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## Introduction

The INSPIRE Directive sets the minimum conditions for interoperable sharing and exchange of spatial data across Europe as part of a larger European Interoperability Framework and the e-Government Action Plan that contributes to the Digital Single Market Agenda. Article 21 of [INSPIRE Directive](#) defines the basic principles for monitoring and reporting. More detailed implementing rules regarding INSPIRE monitoring and reporting have been adopted as [COMMISSION DECISION regarding INSPIRE monitoring and reporting](#) on the 5th of June 2009.

This country fiche highlights the progress in the various areas of INSPIRE implementation and presents an outlook of planned actions for further improvement of the INSPIRE implementation. The country fiche includes information **until May 2019** as an update of the information acquired through:

- member states update,
- [monitoring report](#) in May 2019.

## State Of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Finland. More detailed information is available on the [INSPIRE knowledge base](#).

### Coordination

#### National Contact Point

**Name of Public Authority:** Ministry of Agriculture and Forestry

**Contact Email:** [Click to email](#)

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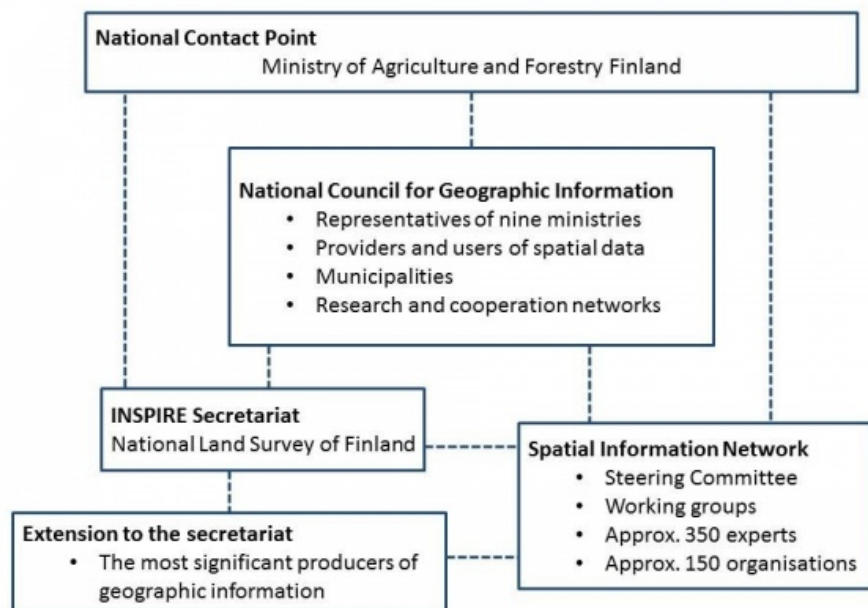
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#### Coordination Structure & Progress: National Contact point

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#### Coordination Structure

- The **Ministry of Agriculture and Forestry** is the national contact point of INSPIRE toward the province of Åland and the rest of Finland. The ministry of Agriculture and Forestry is represented in the MIG as well as in the INSPIRE committee.
- The **INSPIRE secretariat** at the National Land Survey of Finland provides support and guidance for national INSPIRE implementers and maintains national SDI services, such as the Finnish Geoportal. The INSPIRE secretariat is represented in the MIG and the permanent technical subgroup of the MIG and acts as the official secretariat of the national Council of Geographic Information and its extended secretariat.
- The **National Council for Geographic Information** consists of representatives of ministries, major data providers, Universities and co-operation networks. The following ministries are represented in the council: Ministry of the Interior, Ministry of Defence, Ministry of Finance, Ministry of Social Affairs and Health, Ministry of Agriculture and Forestry, Ministry of Transport and Communications, Ministry of Environment and Ministry of Employment and Economy.
- The **Extended Secretariat of the National Council for Geographic Information** provides policy and implementation support. The following organisations are represented in the extended secretariat: National Land Survey, Finnish Environmental Institute,

Meteorological Institute, Geological Research Centre, Finnish Transport Agency, Natural Resources Institute Finland, City of Helsinki as the representative of the municipalities.

- The **network of geographic information** is an open voluntary network that aims to promote the co-operation between actors in the domain of geographic information. It provides information of the implementation of the INSPIRE Directive, the development of the national spatial data infrastructure and other topics related to geographic information. The INSPIRE Secretariat at the National Land Survey of Finland supports and facilitates the activities in the network.
- INSPIRE implementation is also discussed with neighboring countries in the **Nordic INSPIRE Network**.

