



Status of implementation of the INSPIRE Directive – 2016 Country Fiches

COUNTRY FICHE Slovakia

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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 of Slovakia 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 Slovakia representatives.

1. State of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Slovakia. More detailed information is available on the [INSPIRE knowledge base](#).

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

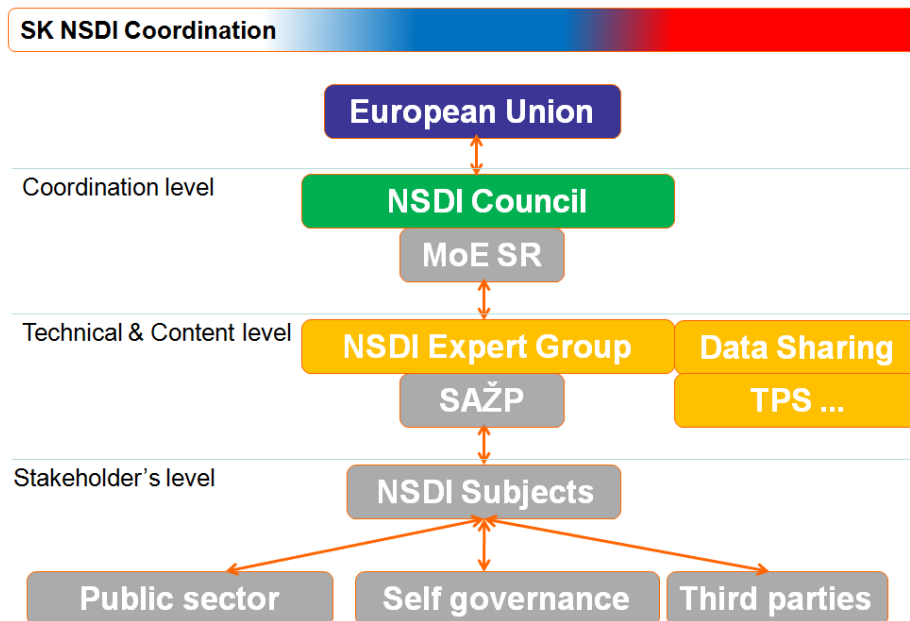
- **[Effectiveness]** How successful has the INSPIRE implementation been in achieving, progressing towards its objectives; progress made, gaps, what factors have influenced or why it has not yet been achieved regarding availability of services, data interoperability, sharing, data policy obstacles
- **[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

Member State Contact Point	
Name of the public authority	Ministry of Environment of the Slovak Republic
Contact information:	
Mailing address	Tajovského 28, 975 90 Banská Bystrica
Telephone number	+421 48 4374 523
Telefax number	
Email address	inspire@enviro.gov.sk
Organisation's website URL	http://www.minzp.sk
Contact person (if available)	Ing. Martin Tuchyňa, PhD.
Telephone number	+421 48 4374 523
Email address	martin.tuchyna@enviro.gov.sk
Contact person - substitute (if available)	Ing. Martin Koška
Telephone number	+421 48 4374 522
Email address	martin.koska@enviro.gov.sk

- Coordination Structure
 - The coordination in Slovakia is driven by two main groups: **Coordination Committee of NSDI (KR-NIPI)** and **Expert Group of NSDI (ES NIPI)**. The ES NIPI coordinates the work of ad hoc Technical WGs (e.g. TPS VSS).



- Main responsibility for the INSPIRE implementation and coordination was assigned to the **Ministry of Environment of the Slovak Republic (MoE)**, supported with the **Coordination Council (KR NIPI)**. KR NIPI is representing the main central authorities, including the representation of local governance. [Effectiveness]
- In agreement with MoE, **Slovak Environment Agency (SAŽP)** is in charge of **National INSPIRE Geoportal** maintenance, communication with the Slovakian stakeholders, communication with DG ENV and JRC, and **primary contacts in both Maintenance and Implementation Group (MIG)** political and technical. [Effectiveness]
- Progress
 - The implementation of **INSPIRE in the country is ongoing**. The implementation, so far, was mainly driven by the efforts in the components of the metadata, partially in network services and interoperability (mainly for INSPIRE Annex 1).
 - The bilateral discussion with EC on possible improvements of some identified gaps led positively to the creation of the **National INSPIRE implementation Action plan**. The Action plan was endorsed by the Coordination Committee and communicated back to the EC. [Relevance]; [Coherence]

1.2 Functioning and coordination of the infrastructure

- In order to improve overall state of implementation of INSPIRE it was agreed by KR NIPI to prepare **the INSPIRE implementation strategy for SK**. **The strategy should reflect on:**
 - Provision of support for filling the National legal framework.
 - To fulfill the duty stem from the INSPIRE directive as well as have an official document to present to the EC and /or other partners.
- To better coordinate activities with relevant initiatives (e.g. e-Government, Open Data). [Coherence]; [EU-added value]

1.3 Usage of the infrastructure for spatial information

- The National Geoportal <http://geoportal.gov.sk/> is managed by the **Slovak Environment Agency (SAŽP)** and represents the main point of access to spatial data information and services.
- There are other information portals maintained by other organizations that provide INSPIRE related datasets and services (e.g. geology related themes SGUDS – <http://geology.sk>).
- VÚVH: Use of Environmental burdens registry (<http://envirozataze.enviroportal.sk/>) for Water plans whilst implementing Water Framework Directive (2000/60/ES). [Relevance]
- The use of INSPIRE based data and services is low as well as the level of harmonization.

