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

Coordination

National Contact Point

Name of Public Authority: Lenkungsgrremium GDI-DE (Steering Committee)

Contact Email: [Click to email](#)

National INSPIRE Website: <https://www.geoportal.de/EN/GDI-DE/INSPIRE/inspire.html?lang=en>

MIG Contacts: Contact Person: Markus Meinert

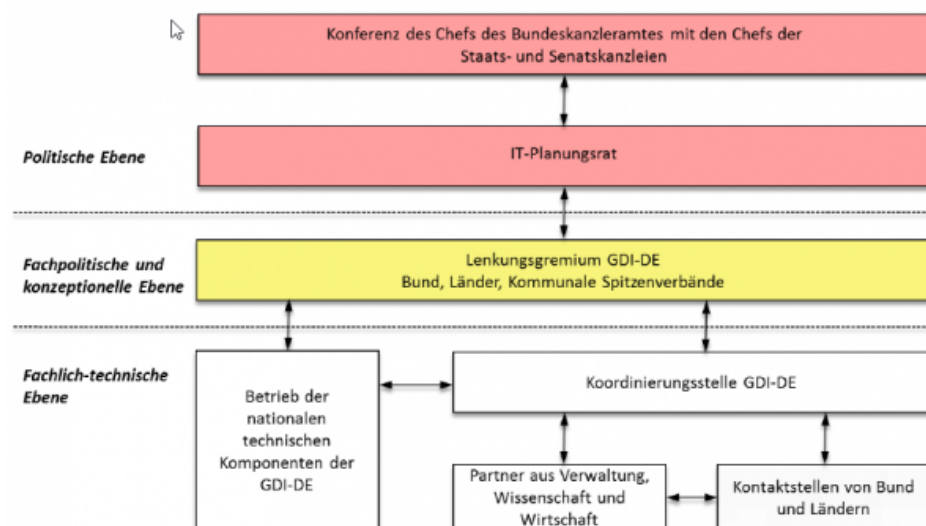
Email: markus.meinert@bmu.bund.de

MIG T Contacts: Contact Person: Daniela Högbe

Email: daniela.hogbe@bkg.bund.de

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Coordination Structure & Progress:

- National Contact point

Name of the public authority	Lenkungs-gremium GDI-DE (Steering Committee)
Contact information:	
Mailing address	<p>Lenkungs-gremium GDI-DE – Vorsitz 2019/2020 Rolf-Werner Welzel Agency for Geoinformation and Surveying Managing Director Neuenfelder Straße 19 21109 Hamburg Germany</p> <p>Koordinierungsstelle GDI-DE Dr. Anja Hopfstock Federal Agency for Cartography and Geodesy Richard-Strauss-Allee 11 60598 Frankfurt am Main Germany</p>
Telephone number	+49 40 428 26 - 5050
Telefax number	
Email address	Vorsitz-LG@gdi-de.org
Organisation's website URL	https://www.geoportal.de/DE/GDI-DE/gdi-de.html?lang=de
Contact person	Rolf-Werner Welzel
Telephone number	+49 40 428 26 - 5050
Email address	rolf-werner.welzel@gv.hamburg.de
Contact person - substitute	Dr. Anja Hopfstock
Telephone number	+49 69 6333-300
Email address	anja.hopfstock@bkg.bund.de mail@gdi-de.org

• Coordination Structure

- Germany's spatial data infrastructure (GDI-DE) is coordinated jointly by the federal level, the federal states and municipalities. Its central bodies are:
 - the steering committee (Lenkungsgrremium GDI-DE)
 - the coordination office (Koordinierungsstelle GDI-DE) and
 - the Federal Agency for Cartography and Geodesy (Bundesamt für Kartographie und Geodäsie, BKG), which operates the national technical components of the GDI-DE (the geodata catalogue, geoportal, registry and validation tools).
- Cooperation with the private sector is ensured by regular meetings of the chairman of the steering committee with business-representatives
- Representatives of academia are also represented in the steering committee as observers.
- On request of the conference of environmental ministers (Umweltministerkonferenz, UMK), a working group of the steering committee on GDI-DE aims to:
 - contribute the view point of the UMK working groups to the further development of the GDI-DE
 - coordinate the further development of INSPIRE and other environmental thematic legislation.
- The chairman of the steering committee meets with representatives of the relevant conferences of ministers twice a year) to facilitate domain-specific communication.

