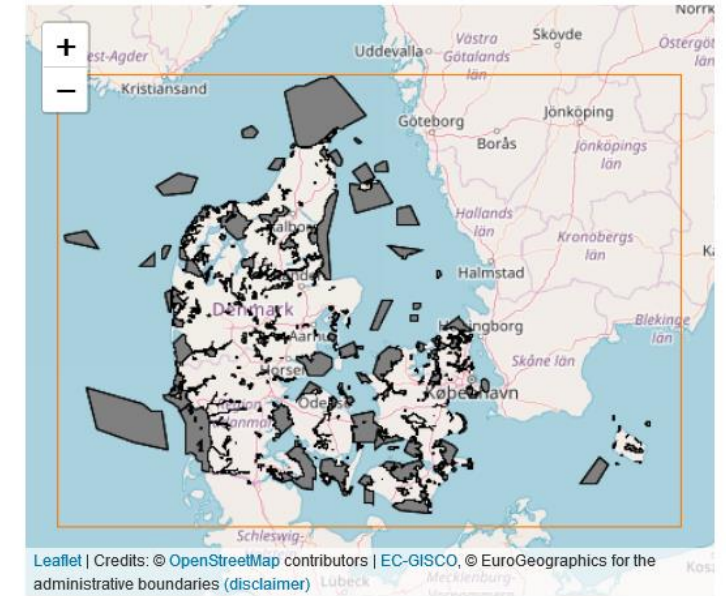
 Themes ▾

Title	Show dataset titles in:	Properties
<input type="text" value="Search title"/>	<input type="text" value="original MD language"/>	
 Havbundssediment 250.000		   
 Jordartskort 1:200.000		   
 INSPIRE_FloodRiskZone_1000aar		   
 INSPIRE_FloodAreas_2016_2021_1000aar		   
 INSPIRE_FloodRiskZone_100aar		   
 INSPIRE_FloodAreas_2016_2021_100aar		   
 DK INSPIRE PS Natura 2000 bird protection areas		   
 DK INSPIRE PS Natura 2000 Habitat Areas		   
 DK INSPIRE AM Surface Water Bodies WFD (2015 - 2021)		   
 DK INSPIRE EF Monitoring Stations WFD (2015 - 2021)		   
Title		Properties



Show entries Showing 1 to 10 of 207 entries [Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) ... [21](#) [Next](#)

PS.ProtectedSite (PS.ProtectedSite)

you might need to zoom-in to see the information



Legend

-  protected sites: polygon
-  protected sites: line

Close











INSPIRE Geoportal – Harvesting status

- Harvest of national catalogues:
 - requested by the catalogue responsible (not by us)
 - only when needed, e.g. when there are changes
 - results previewed in a sandbox and then accepted

Harvesting Status

This page informs about statuses of the harvesting of the officially registered Discovery Services of EU and some EFTA countries.

Geoportal harvest console

Country	Discovery Service Title	Publication date
 ES	Official Catalogue of INSPIRE Dataset and Services (CODSI) (CNIG en nombre del Consejo Superior Geográfico)	Tue, 28 Sep 2021 16:47:01 GMT
 PL	Geoportal - Polska Usługa Wyszukiwania INSPIRE (Główny Urząd Geodezji i Kartografii (GUGiK))	Mon, 27 Sep 2021 18:08:20 GMT
 SE	Nationell svensk metadatakatalog	Mon, 27 Sep 2021 06:13:02 GMT
 DK	Geodata-info søgjetjeneste (Styrelsen for Dataforsyning og Effektivisering)	Sat, 25 Sep 2021 09:41:58 GMT
 AT	INSPIRE Suchdienst Österreich	Fri, 24 Sep 2021 11:55:57 GMT
 EE	Estonian INSPIRE Discovery Service	Thu, 23 Sep 2021 05:16:09 GMT
 HR	NIPP kataloška usluga	Mon, 13 Sep 2021 13:18:52 GMT
 LV	Latvijas metadatu katalogs. GDS (Ģeotelpisko datu savietotājs) (organization name)	Mon, 13 Sep 2021 12:25:04 GMT
 BE	Metadata Vlaanderen CSW (Informatie Vlaanderen)	Wed, 08 Sep 2021 11:08:57 GMT
 NL	CSW Nationaal Georegister (NGR) (Beheer PDOK)	Tue, 07 Sep 2021 10:28:19 GMT
Country	Discovery Service Title	Publication date

