

## JRC TECHNICAL REPORTS

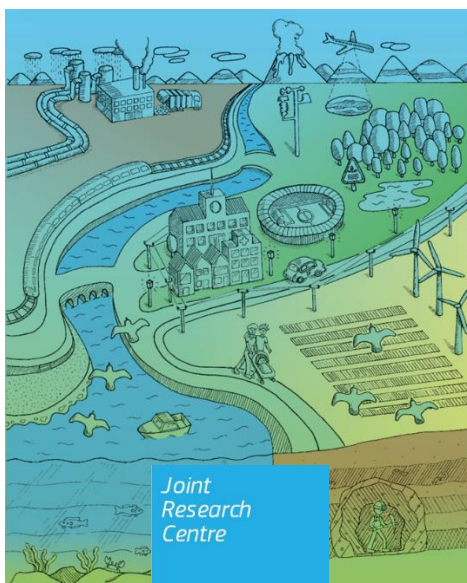


# Summary Report on Status of implementation of the INSPIRE Directive in EU

*Vlado Cetl, Vanda Nunes de Lima,  
Robert Tomas and Michael Lutz  
(DG JRC)*

*Joachim D'Eugenio, Adam Nagy and  
Joeri Robbrecht (DG ENV)*

2017



This publication is a Technical report by the Joint Research Centre (JRC), the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication.

#### Contact information

Name: Vlado Ceti  
Address: Via E. Fermi 2749, TP 263, I-21027 Ispra (VA), Italy  
Email: [vlado.ceti@ec.europa.eu](mailto:vlado.ceti@ec.europa.eu)  
Tel.: +39 0332 783026

#### JRC Science Hub

<https://ec.europa.eu/jrc>

JRC109035

EUR 28930 EN

PDF	ISBN 978-92-79-77058-6	ISSN 1831-9424	doi:10.2760/143502
Print	ISBN 978-92-79-77059-3	ISSN 1018-5593	doi:10.2760/162895

Luxembourg: Publications Office of the European Union, 2017  
© European Union, 2017

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39).

For any use or reproduction of photos or other material that is not under the EU copyright, permission must be sought directly from the copyright holders.

How to cite this report: V. Ceti, V. Nunes de Lima, R. Tomas, M. Lutz, J. D'Eugenio, A. Nagy, J. Robbrecht, *Summary Report on Status of implementation of the INSPIRE Directive in EU*, EUR 28930 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-77058-6, doi:10.2760/143502, JRC109035.

All images © European Union 2017

# Contents

Acknowledgements .....	1
Abstract .....	2
1 Introduction .....	3
1.1 Methodology .....	3
2 State of Play .....	7
2.1 Coordination .....	7
2.2 Functioning and coordination of the infrastructure for spatial information.....	8
2.3 Usage of the infrastructure for spatial information .....	9
2.3.1 Member State level .....	9
2.3.2 EU level.....	9
2.4 Data Sharing Arrangements .....	10
2.5 Costs and benefits .....	11
3 Key Facts and Figures .....	12
3.1 Identification of spatial data with relevance to the environment (step 1) .....	12
3.2 Documentation of the data (metadata) (step 2).....	15
3.3 Accessibility of the data through digital services (step 3) .....	18
3.4 Interoperability of spatial data sets (step 4).....	21
4 Conclusions and outlook .....	23
4.1 Implementation .....	23
4.2 Compliance promotion and assurance .....	24
List of figures .....	26
List of tables .....	27

## **Acknowledgements**

We would like to thank all our colleagues from DG JRC<sup>1</sup>, DG ENV<sup>2</sup> and EEA<sup>3</sup> for their contributions to this report.

## **Authors**

Vlado Cetl, Vanda Nunes de Lima, Robert Tomas and Michael Lutz (DG JRC)

Joachim D'Eugenio, Adam Nagy and Joeri Robbrecht (DG ENV)

Disclaimer: The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

---

<sup>1</sup> <https://ec.europa.eu/jrc/en>

<sup>2</sup> [http://ec.europa.eu/dgs/environment/index\\_en.htm](http://ec.europa.eu/dgs/environment/index_en.htm)

<sup>3</sup> <https://www.eea.europa.eu/>

## Abstract

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.

Summary Report on Status of implementation of the INSPIRE Directive in EU has been prepared to highlight the overall implementation performance across Member States. The report combines the findings of the specific country fiches which have been based on:

- the 2016 [tri-annual INSPIRE implementation reports](#) and action plans for future development
- the 2016 [monitoring reports](#)
- [bilateral meetings](#) on the implementation of the INSPIRE Directive between the Commission and most of the Member States.

It shows the progress in relation to the INSPIRE mid-term report<sup>4</sup> and the REFIT evaluation<sup>5</sup> which referred to the situation in 2013-14. The [monitoring reports](#) submitted by the Member States in May 2017 show further progress in some countries and areas.

---

<sup>4</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016DC0478R%2801%29>

<sup>5</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016SC0243R%2801%29>

# 1 Introduction

This summary report combines the findings from the Member States country fiches developed on the basis on INSPIRE 2016 Reports<sup>6</sup>, including also monitoring data available through INSPIRE dashboard<sup>7</sup>. In addition, also inputs from bilateral meetings and action plans to address implementation deficiencies provided by Member States were used, especially in the assessment of outlook.

## 1.1 Methodology

Several data sources were used as input for performance analysis:

- 2016 INSPIRE Member State Reports;
- INSPIRE Monitoring Indicators (2010-2017);
- Member State Action Plans;
- Bilateral Meetings (Member States with DG ENV).

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.

Figure 1 shows assessment criteria used in Member States country fiches and this Report.

Assessment category	Percentage compliance	Colours	Smiley	terminology	trend	actions
1 (top)	> 90%			Very good	Not influenced by trend	Not influenced by trend
2 (medium)	31-89%			Good (above 50%) and Moderate (below 50%)	Not influenced by trend	Not influenced by trend
3 (low)	< 30%			Poor	Not influenced by trend	Not influenced by trend
Other						

**Figure 1.** Overall assessment criteria

For the key obligations step1 to step4 the relevant indicators have been defined in the INSPIRE reporting decision<sup>8</sup>:

- DSv\_Num: number of spatial data sets for all Annexes

<sup>6</sup> <http://inspire.ec.europa.eu/INSPIRE-in-your-Country>

<sup>7</sup> <https://inspire-dashboard.eea.europa.eu/>

<sup>8</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1511946774523&uri=CELEX:32009D0442>

- MDv1.1: number of spatial data sets for Annex I that have metadata
- MDv1.2: number of spatial data sets for Annex II that have metadata
- MDv1.3: number of spatial data sets for Annex III that have metadata
- MDv1\_DS: number of spatial data sets for all Annexes that have metadata
- MDv2\_DS: number of spatial data sets for all Annexes that have conformant metadata
- MDv2.1: number of spatial data sets for Annex I that have conformant metadata
- MDv2.2: number of spatial data sets for Annex II that have conformant metadata
- MDv2.3: number of spatial data sets for Annex III that have conformant metadata
- MDv1.4: number of spatial data services that have metadata
- MDv2.4: number of spatial data services that have conformant 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)
- NSv2.1: number of spatial data sets for which a view service exists
- NSv2.2: number of spatial data sets for which a download service exists
- NSv2.3: number of spatial data sets for which both a view and a download service exists
- NSi2 = 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 = number of spatial data sets for which a view service exists / number of spatial data sets for all Annexes
- NSi2.2 = number of spatial data sets for which a download service exists / number of spatial data sets for all Annexes
- NSv4: number of all conformant network services
- NSv4.1: number of conformant discovery network services
- NSv4.2: number of conformant view network services
- NSv4.3: number of conformant download network services
- NSv4.4: number of conformant transformation network services
- DSv2.1: number of conformant spatial data sets with conformant metadata for Annex I
- DSv2.2: number of conformant spatial data sets with conformant metadata for Annex II
- DSv2.3: number of conformant spatial data sets with conformant metadata for Annex III

The information reported in the 2016 monitoring report (ref year 2015) were used to score the performance. Three scoring classes were used based on the relevant indicators (Figure 1):




- 1) indicator >90% - green, very good performance
- 2) indicator between 31% and 89% - orange; good performance if above 50%, moderate performance if below 50%
- 3) indicator < 30% - red; poor performance

The trend indicator was scored based on trend over the past years by using the yearly monitoring reports.

The outlook was scored based on the availability of specific actions in the action plan provided by Member States that address issues identified in the bilateral meetings and in the monitoring report. If a Member State identifies an issue and defines an action with a clear scope and timing that addresses the identified issue on short- (max 12 months) or

mid-term (max 36 month) the outlook is considered to be favourable (green). In case no actions are defined the outlook is considered unfavourable (red). In case an action is foreseen but the scope and/or timing for delivering on this action are not clear the outlook is considered to be unsatisfactory (orange). It is shown on Figure 2.

