

# EU Spatial Data Infrastructure INSPIRE “State of the play”

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Joint Research Centre

The European Commission's science and knowledge service



# INSPIRE = enabling interoperability for public administrations, businesses and citizens



*in force since 2007*



**INSPIRE**  
"lingua  
franca" for  
geospatial  
data

**INSPIRE** is to build an **EU-wide infrastructure for geospatial information** enabling:

- **interoperability** for public administration, businesses & citizens **in support** of the **Digital Single Market**
- **e-reporting & Better Regulation** in the env. domain
- **innovative applications** in other policy areas & cross border e.g. Intelligent Transport Systems, Energy efficiency, Disaster management..
- **culture change** in data management & provision practices in Public administration (all levels)



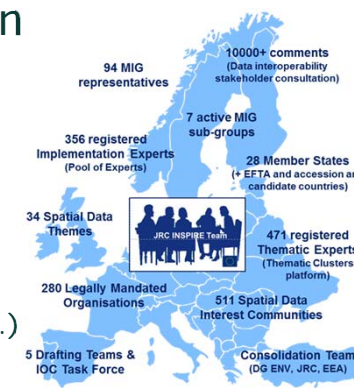
in **close collaboration** with  
**all types of stakeholders**

(e.g. communities of practice, legally mandated organizations, solution providers..)

**Support to  
SMEs**

**SME /  
SPIRE**

**Stakeholders  
engagement**



***"INSPIRE has been a pioneer of European digital society and economy"***

- by Roberto Viola, Director General DG CONNECT – during INSPIRE Conference 2017 (6-8.9.2017)



# INSPIRE Directive – Governance & Coordination

- **INSPIRE Coordination Team (CT):**
  - Directorate General Environment (DG ENV), Joint Research Centre (JRC), Eurostat (ESTAT) & European Environmental Agency (EEA)
- **INSPIRE Committee (IC):**
  - Member States representatives
- Member States **National Contact Points (NCPs)**
- **INSPIRE Maintenance and Implementation Group (MIG):**
  - representatives of the NCPs
  - **MIG-P** (Political) & **MIG-T** (Technical)
  - Maintenance and Implementation Work Programme (**MIWP**)
- **INSPIRE stakeholders**





# INSPIRE Directive – Where are we in 2019?

in force since 2007



Implementation in subsequent **stages**:

- depending on the **Annex**: **Annex 1-3**
- depending on the **resource type**: metadata; services (**Discovery / View / Download**); data sets (as-is / compliant).

2005 - 2014



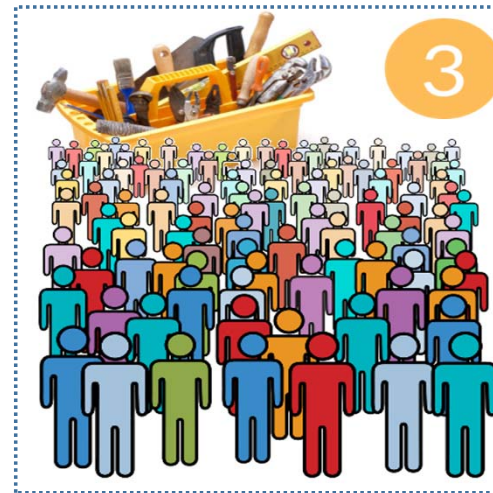
draft

2007 - 2021

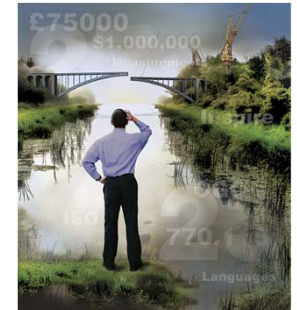


implement

2014 - ...



use



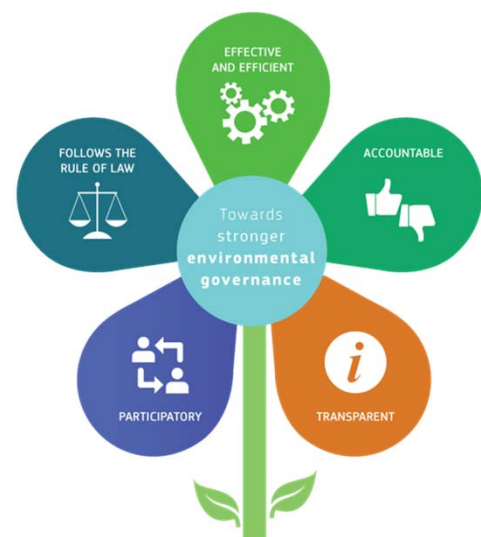
<https://inspire.ec.europa.eu/inspire-roadmap>