- The Agreed Action plan as well as the Implementation strategy (in preparation) should improve the situation.

1.4 Data Sharing Arrangements

- Slovakia is facing significant challenges with regards to the harmonized data sharing arrangements. Main issues are related to the heterogeneous interpretation of INSPIRE and related legal framework, resistance to harmonize and simplify data sharing, absence of harmonized data sharing licenses and agreements, availability of public spatial resources under the public domain. **[Relevance]**
- In order to improve the situation, **update of legal framework is foreseen** to take place (Decree No.352/2011 Coll), including the preparation of harmonized license templates and creation of the NIPI License Policy providing further guidance. **[Coherence] [EU-added value]**

1.5 Costs and Benefits

- The cost evaluation was divided into two period:
 - Cost associated to the implementation of INSPIRE 2013-2015
 - Forecast of the cost for implementation of INSPIRE 2016-2020
- In the case of identified cost 2013 – 2015, the overall sum is: **19 670 561 €** and 24364 person days.
- In the case of the forecast cost for 2016 – 2020, the total estimation is: **18 156 000 €** and 34100 person days.
- Note: In both cases, the National report contains the estimated / calculated costs of individual INSPIRE components **[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 Slovakia 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.

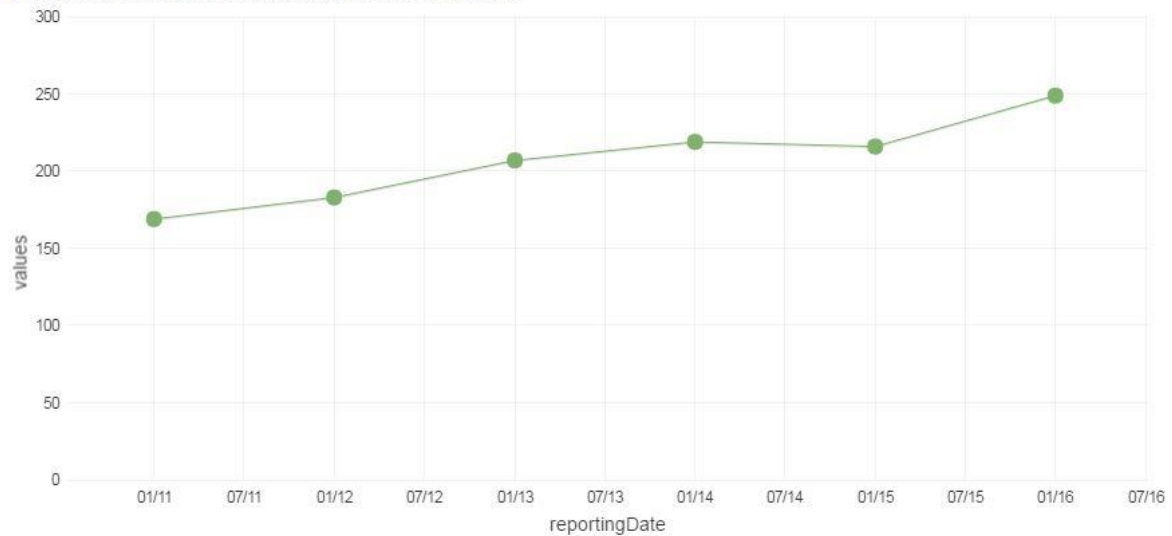
2.1. Identification of spatial data with relevance to the environment (step 1)

a. Evolution of the data offering

DSv_Num: number of spatial data sets for all Annexes

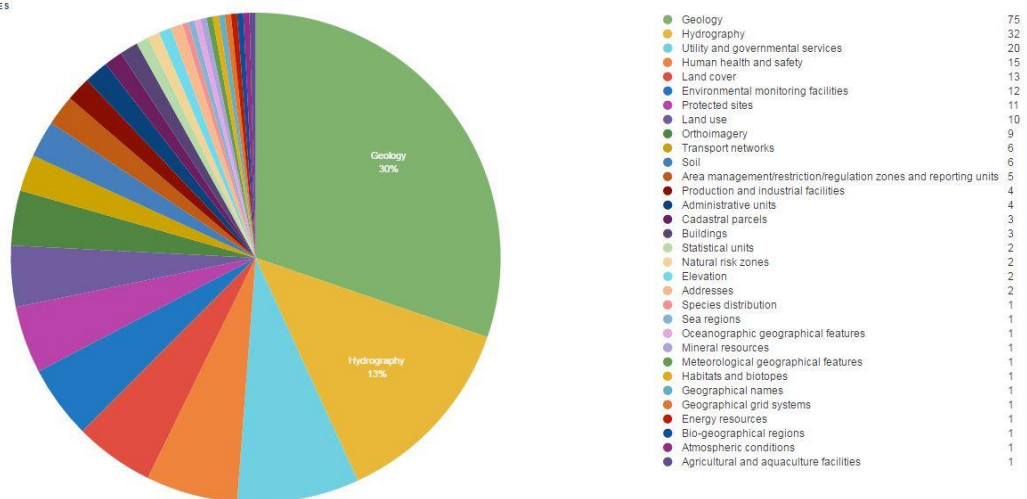
NUMBER OF SPATIAL DATA SETS FOR ALL ANNEXES (DSV_NUM)

