

Table of Contents

- Introduction
- State of Play
 - Coordination
 - Functioning and coordination of the infrastructure
 - Usage of the infrastructure for spatial information
 - Data Sharing Arrangements
 - Costs and Benefits
- Key Facts and Figures.
 - Monitoring Indicators

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

Coordination

National Contact Point

Name of Public Authority: State Geodetic Administration

Postal Address: Gruška 20, 10000 Zagreb

Contact Email: [Click to email](#)

National INSPIRE Website: <https://www.nipp.hr/?id=30>
<https://dgu.gov.hr/>

MIG Contacts: Contact Person: Maric Ljerka

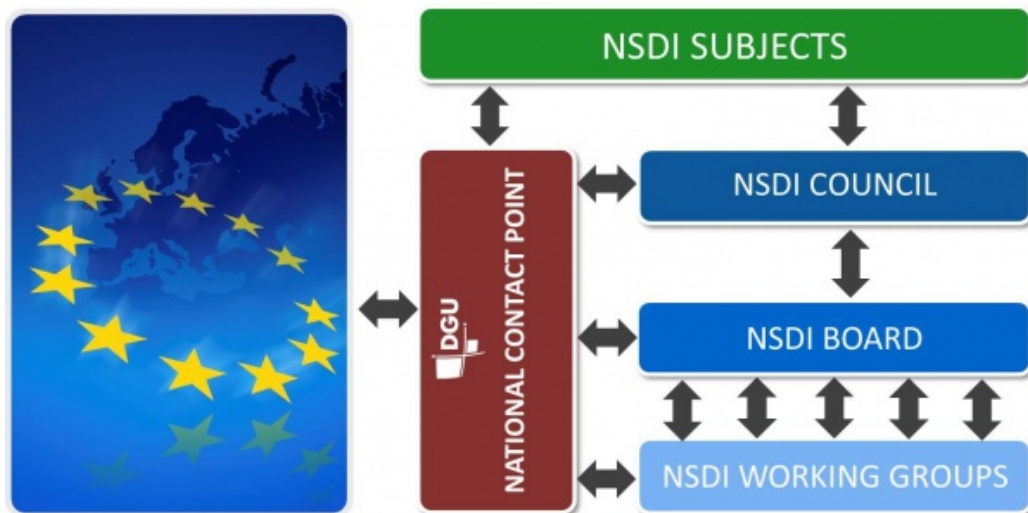
Email: ljerka.maric@dgu.hr

Contact Person: Tomislav Ciceli

Email: Tomislav.Ciceli@dgu.hr

MIG T Contacts: Contact Person: Tomislav Ciceli

Email: Tomislav.Ciceli@dgu.hr



Coordination Structure & Progress:

- **National Contact point**

Name of the public authority	State Geodetic Administration
Contact information:	SGA Sector for Spatial Data Infrastructure
Mailing address	Gruška 20, 10000 Zagreb, Croatia
Telephone number	+385 (0)1 6165404
Telefax number	+385 (0)1 6165484
Email address	infonipp@dgu.hr
Organisation's website URL	https://dgu.gov.hr/
Contact person (if available)	Ljerka Marić
Telephone number	+385 (0)1 6166533
Email address	Ljerka.Maric@dgu.hr
Contact person - substitute (if available)	Tomislav Ciceli
Telephone number	+385 (0)1 6166535
Email address	Tomislav.Ciceli@dgu.hr