# INSPIRE Directive – Better regulation, Refit, Mid-term evaluation (2014-2016)



Main results from “Commission stock taking exercise”:

- MS data access & use **simplification** = **New INSPIRE GEOPORTAL, TOOLS, PILOTS**
- Better Regulation in e-reporting = **re-use** of INSPIRE = **Priority data sets for e-reporting**
- Revision of Monitoring and Reporting Decision
- Revision of EC Regulation on spatial data and service interoperability



**Hiding  
complexity**



**More  
flexibility**

New Maintenance and  
Implementation Work Plan  
MIWP2016-2020

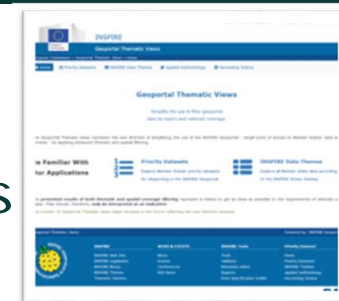


<https://webgate.ec.europa.eu/fpfis/wikis/pages/viewpage.action?pageId=268249090>

# New INSPIRE GEOPORTAL

Officially launched 18.9. 2018 during the INSPIRE Conference 2018

- **Single access point** to EU Spatial Data Infrastructure
  - Harvesting data (Metadata) from 36 national catalogues
  - 150 000+ data sets described (by Metadata)
  - 23 000 + data sets viewable (by View services)
  - 12 000+ data sets downloadable (by Download services)
- Based on the concept of “**THEMATIC VIEWS**”:
  - **User-centric** = easy to use – set of predefined thematic views.
  - **Data sets-centric** = main goal is to get the data!!
  - **Provide clear & reliable overviews** of INSPIRE data sets availability.
- **Integration** with other INSPIRE tools/platforms (e.g Validator, Registry)



<http://inspire-geoportal.ec.europa.eu/>


# New INSPIRE GEOPORTAL

Officially launched 18.9. 2018 during the INSPIRE Conference 2018

Allows to search, view & download data sets using 2 viewers:

- Priority Data Sets Viewer
- INSPIRE Thematic Viewer

**Priority Data Sets Viewer**




Credits: Map: data: Google | Map: styles: snazzy | 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.

[Browse Priority Data Sets](#)

**INSPIRE Thematic Viewer**



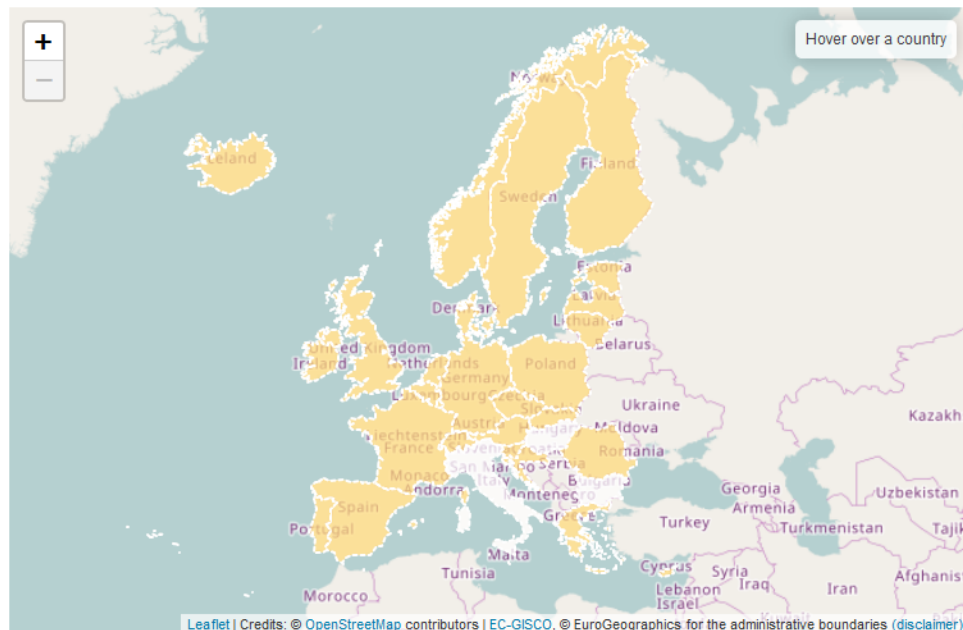
Credits: Map: data: Google | Map: styles: snazzy | Icons: INSPIRE