• Progress

- The structures already established in 2013 have proven to be successful and will be continued based on the administrative arrangement between the federal state (Bund) and the Länder for the creation and operation of the GDI-DE.
- In addition, cooperation was intensified by the abovementioned meetings with representatives of the conferences of ministers.
- The integration into „Maintenance and Implementation Framework“ has established a closer cooperation with other Member States.
- The cooperation between different administrations has been improved through the creation of a web-based collaboration platform.

Functioning and coordination of the infrastructure

- INSPIRE is embedded in the National Spatial Data Strategy (Nationale Geoinformations-Strategie, NGIS) adopted by the steering committee GDI-DE in 2015 and acknowledged as an important addition to the National E-Government Strategy. The strategy shall ensure that spatial information can be effectively used for all spatially relevant decision making processes, including to serve local and national interests. The strategy identifies key principles such as 1. Supply of high quality basic spatial data, 2. Foster the multiple use of spatial data and 3. Promote innovations in spatial data management.
- The coordination of the infrastructure has been further improved through
 - intensified discussions with the GI industry, the coordination body of municipalities and thematic conferences of ministries;
 - new working groups on SDIs/INSPIRE under the thematic conferences of ministries;
 - a growing number of workshops with INSPIRE points of contact.
- To facilitate data and service sharing and use, a joint architecture concept has been developed, based on the INSPIRE Directive, Implementing Rules and Technical Guidance documents. National technical components of the GDI-DE include a geodata catalogue (Geodatenkatalog.de), geoportal (Geoportal.de), registry (GDI-DE Registry) and validation tools (GDI-DE Testsuite).

Usage of the infrastructure for spatial information

- Both public administrations and the private sector are still not widely using the INSPIRE infrastructure to access and use spatial data, mainly because their public tasks are at the local or regional level. But the importance of a (regional or national) spatial data infrastructure is constantly increasing. More and more processes are based on this kind of data platform.
- The documentation of spatial data sets and services through metadata has however made people more aware of the spatial data available in public administration and has thus improved data sharing and use through conventional methods or OGC services. It has also led to an increase in data being made available in digital form.
- In the light of recital 6 and 27 of the INSPIRE Directive and to improve domain-specific access and transparency on INSPIRE-datasets, the responsible administrations in some thematic domains have agreed on providing national data on a national level, e.g.
 - in the water domain, the Federal Institute for Hydrography (BfG) provides data for the Flood Directive, Water Framework Directive, Bathing Water Directive and Marine Strategy Framework Directive (<http://geoportal.bafg.de/INSPIRETabelle/>)
 - in the geology domain, the Federal Institute for Geosciences and Natural Resources (BGR) and the state geological surveys have agreed that the INSPIRE-transformation of the German borehole data will be carried out by BGR for 14 of the 16 German states
 - in the air quality domain, the Federal Environmental Agency (UBA) was mandated by the federal states to provide data asked for in the Air Quality Directive and
 - in the soil domain, the Federal Environmental Agency (UBA) was mandated by the federal states to provide data of the permanent soil observation.
- Some public administrations, in particular at the local level, are still struggling with implementing INSPIRE themselves, due to the perceived complexity of the INSPIRE rules and the related standards and technologies.
- In addition, there are currently still few products on the market that allow the processing of INSPIRE-conformant data, and such functionalities are only rarely required by users. There are therefore only few application examples that go beyond the state of a pilot study.
- Data sets provided in legacy data models via INSPIRE-conformant network services published in regional, state and national geoportals, on the other hand, are often widely used.

Data sharing arrangements

- Individual, bi- or multi-lateral data sharing agreements are increasingly being replaced by generic, legally based conditions for the access to public sector data. This is reflected in an increasing number of legislation on eGovernment, Open Data and transparency.