● (6) indicator/Value values per 1y | (6 Hits) | Time correction: browser



b. Data sets made available per INSPIRE theme in 2015

NUMBER OF RECORD PER THEMES

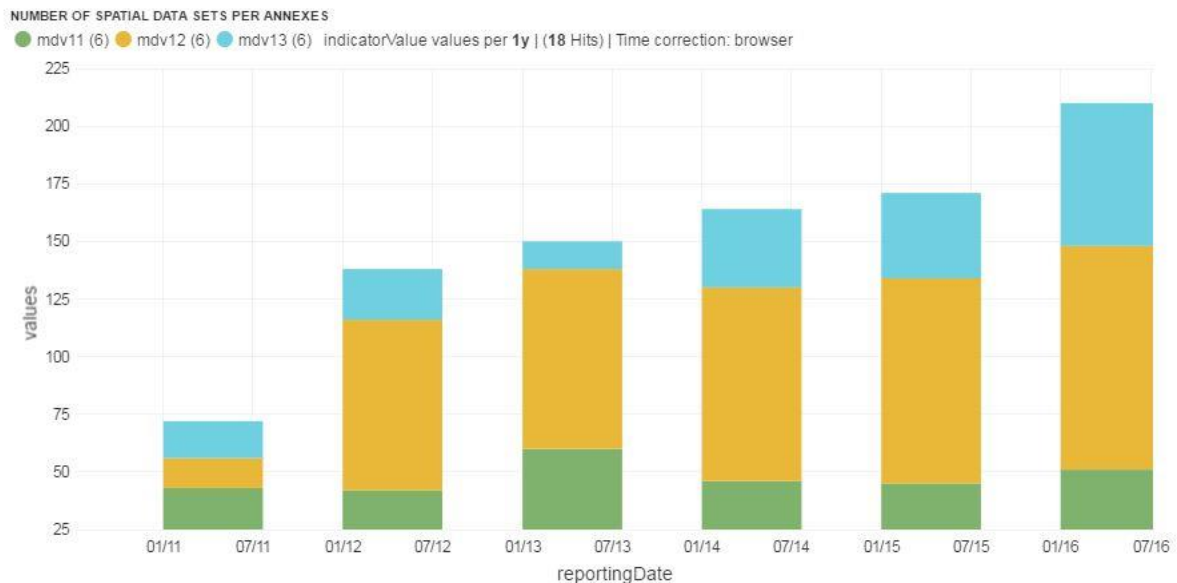


c. Data sets per annex (Annex 1 & 2: spatial reference data; Annex 3: environmental spatial data)

MDv1.1 (green): number of spatial data sets for Annex I that have metadata

MDv1.2 (yellow): number of spatial data sets for Annex II that have metadata

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



Evaluation of progress for step 1:

Slovakia has identified a total of 249 spatial data sets with relation to the themes listed in the INSPIRE annexes.

Additional spatial data sets have been identified in period from 2015-2016, mainly under Annex II and III data themes. A lot of relevant spatial data sets have already been identified for the different data themes. However, the identification 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)

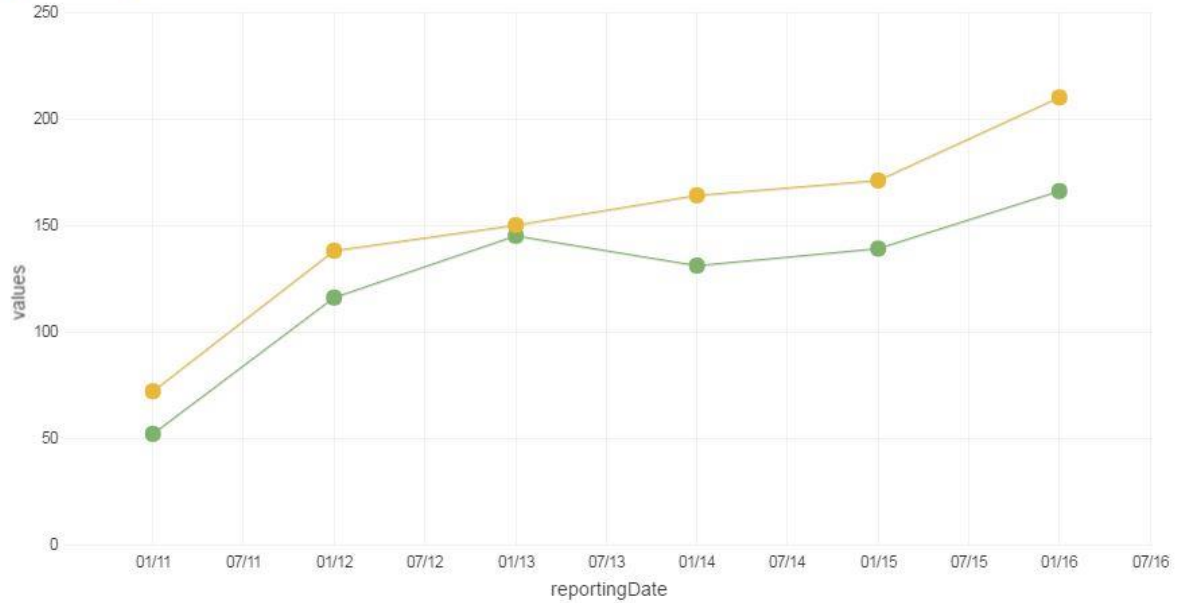
a. Evolution of documented data and conformity of the documentation