#### Functioning and coordination of the infrastructure

- The INSPIRE Directive (2007/2/EC) was transposed in Finland in 2009 by the Spatial Information Infrastructure Decree (725/2009) and the Act on the Infrastructure for Spatial Information (421/2009). The Province of Åland has, on the basis of its autonomy, adopted an Act on the Infrastructure for Spatial Information (2017:54).
- Finland has connected their **national discovery service** to the EU geoportal allowing for the publication of metadata for the available spatial data sets and services on the EU geoportal.
- The National Land Survey of Finland maintains the **Finnish geoportal** at <http://www.paikkatietoikkuna.fi>, which contains also information about the national SDI and guidance for INSPIRE implementers.
- Altogether over 100 nationwide spatial datasets have been identified across different administrative levels (municipalities, regional councils and other regional actors, national administrations) as the scope for implementation of the INSPIRE Directive.
- Following a bilateral meeting with the Commission in April 2016 the Ministry of Agriculture and Forestry prepared an action plan to address any remaining implementation issues. Special attention was given to addressing provisions of the INSPIRE Directive in relation to other EU Environmental Directives and further identification of environmental datasets that are marked as priority data by the Commission. Cooperation and coordination between the environmental actors in Finland has been strengthened.
- The following issues that hinder the implementation have been identified:
  - Need for better tools to support the implementation (e.g. validation tools to test compliance).
  - Complexity of data harmonization.
  - Lack of budget
  - Lack of software support for INSPIRE metadata and services
- **Progress:**
  - The province of Åland has adopted a new Act on the Infrastructure for Spatial Information (2017:54) that repeals the former Act on Spatial Data Infrastructure (2010:85). The new act implements the Finnish State Act on the Infrastructure for Spatial Information (FFS 421/2009), meaning the Finnish act is applicable in Åland with a few local derogations.
  - The National Council of Geographic Information regularly follows up the implementation of the INSPIRE action plan. To bridge the gap in the implementation, the national authorities under the scope of the INSPIRE Directive were asked to draft individual action plans. The national INSPIRE action plan has been further developed and updated by the extended secretariat of the National Council of Geographic Information to support the implementation of the INSPIRE Directive and the national SDI. The INSPIRE secretariat provides support and training to the obliged authorities.
  - A [report on spatial data policy](#) was published in 2018 by the Ministry of Agriculture and Forestry. The report defines a vision of spatial data functions in public administration in Finland and raises measures and directions for further development. The report was handled and approved by the Finnish Parliament.
  - The [Geospatial platform](#) initiative was launched by the Ministry of Agriculture and Forestry in 2017 and is ongoing. The platform provides new tools and support for INSPIRE implementers and promotes interoperability of geographic information in society.
  - The National Geographic Information Strategy was updated in 2016 for the timeperiod 2017-2018 to promote the availability of information and services, the opportunities for participation and the use of geographic information in support of decision-making.
  - In the renewed National Geographic Information Strategy, the Ministry of Finance (as part of their responsibility on realizing interoperable public administration information systems under the IT Management Act (634/2011)) has taken the lead on further aligning the infrastructure for spatial information with the public administration ICT Strategy to speed up the open data program, create new business opportunities and stimulate the further digitization of public services. As a result of this work, the revised spatial data reference architecture was completed in 2016.

#### Usage of the infrastructure for spatial information

- The use of geographic information has grown in recent years, mainly due to the increased public availability of information and the implementation of the INSPIRE Directive. The spatial infrastructure for searching, viewing and downloading has improved the accessibility of spatial data and has raised public awareness. The growth in use of download services has been significant, while the use of view services has somewhat stabilized. Overall, no significant changes have occurred since 2016.
- The national geoportal Paikkatietoikkuna provides a map interface, where the user can access and use over a 1000 maps in a comprehensive way. The geoportal is developed as open source code on the basis of the established geographic reference architecture and is available for reuse supporting a wide range of user interfaces and map publication. The geoportal is used daily by more than 2 000 different users.
- Broad access to spatial information is provided to the users by many different web applications serving specific use cases including municipal maps, routing and planning services, nationwide routing services, geography education, public points of interest, cultural heritage, agricultural applications and environmental applications.
- Access to spatial data has improved and the reported use of data has increased. The increasing use of geographic information has also encouraged data providers to improve the quality of the data and develop data products and services that are better suited to user needs. Spatial information industry companies also played a significant role in promoting the use of spatial information e.g. Finnish Location Information Cluster, a consortium of geospatial information sector companies offering spatial information services.

#### Data sharing arrangements

- The opening up of public information has continued and most of the nationwide INSPIRE datasets are open. For the conditions of use a broad international CC BY 4.0 License applies (Creative Commons license), significantly simplifying the use of the data in different member states and by EU institutions.
- Environmental data have been open to the public since 2008. The National Land Survey opened the terrain data in 2012. After that, many other authorities including the largest municipalities have opened or are planning to open data for free re-use. In 2015, already more than half of all the spatial data sets covered by the INSPIRE Directive are available as open data.
- Identified barriers to the use of spatial data are:
  - Ambiguities in terms of use, unclear data policies and data protection related to privacy consideration that limit effective sharing of data.
  - The use of geographic information and adoption of new policies require new skills in a variety of industries, which causes challenges especially the economically tighter times.

