

FIT FOR FUTURE Platform Opinion

Topic title	<p>INSPIRE –Directive establishing an Infrastructure for Spatial Information in the European Community</p> <hr/> <p>2021 AWP</p> <hr/> <p>Directive 2007/2/EC</p> <p><i>Legal reference</i></p>
Date of adoption	10 December 2021
Opinion reference	2021/SBGR2/09
Policy cycle reference	<p><input type="checkbox"/> Contribution to (ongoing) legislative process</p> <p><i>Commission work programme reference</i></p> <hr/> <p><input checked="" type="checkbox"/> Contribution to the (ongoing) evaluation process</p> <hr/> <p>Evaluation of Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), CWP 2021, Annex II</p> <p><i>Title of the ongoing evaluation</i></p> <hr/> <p>The INSPIRE Directive set up an EU wide digital space for sharing spatial data for protecting the environment. The evaluation of the INSPIRE Directive shall be based on, inter alia: (a) the experience gathered from the implementation of this Directive; (b) the information collected by Member States and the Union-wide overviews; (c) relevant scientific and analytical data; (d) other information including relevant scientific, analytical data required on the basis of the Better regulation guidelines. The evaluation will cover the implementation and application of the INSPIRE Directive and its implementing rules in all EU Member States and the EEA/EFTA countries.</p> <p>The evaluation will assess the effectiveness (degree by which it reaches its objectives), the efficiency (in terms of costs and benefits), the relevancy for the policy stakeholders, the coherence with other actions and legislation and the EU added value, according to the Better Regulation Toolbox and Guidelines. In particular, it will look at how the current legal framework fulfils the objectives of data sharing between the public authorities and making data publicly accessible in a user-</p>

friendly manner. The evaluation includes a public consultation and a targeted stakeholder consultation aimed at testing the general knowledge and use of the INSPIRE related services both from a user perspective and from the perspective of data providers. The latter group will further be asked to identify and possibly quantify issues that can be improved to ensure continued provision of environmental data in the best resourceful way. The outcome of the evaluation will provide an important evidence base for possible follow-up actions under the European Strategy for Data (COM (2020) 66 final) and its function as a digital enabler for the European Green Deal initiative (COM (2019) 640 final). Therefore, the findings of the evaluation may lead to further EU action, such as revised legislation subject to the results of a possible impact assessment.

The INSPIRE Directive was previously 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).

Included in Annex VI of the Task force for subsidiarity and proportionality

No

Other

No

**Have your say:
Simplify!**

No relevant suggestions on this topic have been received from the public.

1. **Data specifications can be less technology-bound, more generic and focused on the purpose.** This means that:
 - a. technical details need to be updated to match the evolving technologies
 - b. technical guidelines should be subject to rules foreseeing more flexible coordination and update mechanisms. Implementing rules must not contain detailed technical specifications, which belong in technical guidelines.
2. **The focus should be on defining priorities and on clarifying policy needs.** This means that:
 - a. There must be a prioritization of the effectively needed Pan-European data and put in relation to the INSPIRE data themes (Annex I – III of the INSPIRE Directive).
 - b. To guarantee interoperability and cost-efficiency, metadata is the crucial level to pay attention to, especially for data that is only used at national, regional or local levels.
3. **Mechanisms to improve European legislation in the field of geospatial information** must be put in place. In particular, a coordination body in the EC (eventually, GISCO at Eurostat) should serve as geospatial hub, coordinating European geospatial information. This can help to:
 - a. Avoid contradictions or diverging requirements concerning geospatial information in different pieces of EU legislation.
 - b. Strengthen the capabilities of the EC in supporting the activities of national, regional and local authorities in this field and disseminate the benefits of INSPIRE across different policy areas.
4. **The potential benefits of INSPIRE have not yet been fully exploited.** It has been deemed useful for environmental reporting, and it has positive spill overs in other policy fields. This means that:
 - a. INSPIRE (or a new, INSPIRE-compatible, legislative initiative) should expand beyond environment.
 - b. INSPIRE infrastructure should be used to provide access to spatial data in the interest of all EU policies.
5. **To overcome technical and financial barriers, non-legislative initiatives should be supported.** These include supporting:
 - a. Secondary, vocational and higher education institutions, with the goal of training future experts in the field of spatial information.
 - b. The training of existing practitioners, with the goal of improving the skills and knowledge of (especially) the staff of national, local and regional authorities responsible for geospatial information.
 - c. The exchange of knowledge and best practices among experts, in public administration, academia and private sector.