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

NUMBER OF SPATIAL DATA SET THAT HAVE METADATA (MDV1_DS) AND HAVE CONFORMANT METADATA (MDV2_DS)

● mdv1_ds (6) ● mdv2_ds (6) indicatorValue values per 1y | (12 Hits) | Time correction: browser



b. Documented data per annex in 2015

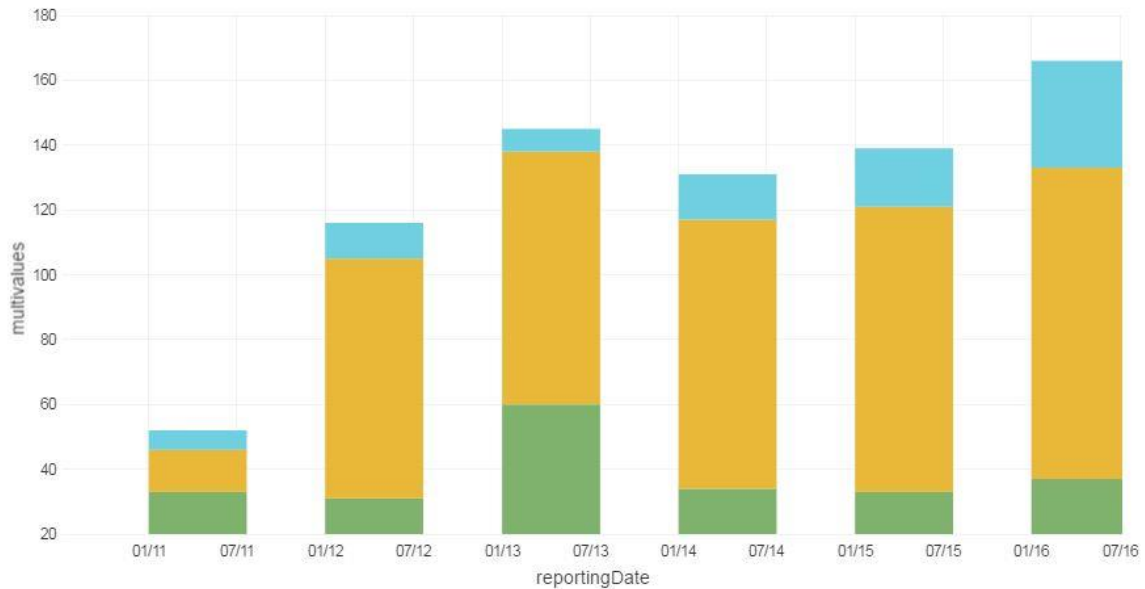
MDv2.1 (green): number of spatial data sets for Annex I that have conformant metadata

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

NUMBER OF SPATIAL DATA SETS THAT HAVE CONFORMANT METADATA PER ANNEXES

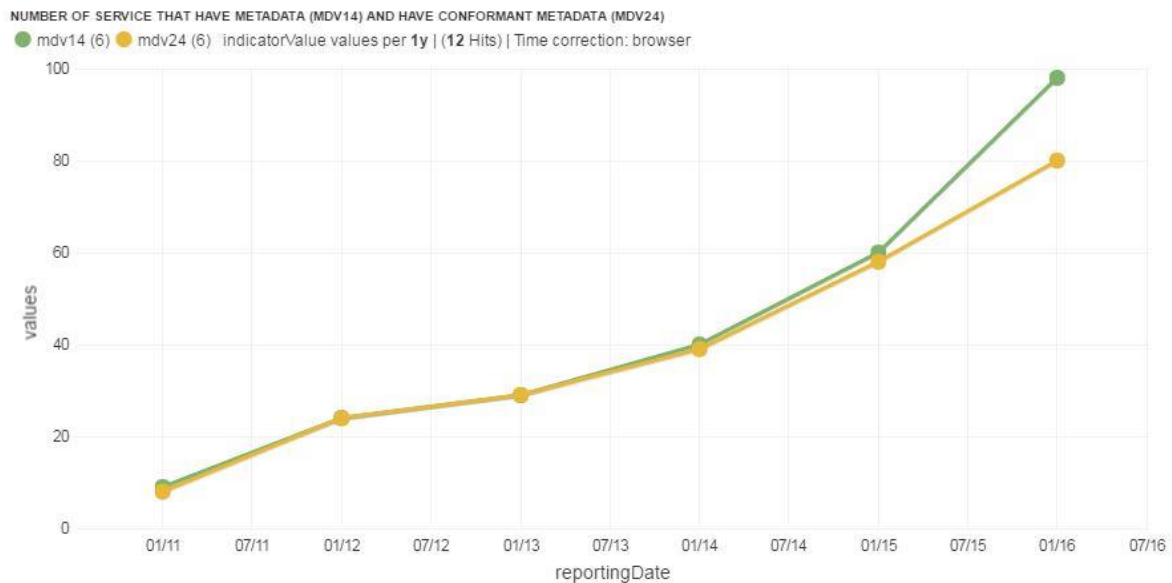
● mdv21 (6) ● mdv22 (6) ● mdv23 (6) indicatorValue multivalues per 1y | (18 Hits) | Time correction: browser