### Costs and benefits

- The costs regarding the implementation of the INSPIRE Directive vary between actors and are difficult to estimate. Overall, no significant changes have occurred since 2016. According to surveys conducted in 2016 and 2019, the key causes of costs can be summed up as:
  - establishment and maintenance of network services, procurement of software, preparation of metadata, information harmonization (estimated costs between 2013-2015: EUR 4.4 million)
  - coordination, support, training, monitoring and development of centralized systems (estimated costs between 2013-2015: EUR 3.4 million).
- The identified benefits of the implementation of the INSPIRE Directive vary between actors from large to little or no benefits. The monetary value of the total benefits are difficult to assess and such information is currently not available. Overall, no significant changes have occurred since 2016. According to surveys conducted in 2016 and 2019, the key benefits can be summed up as:
  - Increased cooperation between actors
  - Increased (re)use of data
  - Increased quality of data
  - Increased discoverability and availability of data
  - Increased understanding of existing data sources
  - Easier access to data
  - Reduced efforts in data maintenance and sharing
  - More services for citizens are being developed
  - Better conditions have been created for decision-making

### Key facts and figures

In addition to the above mentioned issues, the implementation of INSPIRE Directive requires Member States to take four main steps in relation to management of spatial datasets which fall under the Directive:

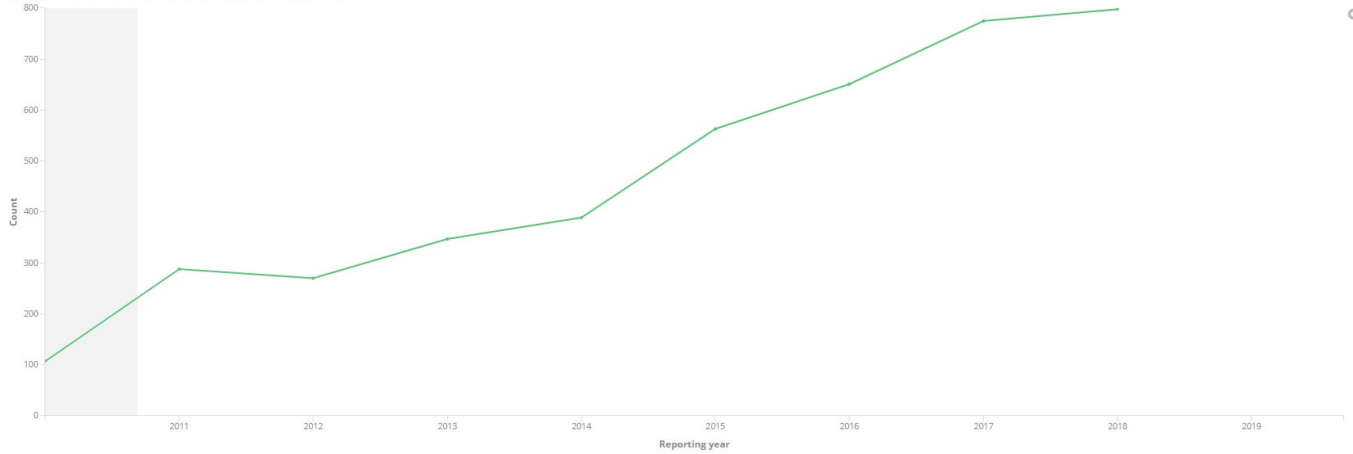
- Step 1: Identify spatial datasets
- Step 2: Document these datasets (metadata)
- Step 3: Provide services for identified spatial datasets (discovery, view, download)
- Step 4: Make spatial datasets interoperable by aligning them with the common data models.

The key facts and figures presented in this country fiche are based on the information provided by Finland on the [INSPIRE dashboard](#). **The provided statistics is not reflecting the data available on INSPIRE geoportal.** The INSPIRE geoportal is updated on a regular and ongoing basis, whilst the INSPIRE dashboard is typically updated after every reporting round, on a yearly basis.

The conformity of the implementation is assessed against the full set of legal specifications set out by the Directive and the Implementing Rules and the commonly agreed good practices set out by the technical guidelines.