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](#)

<http://inspire-geoportal.ec.europa.eu/>

# INSPIRE Geoportal – Implementation overview



Show:



Downloadable



Viewable

## INSPIRE Geoportal Data Set Statistics

156699

Metadata  
records

12020

Downloadable  
Data Sets

## Select a COUNTRY

Austria	547   400   414	Finland	602   51   52	Latvia	140   3   4	Portugal	738   131   236
Belgium	543   170   405	France	39055   1099   13173	Liechtenstein	57   9   11	Romania	119   20   14
Bulgaria	29   0   0	Germany	32101   9248   10643	Lithuania	48   1   5	Slovakia	7180   4   12
Croatia	121   3   4	Greece	41   34   34	Luxembourg	224   211   169	Slovenia	95   8   8
Cyprus	42   28   6	Hungary	110   0   1	Malta	158   128   151	Spain	219   141   143
Czech Republic	147   14   93	Iceland	142   7   0	Netherlands	210   113   131	Sweden	285   28   136
Denmark	189   20   21	Ireland	54   4   0	Norway	223   12   11	Switzerland	213   1   3
Estonia	73   15   23	Italy	20130   0   388	Poland	32077   53   16	United Kingdom	20787   64   316

<http://inspire-geoportal.ec.europa.eu>



# INSPIRE Geoportal – easy access to MS data

## Data sets in Malta

1.

Filters: ☐ Downloadable ☐ Viewable ☐ Show data with national coverage ⓘ

158 | 128 | 151

Title	Properties
Photovoltaic panels installed in the domestic sector per 1000 residents	
11kV Overhead Line	
Article 12 Birds Range	
Article 12 Birds Distribution	
Unemployment rate (15 to 74 years) by District	
Article 17 Habitats Range	
Article 17 Species Range	
Article 17 Species Distribution	
Article 17 Habitats Distribution	
Malta European geostatistical 1km grid	

Show 10 entries Showing 1 to 10 of 158 entries

Previous 1 2 3 4 5 ... 16 Next

## Article 17 Habitats Range

2.

Download Options ▾

View Options ▾

Data set Metadata ▾

**Resource Title**  
Article 17 Habitats Range

**Resource Abstract**  
Article 17 of the Habitats Directive requires Member States to report every six years about the progress made with the implementation of the Habitats Directive. As the main focus of the directive is on maintaining and/or restoring a favourable conservation status for habitat types & species of community interest, monitoring & reporting under the directive is focusing on that. Monitoring of conservation status is not restricted to Natura 2000 sites and data need to be collected both in and outside the Natura 2000 network to achieve a full appreciation of conservation status. Some data on sensitive species is restricted from public access, as the disclosure of such might adversely affect the conservation of the species in question; this is in line with the provisions of Article 4 2(h) of Directive 2003/4/EC.

**Reporting Tags**  
Directive 92/43/EEC - Biogeographical regions (Habitats Directive)  
Directive 92/43/EEC - Habitat maps using INSPIRE geographical grid system (Habitats Directive)

**Conditions Applying To Access And Use**  
No conditions apply

**Limitations On Public Access**  
Some data on sensitive species is restricted from public access, as the disclosure of such might adversely affect the conservation of the species in question; this is in line with the provisions of Article 4 2(h) of Directive 2003/4/EC.

**Geographic Bounding Box**

**Lineage**  
Habitats Directive - Article 17 Report - Malta - 2013 submitted on 11 Dec 2013;  
Habitats Directive - Article 17 Report - Malta - 2007 submitted on 07 Mar 2008.

