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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 Spain. More detailed information is available on the [INSPIRE knowledge base](#).

Coordination

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Coordination Structure & Progress:

- Coordination Structure
 - Consejo Superior Geográfico (CSG) is the director body of the National Cartographic System (SCN), having consultation and planning role for the official geographic information and cartography. CSG is the NCP for INSPIRE and the coordination and direction for the National SDI - Infraestructura de Información Geográfica de España (IIEG);
 - CSG created the Consejo Directivo de la Infraestructura de Información Geográfica de España (CODIIEG) for managing and controlling IIEG. It has executive power;
 - Depending on CODIIEG, there are 31 Thematic Working Groups (GTT), (one per INSPIRE Theme although some are grouped)

with representation of all institutions with responsibility for data and/ or services under scope of INSPIRE. Furthermore, there are four transversal Working Groups (Metadata and catalogue; Architecture, standards and web services; Monitoring and reporting; Data and services policy);

- The CODIIGE deal with interinstitutional coordination: the organization of National SDI (IDEE) is based on 8 national nodes and 17 regional nodes; each regional node establishes the necessary coordination with the local administration and other agents. The coordination structures of the nodes have different typologies;
- Finally, there is a Working Group for the NSDI (GTIDEE) with representatives from public and private sector and academia.
- Progress
 - Set up of coordination structure (CODIIGE and GTT- Working groups technical) to generate long term cohesion of thematic communities.
 - Big effort on training, seminars, events at regional and local levels; electronic monthly bulletin "SobreIDES" <http://www.idee.es/boletin-sobre-ides>
 - Further development & implementation of the corporative SIG (geographic information system) of MAGRAMA (Ministry of Agriculture and Environment, recently divided into Ministry of Ecological Transition, MITECO, and Ministry of Agriculture, Fishing and Food, MAPA) using INSPIRE standard technologies and the SDI MITECO a geoportal & web services.
 - In February 2019, a Geographihc Information Interministerial Group (GIIG) was created. It is composed the MITECO and MAPA units working with GI and one of its responsibilitis is to coordinate INSPIRE activities.
 - Unified coordination of inventory of data sets related with INSPIRE themes & their obligations regarding the EEA.

Functioning and coordination of the infrastructure

- Geoportal (of NSDI) IDEE. (See www.idee.es)
- Each Autonomous Community (Region) has at least one reference geoportal.
- National Geoportal govong access to 46 metadata catalogs from national, regional and local nodes.
- There is an Official Catalogue for INSPIRE dataset & services (CODSI). This catalogue (see <http://www.idee.es/csw-codsi-idee/srv/spa/catalog.search#/home>) is connected via harvesting or file interchange with the catalogs of national and regional SDI nodes, is the base for the monitoring process and for feeding the INSPIRE Geoportal.
- All INSPIRE compliant services available in Spain are available in European INSPIRE Geoportal. Not many users of IDEE use the European one.
- Much more OGC services are available but not all are INSPIRE compliant services.
- Datasets will be available, discovered with keyword in the MD with associated services and MD to get full compliance. The list of key spatial data sets required for other environmental policies is already identified.
- The GTT (Technical Groups) was asked to produce Guides about how to make compliant with INSPIRE the identified datasets and the already implemented OGC standard services. There are already some Guides available. (<http://www.idee.es/web/guest/guias-implementation>)

Usage of the infrastructure for spatial information

- The National Open Data Portal (<http://datos.gob.es/>) use the WMS of IDEE and its catalogue has federated IDEE catalogue.
- Use of the services increased and generalised: during 2018, the web services of 13 SDI nodes reporting statistics have received a total of 19 651 M of requests.
- Mobiles are using more and more WMTS. In 2018 mobiles produces more or less half of data traffic of IGN web services.
- Cross-border SDI Jornadas Ibéricas with representatives of PT, ES and Andorra.
- National geoportal has links with the geoportals of PT, FR and Andorra and it has versions in FR and PT
- Other examples of European projects with Spanish NSDi contributions: ELF, OpenELS, EUREF, Copernicus, HLANDATA, SIGPAC, Red EIONET, EAGLE, INGENIO, GBIF Spain,