## Identification of spatial data with relevance to the environment (step 1)

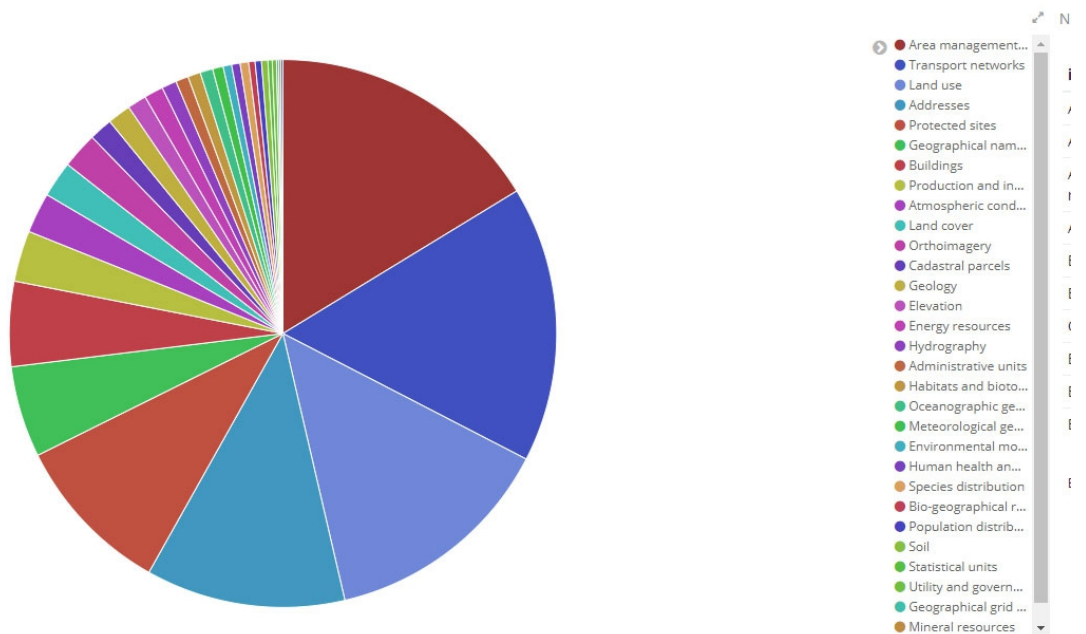
Indicator / Number of spatial data sets for all annexes (DSv\_Num)