Show 10 entries

Showing 1 to 10 of 35 entries

Previous 1 2 3 4 Next

INSPIRE Geoportal – Architecture

- Backend



- Frontend



INSPIRE Geoportal – Ongoing developments

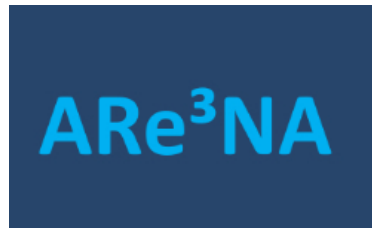
- Re-engineered **backend** based on GeoNetwork:
 - aligned with GeoNetwork's plan to move to **micro-services**
 - main focus is on the **harvesting module**
 - direct contribution to the main branch (no forks) to ensure **sustainability**
 - **containerisation & cloud** hosting
- New **frontend** to include an additional filtering option:
 - by **high-value datasets** – as specified in the upcoming Implementing Act following the 2019 Open Data Directive



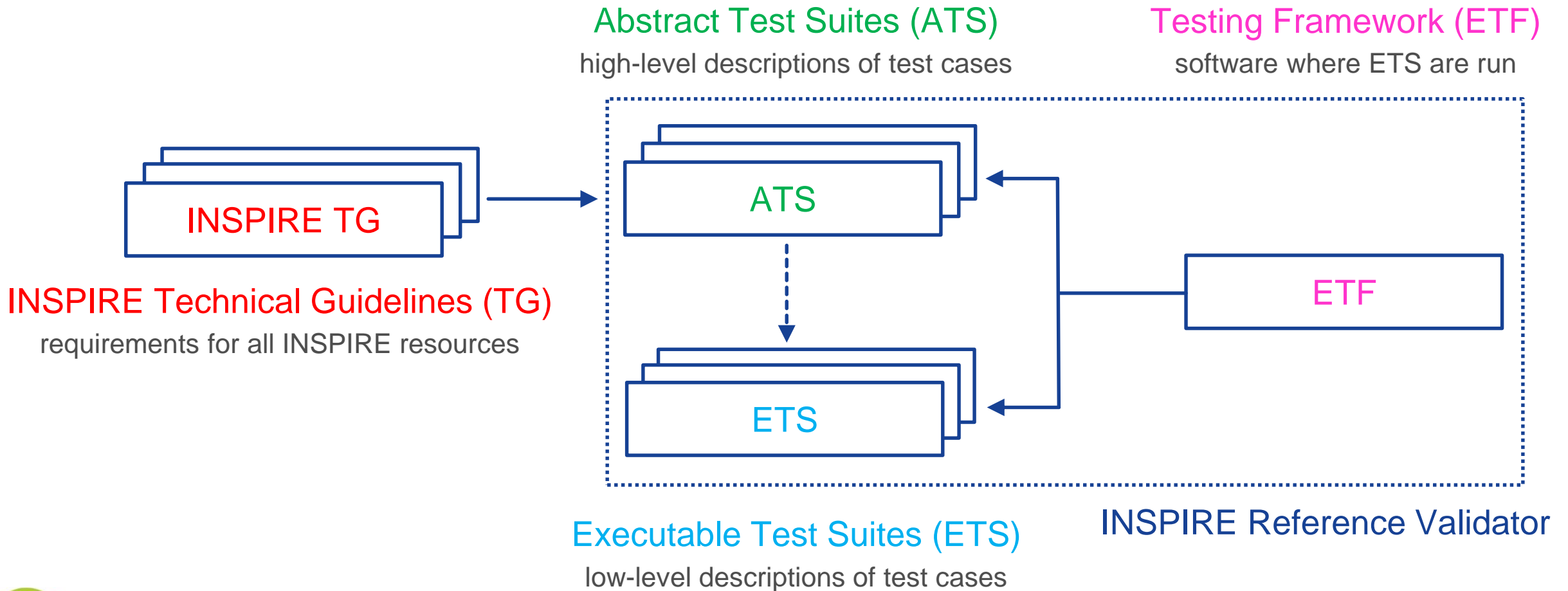
INSPIRE Reference Validator

INSPIRE Reference Validator

- Reasons to develop a common validator:
 - help Member States data providers **test resources** (metadata, data sets and network services) against INSPIRE requirements
 - help INSPIRE coordinators (DG ENV, JRC & EEA) and national coordinators **check INSPIRE implementation progress** in Member States & across Europe
 - support INSPIRE Monitoring and Reporting
 - help solution providers **check their software solutions** against INSPIRE requirements