Data sharing arrangements

- Existence of big projects of collaborative data production and harmonisation under the umbrella of National Cartographic System (SCN), which include sharing of resulting data; the on-going production of georeferenced reference data increased the sharing of data between public admin.
- In the SCN web page (<http://www.scne.es/>) it is published the list of public bodies collaborating in the production of geographic data products each year as a result of collaboration agreements with IGN Spain. Final products are shared and published under a CC BY 4.0 license.
- Some regions have signed collabracion agreements with all the municipalities in their territory.
- There is a wide sharing and reusing data culture. Some public bodies use to share geodata among then without any formal agreement.
- Sharing data for the public: in 2018, in a sampling of 90 public organisations, 28 % publish open data, 8 % publish semi-open data (not allowing commercial uses), 6 % closed data and 58 % do not declare the use conditions.
- For the data that can be downloaded, only 20 % use a Creative Commons license or any other type license. A core reference data produced collaboratively can be downloaded under a CC BY 4.0 license in CNIG Download Centre web page.

Costs and benefits

- There is no recent detailed and complete study on cost of IDEE; annual maintenance and operation costs of IDEE Geoportal are known, as well the ones of MITECO and MAPA, and the average costs/year of 9 Hydrographic Confederations;
- Diversity and heterogeneity on costs from node to node;
- The balance cost/benefits is positive although in many cases the benefit is difficult or impossible to quantify;
- Benefits: the geoportal for hydrocarbons of the Ministry of Industry, Commerce and Tourism allows to citizens savings of 60 million/year.
- The Government of Navarra studied the cost of not having a public ortophoto WMS/WMTS in 2016 and the estimation was 550 000 €.
- In a consultation made on 2018, annual costs estimation for a geoportal (from 13 000 to 100_000 €) and a SDI node (from 37 000 to 270 000 €) varies a lot. Implementation costs of a single web service can be estimated in more or less 4400 € and its maintenance in

550 €/year.

- SDI (IDE) and web services becoming daily working tools in many public admin and private companies, generalised culture of sharing data and information, increasing of open data available in the web, and a strong incentive to regularly and collaboratively produce very expensive data (like the national coverage of LiDAR and orthophoto) are among the benefits.
- Companies storing and distributing map tiles for mobile phones in off-line situations are flourishing.

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:

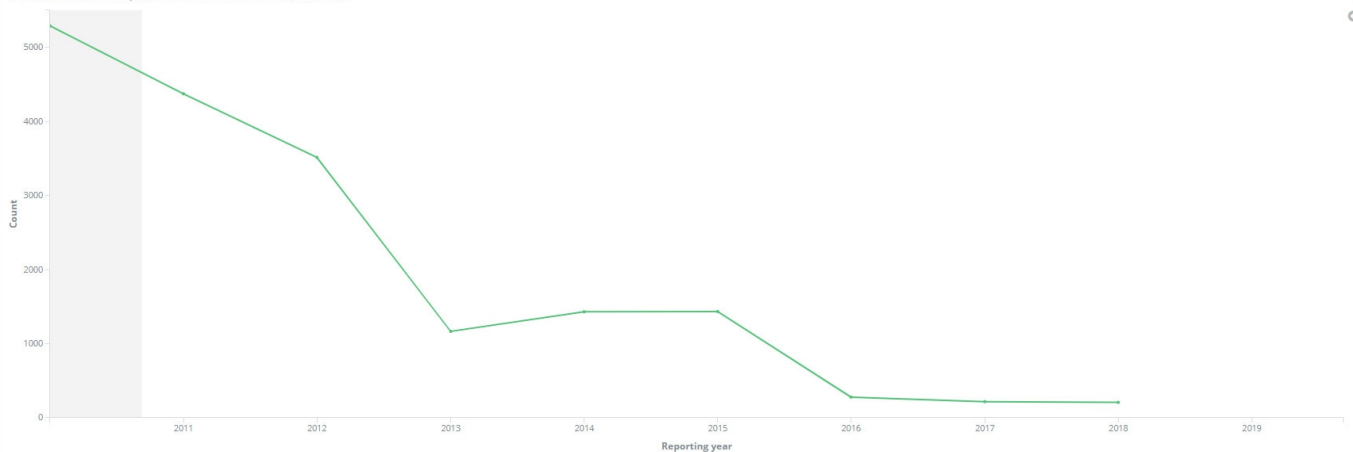
- Step 1: Identify spatial datasets
- Step 2: Document these datasets (metadata)
- Step 3: Provide services for identified spatial datasets (discovery, view, download)
- Step 4: Make spatial datasets interoperable by aligning them with the common data models.

