



SHAPING EUROPE'S
DIGITAL FUTURE

Past, present and future of INSPIRE

Online INSPIRE Conference 2021

26 October 2021

Evaluation of the INSPIRE Directive

- The INSPIRE Directive 2007/2/EC was amended by way of [Regulation \(2019/1010\)](#) on the alignment of reporting obligations in the field of legislation related to the environment, pursuant to which **the Commission shall, no later than 1 January 2022 carry out an evaluation of the Directive**, and of its implementation, and make it publicly available.
- The INSPIRE Directive was already subject to an evaluation in 2016, see Commission Report (COM(2016)478/2) and Staff Working Document on the REFIT evaluation of the INSPIRE Directive (SWD(2016)273).
- The Commission has drafted an evaluation Staff Working Document (SWD) based on the evidence and findings from the supporting study. This SWD is under internal scrutiny and is expected to be adopted in Q1 2022.

Links to the Green/Digital agenda

- The evaluation of the INSPIRE Directive was timely because its provisions and those of the Public Access to Environmental Information Directive date back more than a decade.
- We needed to consider the potential of INSPIRE in the context the recent European policy developments with its priorities for a [European Green Deal](#), its needs for better information, and the European [Digital strategy](#) initiative, that is also meant to enable delivering on Europe's goals for sustainability set out in the European Green deal.
- Europe's digital strategy package includes a [European Strategy for Data](#) covering i.a. the development of a legal governance framework for digital data of both the public and private sector in Europe and the establishment European Common data spaces.
 - Opportunities to strengthen the coherence and synergies with the recently revised European legislation on Open Data (specifically on aligning provisions on data sharing and re-use, INSPIRE Directive Art. 17).
 - The European Data Strategy announces a 'GreenData4All' initiative that includes as the starting point the assessment of the interaction between INSPIRE Directive 2007/2/EC and Directive 2003/4/EC on public access to environmental information.
 - The evaluation results will feed into a possible revision of the INSPIRE Directive as part of the 'GreenData4All' initiative and to position the INSPIRE in the emerging data landscape as key instrument to bring public data into the Green Deal data space.

EU State of Play

Envisaged outputs according the intervention logic

<i>Coordination structures on spatial information at Member States</i>	<i>Average performance</i>
<i>Measures of data sharing are that allow data access and reuse over administrative and national borders.Measures of data sharing are that allow data access and reuse over administrative and national borders.</i>	
Effective coordination	😊
Data sharing arrangements and usage of the infrastructure	😊
<i>Identification of spatial data needed</i>	<i>Total amount</i>
DSi1.1: The number of spatial data sets for which metadata exist	83,805
DSi1.2: The number of spatial data services for which metadata exist	95,381
DSi1.3: The number of spatial data sets for which the metadata contains one or more keywords from a register provided by the Commission indicating that the spatial data set is used for reporting under the environmental legislation	2,068
DSi1.4: The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers regional territory	12,917
DSi1.5: The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers the national territory	4,456

<i>Documentation of identified spatial data through metadata</i>	<i>Average performance</i>
MDi1.1: Percentage of metadata for spatial data sets conformant with Commission Regulation (EC) No 1205/2008 as regards metadata	59%
MDi1.2: Percentage of metadata for spatial data services conformant with Commission Regulation (EC) No 1205/2008 as regards metadata	55%
<i>Organise the documented spatial data in interoperable data models with a common vocabulary and online accessible through the IT services.</i>	<i>Average performance</i>
DSi2: Percentage of spatial data sets that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	50%
DSi2.1: Percentage of spatial data sets, corresponding to the themes listed in Annex I, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	65%
DSi2.2: Percentage of spatial data sets, corresponding to the themes listed in Annex II, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	52%
DSi2.3: Percentage of spatial data sets, corresponding to the themes listed in Annex III, that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets	50%
NSi2: The percentage of spatial data sets that are accessible through view and download services	42%
NSi2.1: The percentage of spatial data sets that are accessible through view services	50%
NSi2.2: The percentage of spatial data sets that are accessible through download services	50%
<i>Ensure that the documented spatial data is accessible online through data services allowing its discovery, view and download and, where needed transformation.</i>	<i>Average performance</i>
NSi4: The percentage of the network services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the network services	63%
NSi4.1: The percentage of the discovery services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the network services	65%
NSi4.2: The percentage of the view services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the network services	65%
NSi4.3: The percentage of the download services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the network services	62%
NSi4.4: The percentage of the transformation services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the network services	25%

Findings of the evaluation (SWD)

- The **implementation** of the INSPIRE Directive **has matured** compared to 2014 and has led to an increased availability and better access to spatial data and services. **However, still the implementation is incomplete.**
- While the INSPIRE Directive is **still largely fit for purpose**, the objective of harmonisation and interoperability within the INSPIRE framework entails **technical specificities for standards that are too rigid to be fit-for-the-future** in the context of evolving standards and technologies.
- INSPIRE has **facilitated the work of the stakeholders** in the area of spatial data provision through improved discoverability, availability and accessibility to spatial data.
- There is a **simplification potential** of the implementation by addressing the requirement for interoperability.