Country fiche / datasets by annex

## Data sets made available per INSPIRE theme (reference year 2018)

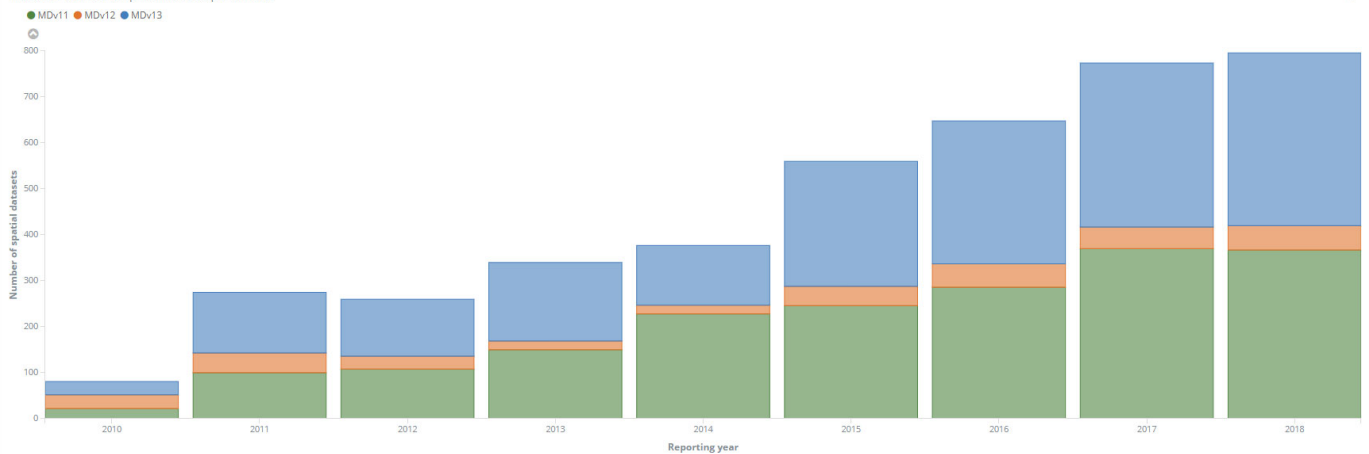
INSPIRE Raw data (datasets) by themes



Country fiche / datasets by themes

## Data sets made available per INSPIRE theme

Indicator / Number of spatial data sets per annexes



Country fiche / Documentation of the data

MDv1.1: number of spatial data sets for Annex I that have metadata

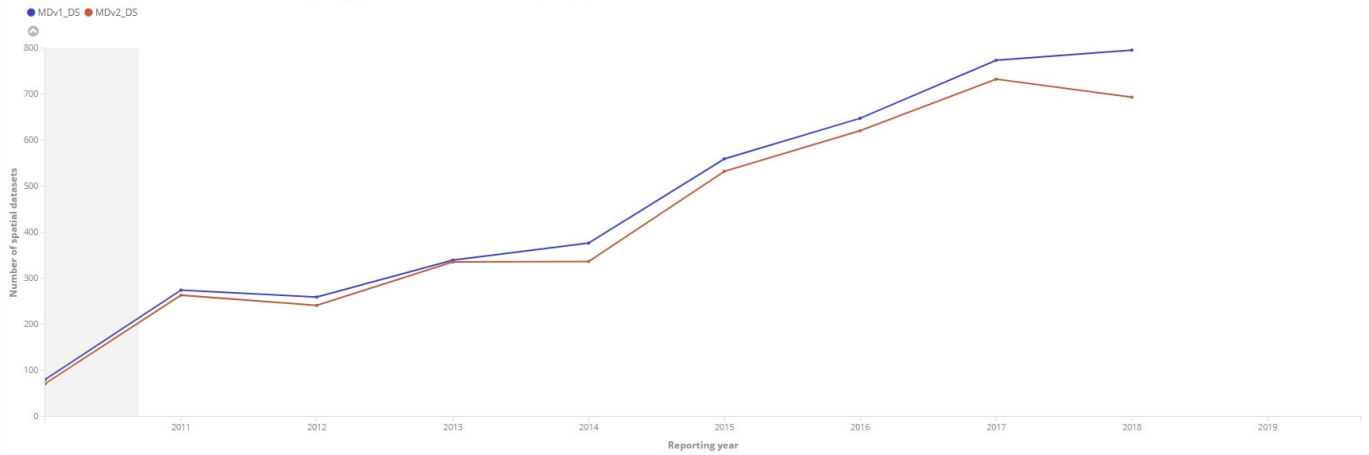
MDv1.2: number of spatial data sets for Annex II that have metadata

MDv1.3: number of spatial data sets for Annex III that have metadata

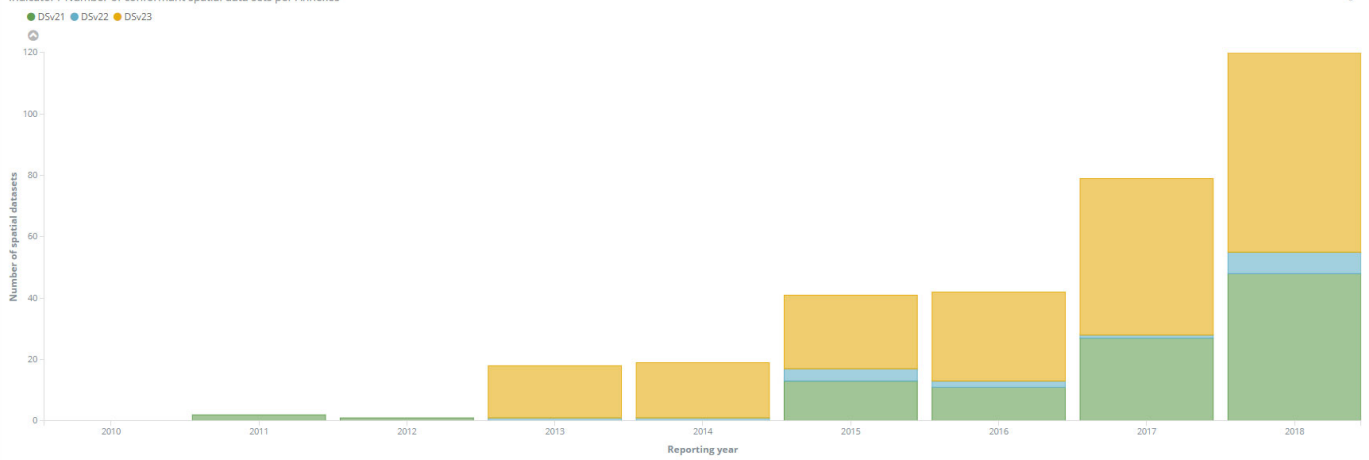
## Documentation of the data (metadata) (step 2)

### Evolution of documented data and conformity of the documentation

Indicator / Number of spatial data set that have metadata (MDv1\_DS) and have conformant metadata (MDv2\_DS)