The key facts and figures presented in this country fiche are based on the information provided by Spain 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)

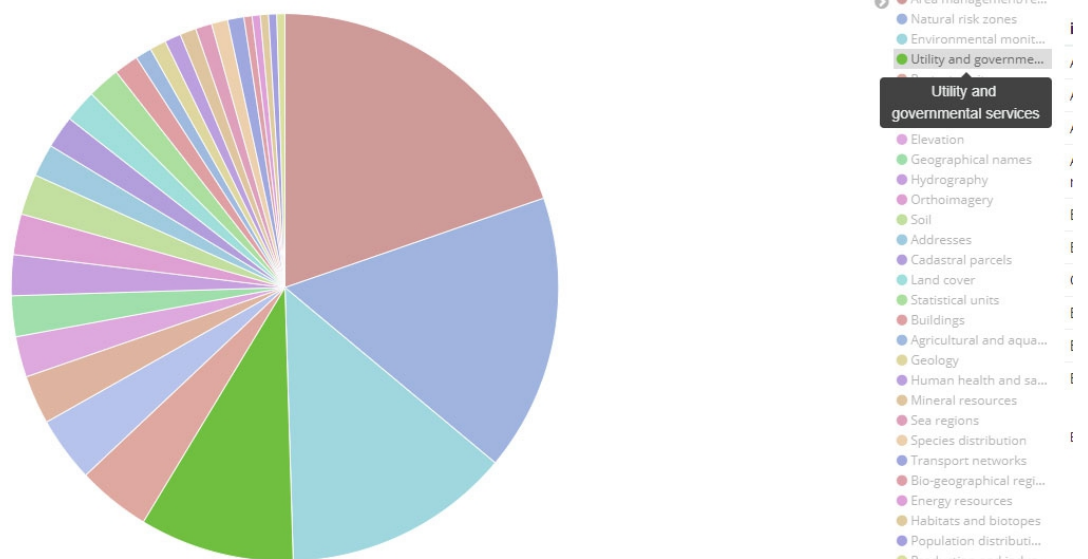
Indicator / Number of spatial data sets for all annexes (DSv_Num)