c. Evolution of documented services and conformity of the documentation

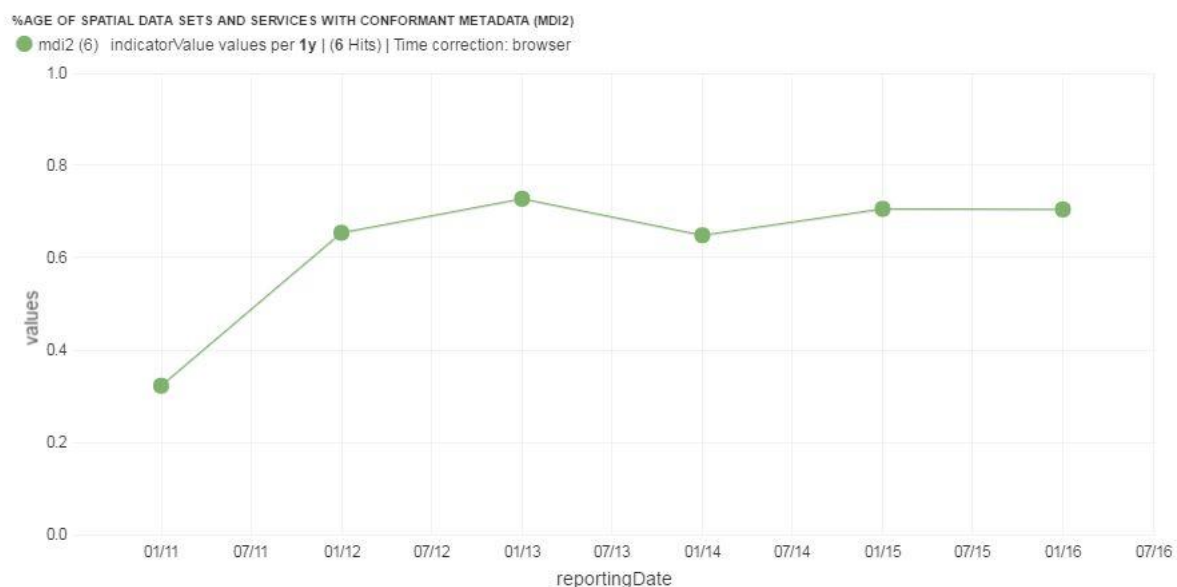
MDv1.4 (green): number of spatial data services that have metadata

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



d. Evolution of the overall conformity of the documented metadata

$MDi2 = (\text{number of spatial data sets for all Annexes that have conformant metadata} + \text{number of spatial data services that have conformant metadata}) / (\text{number of spatial data sets for all Annexes} + \text{number of spatial data services})$



Evaluation of progress for step 2:

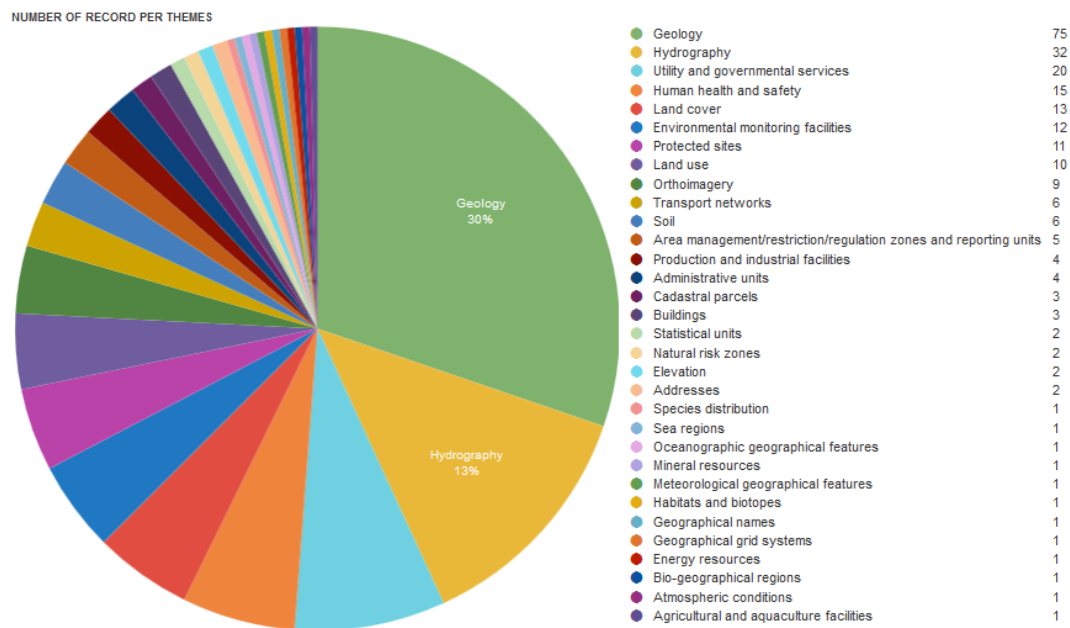
Slovakia has documented and published metadata through a digital discovery service for 84,33% (210 out of 249) of the identified spatial data sets and 98% (98 out of 100) of the digital services. Overall, 70,48% of the metadata conforms to the INSPIRE metadata specifications.