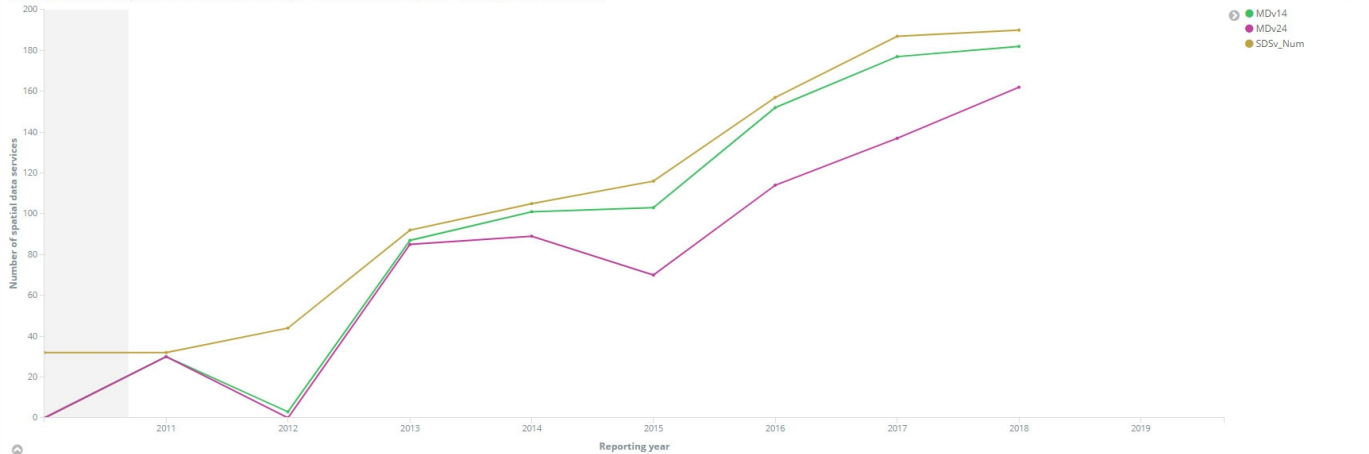
Indicator / Number of conformant spatial data sets per Annexes



Country fiche / Evolution of documented services and conformity of the documentation

### Evolution of documented services and conformity of the documentation

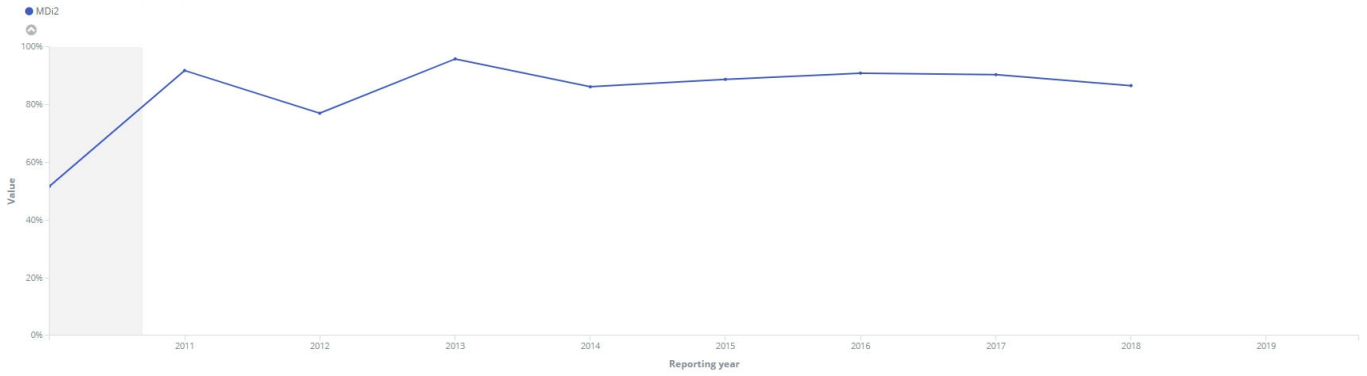
Indicator / Number of spatial data services (SDSv\_Num) with metadata (MDv14) and conformant metadata (MDv24)



Country fiche / Evolution of the overall conformity of the documented metadata

## Evolution of the overall conformity of the documented metadata

Indicator / Percentage of spatial data sets and services with conformant metadata (MDI2)