- According to federal laws, environmental (UIG) and particular spatial data (GeoZG) are publicly available and, for federal data, free of charge.
- Selected spatial reference data of the federal states are provided (against payment) through a common national access point.
- The main barrier for data sharing and use are not the existing data sharing arrangements, but rather the INSPIRE data models, some of which are perceived as too simple and some as too complex and not fitting the user requirements, as well as the lack of tools for using INSPIRE conformant data.

Costs and benefits

- After initially high investment in the creation and operation of the national INSPIRE infrastructure, the costs for the operation of the national technical components have been kept stable at a high level for 2016 to 2018. This does not consider the costs for the creation of the increasing number of INSPIRE compliant data and services by the relevant data providers.
- A reliable evaluation of the cost-benefit ratio will only become possible, when INSPIRE compliant data and services are more widely available and used.

Key facts and figures

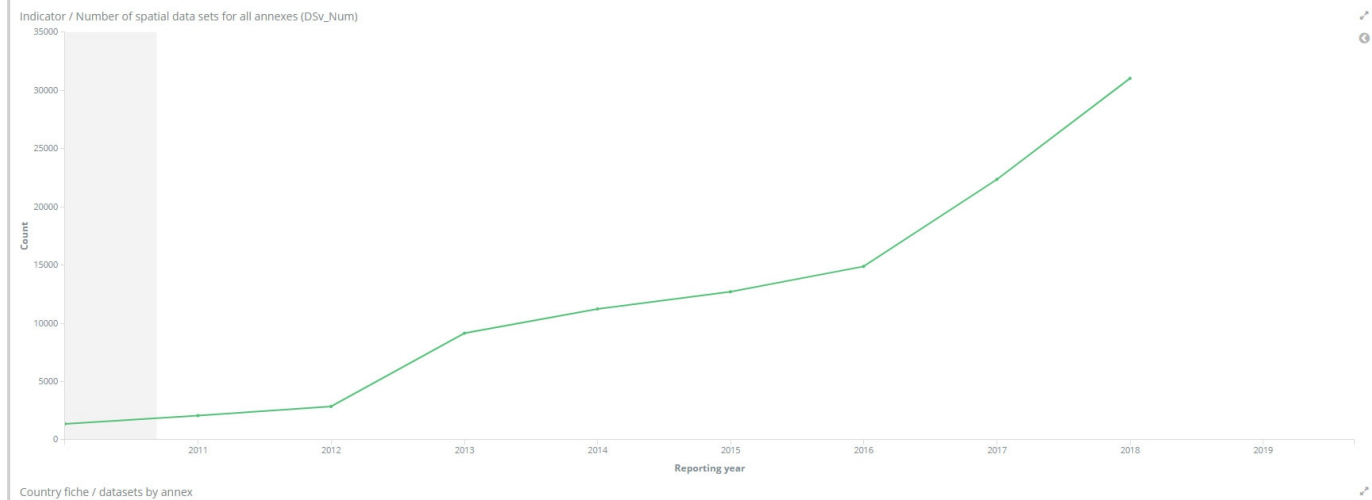
In addition to the above mentioned issues, the implementation of INSPIRE Directive requires Member States to take four main steps in relation to management of spatial datasets which fall under the Directive:

- 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 Germany 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.

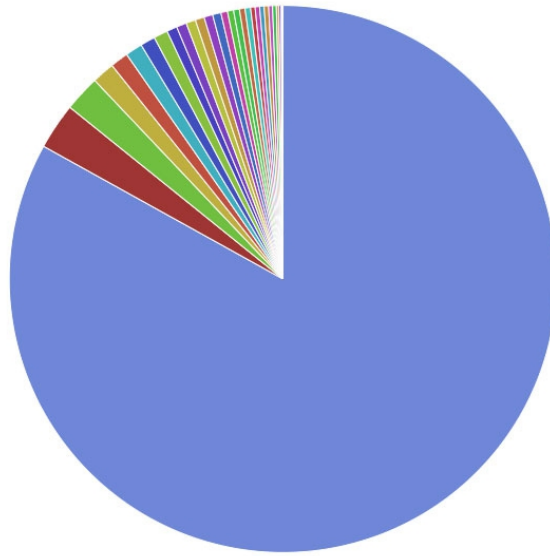
The conformity of the implementation is assessed against the full set of legal specifications set out by the Directive and the Implementing Rules and the commonly agreed good practices set out by the technical guidelines.