Country fiche / datasets by annex

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

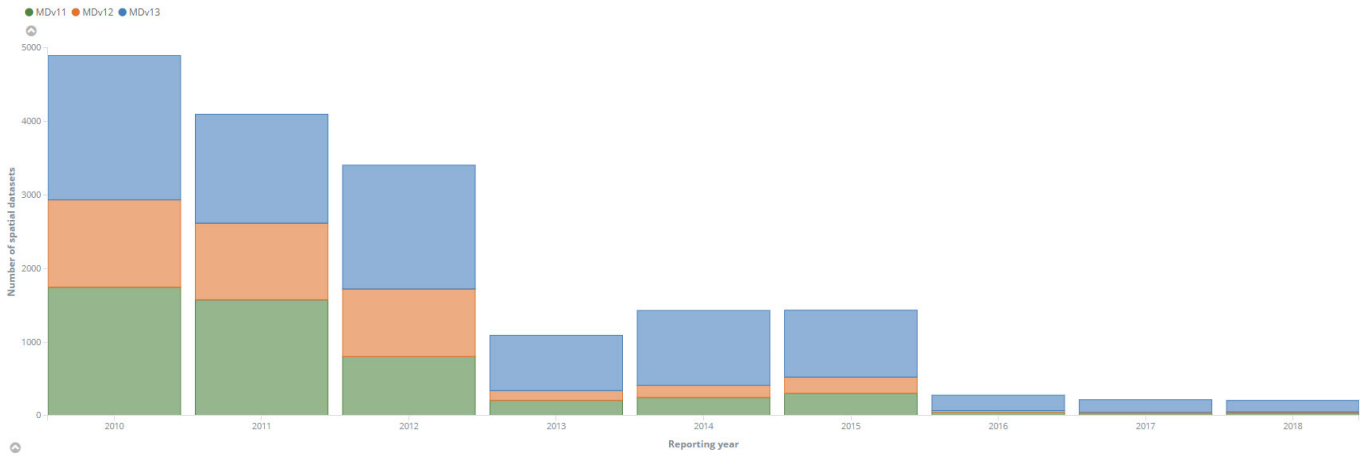
INSPIRE Raw data (datasets) by themes



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

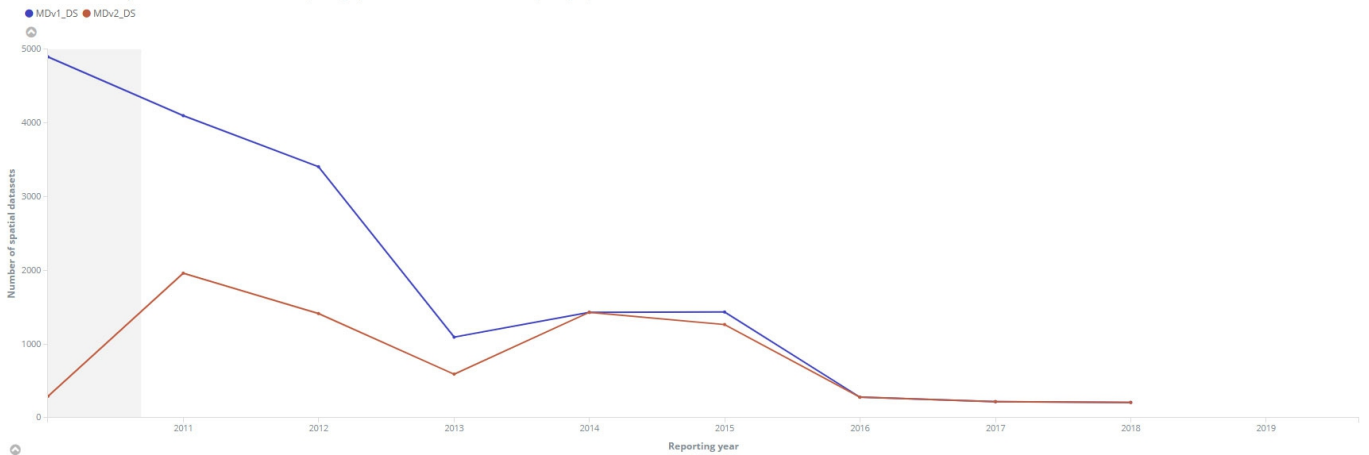
MDv1.2: number of spatial data sets for Annex II that have metadata