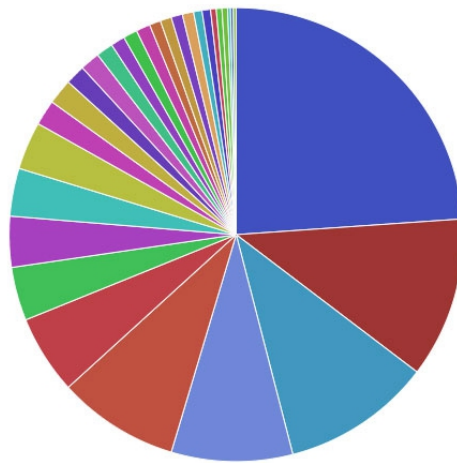


Country fiche / accessibility

## Accessibility of the data through digital services (step 3)

### Digitally accessible spatial data per INSPIRE theme (reference year 2018)

INSPIRE Raw data (datasets available through services) by themes

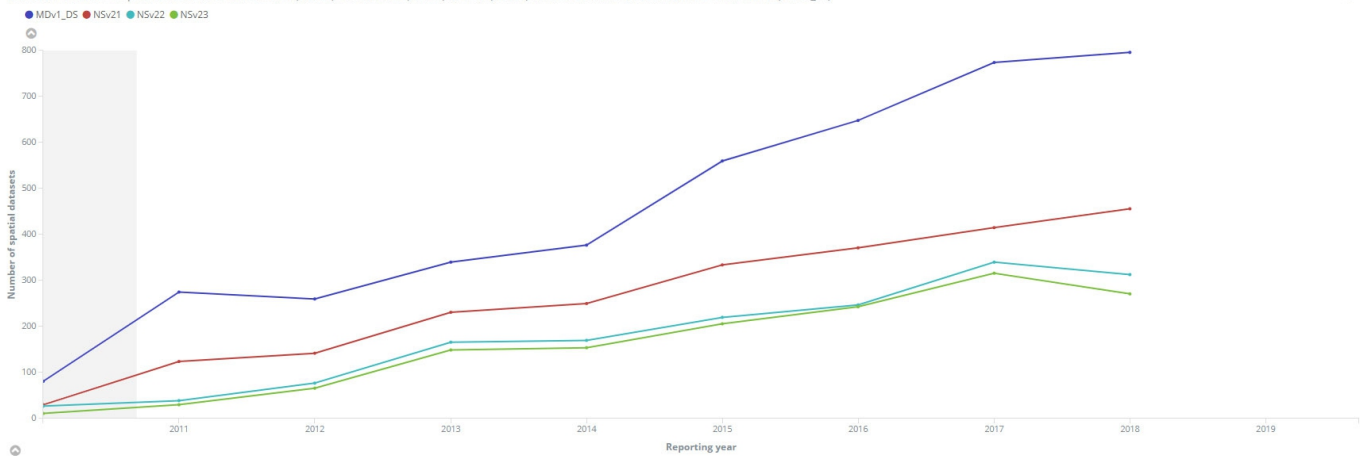


- Transport networks
- Area management...
- Addresses
- Land use
- Protected sites
- Buildings
- Geographical nam...
- Atmospheric cond...
- Land cover
- Production and in...
- Energy resources
- Geology
- Cadastral parcels
- Elevation
- Oceanographic ge...
- Hydrography
- Meteorological ge...
- Orthoimagery
- Administrative units
- Habitats and bioto...
- Human health an...
- Species distribution
- Environmental mo...
- Population distrib...
- Bio-geographical r...

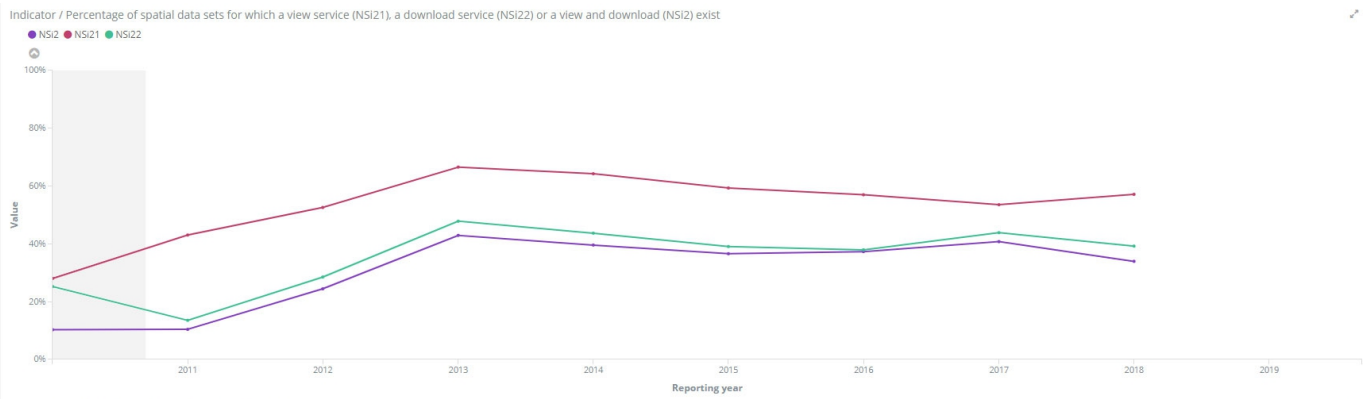
Country fiche / Evolution of spatial data accessible through services

## Evolution of spatial data made accessible through digital services

Indicator / Number of spatial data sets for which a view (NSv21) or download (NSv22) or both (NSv23) service exist and the total number of metadata (MDv1\_ds)