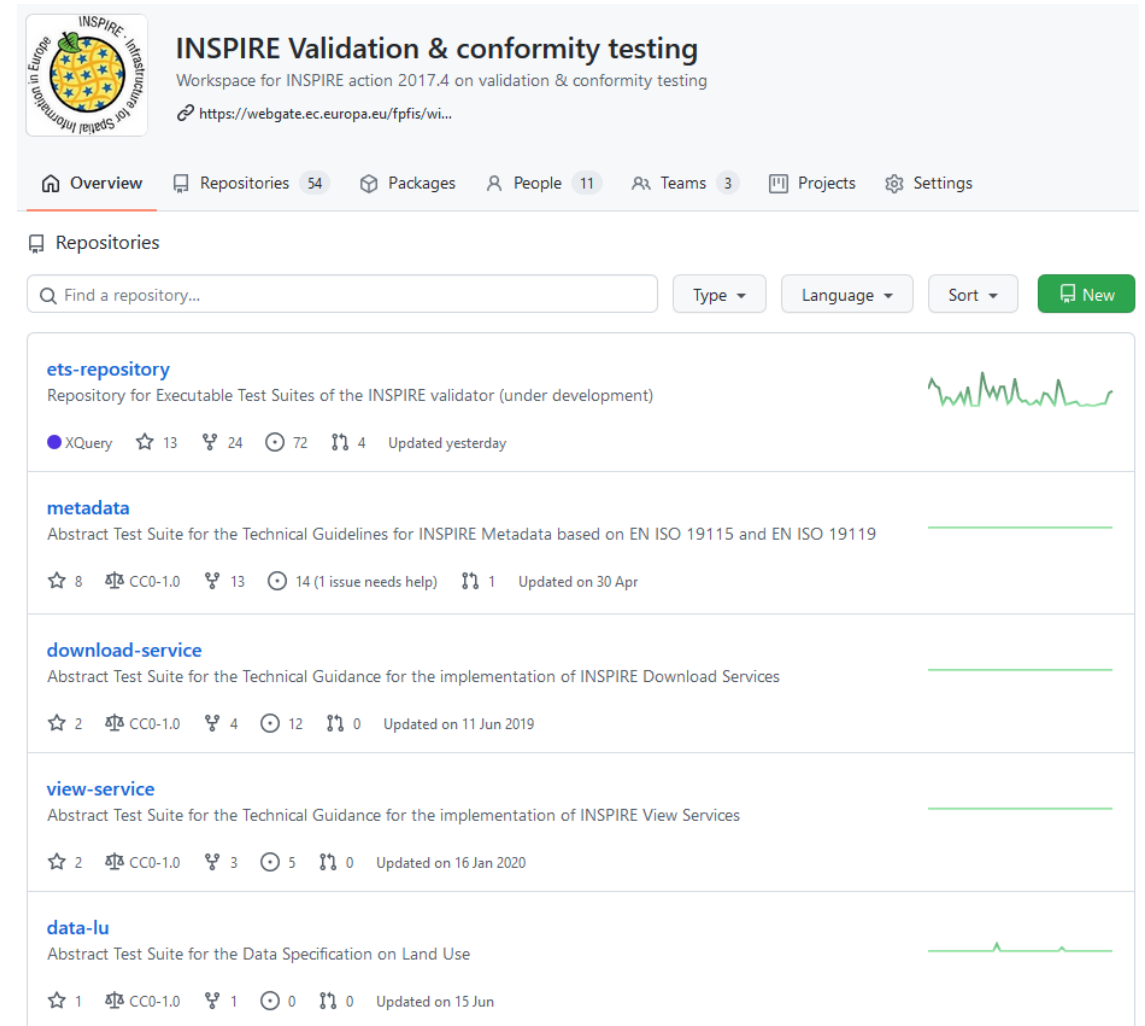


INSPIRE Reference Validator – Components



Abstract & Executable Test Suites

- ATS and ETS available for:
 - metadata
 - discovery services **CSW**
 - view services **WMS, WMTS**
 - download services **WFS, Atom, WCS, SOS, OGC API - Features (soon)**
 - data specifications
 - data encodings
 - Annex I/II/III data specifications



INSPIRE Validation & conformity testing
Workspace for INSPIRE action 2017.4 on validation & conformity testing
<https://webgate.ec.europa.eu/fpfis/wi...>

