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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 Data Spaces announced by the European Data Strategy from 20/02/19 and the e-Government Action Plan that contributes to the Shaping of Europe's digital future 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 Implementing Decision (EU) 2019/1372 on the 19th August 2019.

This country fiche highlights the progress in the various areas of INSPIRE implementation. It includes information on monitoring 2020 acquired in December 2020 and Member States update.

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: Lenkungsgremium GDI-DE (Steering Committee)

Contact Email: Click to email

National INSPIRE Website: https://www.gdi-de.org/en/INSPIRE

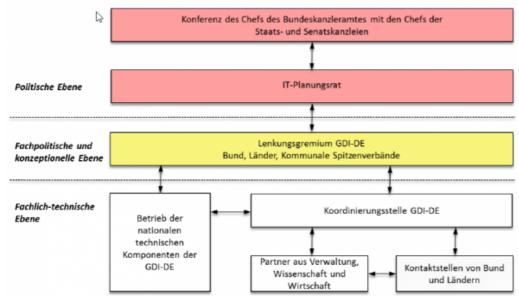
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Coordination Structure & Progress:

• National Contact point

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· 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 (Lenkungsgremium 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 an advisory board consisting of representatives of business associations, among others.
- Cooperation with the scientific sector is ensured by participation of GDI-DE in the setup of a (new) national research data infrastructure.
- Scientific representatives 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 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 above mentioned 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;
 - $\circ~$ 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 Ressources (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 permant 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 since 2016. 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.

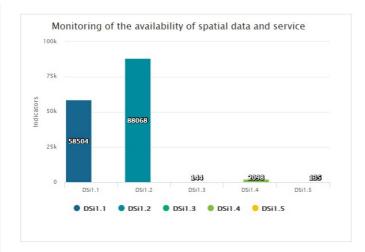
Key facts and figures



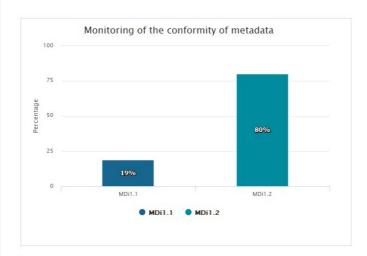
Indicators in support of Commission Decision (EU) 2019/1372 implementing Directive 2007/2/EC (INSPIRE) as regards to monitoring and reporting

Graphs generated with data taken from: https://inspire-geoportal.ec.europa.eu/mr2020_details.html?country=de

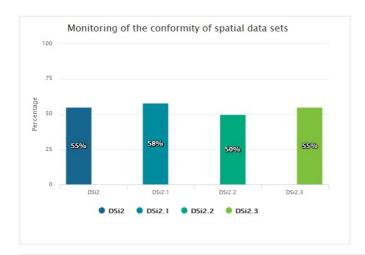
The date of harvest metadata: 21/12/2020



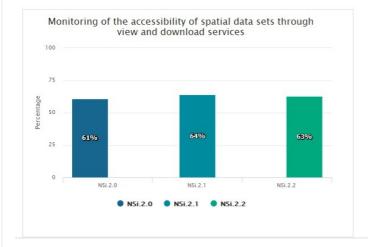
Legend	
Indicator	Definition
DSi1.1	The number of spatial data sets for which metadata exist
DSi1.2	The number of spatial data services for which metadata exist
• DSi1.3	The number of spatial data sets for which the metadata contains one or more keywords from a register provided by the Commission indicating that the spatial data set is used for reporting under the environmental legislation
● DSi1.4	The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers regional territory
OSi1.5	The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers national territory



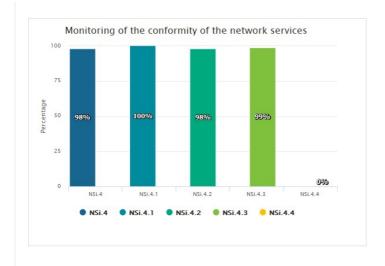
Legend	
Indicator	Definition
● MDi1.1	Percentage of metadata for spatial data sets conformant with Commission Regulation (EC) No 1205/2008 as regards metadata
MDi1.2	Percentage of metadata for spatial data services conformant with Commission Regulation (EC) No 1205/2008 as regards metadata



Legend	
Definition	
Percentage of spatial data sets that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	
Percentage of spatial data sets, corresponding to the themes listed in Annex I, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	
Percentage of spatial data sets, corresponding to the themes listed in Annex II, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	
Percentage of spatial data sets, corresponding to the themes listed in Annex III, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	



Legend	
Indicator	Definition
● NSi.2.0	The Percentage of spatial data sets that are accessible through view and the download services
● NSi.2.1	The Percentage of spatial data sets that are accessible through view services
• NSi.2.2	The Percentage of spatial data sets that are accessible through download services



Legend		
Indicator	Definition	
NSi.4	Percentage of the network services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.1	Percentage of the discovery services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.2	Percentage of the view services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.3	Percentage of the download services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
NSi.4.4	Percentage of the transformation services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	