- **Coordination Structure**

- The main governing body of NSDI in the Republic of Croatia is the NSDI Council. It is a body that implements the NSDI within the Republic of Croatia and coordinates the activities of NSDI subjects within the scope and with rights and obligations determined by the Law on National Spatial data infrastructure (OG 56/13, 52/18, 50/20). Governmental authorities at the level of ministries mainly join this NSDI Council, but also relevant (branch) associations as well as National Contact Point (NCP).
- The Act Amending the National Spatial Data Infrastructure Act (OG 50/20) of 2 May 2020 introduced changes in the composition of the NSDI Council in order to achieve its more efficient work. Therefore it was proposed that the President of the Council was a representative of the National Contact Point and that a new member from the State Hydrometeorological Institute was included in the new composition. Additionally, it governs that exchange and sharing of data at the national level is regulated by a protocol, whereas the sharing of spatial data between NSDI entities and European Commission bodies is regulated by an agreement.
- The Croatian Government has appointed new members of the seventh convocation of the NSDI Council on 26. November 2020.
- At the managerial level is the NSDI Board, a permanent body for NSDI implementation which serves as the coordination link between the NSDI Council and NSDI working groups. The NSDI Board is appointed by the NSDI Council and consists of three representatives from the NSDI Council, three from the NCP, and the heads of NSDI working groups.
- At the operational level, till February 2021, three NSDI working groups were established for the purpose of

elaborating certain tasks and obligations within the scope of the NSDI implementation.

- Workgroup for NSDI technical standards
- Workgroup for NSDI capacity building
- Workgroup for NSDI spatial data.

- The NCP is responsible for leading the implementation of the NSDI and the coordination of the activities of the NSDI subjects within the scope and with rights and obligations determined by the Law.

• Progress

- As the Republic of Croatia became official EU member 1 July 2013, it was not obliged to submit the INSPIRE monitoring and reporting forms before that date. The first Reporting was submitted in 2016 and a lot of progress has been made in the period from 2016-2020. Also from the last update of the Country fiche in 2020 the number of identified spatial datasets, as well as documentation of data through NSDI geoportal and Metadata Catalogue, has grown as seen in the Monitoring results. Accessibility of data through network services is also higher. The interoperability of spatial datasets has also increased but still not enough.

Functioning and coordination of the infrastructure

- The Law on National Spatial Data Infrastructure (OG 56/13) was adopted by the Croatian Parliament in May 2013.
- Progress from the Reporting 2016 includes the adoption of the following acts and documents:
 - In September 2017 the government of the Republic of Croatia adopted the Decision on the adoption of the National Spatial Data Infrastructure Strategy 2020 and the Strategic Plan of the National Spatial Data Infrastructure for the period 2017-2020 (OG 96/17). The adoption of the NSDI Strategy will help all stakeholders, primarily NSDI subjects, to achieve compliance with the INSPIRE Directive. It will further emphasize the centralized access to spatial data of the public bodies through the NSDI geoportal, which will result in greater efficiency of state administration in areas directly or indirectly linked to spatial data. Fulfillment of the strategic goals will increase the number of spatial data present, primarily at the regional and local level, where the largest number of new NSDI subjects are expected.
 - The Law on Amendments to the Law on National Spatial Data Infrastructure (OG 52/18) was adopted by the Croatian Parliament in May 2018 and it fully complies with Directive 2007/2 / EC of the European Parliament and of the Council of March 14th, 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).
 - The Act on Amendments to the National Spatial Data Infrastructure Act (OG 50/20) was adopted by the Croatian Parliament in April 2020. Pursuant to the Act Amending the Act, the current National Spatial Data Infrastructure Act is harmonized with the INSPIRE Directive, which was amended with the entry into force of Regulation (EU) 2019/1010 of the European Parliament and of the Council. Also, the composition of the Council of the National Spatial Data Infrastructure is changed in order to achieve more efficient work of the Council, as well as the competences of the National Contact Point regarding reporting by Member States to the European Commission. Furthermore, the Act on Amendments to the National Spatial Data Infrastructure Act (OG 50/20) , with the aim of harmonization with the Law on State Information Infrastructure (Official Gazette, No. 94/14), proposes that the exchange and sharing of data at the national level is regulated by a protocol, while the sharing of spatial data between NSDI entities and European Commission bodies is regulated by an agreement. The Act Amending the National Spatial Data Infrastructure Act (OG 50/20) entered into force on 2 May 2020.