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

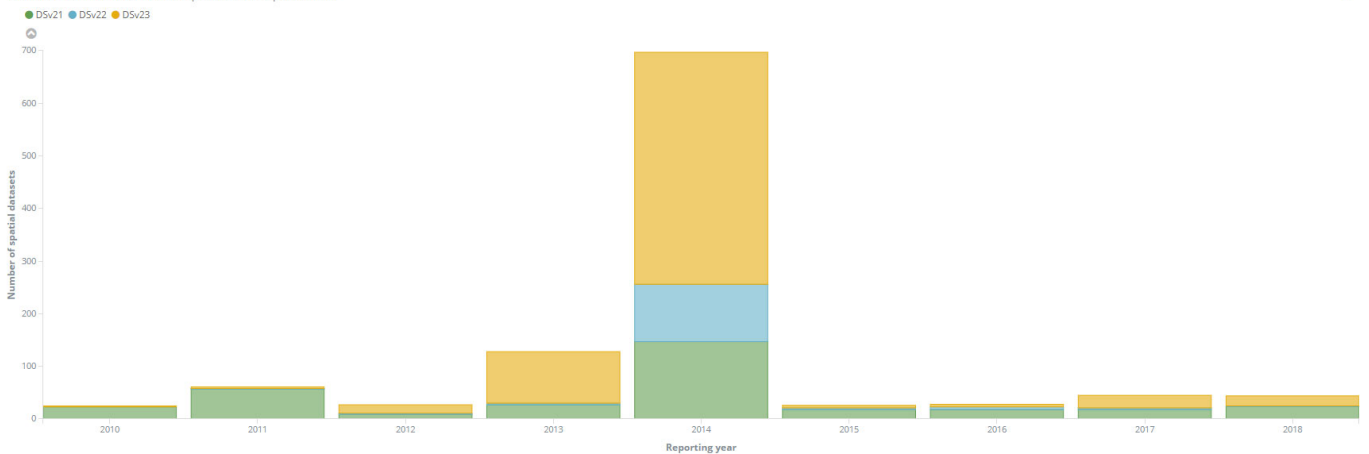
Documentation of the data (metadata) (step 2)

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)



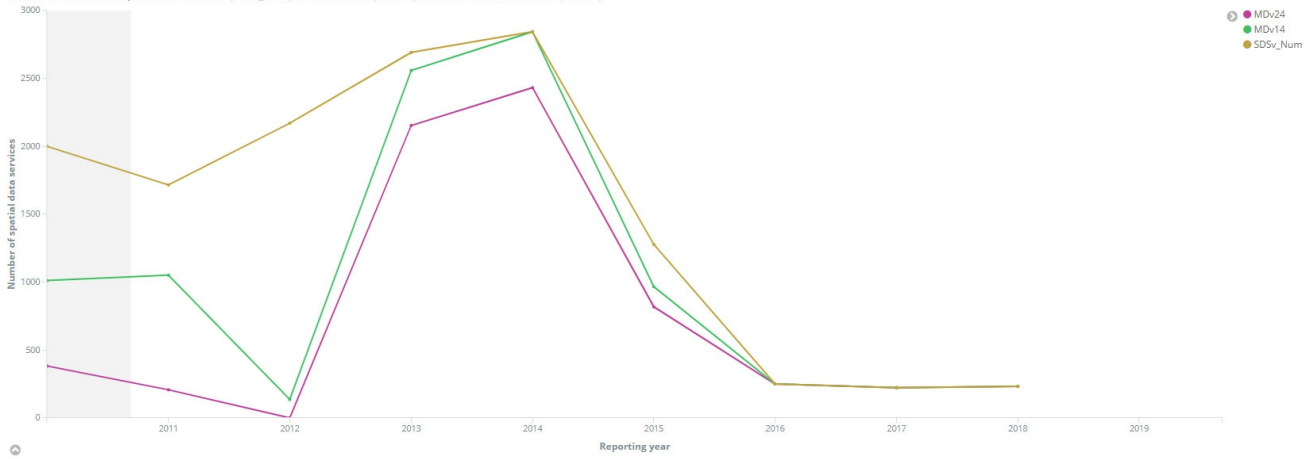
Indicator / Number of conformant spatial data sets per Annexes