Overview Repositories 54 Packages People 11 Teams 3 Projects Settings

Repositories

Find a repository... Type Language Sort New

- ets-repository**
Repository for Executable Test Suites of the INSPIRE validator (under development)
XQuery 13 24 72 4 Updated yesterday
- metadata**
Abstract Test Suite for the Technical Guidelines for INSPIRE Metadata based on EN ISO 19115 and EN ISO 19119
8 CC0-1.0 13 14 (1 issue needs help) 1 Updated on 30 Apr
- download-service**
Abstract Test Suite for the Technical Guidance for the implementation of INSPIRE Download Services
2 CC0-1.0 4 12 0 Updated on 11 Jun 2019
- view-service**
Abstract Test Suite for the Technical Guidance for the implementation of INSPIRE View Services
2 CC0-1.0 3 5 0 Updated on 16 Jan 2020
- data-lu**
Abstract Test Suite for the Data Specification on Land Use
1 CC0-1.0 1 0 0 Updated on 15 Jun

ETF Testing Framework

- A **testing framework** is a software to run ETS.
- The INSPIRE Reference Validator makes use of the **ETF Testing Framework**:
 - a test framework to validate spatial data, metadata & web services in SDIs
 - developed since 2010
 - consistent with **standards** (ISO/OGC)
 - **open source** under EUPL v.1.2, current version: 2.0.0
- An ETF deployment is composed of a **database**, a **servlet container** and one or more **test drivers** to execute ETS:
 - currently supported test drivers are **SoapUI** for web services, **BaseX** for XML documents and **TEAM Engine** for OGC tests
- The ETF can be used from a **web application** and a **REST API**.

INSPIRE Reference Validator – Public UI

- New user interface offering:
 - simplified workflow for starting tests

The screenshot shows the public user interface for the INSPIRE Reference Validator. At the top, there is the European Commission logo and a search bar. The main header is dark blue with the text 'INSPIRE Reference Validator - Test selection' and a navigation menu with links for Home, Test selection, Test reports, Get support, and More on the INSPIRE Reference Validator. The main content area is titled 'Configure your test' and contains three sections of radio button options: 1. 'Select the INSPIRE resource you would like to test' with options: Metadata (selected), View Service, Download Service, Discovery Service, and Data set. 2. 'Select the Technical Guidelines version' with options: Version 1.3 - DEPRECATED and Version 2.0 (selected). 3. 'Select the type of metadata record(s) to be tested' with options: Data sets and data set series (selected), Network Service, and Spatial Data Service. Below these options is an 'Advanced options' dropdown. The next section is 'Provide the resource to test', which includes instructions on file upload and a 'File upload' dropdown menu. To the right of this menu is an 'Upload file*' section with a 'Choose files' button. The final section is 'Provide a label for your test report (optional)', with a text input field containing the text: 'Test run on 18:07 - 28.09.2021 with test suite Conformance Class 2b: INSPIRE data sets and data set series metadata for Monitoring'. A 'Start test >' button is located at the bottom right.

INSPIRE Reference Validator – Public UI

- New user interface offering:
 - simplified workflow for starting tests
 - new visualization of test reports with improved options for filtering

European Commission | EN English | Search

European Commission > INSPIRE > Validator > Test reports

INSPIRE Reference Validator - Test reports

Home Test selection Test reports Get support More on the INSPIRE Reference Validator

Search options

Combine search terms with: AND OR

Resource type: Any resource

Status: Any status

Refine results

Clear all

Search results (1010) Sort by date

Showing results 1 to 30

+	Test run on 17:09 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 17:06 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 17:40 - 28.09.2021 with test suite Common conformance classes - corso
+	Test run on 16:49 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 17:40 - 28.09.2021 with test suite Common conformance classes - corso
+	Test run on 16:38 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 16:33 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 15:54 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 15:53 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	TEST urn:x-wmo:md:de.dwd.cdc::OBS_DEU_PT1H_RF - 1632840705811
+	Test run on 15:49 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 10:31 - 28.09.2021 with test suite Annex II - Land Cover (LC)
+	Test run on 15:46 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 15:46 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 15:45 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+	Test run on 16:44 - 28.09.2021 with test suite Conformance Class 2b: INSPIRE data sets and data set series metadata for Monitoring