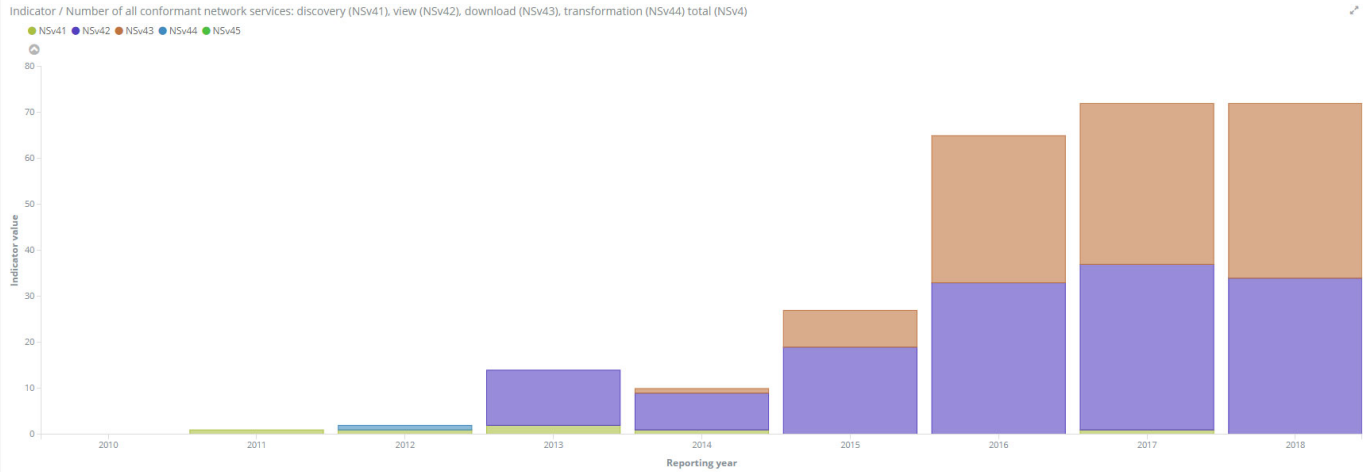






Country fiche / Evolution of the conformity of the digital services

### Evolution of the conformity of the digital services

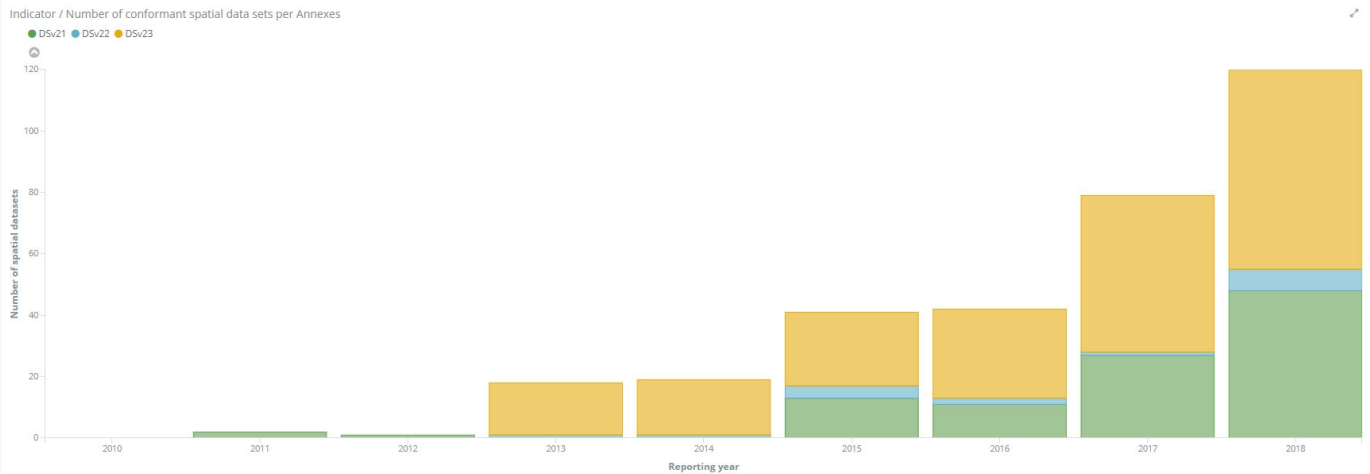


Country fiche / Interoperability

### Interoperability of spatial data sets (step 4)

The interoperability of spatial data sets is an outlook on the readiness of Member States to make their spatial data interoperable according to the interoperability specifications laid down in the INSPIRE interoperability implementing regulation (Commission Regulation (EU) No 1089/2010 <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02010R1089-20131230&qid=1400675738563>). The deadlines for implementation of the spatial data interoperability are 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data.

### Evolution of the conformity with INSPIRE interoperability specifications for spatial data



DSv2.1: number of conformant spatial data sets with conformant metadata for Annex I

DSv2.2: number of conformant spatial data sets with conformant metadata for Annex II

DSv2.3: number of conformant spatial data sets with conformant metadata for Annex III