Status of implementation of the INSPIRE Directive – 2016 Country Fiches

COUNTRY FICHE Croatia 

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 of Croatia 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 2016** as a summary of the information acquired through:

- the 2016 tri-annual INSPIRE implementation report,
- monitoring report in May 2016,

- a bilateral meeting on the implementation of the INSPIRE Directive between the Commission and Croatian representatives.

1. 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.

The content of the chapter is tagged according to 5 criteria of better regulation:

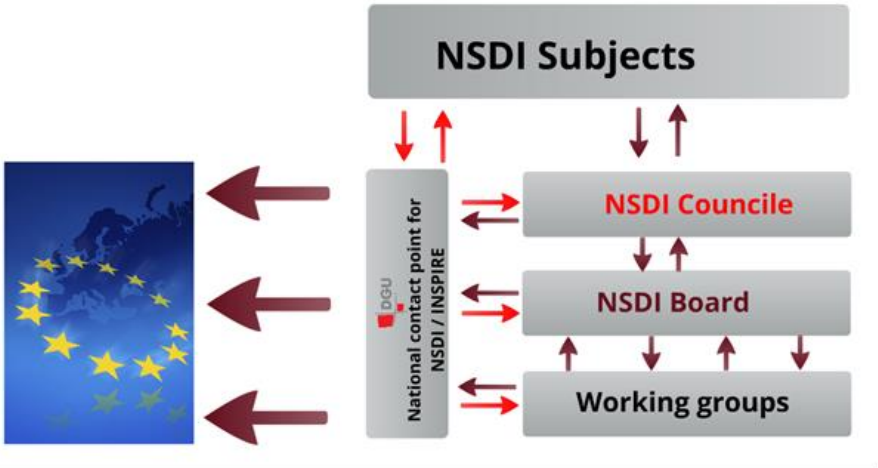
- **[Effectiveness]** How successful has the INSPIRE implementation been in achieving, progressing towards its objectives; progress made, gaps, what factors have influenced or why it has not yet been achieved regarding availability of services, data interoperability, sharing, data policy obstacles
- **[Efficiency]** Costs (numbers or difficulties to evaluate them); benefits (qualitative or quantitative) already visible.
- **[Relevance]** Is it still relevant to make data interoperable, remove obstacles of data sharing, drive collaboration between public services, necessary for National SDI, use cross-sector, requested by eGovernment, modernisation of public admin, etc.; support given by National Institutions for implementation
- **[Coherence]** Internal coherence of INSPIRE provisions proved by implementation; cross-border applications; coherence with other National and EU policies
- **[EU-added value]** Improvement of EU cross-border data management and use; use for environmental monitoring and reporting, use for and with Copernicus data; use cross-sector.

1.1 Coordination

- National Contact point

Name of the public authority	State Geodetic Administration
Contact information:	
Mailing address	Gruška 20, 10000 Zagreb, Croatia
Telephone number	+385 (0)16165404
Telefax number	+385 (0)16165484
Email address	infonipp@dgu.hr
Organisation's website URL	www.dgu.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



- 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. So the progress cannot be assessed yet.

1.2 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.
- The development of new regulations and/or relevant documents are in progress, such as an Agreement on the exchange, access and use of spatial data and services in NSDI, and the NSDI Strategy as a basis for setting up the NSDI Operational Program. **[Effectiveness]**

1.3 Usage of the infrastructure for spatial information

- No quantitative information about the use of the spatial datasets exists. Qualitative descriptive examples about the use of spatial of the spatial datasets exist for the City of Zagreb; Croatian National Protection and Rescue Directorate; and the Ministry of Agriculture, Fisheries and Rural Development.
- No information exists about the use of the NSDI by the general public. According to some stakeholders it is still too early to provide information on the use of the NSDI by the general public.

1.4 Data Sharing Arrangements

- Draft versions of agreements templates for data exchange between public bodies and for access and re-use by third parties are developed with the objective to set up the terms of use and to remove obstacles which might occur at the point of use, i.e. to offer a prior settlement in a way that case by case negotiations, procurements, contracts, licenses, etc. are no longer needed. **[Effectiveness]**

1.5 Costs and Benefits

- Almost no (quantitative) examples of benefits of the INSPIRE implementation can be given. At State Geodetic Administration (NCP), INSPIRE has led that the map producers do not have to go to the field. Moreover, it has also led to cost reduction as data can be used from other institutions and duplication of data acquisition can be avoided. **[Efficiency]**

2 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.