< Previous 1 2 3 4 5 6 7 8 9 ... 32 33 34 Next >

INSPIRE Reference Validator – Public UI

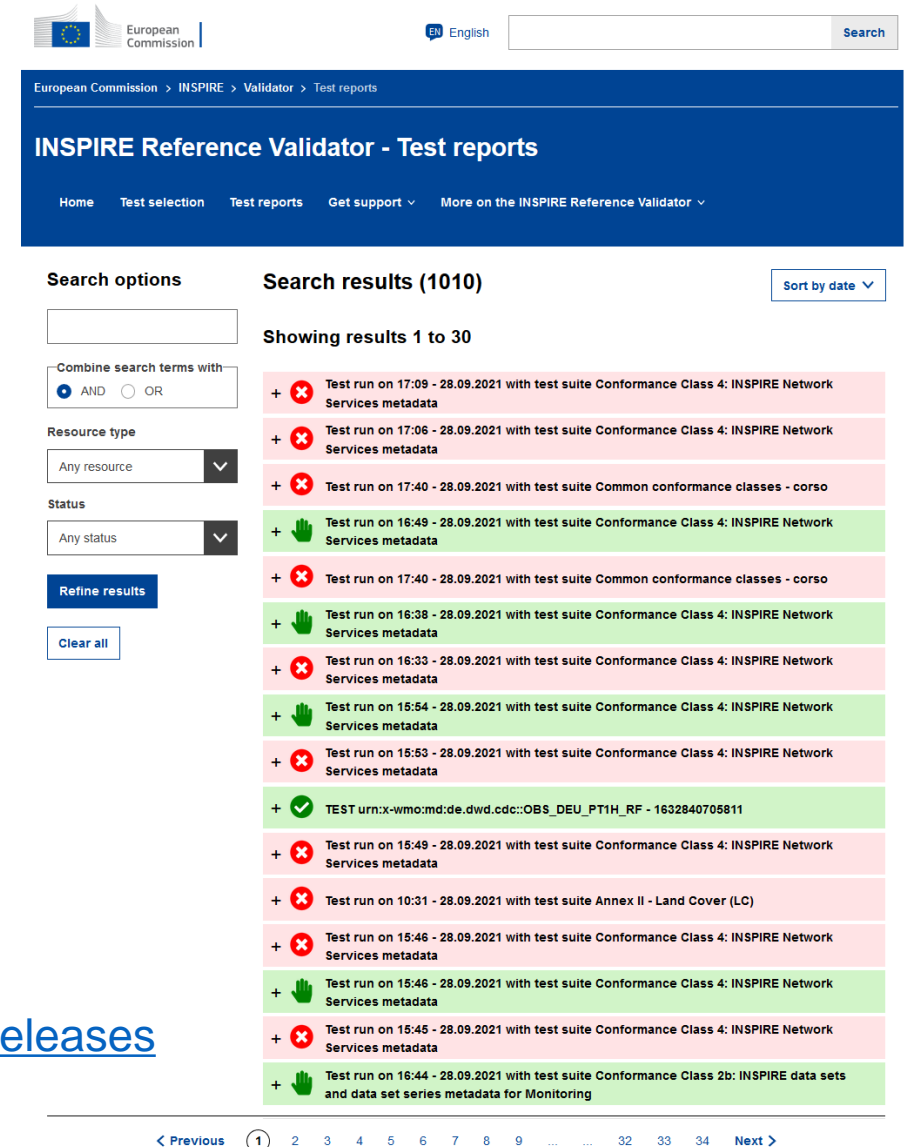
- New user interface offering:
 - simplified workflow for starting tests
 - new visualization of test reports with improved options for filtering
- 2 instances available:

- staging instance: includes bug fixes & new features for testing purposes
- production instance: includes only consolidated developments

- 4 releases per year:

<https://github.com/INSPIRE-MIF/helpdesk-validator/releases>

<https://inspire.ec.europa.eu/validator>



The screenshot displays the public user interface for the INSPIRE Reference Validator. At the top, there is a navigation bar with the European Commission logo, language selection (EN English), and a search bar. Below the navigation bar, the page title is "INSPIRE Reference Validator - Test reports". The main content area is divided into two columns: "Search options" and "Search results (1010)".

Search options:

- A search input field.
- Combine search terms with: AND OR
- Resource type: Any resource (dropdown menu)
- Status: Any status (dropdown menu)
- Buttons: "Refine results" and "Clear all"

Search results (1010):

Showing results 1 to 30. A "Sort by date" dropdown menu is available.

Icon	Test Report Description
+ [X]	Test run on 17:09 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 17:06 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 17:40 - 28.09.2021 with test suite Common conformance classes - corso
+ [Hand]	Test run on 16:49 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 17:40 - 28.09.2021 with test suite Common conformance classes - corso
+ [Hand]	Test run on 16:38 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 16:33 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [Hand]	Test run on 15:54 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 15:53 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [Checkmark]	TEST urn:x-wmo:md:de.dwd.cdc::OBS_DEU_PT1H_RF - 1632840705811
+ [X]	Test run on 15:49 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 10:31 - 28.09.2021 with test suite Annex II - Land Cover (LC)
+ [X]	Test run on 15:46 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [Hand]	Test run on 15:46 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [X]	Test run on 15:45 - 28.09.2021 with test suite Conformance Class 4: INSPIRE Network Services metadata
+ [Hand]	Test run on 16:44 - 28.09.2021 with test suite Conformance Class 2b: INSPIRE data sets and data set series metadata for Monitoring

At the bottom, there is a pagination bar with "Previous", "1", "2", "3", "4", "5", "6", "7", "8", "9", "...", "32", "33", "34", and "Next" buttons.