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



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

INSPIRE Raw data (datasets) by themes



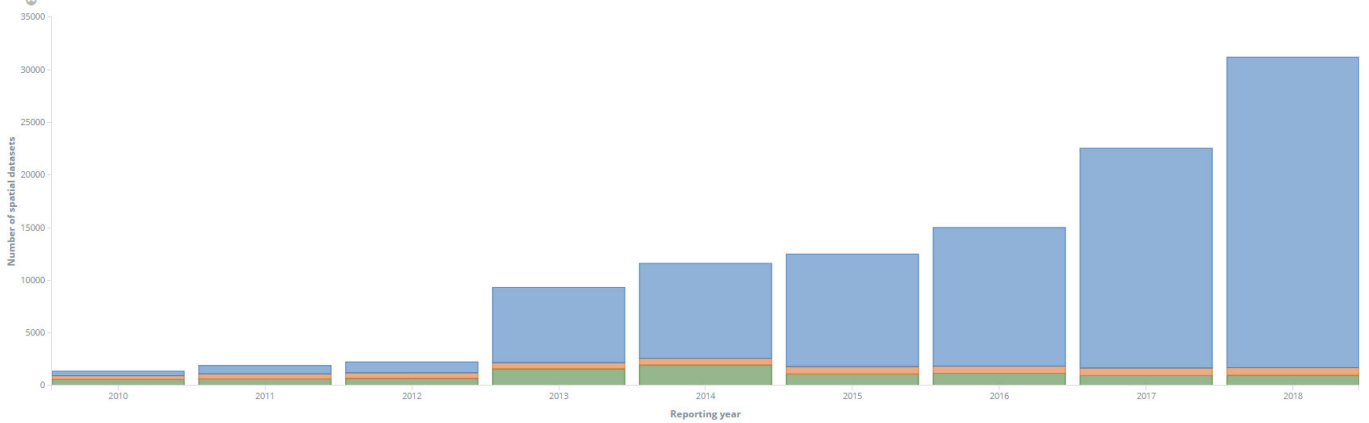
- Land use
- Area management...
- Utility and govern...
- Geology
- Protected sites
- Environmental mo...
- Transport network...
- Soil
- Population distrib...
- Human health an...
- Production and in...
- Habitats and bioto...
- Hydrography
- Natural risk zones
- Orthoimagery
- Statistical units
- Meteorological ge...
- Administrative units
- Land cover
- Buildings
- Energy resources
- Addresses
- Mineral resources
- Elevation
- Geographical nam...
- Species distribution
- Cadastral parcels
- Bio-geographical r...
- Atmospheric cond...
- Agricultural and a...

Country fiche / datasets by themes

Data sets made available per INSPIRE theme

Indicator / Number of spatial data sets per annexes

MDv1.1 MDv1.2 MDv1.3



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

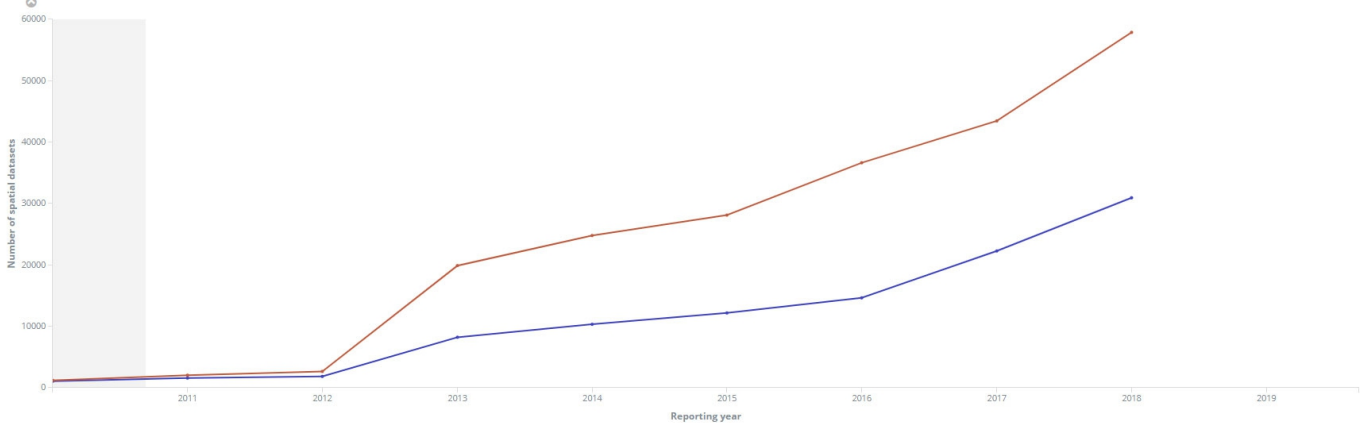
MDv1.3: number of spatial data sets for Annex III that have metadata