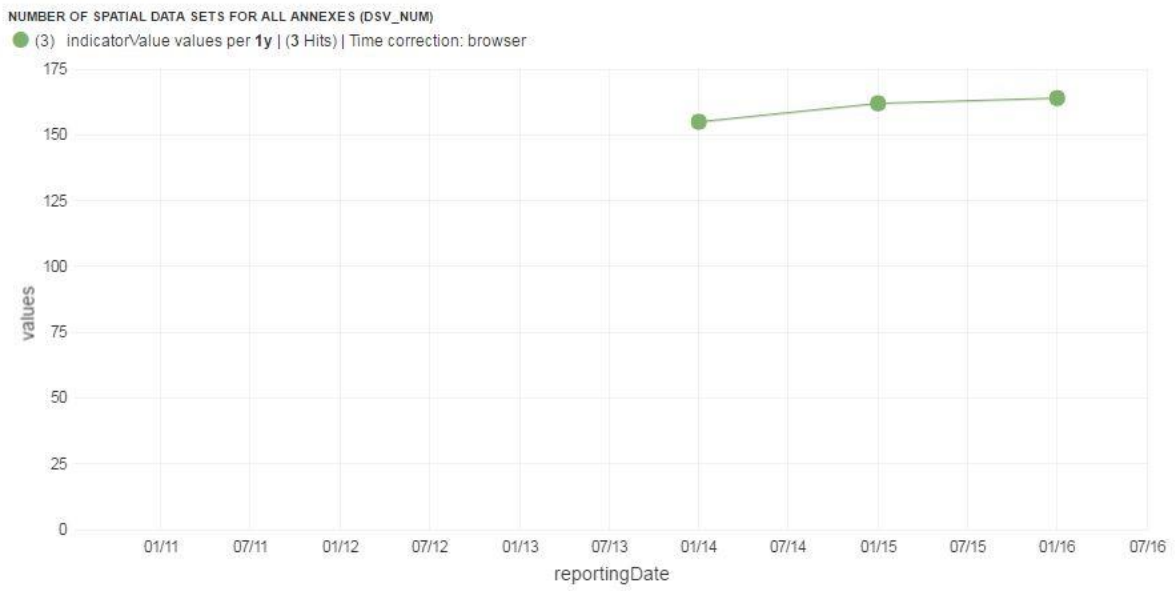
The key facts and figures presented in this country fiche are based on the information provided by Croatia on the INSPIRE dashboard. **The provided statistics is not reflecting the data available on** INSPIRE geoportal. The INSPIRE geoportal is updated on a regular and ongoing basis, whilst the INSPIRE 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.

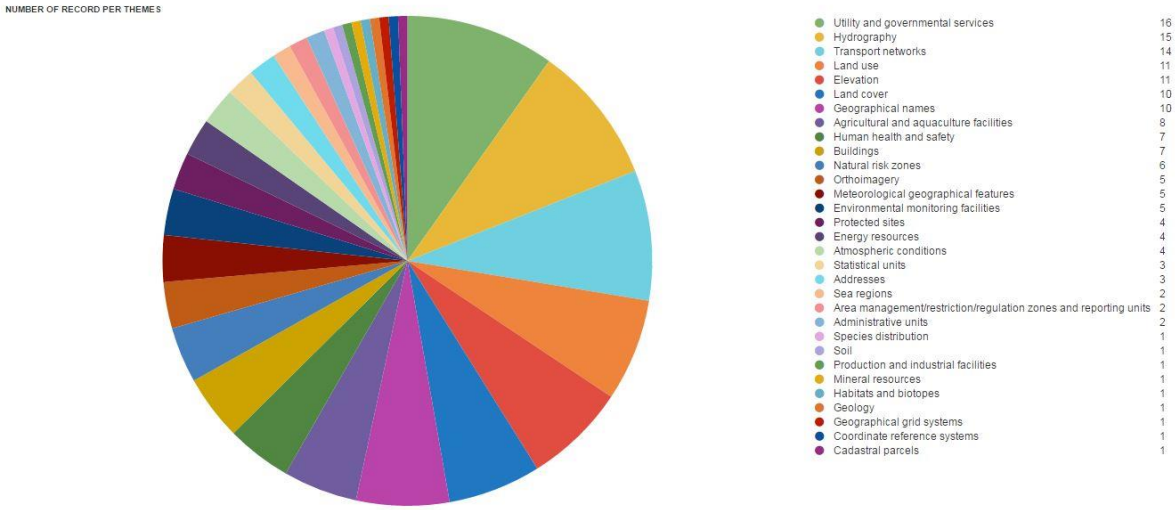
2.1. Identification of spatial data with relevance to the environment (step 1)