INSPIRE Registry

Re³gistry software

- A reusable **open source** solution for managing and sharing **reference codes** through the use of persistent URIs and a clear **governance** approach.
 - code lists, taxonomies, thesauri, «lists of things»
- Provides a **central access point** allowing labels and descriptions for reference codes to be easily looked up by **humans** or retrieved by **machines**.



for any data infrastructure
(not only SDIs)!

<https://joinup.ec.europa.eu/collection/are3na/solution/re3gistry/about>

Re³gistry: where to find it?



Re3gistry 2 software

license EUPL 1.2

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About the Re3gistry 2

The Re3gistry 2 is a reusable open source solution for managing and sharing "reference codes".

It provides a consistent central access point where labels and descriptions for reference codes can be easily browsed by humans and retrieved by machines.

Reference codes are exchanged between applications to uniquely reference some 'thing'. They can be used to define sets of permissible values for a data field or to provide a reference or context for the data being exchanged. Examples are enumerations, controlled vocabularies, taxonomies, thesauri or, simply, 'lists of things'.

The Re3gistry 2 supports organisations in managing and updating reference codes in a consistent way.

The Re3gistry software version numbers comply with the [Semantic Versioning Specification 2.0.0](#).

<https://github.com/ec-jrc/re3gistry>

Re³gistry: where to find it?



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English | Deutsch | Español | Suomen kieli | Français | Italiano | 日本語 | Hungarian

Re3gistry

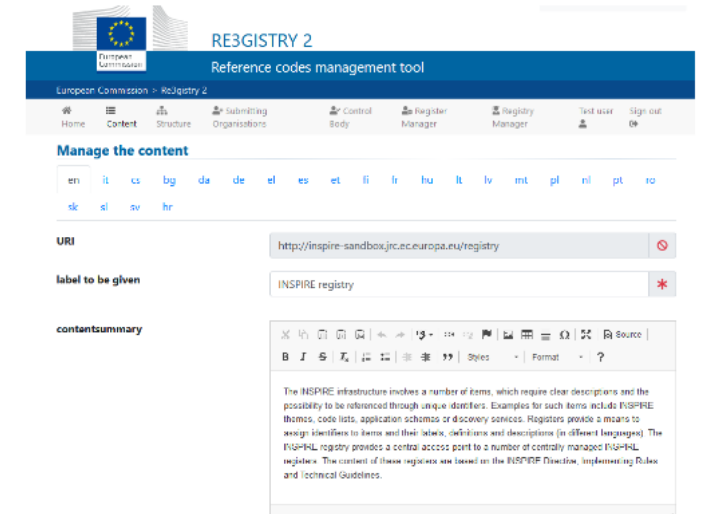
About

The Re3gistry 2 is a reusable open source solution for managing and sharing "reference codes". Initially developed as a central component of the EU's [INSPIRE](#) infrastructure, it provides a consistent central access point where labels and descriptions for reference codes can be easily browsed by humans and retrieved by machines. Reference codes are exchanged between applications to uniquely reference some 'thing'. They can be used to define sets of permissible values for a data field or to provide a reference or context for the data being exchanged. Examples are enumerations, controlled vocabularies, taxonomies, thesauri or, simply, 'lists of things'. The Re3gistry 2 supports organisations in managing and updating reference codes in a consistent way. The Re3gistry software version numbers comply with the Semantic Versioning Specification 2.0.0.



Core Features

- User-friendly editing interface to easily add, edit and manage the registers and reference codes
- Management of the full lifecycle of the reference codes (based on the ISO 19135 Standard)
- Highly flexible and customisable data models
- Multi-lingual content support
- Support for versioning
- RESTful API with content negotiation (including OpenAPI 3 descriptor)
- Free-text search
- Supported formats: HTML, ISO 19135 XML, JSON
- Service formats can be easily added or customised (default formats: JSON and ISO 19135 XML)
- Multiple authentication options
- Externally governed items referenced through URIs
- INSPIRE register federation format support (option to automatically create the RoR format)
- Web-app to access the reference codes in a human readable way.