**Unique Resource Identifier**

## Article 17 Habitats Range

3.

Download Options ▾

View Options ▾

Search..

Simple Viewer	Layer title	Layer name	CRS	Desktop Tool ⓘ	Service metadata
<a href="#">Preview Data Set</a> ⓘ	Habitat Range	HB.HabitatRange	EPSG:4258	Google Earth	
<a href="#">Preview Data Set</a> ⓘ	Habitat Range	HB.Habitat.Range	EPSG:4258	Google Earth	

Data set Metadata ▾

## Article 17 Habitats Range

4.

Download Options ▾

View Options ▾

Search..

Simple Viewer	Layer title	Layer name	CRS	Desktop Tool ⓘ	Service metadata
<a href="#">Preview Data Set</a> ⓘ	Habitat Range	HB.HabitatRange	EPSG:4258	Google Earth	
<a href="#">Preview Data Set</a> ⓘ	Habitat Range	HB.Habitat.Range	EPSG:4258	Google Earth	

Data set Metadata ▾

<http://inspire-geoportal.ec.europa.eu>

# Priority List of eReporting data sets

## MIWP 2016.5. Action

### **Rationale:**

- Result of Refit activities (env. Reporting, INSPIRE)
- Commission strategy for filling the implementation gaps and showcase the benefits
- Giving MS clear guidance on prioritisation
- Instrument to bring communities (e.g. Eionet – env. Reporting x INSPIRE) together



# Priority List of eReporting data sets

## MIWP 2016.5. Action

Work Programme 2016-2020

### 4 Core Tasks:

T1: Manage and update the priority list of eReporting datasets

T2: Make **data available as-is**: identify datasets, document metadata, make metadata and data available on the **EU geoportal** by providing network services

T3: Common and **interoperable European data models** per reporting obligation/data flow that are fit for purpose for the envisaged use case.

T4: Monitor the availability of **pan-European data sets**

<https://webgate.ec.europa.eu/fpfis/wikis/display/InspireMIG/Action+2016.5%3A+Priority+list+of+datasets+for+e-Reporting>



# Use of INSPIRE for other domains

## Common steps:

1. Step wise approach
2. Contact INSPIRE NCPs

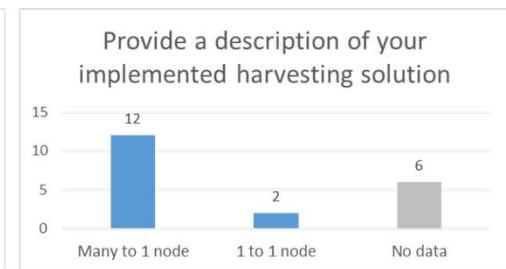
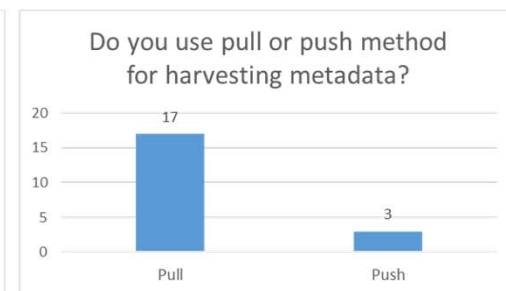
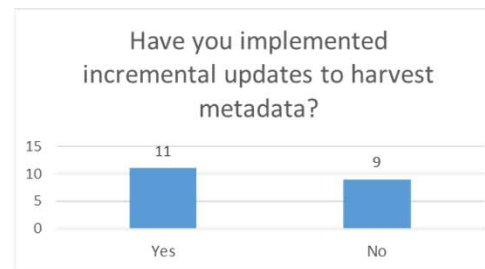
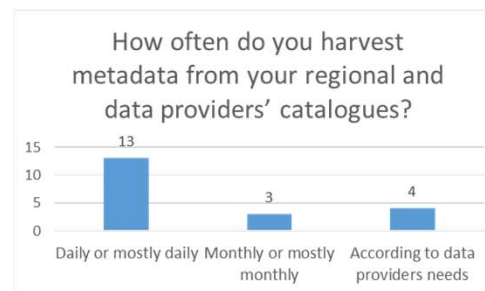
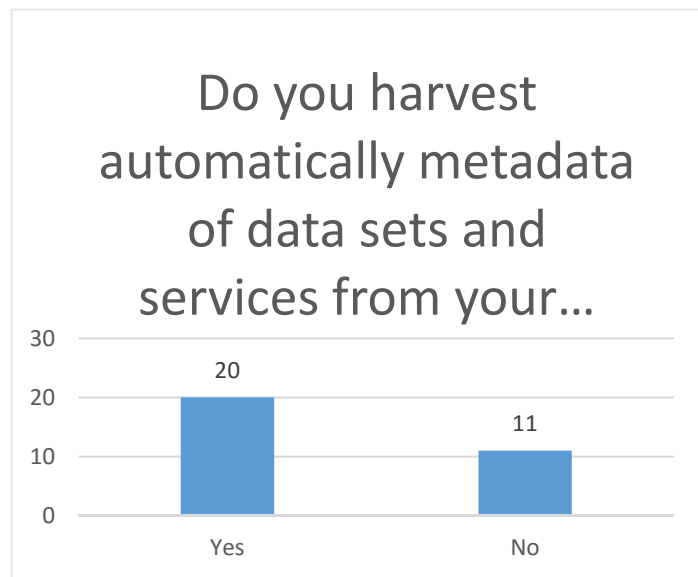
- Data set scoping / data organisation for distribution
- Describe your data sets using customise Inspire metadata
- Integrate your MD records with national catalogue
- Create view and download services for accessing your data + update your data set metadata with correct links to services + publish your data
- Develop a Geo-portal / Thematic web viewer
- Based on concrete use case(s) develop a common (e.g. LPIS & INSPIRE) Data exchange model – applying “domain extension approach”
- Transform your original data sets, update your MD and publish