a. Evolution of the data offering

DSv_Num: number of spatial data sets for all Annexes

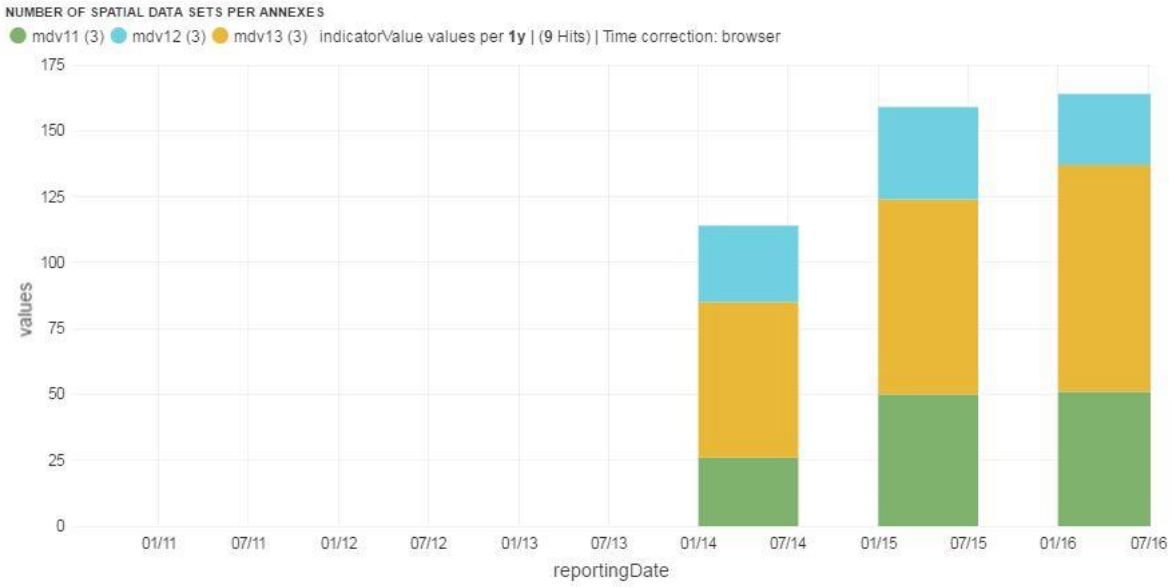


b. Data sets made available per INSPIRE theme in 2015



c. Data sets per annex (Annex 1 & 2: spatial reference data; Annex 3: environmental spatial data)

MDv1.1 (green): number of spatial data sets for Annex I that have metadata
MDv1.2 (blue): number of spatial data sets for Annex II that have metadata
MDv1.3 (yellow): number of spatial data sets for Annex III that have metadata



Evaluation of progress for step 1:

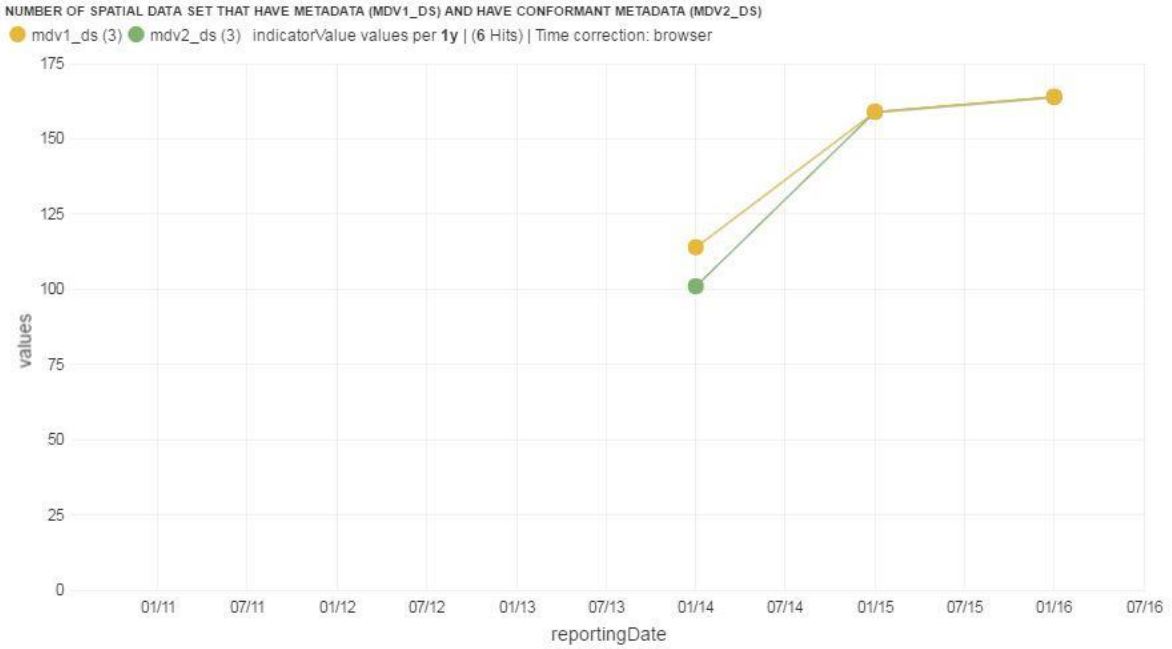
Croatia has identified a total of 164 spatial data sets with relation to the themes listed in the INSPIRE annexes.

Additional spatial data sets have been identified in 2015. A lot of relevant spatial data sets have already been identified for the different data themes. However, the identification still seems incomplete and Croatia could further improve by identifying and documenting spatial data sets required under the existing reporting and monitoring regulations of EU environmental law.

