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Introduction

This country fiche highlights Austria's progress in the various areas of INSPIRE implementation. It contains information covering the period **up to March 2022**.

Austria has transposed the INSPIRE Directive into Austrian law by adopting a federal act at national level (Spatial Data Infrastructure Act – *Geodateninfrastrukturgesetz, GeoDIG* ([Federal Law Gazette I No 14/2010 as amended by Federal Law Gazette I No 109/2012](#)) and nine spatial data infrastructure laws at regional level (in the federal provinces/Länder).

In 2015, the EU Commission held a meeting with Austria concerning the necessary full implementation of the INSPIRE Directive (pre-pilot bilateral technical meeting). As a result, Austria drew up an Action Plan to (further) ensure and achieve proper implementation of the Directive. The Action Plan was attached to Austria's report in 2016. One of the measures detailed in the Action Plan was the establishment of a helpdesk to provide public authorities with technical support for INSPIRE implementation. The extended activities help implement the INSPIRE Directive, while also contributing to the EU's Digital Single Market.

This country fiche highlights the progress in the various areas of INSPIRE implementation. It includes information on [monitoring 2021](#) acquired in December 2021 and Member States update.

State Of Play

The following paragraphs provide a summary of currently valid information on governance, use, impacts and progress achieved towards INSPIRE implementation.

Coordination

National Contact Point

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Postal Address: Bundesministerium für Landwirtschaft, Regionen und Tourismus

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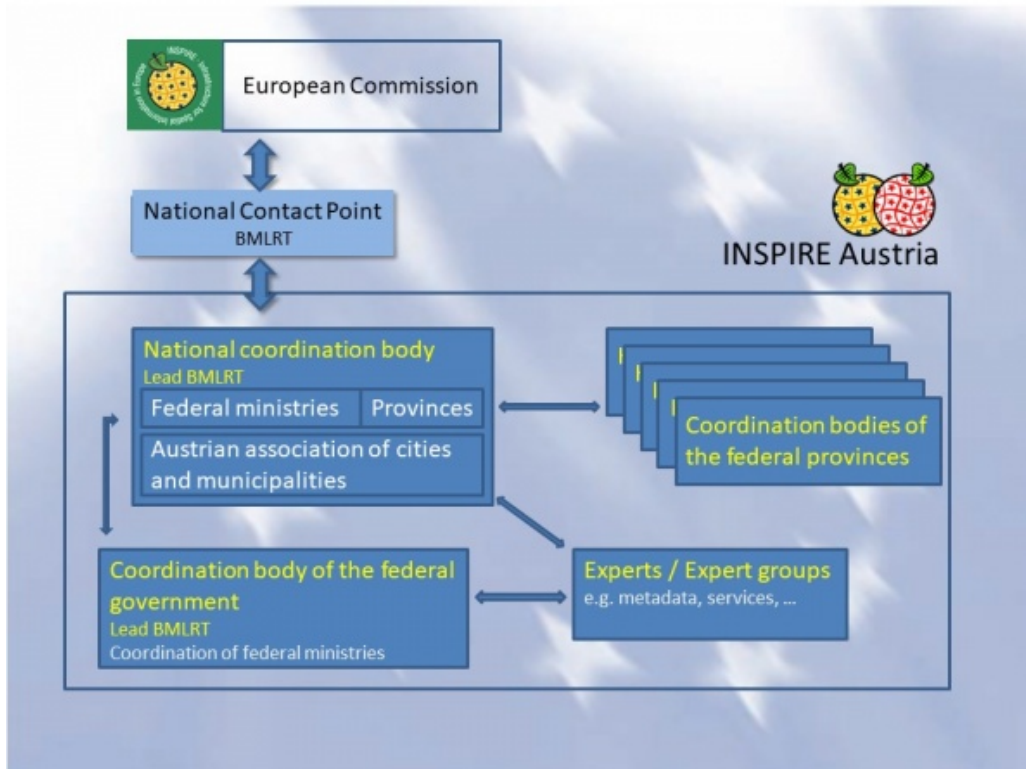
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Coordination Structure & Progress:

Coordination structure

- As Austria has a federal system of government, coordinating structures have been established at national and regional (provinces/Länder) level.
- The Federal Ministry for Agriculture, Regions and Tourism (Bundesministerium für Landwirtschaft, Regionen und Tourismus, BMLRT) has set up a national coordination body for implementing INSPIRE, which consists of authorised representatives from federal ministries (whose scope of responsibilities includes INSPIRE spatial data sets or services), and of representatives from the provinces and the Austrian association of cities and municipalities (as illustrated below).
- The national coordination body is assisted by experts or temporary working groups as required.
- For information about INSPIRE in Austria please go to www.inspire.gv.at

Progress

Member States are given some leeway as to how they deal with the technical implementation of the INSPIRE Directive, which has an impact on the functional quality of INSPIRE infrastructure. For this reason, additional measures and mechanisms are used for INSPIRE in Austria to ensure the applicability of INSPIRE and quality improvement:

- **National helpdesk:** supports Austrian public data providers (public authorities) in the enforcement of laws implementing the INSPIRE Directive, in the implementation of the Directive and of the directly applicable implementing acts of the INSPIRE Directive. In addition to technical content and support, tools for the validation of metadata, network services and data – which are currently only partially functional - are tested and the knowledge generated is passed on to the spatial data providers.
- Working group on metadata: defines a national understanding for a harmonised generation and maintenance of metadata
- Working group on network services: assists in the establishment of network services and technology selection and conducts implementation tests – e.g. tests for implementing a national validation service
- Working group on data harmonisation: helps to coordinate the process of data harmonisation approaches where necessary
- Working group on validation: supports in the area of data and service validation, tests for implementing a national

Functioning and coordination of the infrastructure

- In Austria, a country which is organised on a federal basis, there are several spatial data infrastructures (SDIs) at national, regional and local level, designed to support specific public tasks. These SDIs are now being adapted and further developed in the course of the implementation of INSPIRE to meet INSPIRE requirements.
- There are around 40 public providers of spatial data that are obliged to implement INSPIRE in Austria. The main public spatial data providers are federal agencies (e.g. the Federal Ministry for Agriculture, Regions and Tourism (BMLRT), the Federal Office of Metrology and Surveying (BEV), the Environment Agency Austria (Umweltbundesamt GmbH) and Statistics Austria) and the provinces.
- In the interests of administrative efficiency, the provinces or the federal government fulfil the obligations of the municipalities on their behalf. Additionally, the Computing and Technology Centre for Agriculture, Forestry and Water Management (LFRZ GmbH) provides a service infrastructure financed by the BMLRT which can be used by public spatial data providers.
- With GEOLAND.AT, the provinces have created a spatial data network within which they coordinate their GIS activities and provide easy, open and Austria-wide access to their spatial data and services via a joint geoportal. GEOLAND.AT plays a central role in INSPIRE implementation in the provinces and creates synergies in the provision of network services.
- Through the national helpdesk, IT and Geo spatial experts meet regularly to discuss technical details, e.g. users of the metadata solution GeoNetwork in order to promote the further development and maintenance of software (internationally). The results are communicated in Austria and at European level.
- For quality and efficiency reasons, many spatial data topics are addressed in a collaborative effort, to simplify INSPIRE implementation and support the availability of national products. Austrian addresses, for instance, are collected from the approx. Austrian 2100 municipalities and compiled in a national database. Similarly, a national transport graph (www.gjp.gv.at/) has been developed in a collaboration between the federal government and the provinces, which is a digital image of the Austrian transport network. The provinces and their partners also provide a joint basemap (www.basemap.at/), which is available online as a GIS service (WMTS), and as a predefined dataset for offline download.