#### 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.

**Figure 2.** Outlook assessment criteria

For the key obligations "Ensure effective coordination" and "Data sharing without obstacles" a combination of the above approach and a qualitative expert interpretation of based on information provided in the tri-annual 2016 implementation report and the bilateral meeting was used. To guarantee a minimum level of objectivity and comparability in the qualitative scoring, these interpretations have been validated by different contributors.

For the "Data sharing without obstacles" the indicator that evaluates the availability of data sets through network services (discovery, view & download) and the information received in the tri-annual 2016 implementation report and the bilateral meeting (e.g. the availability of a common national data policy, general issues on data sharing, limits on access and use) was used to score this criteria. The absence of data access through network services and clarity about the use and reuse conditions of data was considered as an obstacle leading to a lower score (red). A majority of data being made available through network services and the availability of a clear national licensing and data policy will result in a higher score (green).

Country fiches and feedback of the Member States together with summary report were presented during the INSPIRE Maintenance and Implementation Group (MIG) expert group meeting, that was held 13 – 14 June 2017 in Brussels. Overall, the work done was appreciated and in general the country fiches were welcomed as a comprehensive and effective communication instrument. Member State experts were invited to provide feedback on the EU overview report by end of July 2017. Received feedback was taken into account in this final version. All country fiches were also shared with the MIG before publishing on the INSPIRE website.

The summary report consists of three main chapters:

- State of play that presents summary on functioning and coordination of infrastructure, use of infrastructure, data sharing arrangements and cost benefit aspects;
- Key Facts and Figures based on INSPIRE monitoring and dashboard focusing on metadata, data and services;
- Conclusion and outlook.

The status of 2016 reporting obligations and bilateral meeting follow-up is shown in the following table.

**Table 1.** STATUS REPORTING 2016 for the INSPIRE Directive

MS	Country report on implementation and use of infrastructures for spatial information 2013 - 2015		Monitoring of implementation and use of infrastructures for spatial information 2015		Action plan to address implementation deficiencies		Bilateral meeting		
	Reported	Date	Reported	Date	Reported	Date	Meeting	Date	EU Pilot letter
AT	YES	5/10/2016	YES	5/10/2016	YES	5/10/2016	YES	11/5/2015	-
BE	YES	5/15/2016	YES	5/17/2016	YES	5/15/2016	YES	10/7/2015	-
BG	YES	5/26/2016	YES	5/18/2016	YES	5/26/2016	NO	-	YES
HR	YES	5/16/2016	YES	5/16/2016	YES	9/7/2016	YES	1/18/2016	-
CY	YES	5/13/2016	YES	5/13/2016	YES	5/13/2016	NO	-	YES
CZ	YES	5/14/2016	YES	5/15/2016	YES	5/14/2016	YES	3/17/2016	-
DK	YES	5/13/2016	YES	5/13/2016	YES	9/14/2016	YES	4/25/2016	-
EE	YES	5/13/2016	YES	5/13/2016	YES	5/13/2016	written exchange	-	-
FI	YES	5/17/2016	YES	5/17/2016	YES	9/15/2016	YES	4/25/2016	-
FR	YES	5/25/2016	YES	5/25/2016	YES	5/25/2016	written exchange	-	-
DE	YES	5/13/2016	YES	5/4/2016	YES	5/13/2016	YES	11/9/2015	-
EL	YES	9/27/2016	YES	5/31/2016	YES	6/28/2016	YES	12/8/2015	-
HU	YES	6/15/2016	YES	5/27/2016	YES	3/1/2016	YES	11/30/2015	-
IE	YES	7/06/2017	YES	7/07/2017	NO	-	YES	-	-
IT	YES	5/18/2016	YES	5/30/2016	YES	5/18/2016	NO	-	YES
LV	YES	5/11/2016	YES	5/11/2016	YES	9/05/2016	YES	1/29/2016	-
LT	YES	5/23/2016	YES	5/23/2016	YES	5/23/2016	NO	-	YES
LU	YES	5/11/2016	YES	5/11/2016	YES	5/11/2016	YES	3/21/2016	-
MT	YES	5/13/2016	YES	5/13/2016	YES	5/19/2016	NO	-	YES
NL	YES	5/13/2016	YES	5/3/2016	YES	5/23/2016	YES	5/26/2016	
PL	YES	5/14/2016	YES	5/14/2016	YES	5/17/2016	YES	10/20/2015	
PT	YES	5/12/2016	YES	5/12/2016	YES	5/12/2016	YES	2/11/2016	
RO	YES	5/20/2016	YES	5/20/2016	YES	5/20/2016	YES	1/26/2016	
SK	YES	5/15/2016	YES	5/15/2016	YES	5/20/2016	YES	3/11/2016	
SI	YES	5/13/2016	YES	5/13/2016	YES	5/13/2016	YES	2/24/2016	
ES	YES	5/13/2016	YES	5/13/2016	YES	7/29/2016	YES	4/12/2016	
SE	YES	5/15/2016	YES	5/9/2016	YES	9/14/2016	YES	4/25/2016	
UK	YES	5/16/2016	YES	5/16/2016	NO	-	NO	-	-

## 2 State of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in EU Member States (MS). More detailed information is available on the INSPIRE knowledge base<sup>9</sup>.

### 2.1 Coordination

- National Contact Points (NCPs)

According to Art. 19(1) of the INSPIRE Directive, each Member State must designate a Contact Point, usually a public authority, to be responsible for contacts with the Commission in relation to INSPIRE. For example, the contact points are responsible for providing regular information about the implementation of INSPIRE in their country and report on behalf of their Member State to the Commission.

**Table 2.** NCPs

 Austria <a href="#">Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft</a>	 Germany <a href="#">Coordination Office SDI Germany – Federal Agency for Cartography and Geodesy</a>	 Poland <a href="#">Guqik</a>
 Belgium <a href="#">Agentschap voor Geografische Informatie Vlaanderen</a>	 Greece <a href="#">Ministry of Environment, Energy and Climate Change</a>	 Portugal <a href="#">Direção-Geral do Território (DGT)   Directorate-General for Territorial Development</a>
 Bulgaria <a href="#">State e-Government Agency</a>	 Hungary <a href="#">Department of Land Administration, Ministry of Agriculture, Hungary</a>	 Romania <a href="#">National Agency for Cadastre and Land Registration</a>
 Croatia <a href="#">State Geodetic Administration</a>	 Ireland <a href="#">Department of the Environment, Community and Local Government</a>	 Slovakia <a href="#">Ministry of Environment of the Slovak Republic</a>
 Cyprus <a href="#">Ministry of Interior</a>	 Italy <a href="#">Ministero dell'Ambiente e della Tutela del Territorio e del Mare</a>	 Slovenia <a href="#">Surveying and Mapping Authority</a>
 Czech Republic <a href="#">Czech Environmental Information Agency (CENIA)</a>	 Latvia <a href="#">Latvian Geospatial Information Agency</a>	 Spain <a href="#">National Geographic Institute</a>
 Denmark <a href="#">Agency for Data Supply and Efficiency</a>	 Lithuania <a href="#">Ministry of Agriculture</a>	 Sweden <a href="#">Lantmäteriet</a>
 Estonia <a href="#">Estonian Land Board</a>	 Luxembourg <a href="#">Administration du cadastre et de la topographie, Service du géoportail</a>	 United Kingdom <a href="#">Department of Environment, Food &amp; Rural Affairs</a>
 Finland <a href="#">Ministry of Agriculture and Forestry</a>	 Malta <a href="#">Malta Information Technology Agency</a>	
 France <a href="#">Ministry of Ecology, Sustainable Development and Energy</a>	 Netherlands <a href="#">Ministry of Infrastructure and Environment</a>	

See the List of national contact points for more detailed information<sup>10</sup>.

- Progress with respect to the previous reporting period

<sup>9</sup> <http://inspire.ec.europa.eu/>

<sup>10</sup> <http://inspire.ec.europa.eu/contact-points/57734>

The following table shows in detail implementation status, trend and outlook regarding coordination.