Usage of the infrastructure for spatial information

- Quantitative information about the use of the spatial datasets exists only for those datasets for which are developed network services. NSDI subjects that have developed such services for their datasets are State Geodetic Administration, Ministry of Environmental Protection and Energy, Croatian Highways, Ministry of Construction and Physical Planning, City of Zagreb, Croatian Forest, Croatian Water, and PSP. The most used network services are State Geodetic Administration's Digital orthophoto, Topographic Map 1: 25 000 and Cadastral parcels and Cadastral municipalities.
- NCP has encouraged NSDI subjects to implement their own metadata catalogues based on NSDI Metadata Specification and now NSDI geoportal is harvesting two such catalogues from the Ministry of Economy and Sustainable Development and Croatian Bureau of Statistics.
- The use of the infrastructure for spatial information has grown a lot in the past three years which can be seen in the development of many geoportal and metadata catalogues.
- NSDI is also used in education in the Republic of Croatia. Research made on several high schools and universities in Croatia showed that NSDI is used for educational purposes in at least 3 faculties and 1 high school.
- Communication Plan of National Spatial Data Infrastructure was written in December 2018 and its goal is to define the best methods for communication with different stakeholders including the general public and further raise the awareness on benefits of spatial data infrastructure.
- At the end of 2019, a new version of the NSDI Metadata Specification, that is fully compliant with the new INSPIRE Implementing rules for metadata "Technical Guidance for the implementation of INSPIRE dataset and service metadata based on ISO/TS 19139:2007 ", was adopted. In the Specification the emphasis is on implementation rules of xml coding of metadata elements in accordance with norm ISO / TS 19139: 2007 taken as a reference, international standard for

metadata coding. New Specification, in which metadata elements are divided into compliance classes, provide better support in automatic metadata validation.

- In 2020, new version of NSDI Metadata Specification was implemented to the national catalogue on the national Geoportal.
- State Geodetic Administration, in 2019, 2020 and 2021, is implementing the project "Strengthening Capacities for the Establishment of the National Spatial Data Infrastructure". The project is co-financed by the European Social Fund from the Priority Axis 4, Operational Program Effective Human Resources 2014-2020, Investment Priority 11.i., Specific goal 11.i.1. The main goal of the project is to strengthen the existing NSDI capacities at the National Contact Point and local promoters, as well as raising NSDI knowledge at the local, regional and national levels thus resulting in the increase of the number of NSDI subjects.
- State Geodetic Administration, in 2019, 2020 and 2021, is implementing the project „Increasing the availability of NSDI spatial data through e-services“ funded from the European Regional Development Fund, aiming to increase availability and interoperability of spatial datasets in Croatia.

Data sharing arrangements

- The goal of the Republic of Croatia is to share the data between public authorities and to re-use it for different purposes. Data sharing agreements exist among public authorities and define the terms of use for datasets that are being shared, therefore reducing the obstacles in data sharing.
- There is also a practice of co-financing the major projects of data acquisition between two or more institutions that also leads to data sharing and cost reduction. The best example is the creation of Digital orthophoto, which is co-financed by two institutions, State Geodetic Administration and Agency for Payments in Agriculture, Fisheries and Rural Development.
- Data exchange and sharing are common among some Croatian public authorities and European Community institutions and bodies. For example, the Meteorological and Hydrological Service exchange daily data in the context of the European Flood Awareness System and World meteorological services.
- The State Geodetic Administration, in 2019, has signed the Copernicus Agreement with the European Environmental Agency which includes ATOM INSPIRE - Administrative units, hydrography and elevation.

Costs and benefits

Although no quantitative values of the INSPIRE implementation benefits can be given, there are many positive feedbacks to INSPIRE implementation and using National Spatial Data Infrastructure:

- Using NSDI has led to cost reduction as data can be re-used in other institutions and duplication of data acquisition can be avoided.
- Stakeholders use the Metadata Catalogue and NSDI geoportal for their needs regarding spatial data since all necessary information regarding the data can be found there (e.g. terms of use, resolution, data coverage).
- NSDI subjects when providing INSPIRE services for their spatial datasets decide to make them free of charge, thus allowing companies to use these data to create new products and expand the spatial data market.
- Generally, NSDI is contributing a lot in raising knowledge on spatial data management issues.