Usage of the infrastructure for spatial information

- The use of INSPIRE network services (and their development in recent years) in Austria is partly closely monitored, but on the other hand there are often no reliable user or access data available, as these are not monitored separately and estimates are based on different methods and classifications. For services where users are registered via a user login, a strong increase in the number of uses can be observed.
- Several federal agencies, all of the provinces, and many cities and municipalities operate web-based GIS applications that provide public access to the spatial data of public administration. Examples are:
 - the national INSPIRE search portal geometadatensuche.inspire.gv.at
 - the national INSPIRE registry registry.inspire.gv.at
 - the GIS portal of the provinces www.geoland.at
 - the GIS portals of the individual provinces
 - the OGD administrative basemap of Austria www.basemap.at/
 - the Austrian address register with the official addresses www.adressregister.at/
 - the geoportal provided by BEV (data.bev.gv.at/), especially for addresses and cadastre, and the topographic map www.austrianmap.at/
 - the website of the Central Institute for Meteorology and Geodynamics (ZAMG) www.zamg.ac.at/ with weather, climate and earthquake data
 - the portal www.naturgefahren.at/ with data on natural hazards

Data sharing arrangements

- The GI (geographic information) sector in Austria is heterogeneous, mainly due to Austria's federal framework, and has developed in different ways, depending on the thematic requirements. This can make an exchange of data between organisations more difficult.
- The last few years have seen more and more collaboration arrangements, such as:
 - the invitation to tender for the creation of orthophotos as a collaboration between the federal government and the provinces
 - a collaboration between the federal government and the provinces on the creation of a Digital Elevation Model (ALS: airborne laser scanning)
 - the generation of addresses in a consortium consisting of the federal government and the Austrian association of cities and municipalities
 - the mutual quality check of addresses and the transport graph (GIP) using service-based methods
- Some organisations (e.g. ZAMG, AustroControl GmbH, Environment Agency Austria) have well-established data sharing arrangements with European or international partner organisations (e.g. EUROCONTROL, European Environment

Agency (EEA)).

- Many Austrian spatial data providers make their data (including INSPIRE spatial data) available under an open licence (*Creative Commons Attribution 4.0 International*, [CC-BY_4.0](#)) and many of them participate in [Cooperation Open Government Data Österreich](#).

Costs and benefits

- Costs
 - For IT operations, costs arise in the areas provision, (network) security and failure minimisation (resilience). As for installation, there are further staff costs for harmonising INSPIRE spatial data sets and services, and for establishing relevant workflows.
 - The total costs of national INSPIRE coordination, including central services costs and staff costs for coordinating and supporting national implementation, for the Ministry (BMLRT) that is responsible for providing these support services amount to around € 540 000 per year. This does not include the costs for the around 40 public spatial data providers.
 - The costs for the data harmonisation are estimated to be at least € 2 million, and additionally about € 250 000 per year.
 - The high cost for INSPIRE data harmonisation and the lack of resources pose a challenge for further developments of data exchange in coming years. It will be important to develop clearly defined use cases for data harmonisation and to coordinate and establish the use of INSPIRE data in environmental reporting and other data provision requirements as well. Such examples have been and are still being promoted by the European Commission.
- Benefits
 - The coordination of INSPIRE implementation between the public spatial data providers involved (in addition to previous cooperation efforts) has had a positive effect on the communication and cooperation between these providers at national, but also at European level.
 - INSPIRE is seen as a driving force for the ongoing development of national SDIs.
 - However, many public spatial data providers see no tangible benefit yet. Benefits are expected in the long term (simplified and more efficient data sharing, simplified environmental reporting).
- Benefit-cost ratio
 - The benefit-cost ratio between the high costs for data harmonisation and the currently low usage of INSPIRE services is looked at critically.
 - The benefits of the OGD initiatives are looked upon favourably. In this respect, INSPIRE makes a contribution by showing which spatial data sets and services are available from the public providers.
 - The collaborative (Member States and/or European Commission) development of instruments helps to improve INSPIRE implementation and use. However, efforts of individual Member States and data providers are currently not always sufficiently used to create synergies.