Documentation of the data (metadata) (step 2)

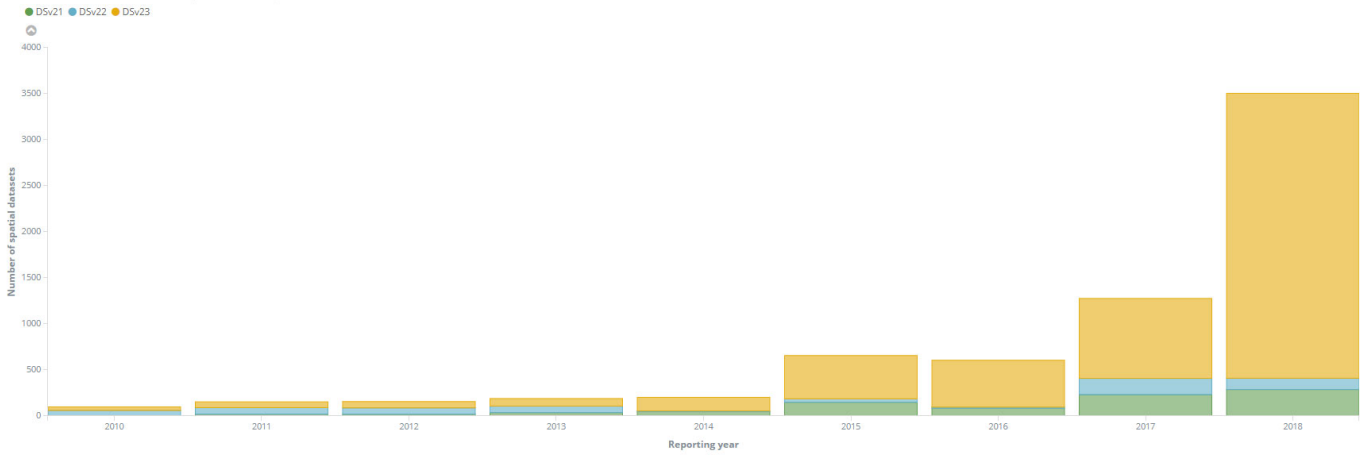
Evolution of documented data and conformity of the documentation

Indicator / Number of spatial data set that have metadata (MDv1_DS) and have conformant metadata (MDv2_DS)