**Table 3.** Ensure effective coordination

MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT	😊↗	🟢	<p><b>Implementation Status:</b></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><b>Trend:</b></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><b>Outlook:</b></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>
BE	😊↗	🟢	
BG	😬→	🟢	
HR	😬→	🟢	
CY	😬↗	🟢	
CZ	😊↗	🟢	
DK	😊↗	🟢	
EE	😬↗	🟢	
FI	😊↗	🟢	
FR	😊→	🟢	
DE	😊↗	🟢	
EL	😬→	🟢	
HU	😬→	🟢	
IE	😬↗	NA	
IT	😬↗	🟢	
LV	😊↗	🟢	
LT	😊↗	🟢	
LU	😊↗	🟢	
MT	😬↗	🟢	
NL	😊↗	🟢	
PL	😊↗	🟢	
PT	😊↗	🟢	
RO	😬→	🟢	
SK	😊↗	🟢	
SI	😊↗	🟢	
ES	😊↗	🟢	
SE	😊↗	🟢	
UK	😊↗	NA	

## 2.2 Functioning and coordination of the infrastructure for spatial information

Member States have installed a coordination structure and governance for their INSPIRE implementation. 21 Member States show a positive trend in ensuring an effective coordination. In some cases the coordination is not effective enough and needs to be

improved or changed. The coordination structure reflects the administrative culture and the constitutional setup of the Member State (federated vs centralized, involvement of local authorities ...). In some cases INSPIRE implementation was setup purely from a national mapping and cadastral agencies (NMCA) perspective, resulting in a strong focus on Annex I and II data sets and showing gaps on the availability of Annex III data sets and the coordination with the environmental domain. Awareness has been raised and most Member States have started to remediate this deficiency.

## **2.3 Usage of the infrastructure for spatial information**

### **2.3.1 Member State level**

The documentation of spatial data sets and services through metadata has proven to raise the awareness about the availability of spatial data available in the public administration and as such has improved spatial data sharing and use.

It is clear that the availability of a spatial data infrastructure as such does not guarantee its success. The usefulness and success of the infrastructure depends on how possible users are aware and are connected to this infrastructure. Without a specific tailored guidelines and application layer that satisfies existing use cases at national and EU-level the use of the infrastructure stays limited. To build this kind of abstraction layer for end-users, the availability of view and download services that can be reused by targeted applications is essential. Usage of discovery services is limited mostly to professional users thus making spatial data and services not discoverable for wider user's community. In Member States where the service offering is limited or of low quality, usage of the infrastructure tends to be limited.

In some Member States the Open Data initiative is higher on the political agenda. This does not conflict with the ambitions of the INSPIRE Directive. On the contrary, in information-mature Member States where Open Data and INSPIRE ambitions are implemented in a complementary way the use of spatial data and the INSPIRE infrastructure is boosted.

In Member States where the only driver for the implementation of the INSPIRE Directive is its legal obligation and where no use cases are being developed or where INSPIRE implementation is done in isolation, the use of the infrastructure is limited.

### **2.3.2 EU level**

The lack in availability of interoperable pan-European information products within the INSPIRE infrastructure that support and facilitate EU-level use cases limits the use of the infrastructure at EU-level and beyond the INSPIRE community. There are still many isolated and non-interoperable data sets that cannot be used in cross-border and EU applications. The lack of available and/or easy to use products also affects the availability of end-user applications that satisfy the information needs of users and offer a low-threshold access for a larger public to the European spatial data infrastructure.

The Commission has selected monitoring and reporting under the environmental acquis as a priority use case for the development of a first set of pan-European information products. Based on the evaluation of reporting obligations under the environmental legislation, done in the framework of the Better Regulation, a priority list of eReporting data sets related to environmental reporting obligations has been prepared by the DG ENV.

This list of datasets will be a rolling list that is further extended in view of tangible information needs to adequately evaluate the effects on the environment of EU environmental legislation and its effectiveness, efficiency and coherence with other pieces of EU legislation. As the scope of the Fitness Check for monitoring and reporting goes beyond the realm of environment, this means that for future development of the list the information needs of other domains can be taken into consideration as well (e.g. Transport, Mobility, Agriculture, Energy, Sustainable Cities ...). This more domain-holistic approach to

streamlining these information streams will not only reduce the reporting burden, but will also induce better integrated public eGovernment services.

## 2.4 Data Sharing Arrangements

The following table shows in detail overall implementation status, trend and outlook regarding data sharing.

**Table 4.** Data sharing without obstacles

MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT	😊↗	🟢	<p><b>Implementation Status:</b></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><b>Trend:</b></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><b>Outlook:</b></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>
BE	😊↗	🟢	
BG	😐↗	🟡	
HR	😐→	🟡	
CY	😐↗	🟢	
CZ	😐→	🟢	
DK	😊↗	🟢	
EE	😐↗	🟢	
FI	😐↗	🟢	
FR	😊→	🟢	
DE	😊↗	🟢	
EL	😐→	🟢	
HU	😐→	🟡	
IE	😐→	NA	
IT	😐↗	🟢	
LV	😊↗	🟢	
LT	😊↗	🟢	
LU	😊↗	🟢	
MT	😐↗	🟢	
NL	😊↗	🟢	
PL	😊↗	🟢	
PT	😊↗	🟢	
RO	😐→	🟡	
SK	😐↗	🟢	
SI	😐↗	🟢	
ES	😊↗	🟢	
SE	😊↗	🟢	
UK	😊↗	NA	

## **2.5 Costs and benefits**

Because of the federated and technical nature of the INSPIRE implementation in many Member States (across administrative levels and cross-domain) quantification and management of costs and benefits are considered difficult.

Costs are in many cases only indicative and benefits for citizens, businesses, and administrations lack quantification. In general the qualitative and strategic benefits are considered significant. There are many examples of increased data sharing through the development of new services and geoportals making public spatial data electronically available. Many projects and new applications are already making use of INSPIRE data "as-is". Some Member States expect to be able to make a more reliable evaluation of the cost-benefit ratio when INSPIRE-conformant data and services are more widely available and used.

More recent cost-benefit studies in Netherlands and Sweden have shown that the INSPIRE Directive is proving its value but in the coming years the demand side should get a stronger focus, for instance by further integrating INSPIRE in environmental reporting.

Lithuania provides a very concrete assessment of economic and social benefits generated at the national level as a result of the functioning of the infrastructure for spatial information. The assessment of the cost-benefit analysis of the implementation of the Directive identified public service savings of around 1.2 million € in working days and the socio-economic benefits have been assessed from 0.9 million € in the year 2014 to an average of 1.8 million € annually the following years.

Rather than providing a global quantification of the benefits, Member States refer to specific use cases where added value was created, such as for example in Spain where the geoportal for hydrocarbons of the ministry of industry, commerce and tourism allows to citizens savings up to 60 million €/ year, in Denmark where a business case underlying the release of (all) spatial data was estimated an annual net gain to be averaging about 100 million kr. until 2020 and in Poland where the Register of Historical Monuments reduces the costs of access to data on monuments and the effort of preparing analyses and planning documents necessary in the process of spatial planning.

### 3 Key Facts and Figures

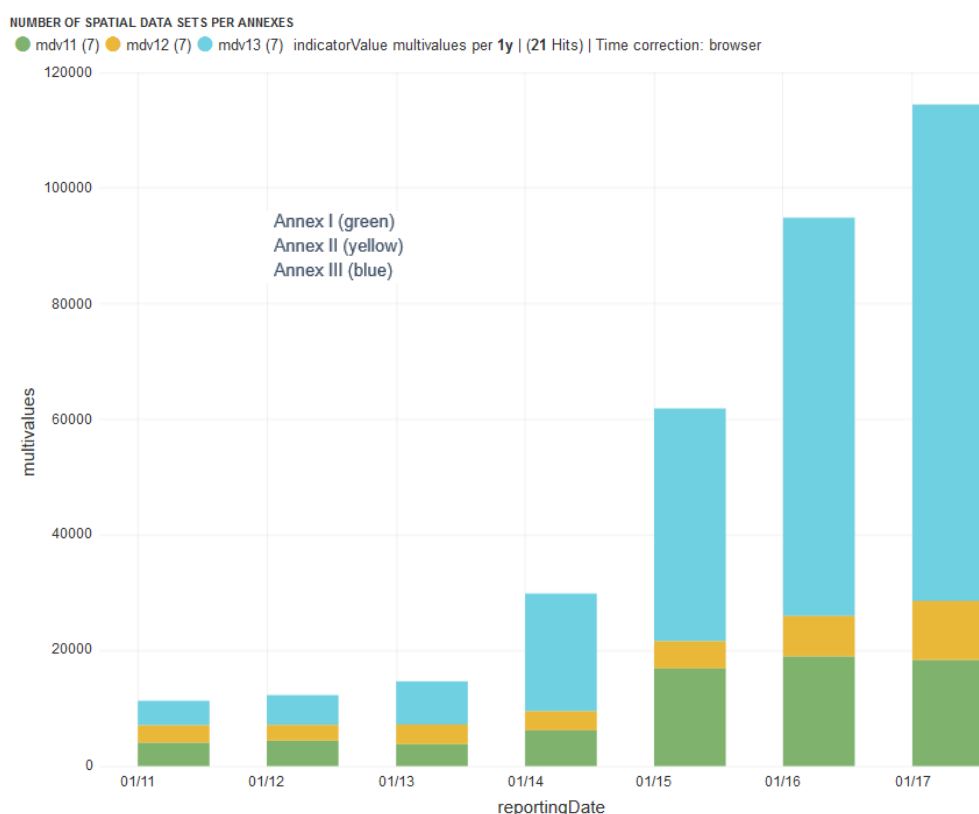
In addition to the above mentioned topics, the implementation of INSPIRE Directive requires Member States to take four main steps in relation to management of spatial datasets which fall under the Directive:

- 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 summary report are based on the information provided by Member States on the INSPIRE dashboard<sup>11</sup>. **The provided statistics is not reflecting the data available on INSPIRE geoportal<sup>12</sup>.** 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.