2.2 Documentation of the data (metadata) (step 2)

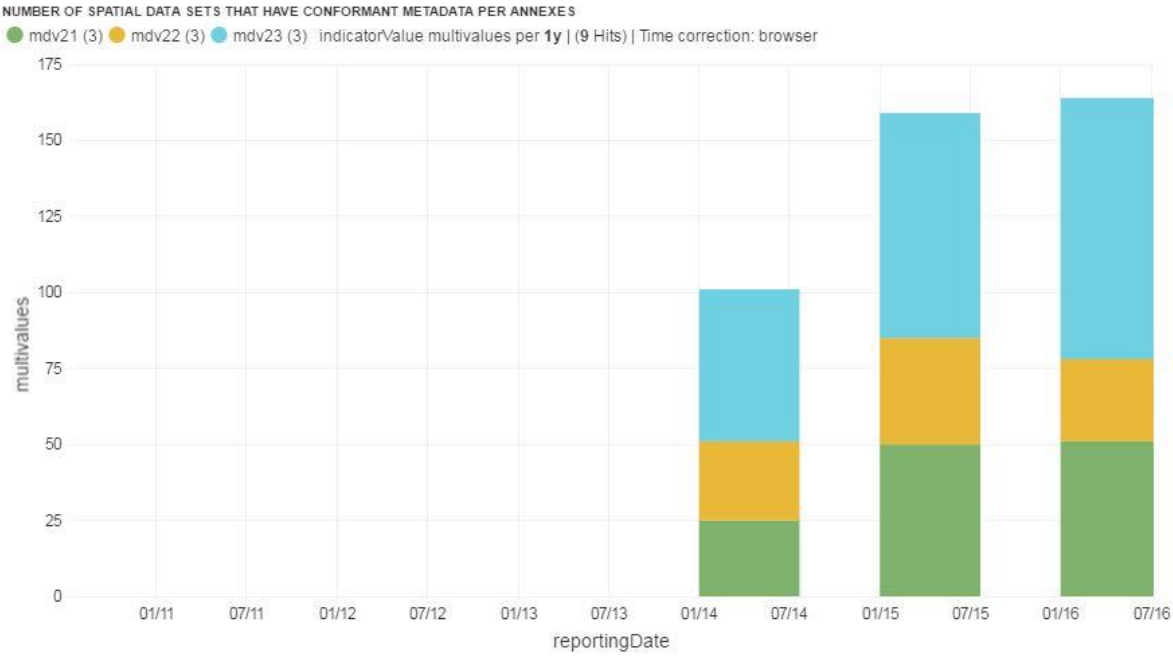
a. Evolution of documented data and conformity of the documentation

MDv1_DS (yellow): number of spatial data sets for all Annexes that have metadata
MDv2_DS (green): number of spatial data sets for all Annexes that have conformant metadata



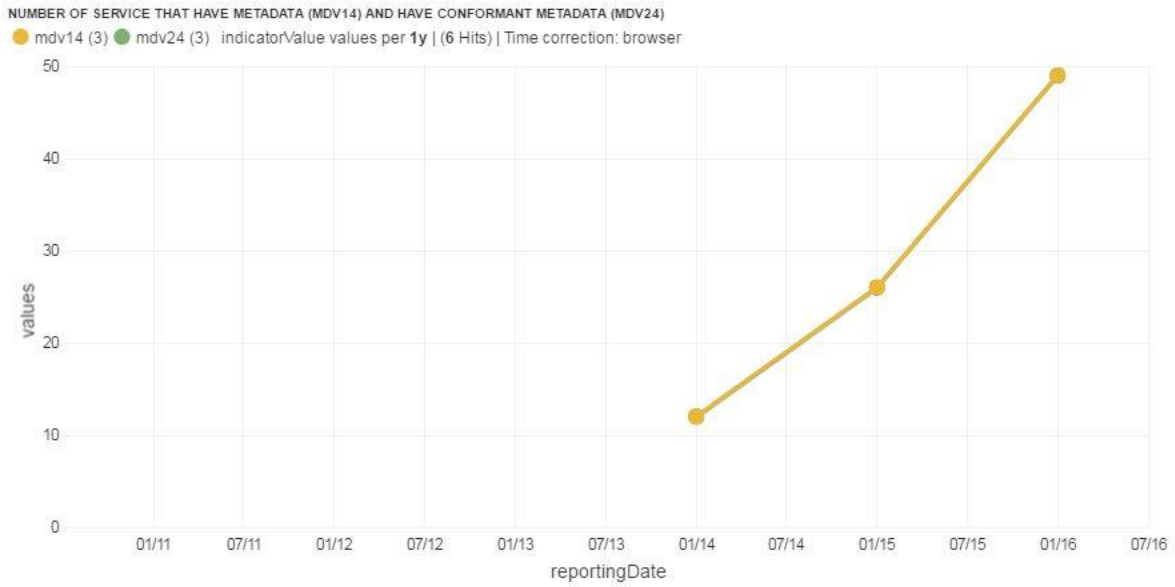
b. Documented data per annex in 2015

MDv2.1 (green): number of spatial data sets for Annex I that have conformant metadata
MDv2.2 (yellow): number of spatial data sets for Annex II that have conformant metadata
MDv2.3 (blue): number of spatial data sets for Annex III that have conformant metadata