It shows a high level of maturity. To support data discovery for the end-users of the INSPIRE infrastructure, Slovakia should aim to achieve better technical conformity of the available metadata.

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

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.

Digitally accessible spatial data per INSPIRE theme in 2015



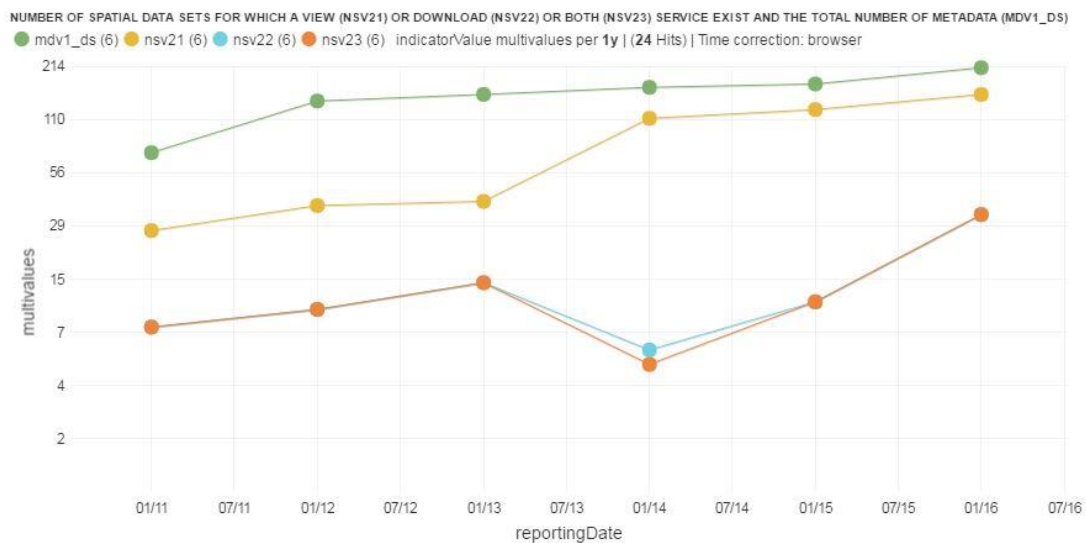
b. Evolution of spatial data made accessible through digital services

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



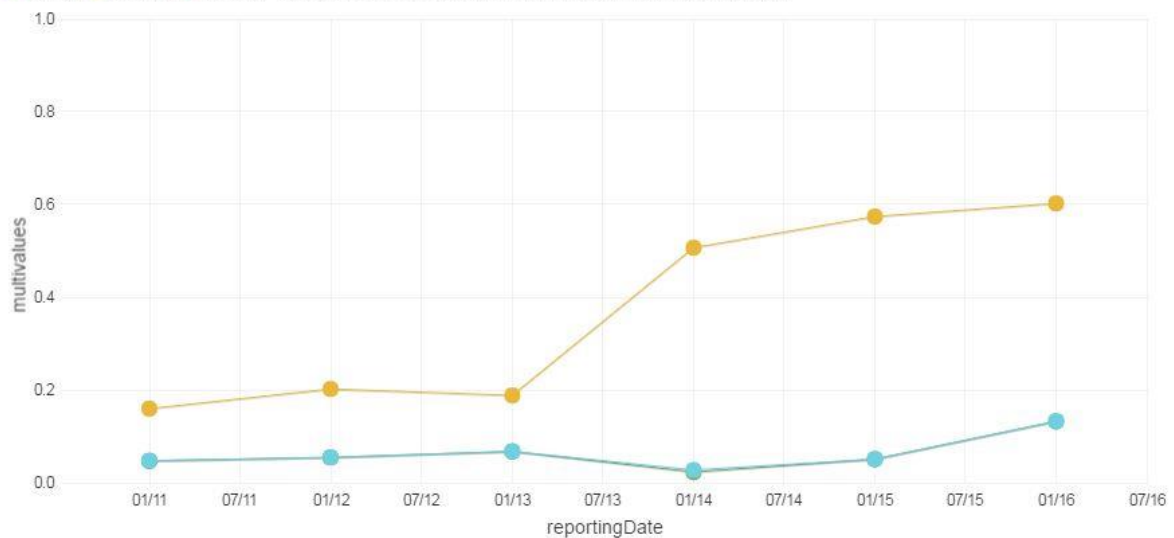
NSi2 (green) = number of spatial data sets for which both a view and a download service exists / number of spatial data sets for all Annexes