#### 3.1 Identification of spatial data with relevance to the environment (step 1)



**Figure 3.** Number of Spatial Data Sets per annexes (Annex I & II: spatial reference data; Annex III: environmental spatial data)

<sup>11</sup> <https://inspire-dashboard.eea.europa.eu/>

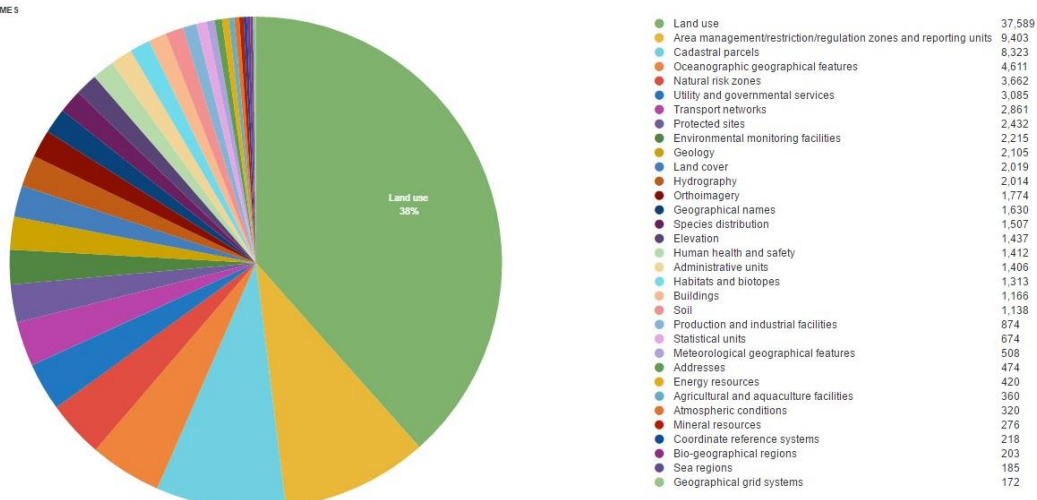
<sup>12</sup> <http://inspire-geoportal.ec.europa.eu/>

The following table shows in detail implementation status, trend and outlook for identification of data sets.

**Table 5.** Identification of spatial datasets

MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT	😊↗	🟢	<p><b>Implementation Status:</b></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><b>Trend:</b></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><b>Outlook:</b></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>
BE	😊↗	🟢	
BG	😐↗	🟢	
HR	😐➡	🟢	
CY	😐↗	🟢	
CZ	😐➡	🟢	
DK	😐↗	🟢	
EE	😐↗	🟢	
FI	😐↗	🟢	
FR	😊➡	🟢	
DE	😊↗	🟢	
EL	😐↘	🟡	
HU	😐➡	🟡	
IE	😐↗	NA	
IT	😐↗	🟢	
LV	😐➡	🟢	
LT	😐↘	🟢	
LU	😐↗	🟡	
MT	😐↗	🟡	
NL	😐↗	🟢	
PL	😊↗	🟢	
PT	😊↗	🟢	
RO	😐↘	🟡	
SK	😐↗	🟢	
SI	😐↘	🟢	
ES	😐↘	🟢	
SE	😊↗	🟢	
UK	😊↗	NA	

NUMBER OF RECORD PER THEMES



**Figure 4.** Data sets available per INSPIRE theme in 2015

#### Evaluation of progress for step 1:

**By mid-2016, Member States had identified more than 90000 spatial data sets with relation to the themes listed in the INSPIRE annexes.**

**A lot of progress could be seen from 2013 onwards. Many spatial data sets have been identified in this period, mainly under Annex III data themes. Trend and outlook are in most cases positive. 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. They should be accessible at least 'as is' to public authorities and the public through the digital services foreseen in the INSPIRE Directive.**

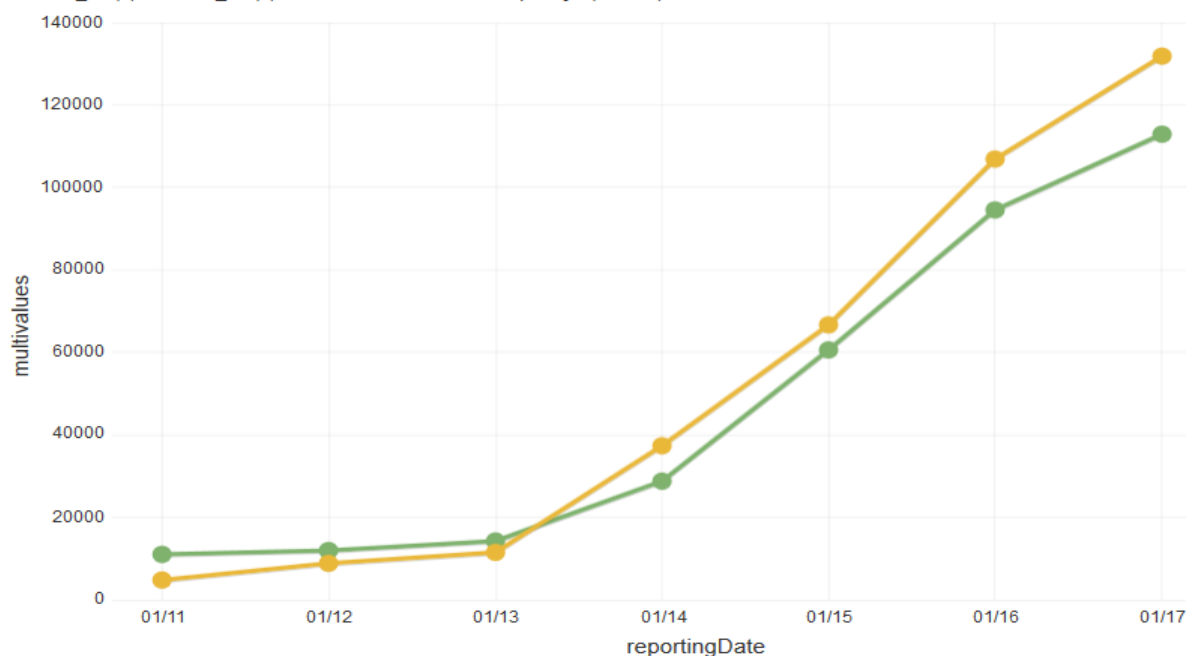
## 3.2 Documentation of the data (metadata) (step 2)

MDv1\_DS (green): number of spatial data sets for all Annexes that have metadata

MDv2\_DS (yellow): 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 (7) ● mdv2\_ds (7) indicatorValue multivalues per 1y | (14 Hits) | Time correction: browser

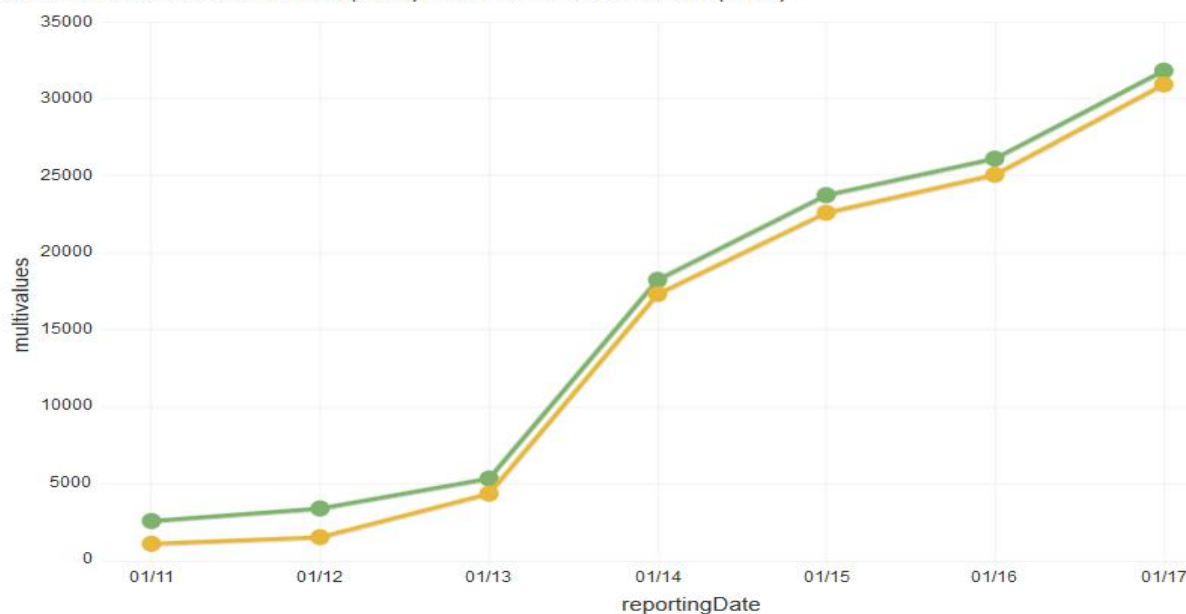


**Figure 5.** Evolution of documented data and conformity of the documentation

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

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

NUMBER OF SERVICE THAT HAVE METADATA (MDV14) AND HAVE CONFORMANT METADATA (MDV24)