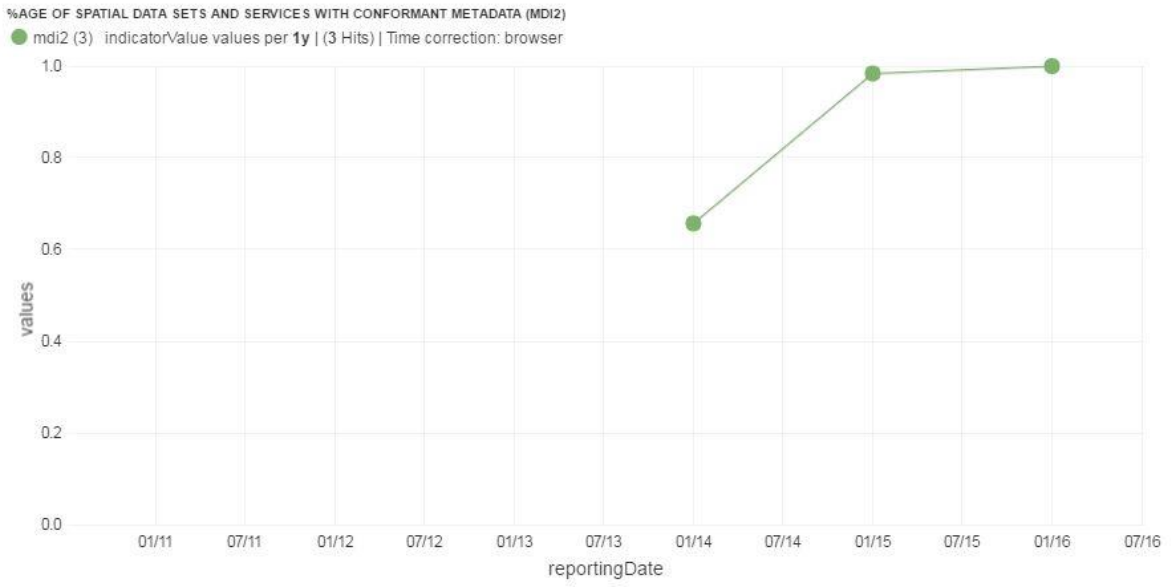
c. Evolution of documented services and conformity of the documentation

MDv1.4 (yellow): number of spatial data services that have metadata
MDv2.4 (green): number of spatial data services that have conformant metadata



d. Evolution of the overall conformity of the documented metadata

MDi2 = (number of spatial data sets for all Annexes that have conformant metadata + number of spatial data services that have conformant metadata) / (number of spatial data sets for all Annexes + number of spatial data services)



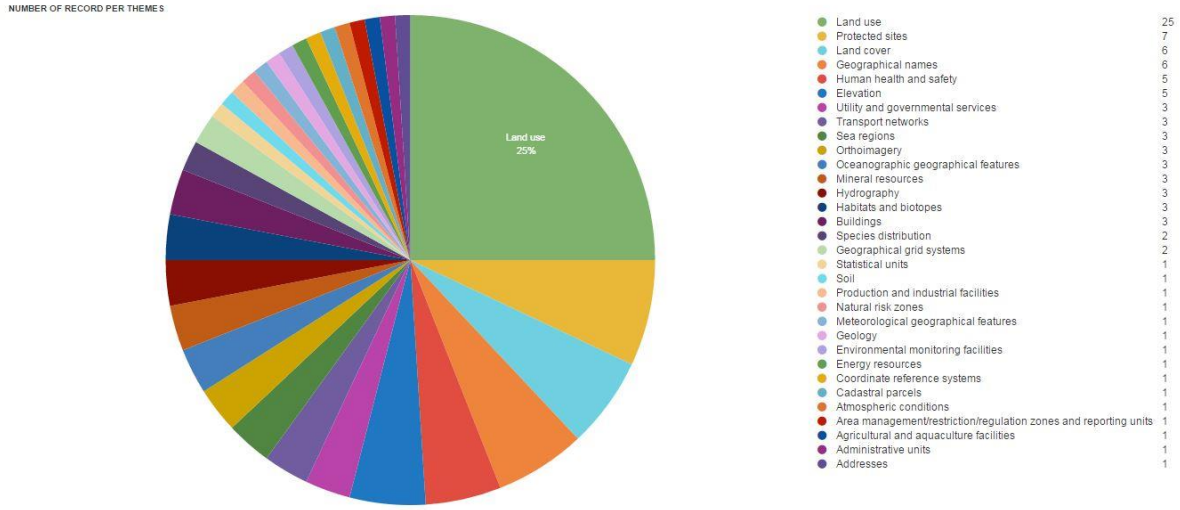
Evaluation of progress for step 2:
Croatia has documented and published metadata through a digital discovery service for 100% (164) of the identified spatial data sets and 100% (49) of the digital services. Overall, 100% of Croatian metadata conforms to the INSPIRE metadata specifications.

The documentation of spatial data sets has further improved in Croatia in 2014 and 2015 and shows a high level of maturity.