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

%AGE OF SPATIAL DATA SETS FOR WHICH A VIEW SERVICE (NSI21), A DOWNLOAD SERVICE (NSI22) OR A VIEW AND DOWNLOAD (NSI2) EXIST

● nsi2 (6) ● nsi21 (6) ● nsi22 (6) indicatorValue multivalues per 1y | (18 Hits) | Time correction: browser



c. Evolution of the conformity of the digital services

NSv4 (blue): number of all conformant network services

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

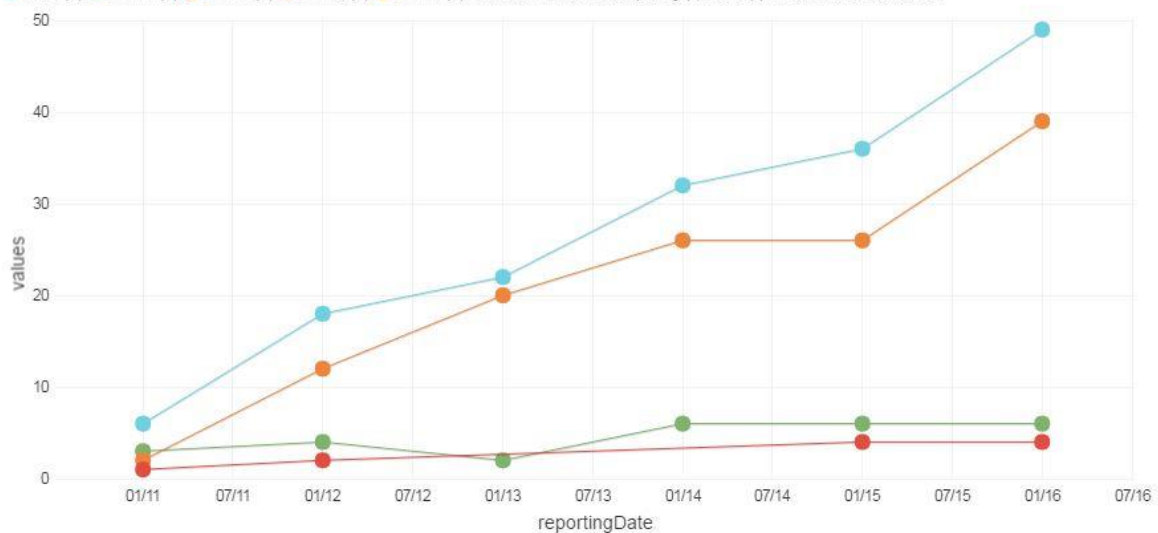
NSv4.2 (orange): number of conformant view network services

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

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

NUMBER OF ALL CONFORMANT NETWORK SERVICES: DISCOVERY (NSV41), VIEW (NSV42), DOWNLOAD (NSV43), TRANSFORMATION (NSV44) TOTAL (NSV4)

● nsv4 (6) ● nsv41 (6) ● nsv42 (6) ● nsv43 (6) ● nsv44 (6) indicatorValue values per 1y | (30 Hits) | Time correction: browser



Evaluation of progress for step 3:

Slovakia has:

- 60,24% of its data sets accessible for viewing through a view service;
- 13,25% of its data sets accessible for download through a download service.

49% of the available digital services are conform to the INSPIRE network service specifications (49 out of 100).

Slovakia shows that it has built the necessary capacity and competences to make data accessible through digital INSPIRE network services. Accessibility of datasets through download services and the technical conformity of the available services with the INSPIRE network services should be further improved.