Findings of the evaluation (SWD)

- INSPIRE is **legally coherent** with environmental legislation with geospatial reporting obligations and with other relevant areas of EU policy. The INSPIRE Directive has been **designed to be consistent with the EU legal framework on data/information sharing and dissemination** and can **support implementation of Public Access to Environmental Information Directive** and the Open Data Directive. Synergies between the three Directives could however be better exploited (reuse conditions, metadata ...).
- The **added value** of the Directive mainly consisted of promoting data sharing as a common principle, the establishment of governance structures, achieving interoperability in a broader scope (EU-wide), unlocking public data, improving transparency and creating a pool of EU level expertise.
- Important EU added value of the Directive can be maintained and further enhanced through its effective positioning in the emerging European data governance landscape and to become one of the key drivers of the upcoming Green Deal data space.

MIG mini-Workshop (17 June 2021)

The future of INSPIRE (revisited)

- The workshop was guided by a survey to which 21 experts from 20 countries participate.
- The INSPIRE MIG expert group identified the following key drivers for developing policy options to revise the INSPIRE Directive:
 - Close remaining implementation gaps.
 - Align the legal framework with more recent and emerging data legislation under the European strategy for data.
 - Renew the technical scope of the Directive using the principle of technology-neutrality for a future-proof architecture. Maximize implementation flexibility while maintaining minimal interoperability mechanisms.
 - Strengthen demand-driven data scoping responding to information needs on all administrative levels.
 - Include data quality provisions.
 - Take into account cost-recovery/financing of the infrastructure to ensure long-term continuity.

JRC Science for policy report¹

INSPIRE - A Public Sector Contribution to the European Green Deal Data Space

- In order to stay fit for purpose SDI should evolve from complex and highly specialised geospatial data frameworks to flexible, open, agile, and self-sustainable data ecosystems.
- The entry level to the data ecosystem should be lowered and the sharing and consumption of data by communities should be diversified
- There is a need to blend SDIs, including INSPIRE, within a larger European data space, thus enabling various actors to seamlessly discover, access and use data for whatever final purpose, being it a research study, a policy intervention or a business application in any geospatially-related domain.
- To support this challenging objective, this science for policy report demonstrates the need for a simplification and modernisation of the INSPIRE technological framework in a user-centric and agile manner.
- The future INSPIRE infrastructure should be an integral part of the European data spaces.

¹ Kotsev, A., Minghini, M., Cetl, V., Penninga, F., Robbrecht, J. and Lutz, M., INSPIRE - A Public Sector Contribution to the European Green Deal Data Space, EUR 30832 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-41564-0, doi:10.2760/8563, JRC126319.

Recommendations (SWD)

- A number of issues that hamper the full implementation of the Directive have been identified and show the **need for a revision** to make the INSPIRE Directive fully coherent and complementary in support of more recent digital and data legislation.
- Remaining **implementation gaps in Member States need to be closed** to optimise the reuse of spatial data and facilitate its pan-European use.
- **New data sources should be included** (IoT data, citizen-generated data, business data ...) beyond the current spatial data scope to better address information needs of a larger stakeholder community and to better help meeting the objectives of the European Green Deal.
- The further implementation (data and services availability, accessibility and interoperability) of the INSPIRE Directive should be **user-driven** by a common demand across administrative levels and use cases to improve the EU added value of the infrastructure and its cost-benefit balance.

Recommendations (SWD)

- The **legal framework should be technology neutral**. Implementers should have the option and the freedom to deploy cost-effective off-the-shelf tools that apply state of the art technology to share data in a user-friendly way.
- **More work is needed**
 - on standardising data reuse conditions and licensing
 - on increased flexibility of the legal framework to make it future and technology proof
 - on further simplification of the minimal interoperability mechanisms to strike a cost-effectiveness balance.

Timing for a revision of the INSPIRE Directive (indicative)

- The revision of the INSPIRE Directive and parts of the Public Access to Environmental Information Directive has been politically validated,
- November/December 2021 – Publication of the Inception Impact Assessment roadmap for public consultation
 - Close implementation gaps and maintain the legal framework.
 - Align the legal framework with more recent and emerging data legislation under the European strategy for data, such as the data reuse provisions of the Open Data Directive, the related [initiative for an Implementing Act on High Value Datasets](#), the proposal for a regulation on European data governance ([Data Governance Act](#)) and the Data Act;
 - Modernise the data regime and the implementing regulations in line with technological and innovation opportunities - principle of rendering the Directive technology neutral / future proof
 - Extending the data scope of the INSPIRE Directive to also include non-spatial, citizen science and business data building on the mechanisms the Data Governance Act and the Data Act.
 - ...
- Q1 2022 – Start Impact Assessment study
- Q2 2022 – Public consultation
- ...

Thank you



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