2.3. Accessibility of the data through digital services (step 3)

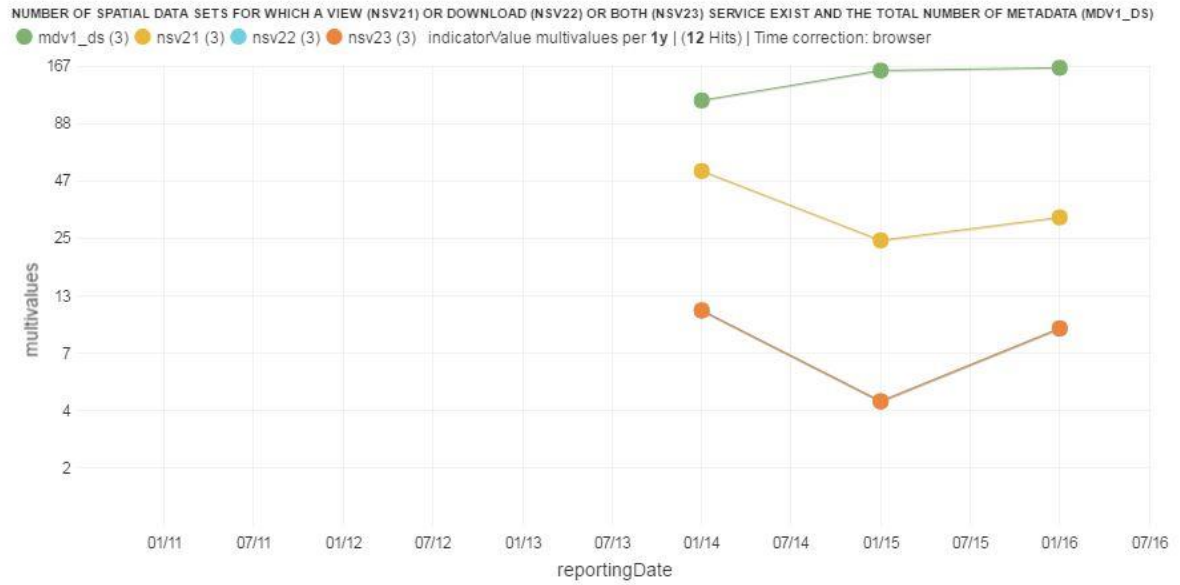
a. Digitally accessible spatial data per INSPIRE theme in 2015

Note: This figure reflects the amount of spatial data sets made available through a digital service, not the amount of available digital services. A digital service can make several spatial data sets available.



b. Evolution of spatial data made accessible through digital services

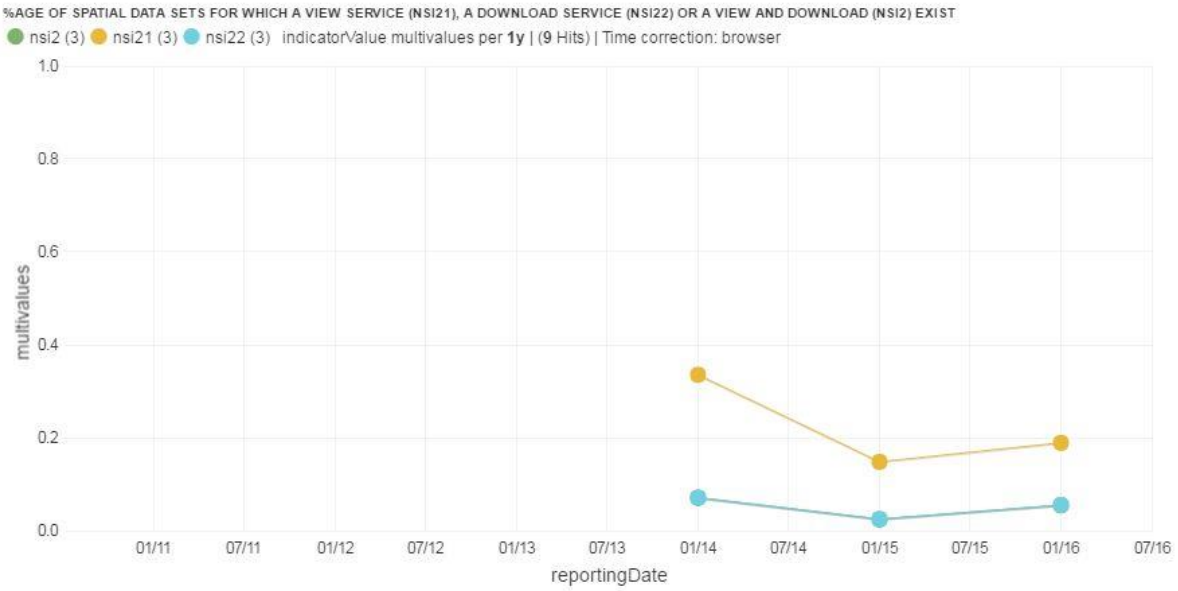
MDv1_DS (green): number of spatial data sets for all Annexes that have metadata
NSv2.1 yellow): number of spatial data sets for which a view service exists
NSv2.2 (blue): number of spatial data sets for which a download service exists
NSv2.3 (orange): number of spatial data sets for which both a view and a download service exists



NSi2 (green) = number of spatial data sets for which both a view and a download service exists / number of spatial data sets for all Annexes

NSi2.1 (yellow) = number of spatial data sets for which a view service exists / number of spatial data sets for all Annexes