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

Evolution of documented services and conformity of the documentation

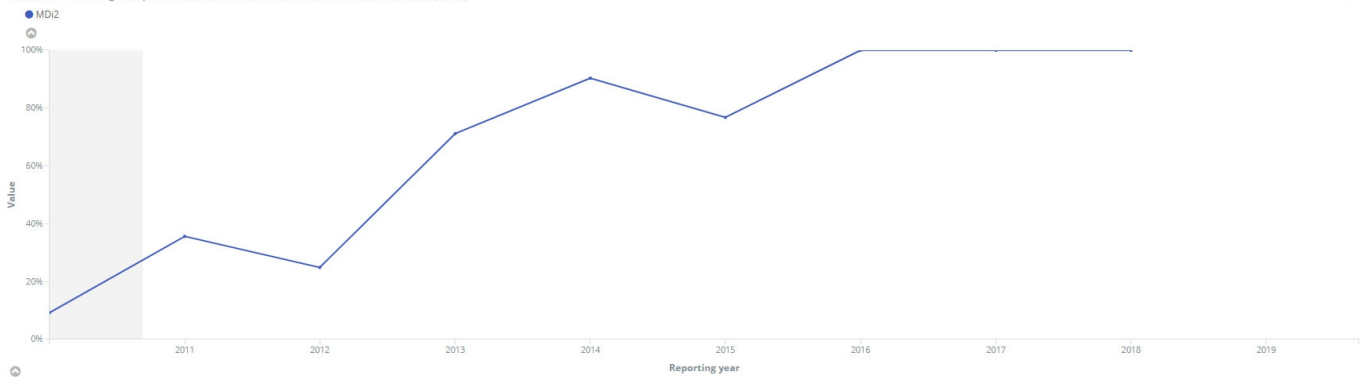
Indicator / Number of spatial data services (SDSv_Num) with metadata (MDv14) and conformant metadata (MDv24)



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)

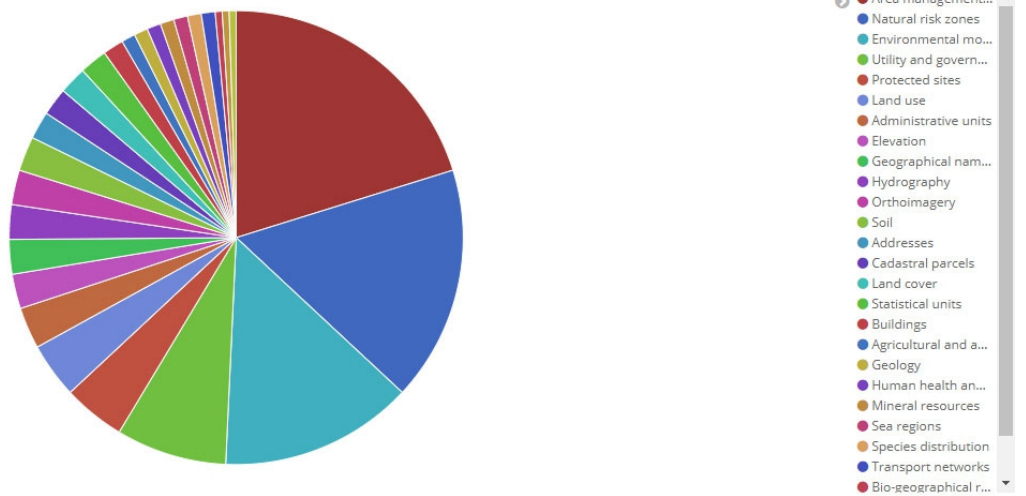


Country fiche / accessibility

Accessibility of the data through digital services (step 3)