https://live.osgeo.org/it/overview/re3gistry_overview.html

https://live.osgeo.org/it/quickstart/re3gistry_quickstart.html



INSPIRE Registry

INSPIRE registry

Help us improving the **Re3gistry software**! Please fill our quick survey at <http://europa.eu/!Bn84Ct>

ID: <http://inspire.ec.europa.eu/registry>

Label: **INSPIRE registry**

Content Summary: The INSPIRE infrastructure involves a number of items, which require clear descriptions and the possibility to be referenced through unique identifiers. Examples for such items include INSPIRE themes, code lists, application schemas or discovery services. Registers provide a means to assign identifiers to items and their labels, definitions and descriptions (in different languages). The INSPIRE registry provides a central access point to a number of centrally managed INSPIRE registers. The content of these registers are based on the INSPIRE Directive, Implementing Rules and Technical Guidelines.

Registry manager: **European Commission, Joint Research Centre**

Other formats:



Registers

Filter Label
Label
INSPIRE application schema register
INSPIRE code list register
INSPIRE enumeration register
INSPIRE feature concept dictionary
INSPIRE glossary
INSPIRE layer register
INSPIRE media-types register
INSPIRE metadata code list register
INSPIRE reference document register
INSPIRE theme register

Items per page Showing 1 to 10 of 10 entries

First Previous **1** Next Last

- Currently:
 - 10 registers
 - 10000+ items
 - 23 languages
 - 7 formats

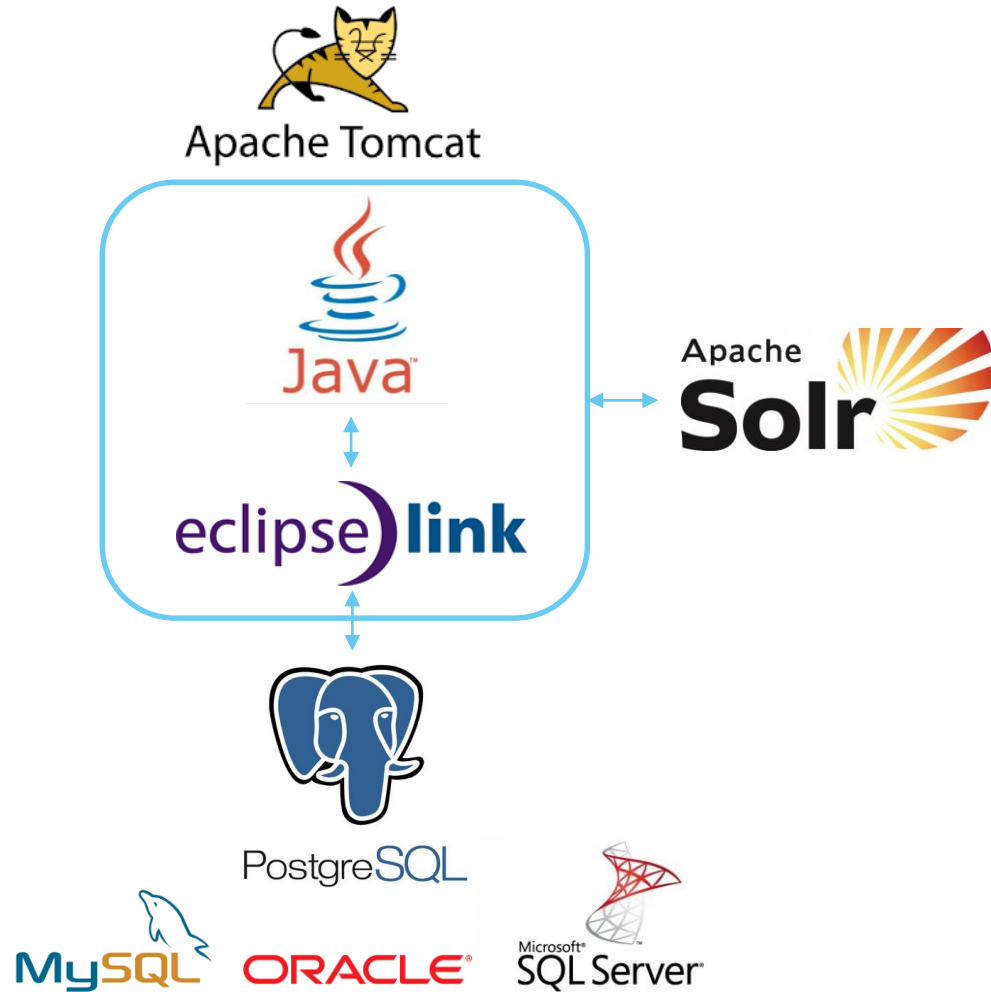


<https://inspire.ec.europa.eu/registry>



Re³gistry: architecture

BACKEND



FRONTEND



Re³gistry v.2: functionalities

- Multi-lingual support
- Several formats (JSON, XML, RDF, etc.) – extensible
- Ready-to-use & customisable public user interface
- User, admin & developer manuals
- Simple management of users and groups
- User-friendly editing interface
- Integration of ISO 19135:2005 procedures to register reference codes
- Integrated, OpenAPI-compliant REST API
- Simple data export and indexing (provided by Solr)
- Guided installation procedure, including migration from Re³gistry v.1.3
- RSS feed
- RoR format to facilitate federation