NSi2.2 (blue) = number of spatial data sets for which a download service exists / number of spatial data sets for all Annexes



c. Evolution of the conformity of the digital services

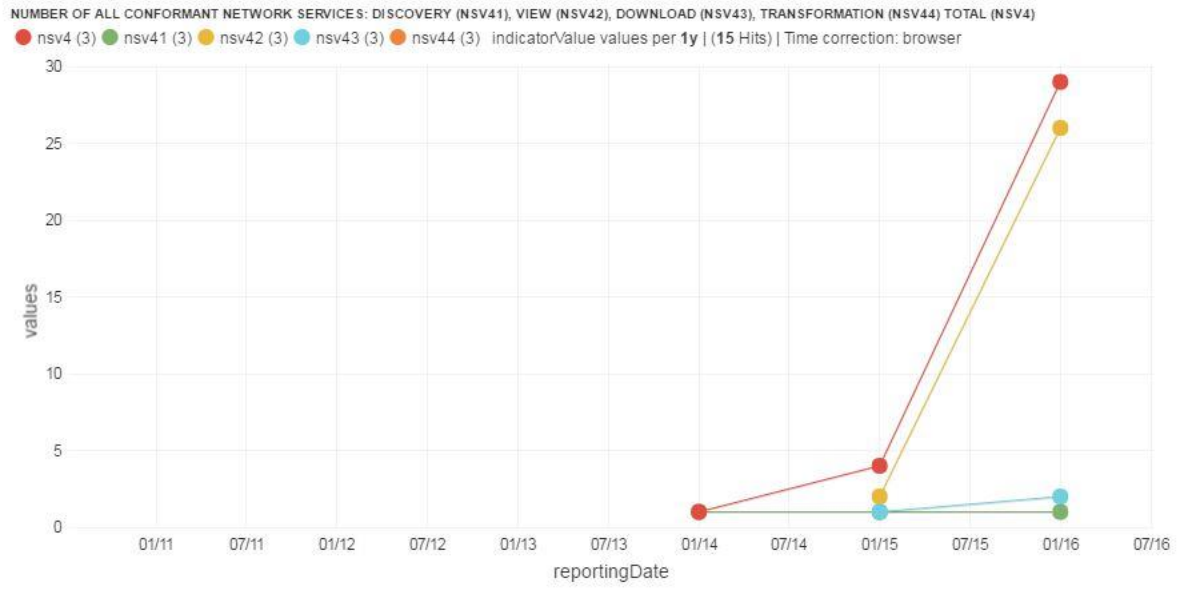
NSv4 (red): number of all conformant network services

NSv4.1 (green): number of conformant discovery network services

NSv4.2 (yellow): number of conformant view network services

NSv4.3 (blue): number of conformant download network services

NSv4.4 (orange): number of conformant transformation network services



Evaluation of progress for step 3:

Croatia has:

- 18,9% of its data sets accessible for viewing through a view service;

- 5,49% of its data sets accessible for download through a download service.

59,18% of the available digital services are conform to the INSPIRE network service specifications.

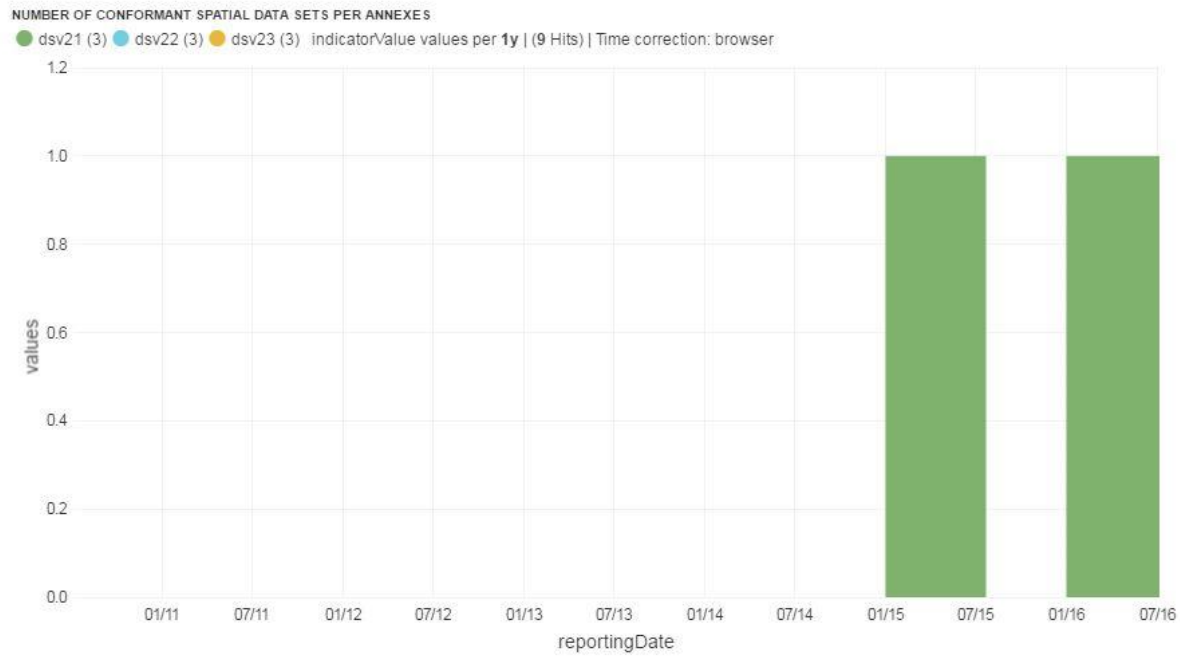
Croatia shows that it has not yet built the necessary capacity and competences to make data accessible through digital INSPIRE network services. The offering is stagnating and a significant amount of the spatial data still has to be brought online. The technical conformity of the available services with the INSPIRE network service specifications should be also improved. Croatia should boost their effort to further improve the accessibility of their spatial data through digital INSPIRE services.