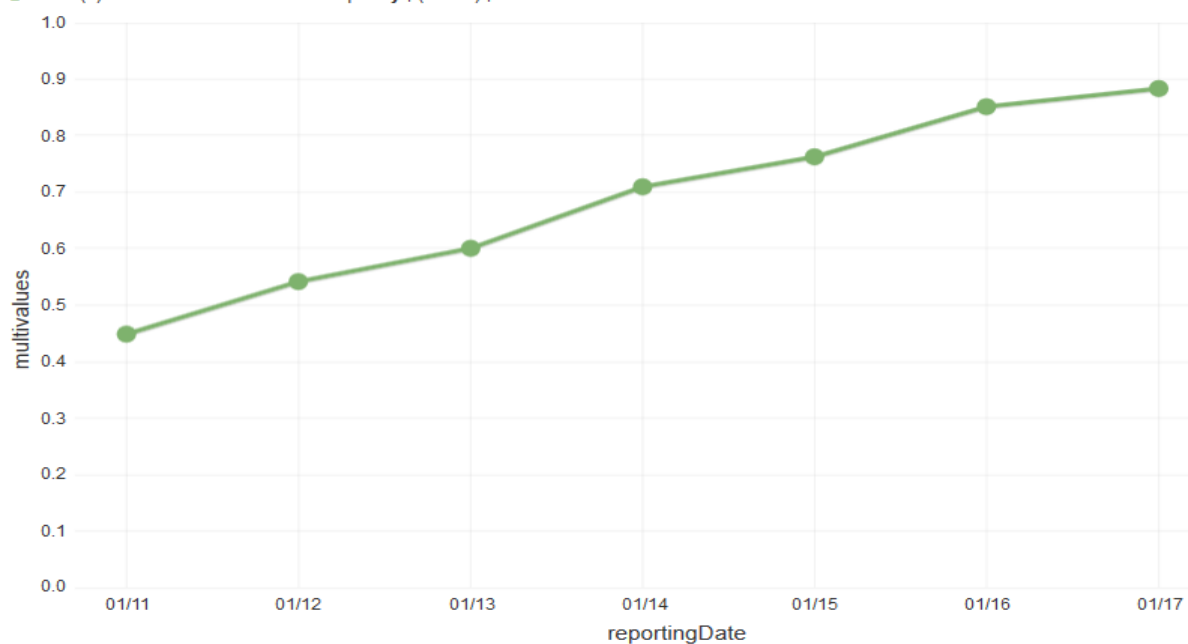


**Figure 6.** Evolution of documented services and conformity of the documentation

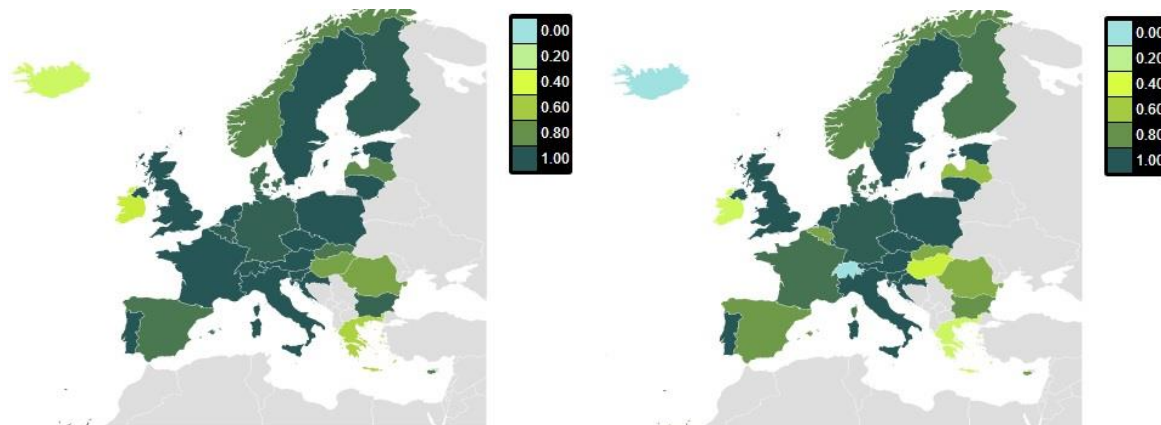
MDi2 = (number of spatial data sets for all Annexes that have conformant metadata + number of spatial data services that have conformant metadata) / (number of spatial data sets for all Annexes + number of spatial data services)

#### PERCENTAGE OF SPATIAL DATA SETS AND SERVICES WITH CONFORMANT METADATA (MDI2)

● mdi2 (7) indicatorValue multivalues per 1y | (7 Hits) | Time correction: browser



**Figure 7.** Evolution of the overall conformity of the documented metadata



**Figure 8.** Existence of Metadata (data sets and services) and Conformity\*

\* Figures include also EFTA countries

#### Evaluation of progress for step 2:

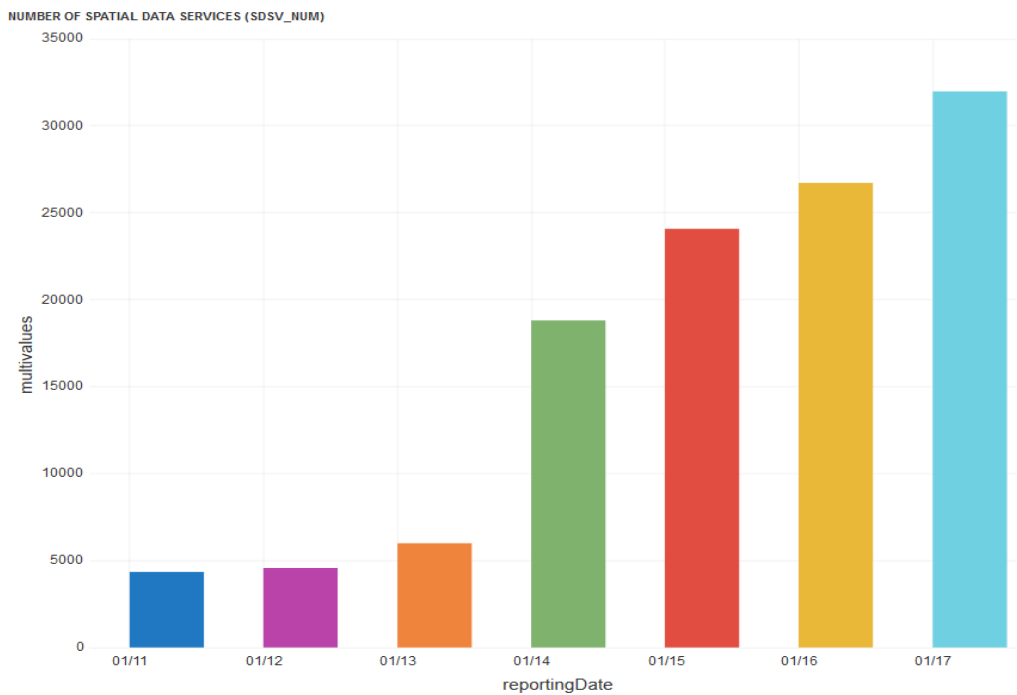
**Documentation on data and services in EU is constantly improving. Overall, 87% of the metadata (data sets and services) conforms to the INSPIRE metadata specifications.**

The following table shows in detail implementation status, trend and outlook for identification of data sets.