2.4. Interoperability of spatial data sets (step 4)

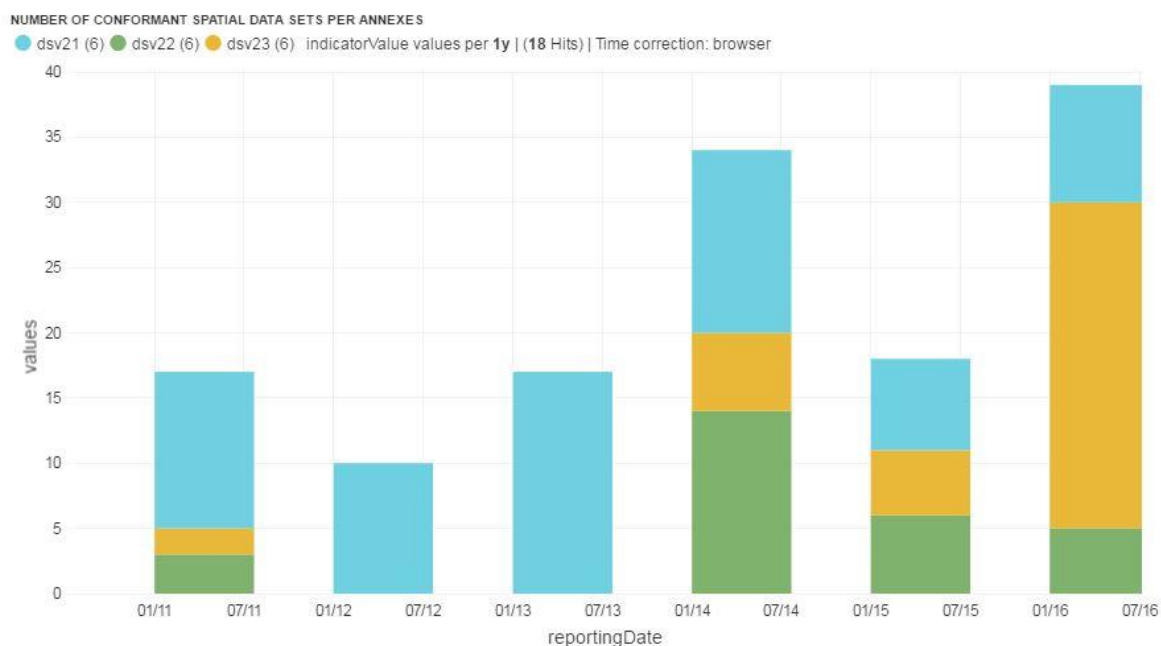
The interoperability of spatial data sets is an outlook on the readiness of Member States to make their spatial data interoperable according to the interoperability specifications laid down in the INSPIRE interoperability implementing regulation ([Commission Regulation \(EU\) No 1089/2010](#)). The deadlines 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 (blue): number of conformant spatial data sets with conformant metadata for Annex I

DSv2.2 (green): 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:

Slovakia has reported 39 data sets to be conform to the INSPIRE interoperability specifications in 2015.

We can conclude that Slovakia has started its preparations for the 2017/2020 data interoperability deadlines.

3. Outlook

Slovakia has 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)

- **Preparation of the INSPIRE implementation strategy for SK**
- **Continuation of the identification of the responsible organizations for not only INSPIRE themes but for each spatial object types** (development of the National Register of responsible organizations)

b. Data sharing and exchange (1.4)

- In order to improve the situation, **update of legal framework is foreseen** to take place (Decree No.352/2011 Coll), including the preparation of harmonized license templates and creation of the NIPi License Policy providing further guidance.

c. Metadata (2.2)

- Continued effort to provide MD fully in line with the INSPIRE technical requirements.
- The MD for priority datasets will be created by the end of INSPIRE monitoring 2016.

d. Network services (2.3)

- Accessibility of datasets through download services and the technical conformity of the available services with the INSPIRE network services should be further improved. The priority datasets for eReporting as well as Annex I themes are the main priority for 2016/2017.

e. Data Interoperability (2.4)

- In order to increase and speed up the availability of the spatial datasets and services, together with the priority data sets, identification of any other as-is spatial datasets falling within the scope of INSPIRE will be the first set of actions.
- Following actions will be focused on their harmonization and alignment with the INSPIRE exchange model. The obligation of making “priority and remaining data sets” available has been communicated to all the relevant data providers.

4. Summary - How is Country doing?

INSPIRE key obligation	Overall implementation status and trend	Outlook	<p align="center"><u>Dashboard Legend</u></p> <p>Implementation Status:</p> <p>😊: implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily.</p> <p>😐: 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.</p> <p>😞: implementation of this provision is falling significantly behind or has not even started. Serious efforts are necessary to close implementation gap.</p> <p>Trend:</p> <p>↗: the trend of the implementation is positive.</p> <p>→: the trend of the implementation is neutral.</p> <p>↘: the trend of the implementation is negative.</p> <p>Outlook:</p> <p>🟢: clear and targeted actions have been identified which allow reaching the objectives of the legislation in an effective way.</p> <p>🟡: 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.</p> <p>🔴: no actions have been identified to overcome identified implementation gaps.</p>
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.	😐 →	🟢	

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.

Slovakia 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 only partially available and lack consistency. Slovakia has no common data-policy or harmonized conditions for access and use. Although there is legislation in place, the implementation lags behind and the current data-sharing landscape remains very heterogeneous. Different licenses and bilateral data-sharing agreements are being used for exchanging spatial data between public authorities. There is an ongoing legislative action aiming to improve the situation and address the identified gaps by the end of 2016.

Assessments of monitoring reports issued by Slovakia and the spatial information that Slovakia 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. With respect to the proposed INSPIRE priority list of the datasets linked to the reporting obligations in EU environment legislation, Slovakia has already initiated activities to create closer alignment between INSPIRE and environmental reporting.

Suggested action

- Critically review the effectiveness of its data policies and amend them, taking 'best practices' into consideration. Provide the sufficient support for the implementation of the amended legislation and ensure the consistency with the eGovernment activities.
- 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.