The screenshot shows the INSPIRE Registry v.2 interface. At the top, there's a navigation bar with the European Commission logo and the text 'INSPIRE Registry'. Below this, a search bar and a language selector (English (en)) are visible. The main content area is titled 'application' and contains a search engine. A survey link is present: 'Help us improving the Re3gistry software! Please fill our quick survey at http://europa.eu/1bn04ct'. The application details include: ID: http://inspire.ec.europa.eu/media-types/application; This version: http://inspire.ec.europa.eu/media-types/application:1; Latest version: http://inspire.ec.europa.eu/media-types/application. There are links for 'PersistentURI' and 'Versioning'. The 'Label' and 'Definition' fields are highlighted as 'Customisable fields'. The 'Status' is 'Valid', with a note 'Item lifecycle management'. Below, there are icons for 'Other formats': RDF/XML, JSON, Atom, and CSV, labeled 'Default formats + JSON API'. A table of 'Subtypes' is shown with columns for 'Label' and 'Status'. The table lists various media types like 'atom+xml', 'geo+json', 'gml+xml', etc. Some entries have external links (e.g., 'vnd.google-earth.kml+xml') and others have internal links (e.g., 'x-ecw'). Annotations point to 'Link to Externally managed values' and 'Internally managed values'. The footer contains 'INSPIRE registry', 'Powered by: Re3gistry 1.3', and navigation links for INSPIRE, NEWS & EVENTS, INSPIRE Tools, and INSPIRE registry.

Register Federation

- Created as a testbed to **join together national/sectorial extensions** of INSPIRE data models in a single place to facilitate sharing of codes.
- Fully **compatible with the Re³gistry**.
- **RoR (Register of Registers)** format.
- Ready-to-use and customisable **public user interface** (webapp).
- To be released as **open source** in the coming months.



The screenshot shows the INSPIRE Register Federation web application. The header includes the European Commission logo and the text 'INSPIRE Register Federation'. Below the header is a navigation menu with 'Registries', 'Registers', 'Relations', 'Federated search', and 'Help'. The main content area is titled 'Registries' and contains a table with two columns: 'Label' and 'Publisher'. The table lists various registries and their publishers, including the European Geoscience Registry, the French INSPIRE registry, and the IUGS CGI Geoscience Vocabularies for Linked Data.

Filter Label	Filter Publisher
Label	Publisher
European Geoscience Registry	BRGM ↗
Système de publication de registres de l'IDG française	BRGM ↗
INSPIRE registry	European Commission, Joint Research Centre ↗
EEA Data Dictionary vocabularies	European Environment Agency ↗
Austrian INSPIRE registry	CCCA Data Centre ↗
INSPIRE Italia Registry	Agency for Digital Italy ↗
Lithological Classification Austria - extended values	Geological Survey of Austria ↗
Spanish INSPIRE registry	Centro Nacional de Información Geográfica ↗
BRGM (French geological survey) registry tool	BRGM ↗
IUGS CGI Geoscience Vocabularies for Linked Data	Geoscience Terminology Working Group (GTWG) ↗

Summary

Summary

INSPIRE central infrastructure component	Source code & community support	Underlying open source software
INSPIRE Geoportal https://inspire-geoportal.ec.europa.eu	https://github.com/INSPIRE-MIF/helpdesk-geoportal	GeoNetwork (WIP) https://github.com/geonetwork
INSPIRE Reference Validator https://inspire.ec.europa.eu/validator	https://github.com/inspire-eu-validation https://github.com/INSPIRE-MIF/helpdesk-validator	ETF Testing Framework https://github.com/etf-validator
INSPIRE Registry https://inspire.ec.europa.eu/registry	https://github.com/INSPIRE-MIF/helpdesk-registry	Re3gistry https://github.com/ec-jrc/re3gistry

Thank you!



<https://git.io/JgYBv>



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[@MarcoMinghini](https://twitter.com/MarcoMinghini)



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