**Table 6.** Documentation of datasets and services (metadata)

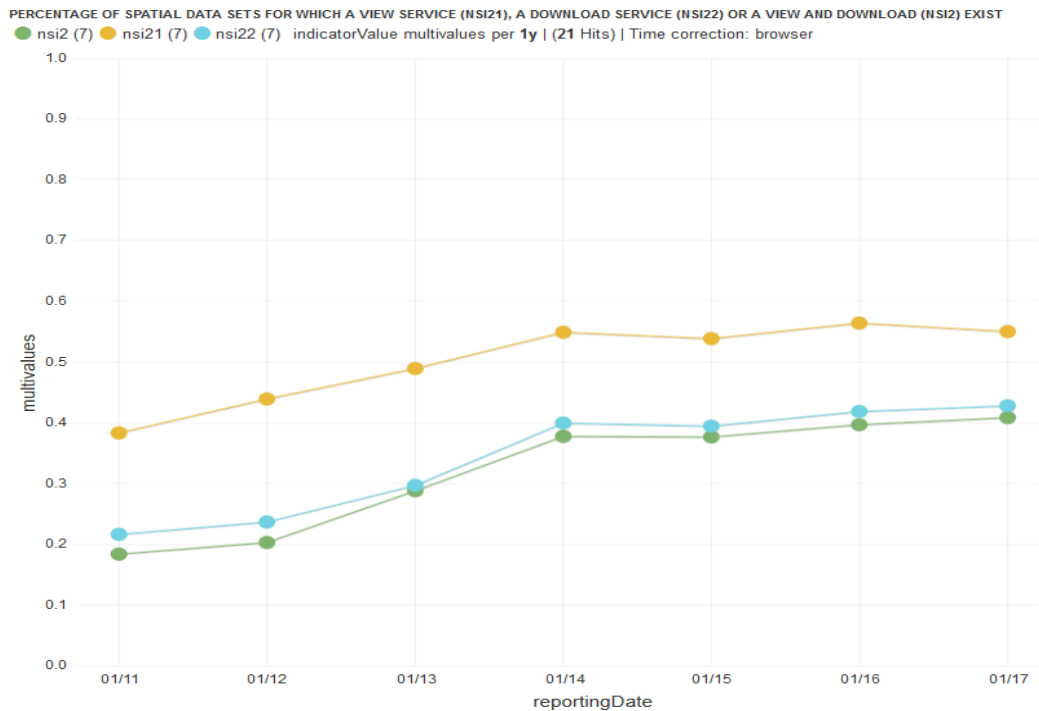
MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT	😊↗	🟢	<p><b>Implementation Status:</b></p> <p>😊: implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily.</p> <p>😐: implementation of this provision has started 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><b>Trend:</b></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><b>Outlook:</b></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>
BE	😊↗	🟢	
BG	😐↗	🟢	
HR	😊↗	🟢	
CY	😐→	🟢	
CZ	😊↗	🟢	
DK	😊↗	🟢	
EE	😊↗	🟢	
FI	😐↗	🟢	
FR	😊↗	🟢	
DE	😊↗	🟢	
EL	😐↘	🟢	
HU	😐↗	🟢	
IE	😐→	NA	
IT	😊↗	🟢	
LV	😐→	🟢	
LT	😊↗	🟢	
LU	😊↗	🟢	
MT	😊↗	🟢	
NL	😊↗	🟢	
PL	😊↗	🟢	
PT	😊↗	🟢	
RO	😐↘	🟡	
SK	😐↗	🟢	
SI	😊↗	🟢	
ES	😐→	🟢	
SE	😊↗	🟢	
UK	😊↗	NA	

### 3.3 Accessibility of the data through digital services (step 3)



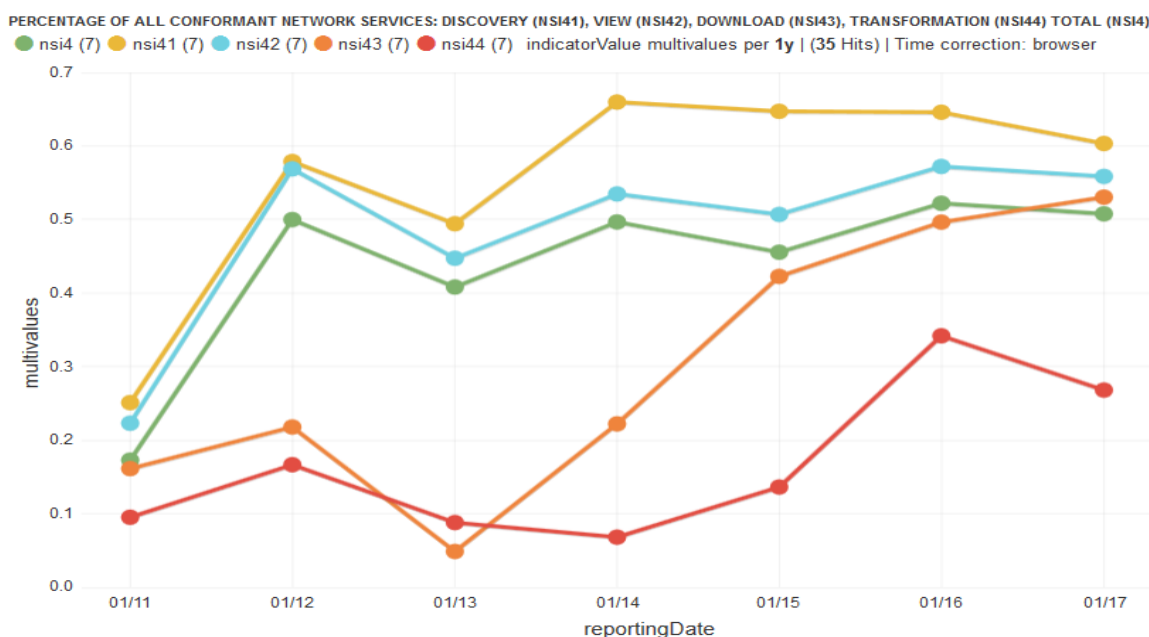
**Figure 9.** Evolution of spatial data services

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)

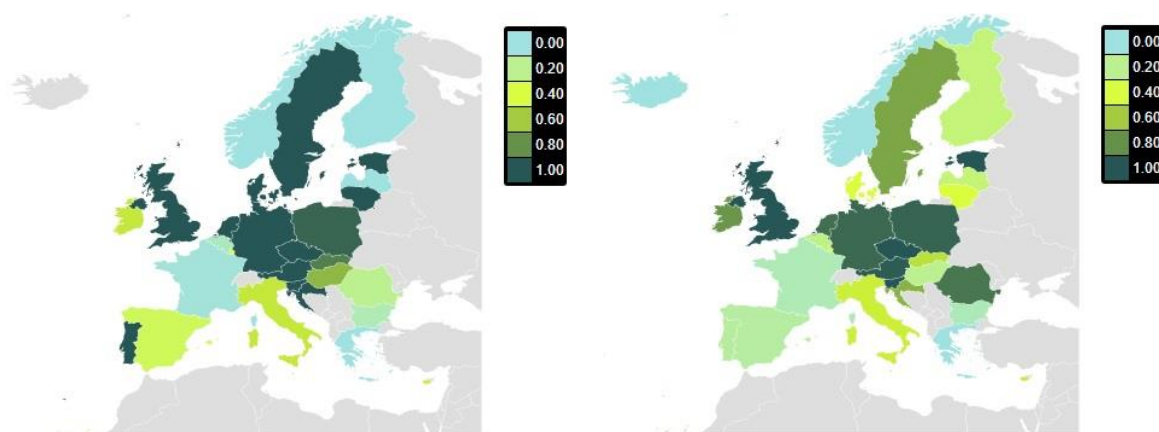


**Figure 10.** Evolution of spatial data made accessible through digital services

NSv4 (green): (number of all conformant network services) / (number of all network services)  
 NSv4.1 (yellow): (number of conformant discovery network services) / (number of discovery network services)  
 NSv4.2 (blue): (number of conformant view network services) / (number of view network services)  
 NSv4.3 (orange): (number of conformant download network services) / (number of download network services)  
 NSv4.4 (red): (number of conformant transformation network services) / (number of transformation network services)



**Figure 11.** Evolution of the conformity of the digital services



**Figure 12.** Conformity of discovery and view services\*

\* Figures include also EFTA countries

### Evaluation of progress for step 3:

Number of digital spatial data services across EU is evolving slowly. More than 40000 view services and more than 30000 download services are available. However, many of identified spatial data sets are still not accessible through the services and there is the space for further improvement. The overall technical conformity of the existing services is more than 50 %, which is low and should be also further improved.

The following table shows in detail implementation status, trend and outlook for provision of services.