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

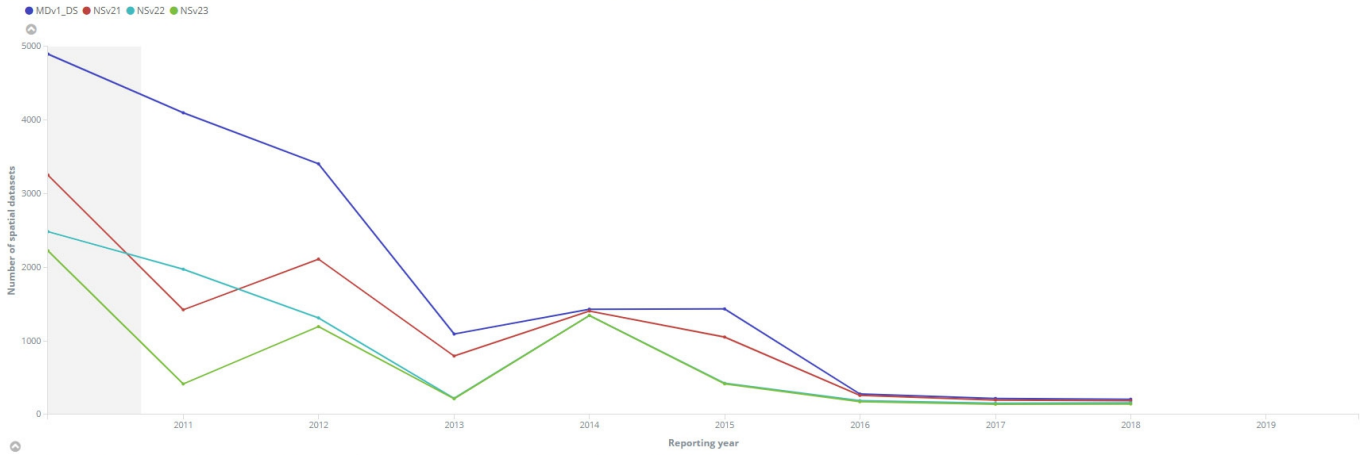
INSPIRE Raw data (datasets available through services) by themes



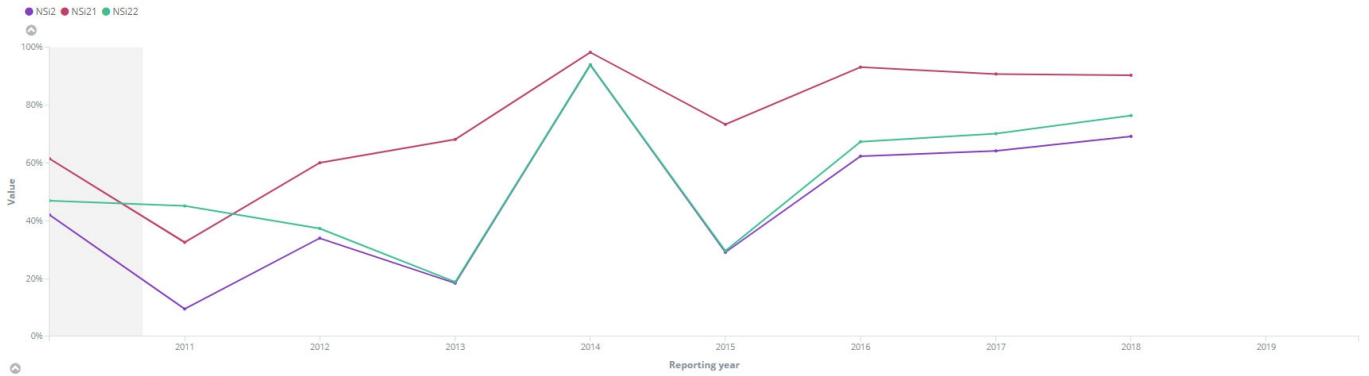
Country fiche / Evolution of spatial data accessible through services

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)