MDv1_DS MDv2_DS



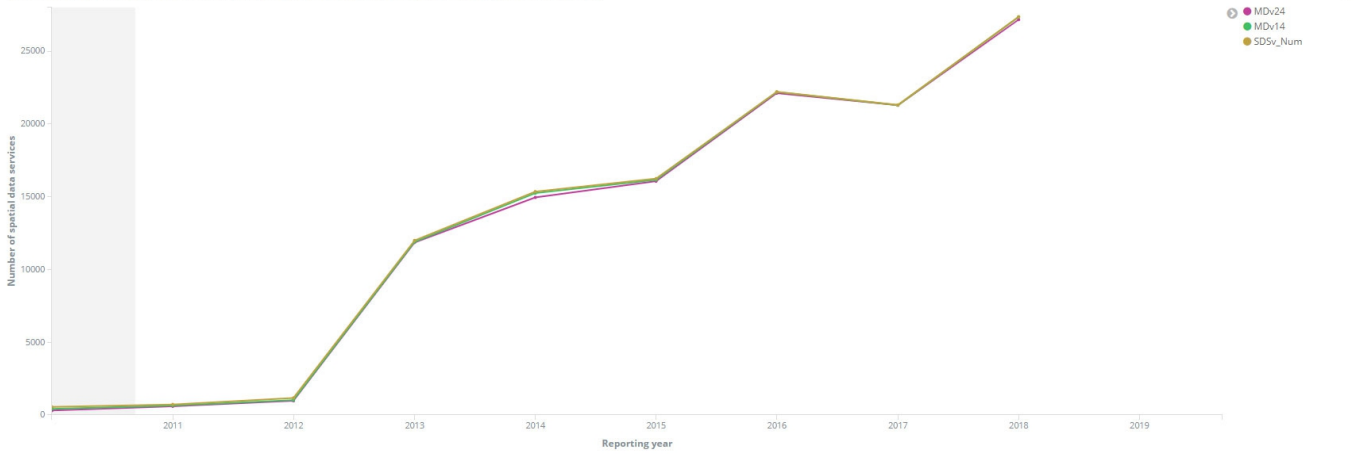
Indicator / Number of conformant spatial data sets per Annexes



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

Evolution of documented services and conformity of the documentation

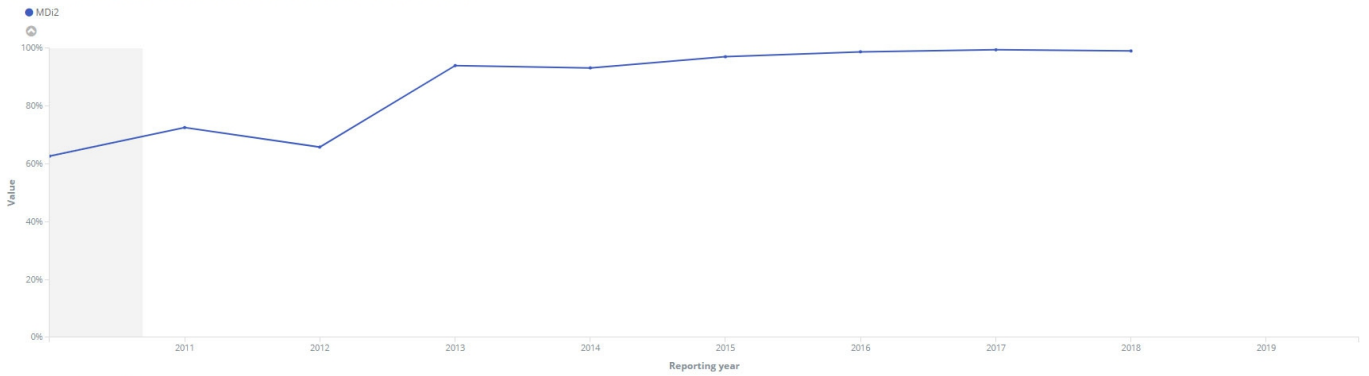
Indicator / Number of spatial data services (SDSv_Num) with metadata (MDv14) and conformant metadata (MDv24)



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)