**Table 7.** Provision of services for identified spatial datasets (discovery, view, download)

MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT			<p><b>Implementation Status:</b></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><b>Trend:</b></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><b>Outlook:</b></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>
BE			
BG			
HR			
CY			
CZ			
DK			
EE			
FI			
FR			
DE			
EL			
HU			
IE		NA	
IT			
LV			
LT			
LU			
MT			
NL			
PL			
PT			
RO			
SK			
SI			
ES			
SE			
UK		NA	

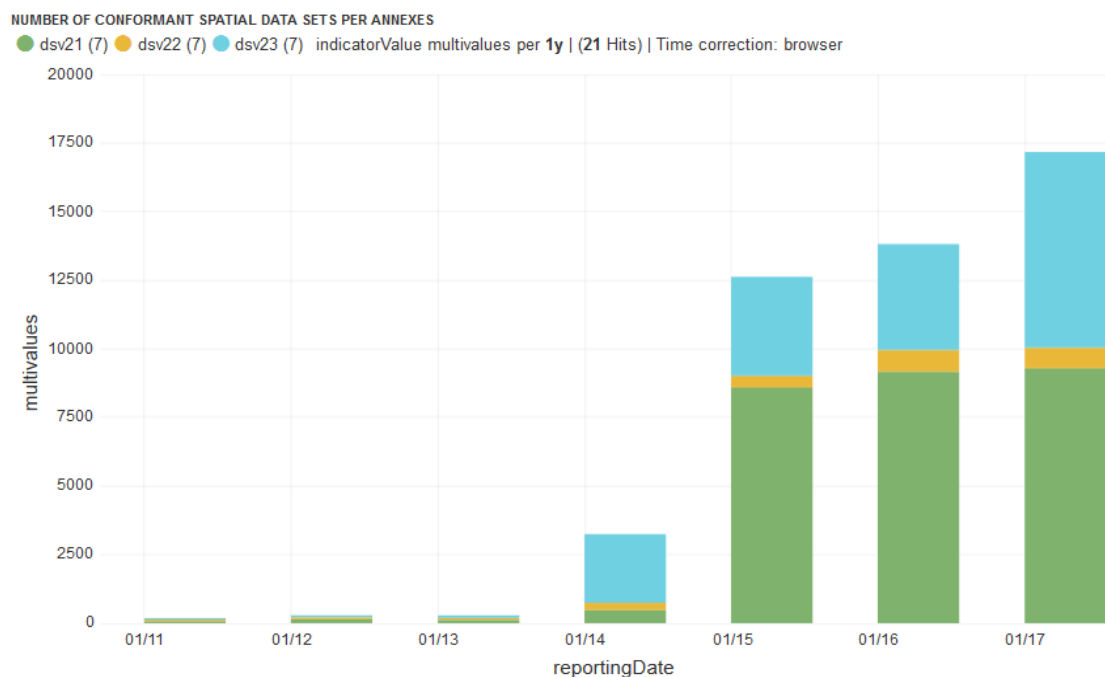
### 3.4 Interoperability of spatial data sets (step 4)

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<sup>13</sup>). The deadlines for implementation of the spatial data interoperability are still in the future (23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data) and therefore the assessment on compliance (Table 8) indicates the likely future situation if no additional efforts are made.

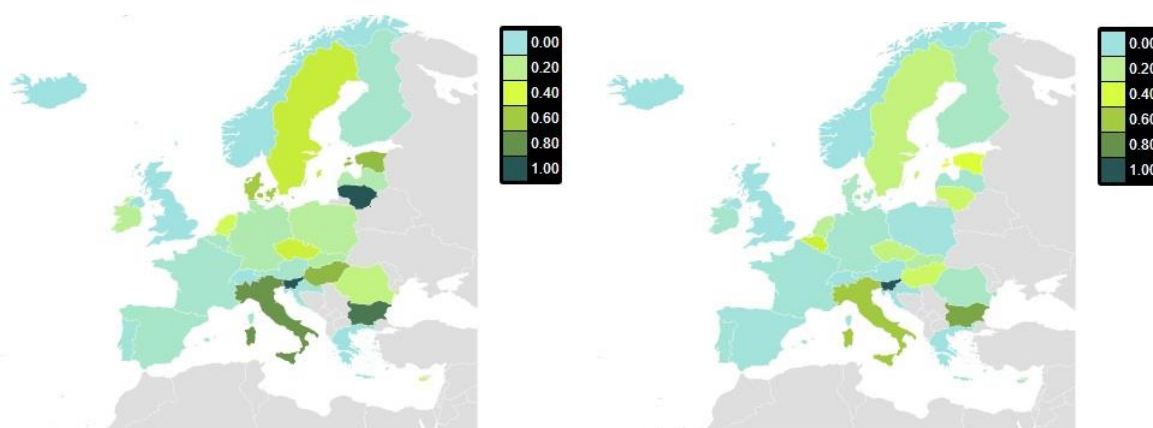
DSv2.1 (green): number of conformant spatial data sets with conformant metadata for Annex I

DSv2.2 (yellow): number of conformant spatial data sets with conformant metadata for Annex II

DSv2.3 (blue): number of conformant spatial data sets with conformant metadata for Annex III



**Figure 13.** Evolution of the conformity with INSPIRE interoperability specifications for spatial data



**Figure 14.** Conformity of spatial data sets Annex I and all Annexes (I, II and III)\*

\* Figures include also EFTA countries

<sup>13</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02010R1089-20131230&qid=1400675738563>

#### Evaluation of progress for step 4:

**Almost 14000 data sets in EU reported to be conformant to the INSPIRE interoperability specifications. It shows that Member States already started preparations to meet 2017 and 2020 data interoperability deadlines. However, significant efforts need to be made by all Member States in order to meet these upcoming obligations.**

The following table shows in detail implementation status, trend and outlook for provision of interoperable spatial datasets by aligning them with the common data models.

**Table 8.** Provision of interoperable spatial datasets

MS	Overall implementation status and trend	Outlook	Dashboard Legend
AT	😊↗	🟢	<p><b>Implementation Status:</b></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><b>Trend:</b></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><b>Outlook:</b></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>
BE	😊↗	🟢	
BG	😊↗	🟡	
HR	😐→	🟡	
CY	😊→	🟢	
CZ	😊↗	🟢	
DK	😊→	🟢	
EE	😊↗	🟢	
FI	😊↗	🟢	
FR	😊↗	🟢	
DE	😊↗	🟢	
EL	😊→	🟢	
HU	😊↗	🟡	
IE	😊↗	NA	
IT	😊↗	🟢	
LV	😊→	🟢	
LT	😊↗	🟢	
LU	😊↗	🟢	
MT	😊→	🟢	
NL	😊↗	🟢	
PL	😊↗	🟢	
PT	😊↗	🟢	
RO	😊↗	🟡	
SK	😊→	🟢	
SI	😊↗	🟢	
ES	😊↗	🟢	
SE	😊↗	🟡	
UK	😐→	NA	

## 4 Conclusions and outlook

### 4.1 Implementation

The bilateral technical implementation meetings and the Member State action plans as part of the compliance promotion have created a positive momentum and have been a driver for improvement of the implementation of the INSPIRE Directive in the Member States. Nevertheless, the state of implementation still shows different levels of maturity across Member States. To harvest the full benefits of the INSPIRE Directive it is clear that some Member States will have to improve data sharing, the alignment of INSPIRE implementation with national use cases and the management of spatial datasets which fall under the Directive. For the latter, additional efforts are specifically needed for step 1 (Identify spatial datasets), step 3 (access to spatial data through services) and step 4 (aligning spatial data with the common data models).

**27 out of 28 Member States issued their monitoring report for reference year 2015 (only Ireland failed to comply)<sup>14</sup>.**

**27 out of 28 Member States issued their tri-annual implementation report (only Ireland failed to comply)<sup>11</sup>.**

**19 out of 28 Member States have ensured effective coordination. The other Member States are aware of possible improvements and have addressed them in their action plans.**

**The usage of the infrastructure on national and EU-level was still limited. The usage of the infrastructure in Member States would benefit from better alignment with e-Government initiatives and other national use cases. The European Commission has provided a clear implementation scope by selecting reporting under the environmental acquis as main EU-level use case for INSPIRE implementation in 2017-2020.**

**Data policies that ensure effective data sharing without obstacles remain a point of attention in half of the Member States.**

**Member States strongly advocate the benefits of the Directive, but quantification of direct costs and benefits remains difficult.**

**The number of reported spatial data sets and services slowly but steadily increases. More than 90% of spatial data sets are reported by only 5 countries. The identification of spatial data could further improve by identifying and documenting spatial data sets required under the reporting and monitoring regulations of EU environmental law.**

**The documentation of data and services is constantly improving. Overall, 87% of the metadata for data sets and network services conforms to the INSPIRE metadata specifications.**

**The accessibility of digital spatial data through view and download services is evolving slowly and needs further improvement. More than 40.000 view services and more than 30.000 download services are available. More than 80% of these spatial data services are reported by only 2 countries and many of the identified spatial data sets are still not accessible through the services. The overall**

---

<sup>14</sup> In the meantime, Ireland rectified this situation and provided the missing 2016 tri-annual INSPIRE implementation report and 2015 and 2016 monitoring reports. However, the information in these reports could not be included in this summary report.