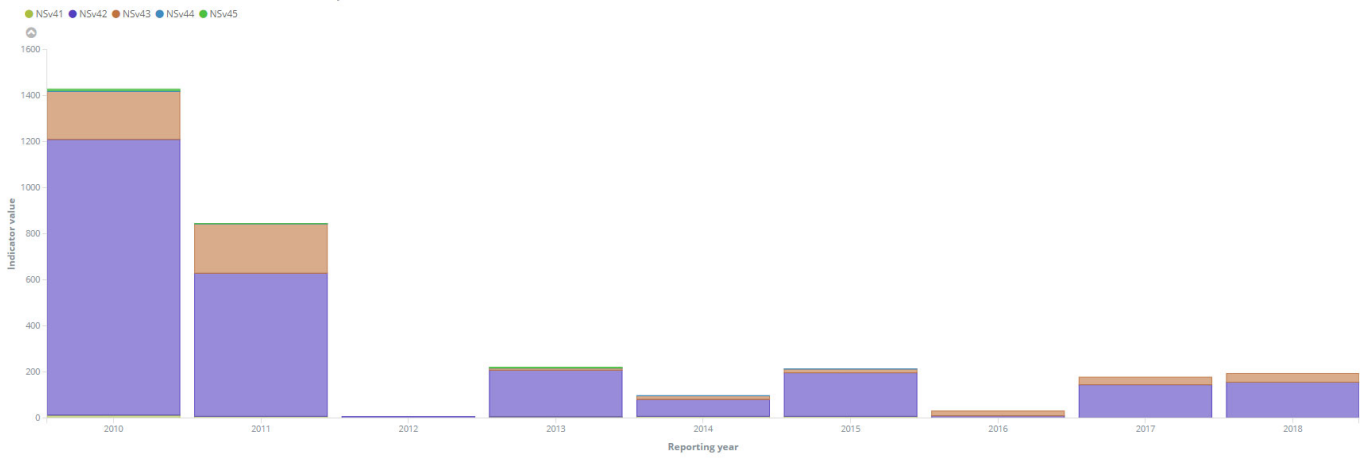
Indicator / Percentage of spatial data sets for which a view service (NSI21), a download service (NSI22) or a view and download (NSI2) exist



Country fiche / Evolution of the conformity of the digital services

Evolution of the conformity of the digital services

Indicator / Number of all conformant network services: discovery (NSv41), view (NSv42), download (NSv43), transformation (NSv44) total (NSv4)



Country fiche / Interoperability

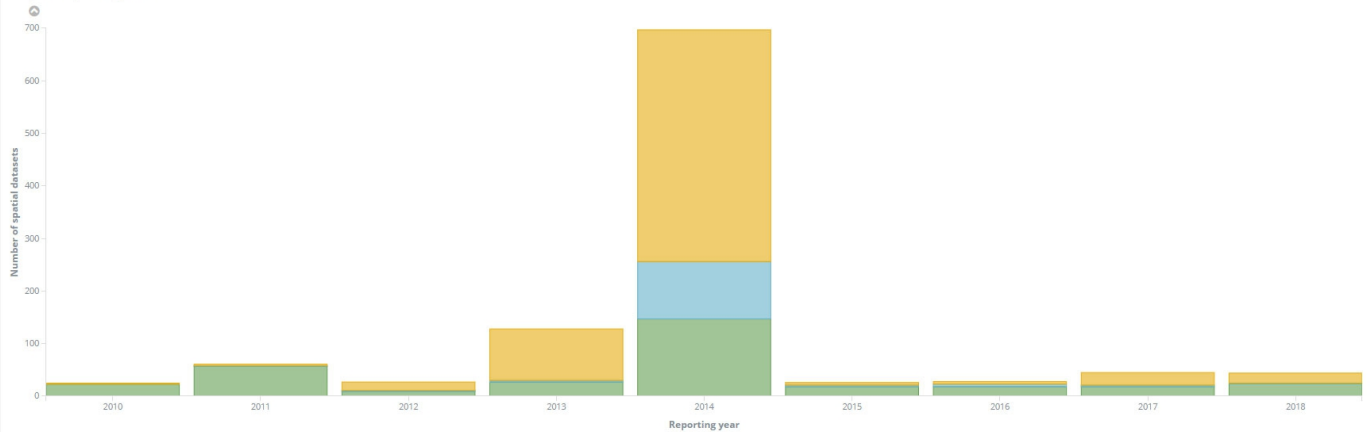
Interoperability of spatial data sets (step 4)

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

Indicator / Number of conformant spatial data sets per Annexes

● DSv21 ● DSv22 ● DSv23



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