2.4. 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). The deadlines for implementation of the spatial data interoperability are in the future: 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data.

a. Evolution of the conformity with INSPIRE interoperability specifications for spatial data

DSv2.1 (green): number of conformant spatial data sets with conformant metadata for Annex I
DSv2.2 (blue): number of conformant spatial data sets with conformant metadata for Annex II
DSv2.3 (yellow): number of conformant spatial data sets with conformant metadata for Annex III



Evaluation of progress for step 4:

Croatia has reported only 1 data set to be conform to the INSPIRE interoperability specifications in 2015.

With a reported dataset conformity of 1 data set across the INSPIRE annexes for 2015, we can conclude that Croatia has not yet started its preparations for the

2017/2020 data interoperability deadlines. Much more efforts will be needed in 2016 and 2017.

3. Outlook

Croatia has critically reviewed their INSPIRE implementation and provided an action plan in 2016 to remediate existing implementation issues and further improve the overall conformity of the implementation. The following actions are set up to directly address previously identified issues:

a. Coordination (1.1; 1.2)

- **Creating list of institutions/experts** involved in environmental reporting. NCP and NSDI subjects in 2016.
- **Including reporters in INSPIRE implementation**. NCP/reporters in 2016/2017.

b. Data sharing and exchange (1.4)

- **New prioritisation** regarding environmental directives

c. Metadata (2.2)

- ***Compliance with metadata under Annex I – III****. Responsibility of NCP and NSDI subjects in the period 2016-2020.*

d. Network services (2.3)

- **Existence and compliance of Spatial Data Services** (discovery, view and download services). NSDI Council, NCP and NSDI subjects in the period 2016-2020.

e. Data Interoperability (2.4)

- **Identification of missing datasets**. Responsibility of NCP and NSDI subjects in the period 2016-2020.
- **Integration of reporting datasets in NSDI/INSPIRE**. NCP in 2016/2017
- **Compliance with INSPIRE requirements** on "Interoperability of spatial data sets and services". Responsibility of NCP and NSDI subjects in the period 2016-2020.

4. Summary - How is Country doing?

INSPIRE key obligation	Overall implementation status and trend	Outlook
Ensure effective coordination	😐➔	
Data sharing without obstacles	😐➔	
Step 1: Identify spatial datasets	😐➔	
Step 2: Document 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.	☹➔	

Dashboard Legend

Implementation Status:

🙂: implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily.

😐: implementation of this provision has started and made some progress but is still far from being complete. Outstanding issues are significant and need to be addressed to ensure that the objectives of the legislation can still be reached by 2020.

☹: implementation of this provision is falling significantly behind or has not even started. Serious efforts are necessary to close implementation gap.

Trend:

↗: the trend of the implementation is positive.

➔: the trend of the implementation is neutral.

↘: the trend of the implementation is negative.

Outlook:

: clear and targeted actions have been identified which allow reaching the objectives of the legislation in an effective way.

: No real progress has been made in the recent past or actions which have been identified are not clear and targeted enough to predict a more positive outlook.

: no actions have been identified to overcome identified implementation gaps.

Specific recommendations:

For each Member State, the accessibility of environmental data (based on what the INSPIRE Directive envisages) as well as data-sharing policies have been systematically reviewed.

Croatia has indicated in the 3-yearly INSPIRE implementation report that the necessary data-sharing policies allowing access and use of spatial data by national administrations, other Member States' administrations and EU institutions without procedural obstacles are still under development. Initiatives for setting up data sharing arrangements have been initiated trying to overcome identified barriers such as: public use limitations/restrictions, lack of human capacity, lack of licensing policy, pricing and funding policies.

Assessments of monitoring reports issued by Croatia and the spatial information that Croatia has published on the INSPIRE geoportal indicate that not all spatial information needed for the evaluation and implementation of EU environmental law has been made available or is accessible. The larger part of this missing spatial information consists of the environmental data required to be made available under the existing reporting and monitoring regulations of EU environmental law.

Suggested action

- Critically review the effectiveness of its data policies and amend them, taking 'best practices' into consideration.
- Identify and document all spatial data sets required for the implementation of environmental law, and make the data and documentation at least accessible 'as is' to other public authorities and the public through the digital services foreseen in the INSPIRE Directive.