**technical conformity of the existing services is more than 50 %, which is low and should be also further improved.**

**Almost 14.000 data sets were reported by the Member States to be conformant to the INSPIRE interoperability specifications. It shows that Member States already started preparations to meet 2017 and 2020 data interoperability deadlines. However, significant efforts will still be needed by all Member States in order to meet these upcoming obligations.**

## **4.2 Compliance promotion and assurance**

In 2016 the European Commission has published its evaluation report<sup>15</sup> which was due under Article 23 of the INSPIRE Directive (2007/2/EC). Together with this the European Commission presented a detailed evaluation<sup>16</sup> which was carried out in the context of its Regulatory Fitness (REFIT) programme, one of the priorities of the Commission under its Better Regulation agenda. The findings in these reports refer to the situation of implementation in 2013-14.

This evaluation has demonstrated that the INSPIRE Directive is still largely fit-for-purpose, but that further efforts are needed at EU and Member State level to close the remaining implementation gaps and to harvest the full benefits of the Directive. Moreover, specific issues needing attention concern the data policy provisions in the Directive (Article 17) and requirements and use of some of the technical specifications in the implementing rules (including the streamlining of reporting).

As a consequence, the Commission has issued a number of recommendations and actions which are now being implemented in close collaboration with the Member States as part of an updated Maintenance and Implementation Work Programme 2017-2020<sup>17</sup>.

Within the scope of the Commission's INSPIRE compliance promotion strategy 2015 -2017 EU pilot letters were sent to five Member States who failed to connect their discovery services to the EU geoportal (BG, CY, IT, LT, MT) and bilateral technical implementation meetings (20) or written exchanges (2) with the Member States were held during the period September 2015 - April 2016.

As a follow-up, Member States were invited to draw up an action plan for improving the implementation of the INSPIRE Directive in conjunction with the next national tri-annual report which was due on 15 May 2016.

The implementation dialogue has proven very effective and was valued by the Commission services and the Member States. Most Member States have critically reviewed their INSPIRE implementation and provided an action plan in 2016 for the period 2016-2020 to remediate existing implementation issues and further improve the overall conformity of the implementation. The action plans show a common understanding and awareness of remaining implementation challenges and demonstrate the goodwill of Member States to address these.

In addition, the Commission has launched a two-yearly review of implementation of EU law with the Environmental Implementation Review (EIR)<sup>18</sup>. The EIR has the overarching objective of supporting the EU environmental policies and legislation. The EIR country reports on Member States implementation status include in section V on "Effective governance and knowledge" the evaluation of the INSPIRE evidence-base available to the Commission also building on the bilateral meetings and the INSPIRE country reports. The next round of the EIR country reports is due in 2019.

<sup>15</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016DC0478R%2801%29>

<sup>16</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016SC0243R%2801%29>

<sup>17</sup> <https://ies-svn.jrc.ec.europa.eu/projects/miwp-2016-2020>

<sup>18</sup> [http://ec.europa.eu/environment/eir/country-reports/index2\\_en.htm](http://ec.europa.eu/environment/eir/country-reports/index2_en.htm)

As a result of the Fitness Check on Monitoring and Reporting, a Report<sup>19</sup> and a Staff Working Document<sup>20</sup> were drafted which drew up a number of actions with important implications for the INSPIRE Directive.<sup>21</sup>

More concretely, from the perspective of eReporting under the environmental acquis as a major EU-level use case for the implementation of the INSPIRE Directive, the Fitness Check on Monitoring and Reporting<sup>22</sup> has highlighted the importance of implementing the INSPIRE Directive and further steers the implementation efforts so that the benefits and burden reduction potential of the Directive can be harvested. Based on the evaluation of reporting obligations under the environmental legislation, done in the framework of the Better Regulation initiative, a rolling list of datasets related to environmental reporting obligations has been prepared by the Directorate-General for the Environment. This priority list of eReporting datasets<sup>23</sup> will be regularly reviewed to reflect the most actual information needs and expectations and will provide a clear data and implementation scope for a stepwise INSPIRE implementation not only reducing reporting burdens but also inducing better integrated public eGovernment services.

Drawing on the conclusions of this report the Commission will draft a follow-up to the compliance promotion strategy for the coming years taking the appropriate actions to enhance national efforts, including providing help and support to Member States lagging behind in INSPIRE implementation (see in particular tables 4-8).

**26 Member States (all except UK and IE) voluntarily drafted an action plan to remediate any shortcomings of current implementations of the INSPIRE Directive and all Member States have now connected their national spatial data infrastructure to the EU geoportal.**

**Together with the recommendations following the INSPIRE REFIT, the outcome of the bilateral technical meetings with Member States has been used to fine-tune the multi-annual work programme (MIWP 2017-2020) of the Maintenance and Implementation expert Group (MIG), allowing picking up on identified challenges and defining the necessary priority actions to facilitate implementation efforts in all Member States.**

**eReporting under the environmental acquis has been put forward by the European Commission as major EU-level use case for the implementation of the INSPIRE Directive in 2017 – 2020.**

<sup>19</sup> [http://ec.europa.eu/environment/legal/reporting/pdf/action\\_plan\\_env\\_issues.pdf](http://ec.europa.eu/environment/legal/reporting/pdf/action_plan_env_issues.pdf)

<sup>20</sup> [http://ec.europa.eu/environment/legal/reporting/pdf/SWD\\_2017\\_230.pdf](http://ec.europa.eu/environment/legal/reporting/pdf/SWD_2017_230.pdf)

<sup>21</sup> See in particular actions 1-6, 9

<sup>22</sup> [http://ec.europa.eu/environment/legal/reporting/fc\\_overview\\_en.htm](http://ec.europa.eu/environment/legal/reporting/fc_overview_en.htm)

<sup>23</sup> <https://ies-svn.jrc.ec.europa.eu/projects/2016-5>

## List of figures

<b>Figure 1.</b> Overall assessment criteria .....	3
<b>Figure 2.</b> Outlook assessment criteria .....	5
<b>Figure 3.</b> Number of Spatial Data Sets per annexes (Annex I & II: spatial reference data; Annex III: environmental spatial data) .....	12
<b>Figure 4.</b> Data sets available per INSPIRE theme in 2015 .....	14
<b>Figure 5.</b> Evolution of documented data and conformity of the documentation .....	15
<b>Figure 6.</b> Evolution of documented services and conformity of the documentation .....	15
<b>Figure 7.</b> Evolution of the overall conformity of the documented metadata .....	16
<b>Figure 8.</b> Existence of Metadata (data sets and services) and Conformity* .....	16
<b>Figure 9.</b> Evolution of spatial data services .....	18
<b>Figure 10.</b> Evolution of spatial data made accessible through digital services .....	18
<b>Figure 11.</b> Evolution of the conformity of the digital services .....	19
<b>Figure 12.</b> Conformity of discovery and view services* .....	19
<b>Figure 13.</b> Evolution of the conformity with INSPIRE interoperability specifications for spatial data.....	21
<b>Figure 14.</b> Conformity of spatial data sets Annex I and all Annexes (I, II and III)* .....	21

## List of tables

<b>Table 1.</b> STATUS REPORTING 2016 for the INSPIRE Directive .....	6
<b>Table 2.</b> NCPs .....	7
<b>Table 3.</b> Ensure effective coordination .....	8
<b>Table 4.</b> Data sharing without obstacles .....	10
<b>Table 5.</b> Identification of spatial datasets.....	13
<b>Table 6.</b> Documentation of datasets and services (metadata).....	17
<b>Table 7.</b> Provision of services for identified spatial datasets (discovery, view, download) .....	20
<b>Table 8.</b> Provision of interoperable spatial datasets.....	22

## **GETTING IN TOUCH WITH THE EU**

### **In person**

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: <http://europea.eu/contact>

### **On the phone or by email**

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by electronic mail via: <http://europa.eu/contact>

## **FINDING INFORMATION ABOUT THE EU**

### **Online**

Information about the European Union in all the official languages of the EU is available on the Europa website at: <http://europa.eu>

### **EU publications**

You can download or order free and priced EU publications from EU Bookshop at: <http://bookshop.europa.eu>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>).

## JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



**EU Science Hub**  
[ec.europa.eu/jrc](https://ec.europa.eu/jrc)



@EU\_ScienceHub



EU Science Hub - Joint Research Centre



Joint Research Centre



EU Science Hub



Publications Office

doi:10.2760/143502

ISBN 978-92-79-77058-6