Key facts and figures

Austria

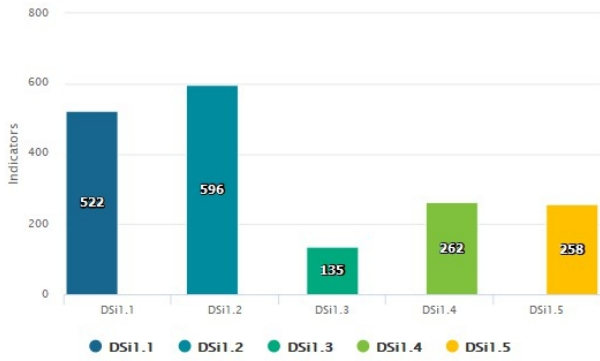
Indicators in support of [Commission Decision \(EU\) 2019/1372](#) implementing Directive 2007/2/EC (INSPIRE) as regards to monitoring and reporting

Graphs generated with data taken from: https://inspire-geoportal.ec.europa.eu/mr2021_details.html?country=at

The date of harvest metadata: 17/12/2021

Endpoint: *INSPIRE-61494ff5-6fad-11e8-b649-52540023a883*

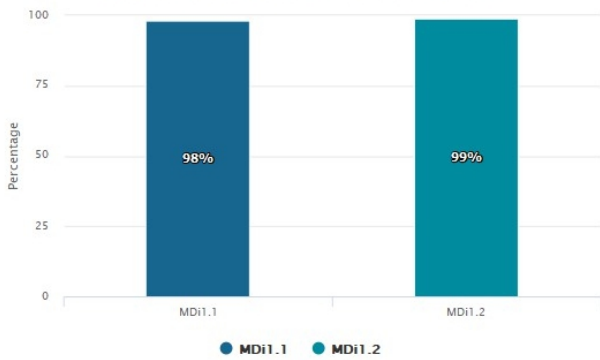
Monitoring of the availability of spatial data and service



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
DSi1.5	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

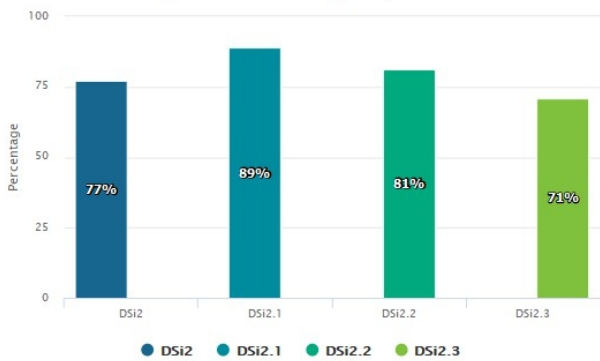
Monitoring of the conformity of metadata



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

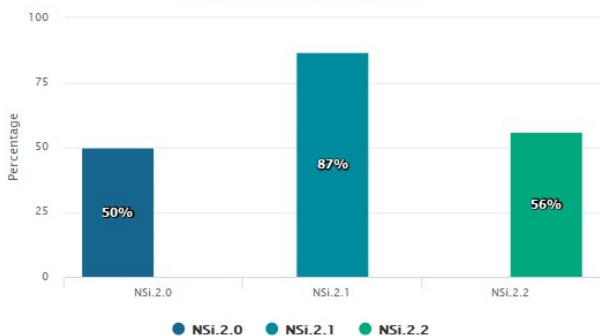
Monitoring of the conformity of spatial data sets



Legend

Indicator	Definition
DSi2	Percentage of spatial data sets that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets
DSi2.1	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
DSi2.2	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
DSi2.3	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

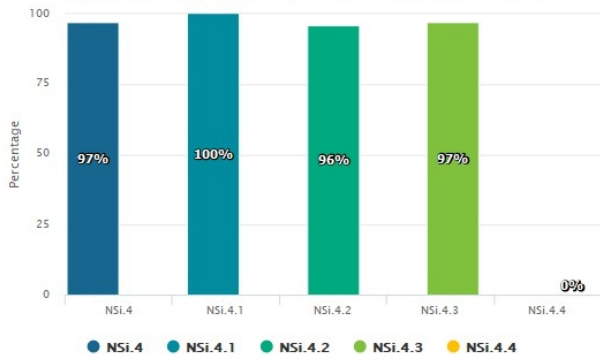
Monitoring of the accessibility of spatial data sets through view and download services



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

Monitoring of the conformity of the network 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