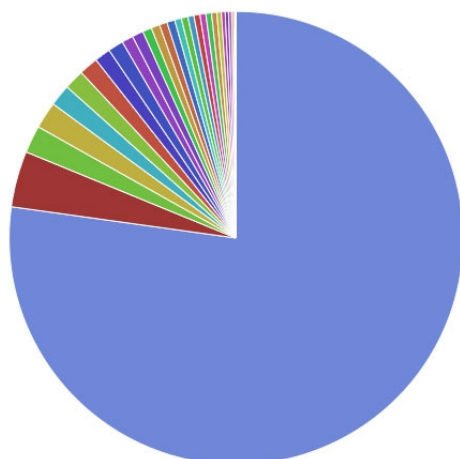


Country fiche / accessibility

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

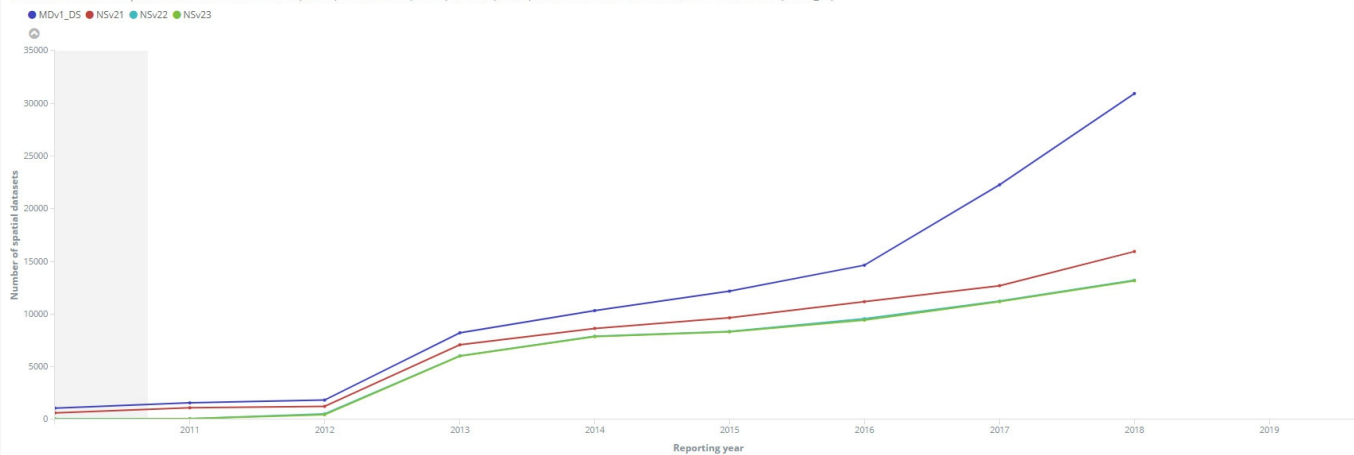


- Land use
- Area management...
- Utility and govern...
- Geology
- Environmental mo...
- Soil
- Protected sites
- Population distrib...
- Transport networks
- Hydrography
- Human health an...
- Meteorological ge...
- Habitats and bioto...
- Administrative units
- Natural risk zones
- Land cover
- Statistical units
- Addresses
- Buildings
- Energy resources
- Geographical nam...
- Mineral resources
- Production and in...
- Orthoimagery
- Cadastral parcels

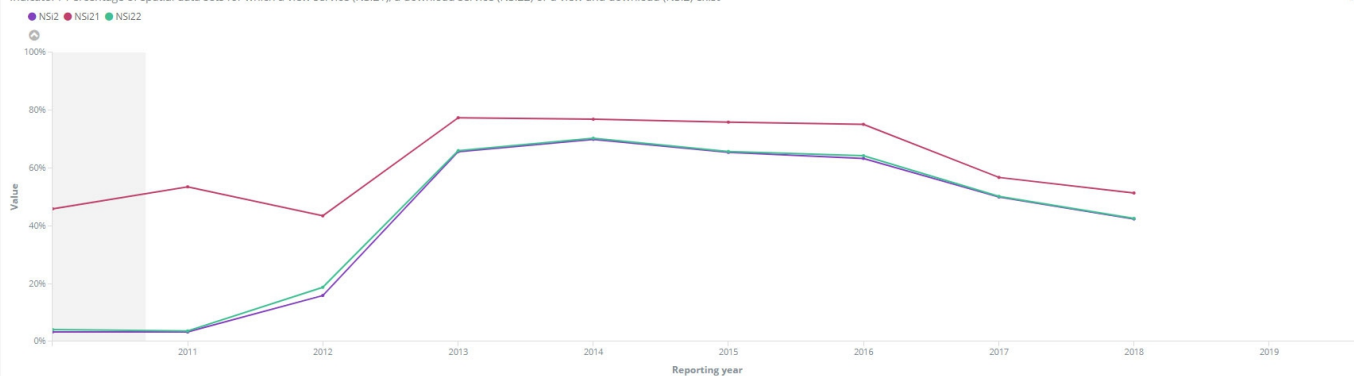
Country fiche / Evolution of spatial data accessible through services