# Readiness of the Member States regarding national MD catalogues

Collected responses from 31 EU and some EFTA countries



- Different catalogues interfaces are often supported:
  - CSW
  - Webdav (WAF)
- Reporting and approval system for publication often put in place.

<https://webgate.ec.europa.eu/fpfis/wikis/display/InspireMIG/INSPIRE+Geoportal+Workshop>

# Use of INSPIRE for other domains

## Available SW tools & services

- **Metadata management**
  - **National SDI catalogues**, open source (e.g. Geonetwork), ESRI..
  - INSPIRE **Reference validator** (to check your metadata)
  - INSPIRE **Registry** (e.g. Code list Register – to add your agreed keywords)
- **Creation of view and download services**
  - National SDI catalogues, open source (e.g. Geoserver, deegree, Mapserver), ESRI..
  - INSPIRE Reference validator (to check your web services)
- **Data harmonisation & transformation**
  - open source (e.g. HALE Studio), FME, ESRI..
  - INSPIRE Reference validator (to check your data transformation)
- **Data scoping / data consumption**
  - INSPIRE **Find Your Scope** (e.g. to select set of relevant feature types instead of the whole INSPIRE theme(s))



<https://inspire.ec.europa.eu/inspire-tools>



# Use of INSPIRE for other domains

## Capacity building, collaboration platforms

- **Free SDI trainings**

- Geospatial Knowledge Base (GKB) Training Platform: <https://www.geo-train.eu/>
- INSPIRE web site / knowledge base: <https://inspire.ec.europa.eu/>

- **On-line collaboration**

- INSPIRE Community Forum / Thematic Clusters: <https://themes.jrc.ec.europa.eu/>
- Good practises, implementation examples: <https://inspire.ec.europa.eu/inspire-tools>

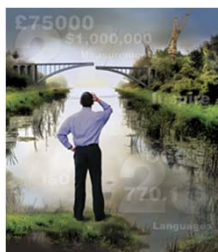


# Use of EU Spatial data infrastructure



## Conclusions

- EU SDI is ready to be utilised – also internally @ EC!!
- EU SDI is more flexible then it is perceived!!
- EU SDI is built on MS NSDIs - distributed system, data stays with its administrators.
- Future of EU SDI is to continue evolving in the wider EU eGovernment activities (e.g. EU Interoperability Framework, eGovernment Action Plan, ISA<sup>2</sup>, revision of PSI - High Value datasets, EU data space..)





# Thank you



## Questions?

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***Make it work together***