Key facts and figures

Croatia

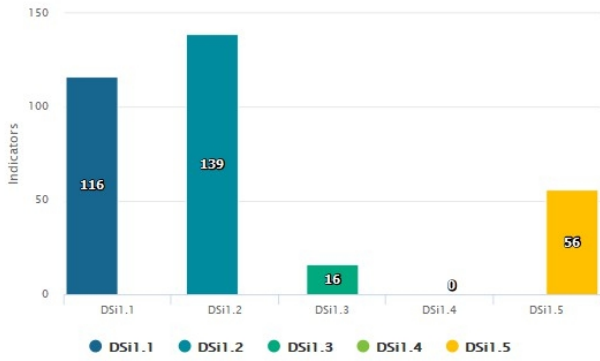


Indicators in support of [Commission Decision \(EU\) 2019/1372](#) implementing Directive 2007/2/EC (INSPIRE) as regards to monitoring and reporting

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

The date of harvest metadata: 16/12/2020

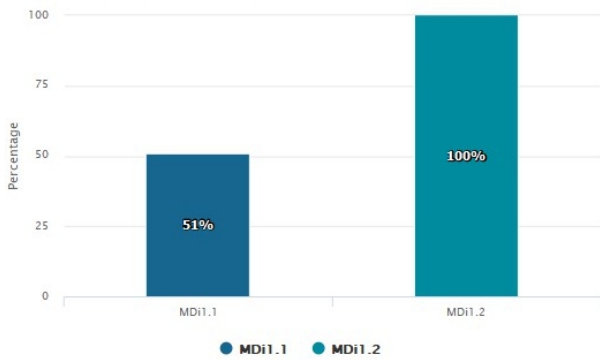
Monitoring of the availability of spatial data and service



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

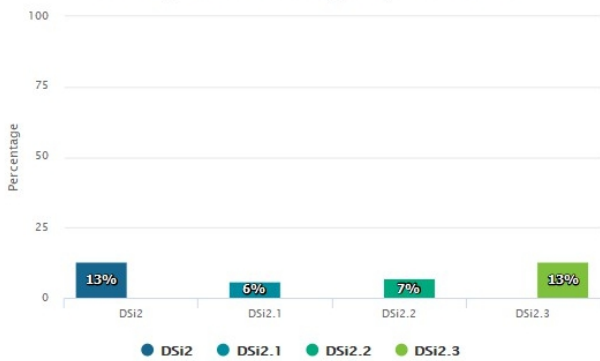
Monitoring of the conformity of metadata



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

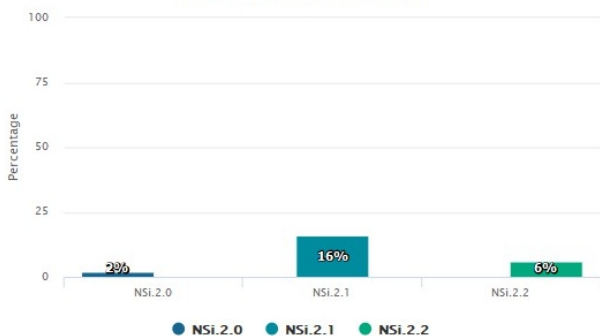
Monitoring of the conformity of spatial data sets



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

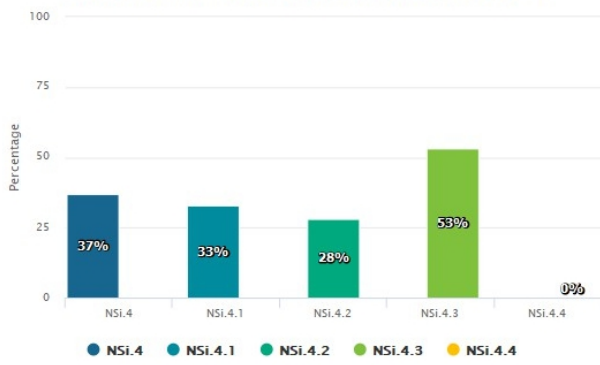
Monitoring of the accessibility of spatial data sets through view and download services



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