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

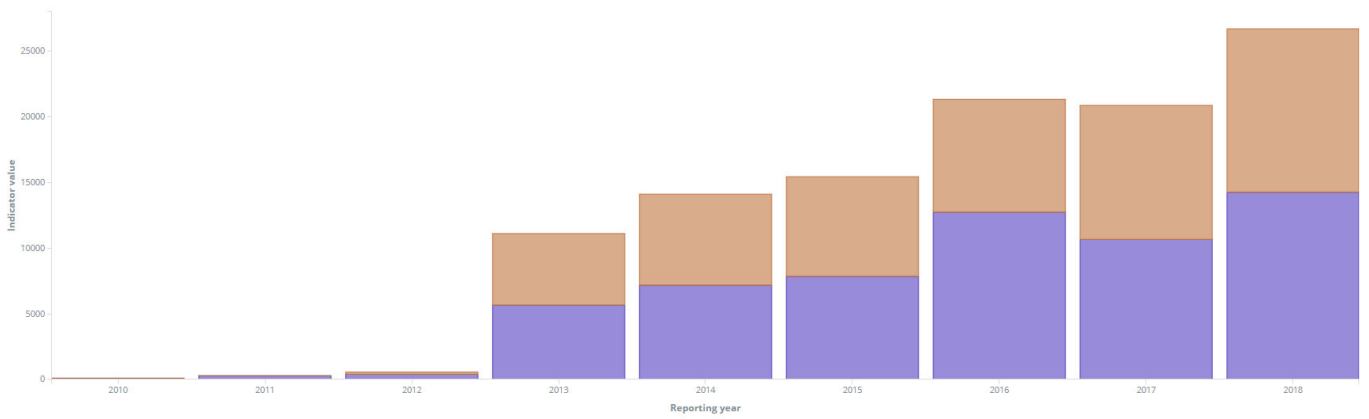


Country fiche / Evolution of the conformity of the digital services

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)

● NSv41 ● NSv42 ● NSv43 ● NSv44 ● NSv45



Country fiche / Interoperability

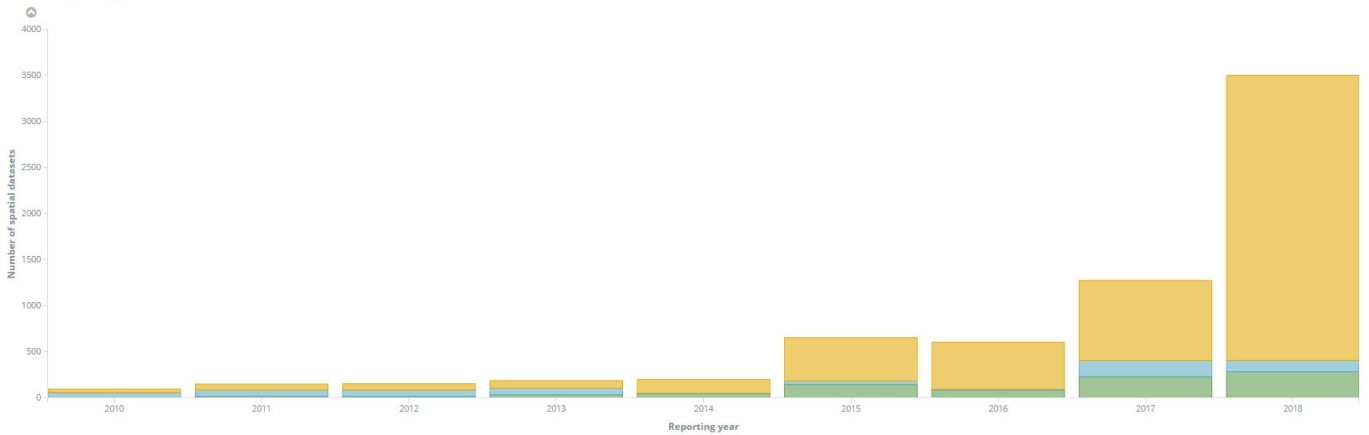
Interoperability of spatial data sets (step 4)

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