SHORT DESCRIPTION OF THE LEGISLATION ANALYSED

The [INSPIRE Directive 2007/2/EC](#) is the only piece of European Union (EU) legislation that obliges Member States to share geospatial data to support EU's environmental policies and policies or activities which may impact on the environment. INSPIRE is based on the infrastructures for spatial information established and operated by the EU Member States. In addition, [Directive 2003/4/EC on public access to environmental information](#) implements parts of the Aarhus Convention¹ relating to information that authorities must make available to the public. The provisions in the Directive date almost 20 years back. The development in digital technologies and emerging of new data sources such as citizen science² and environmental sensors justify that we evaluate how it corresponds with the objectives of Directive 2019/1024/EC on open data and the re-use of public sector information.

These legal instruments are the backbone of the environmental information management covering the whole of the EU environmental policy. They require Member States to provide access to environmental information in an easily understandable and user-friendly manner. This allows information sharing between public authorities, for instance when managing cross-border crises such as floods or forest fires. The framework further facilitates public access to spatial information, with a view to involve members of the public into decision-making.

Both Directives are therefore highly relevant in the context of the [European Green Deal](#) initiative. They respond to the need for better information and more accessible data to support policy development and better implementation.

Besides the environmental aspect of the legislation, its importance to the geospatial field must also be considered. Contrary to statistical information, for which there is a European mandate (Article 338, TFEU), geographical information, being strongly connected to national sovereignty, is a competence of Member States. Notwithstanding this, geospatial data has implications for many policy fields.

Further sources of information

[Have your Say entry page](#)

Legislation framework webpage: [Inspire Knowledge Base](#)

[Evaluation and Fitness Check Roadmap](#)

[Public consultation](#)

CoR's Study on [Integration of Geographic and Statistical Information](#)

JRC's study [INSPIRE - A Public Sector Contribution to the European Green Deal Data Space](#)

RegHub consultation (*link to be provided at a later stage*)

¹ Council Decision 2005/370/EC - <https://eur-lex.europa.eu/eli/dec/2005/370/oj>;

² Citizen science is scientific research conducted, in whole or in part, by amateur (or nonprofessional) scientists whose outcomes are often advancements in scientific research, as well as an increase in the public's understanding of science;

Existing evidence suggests the following issues:

The EC evaluation is still ongoing. In particular, regarding the efficiency of the INSPIRE Directive, the evaluation will address the following questions:

- To what extent has the intervention been cost-effective?
- Can any specific provisions in INSPIRE be identified that make cost-efficient implementation more difficult?
- Can the INSPIRE Directive and Implementing Rules³ be made more cost-efficient? What is the simplification potential?
- Are the results achieved so far proportionate to the resources used and do they meet the expectations from the ex-ante evaluation of INSPIRE?
- How proportionate were the costs of the intervention for different stakeholder groups (enterprises including SMEs, private citizens ...)?
- Have the resources needed to implement INSPIRE been available?
- How has the use of INSPIRE for environmental reporting affected the reporting burden?
- How would further streamlining of the provisions in Articles 7 and 8 of Directive 2003/4/EC on public access to environmental information with the active dissemination provisions of the INSPIRE Directive impact the administrative burden on the Member States?

(Source: [Evaluation and Fitness Check Roadmap](#))

The Fit for Future Platform has acknowledged the issues raised by the legislation concerned as follows:

Regarding: modernisation and future proofing of existing laws, including via digitalisation, the efficient labelling, authorisation and reporting obligations, the simplification of EU legislation:

Despite an overwhelmingly positive opinion on INSPIRE among practitioners, many state that the Directive is not entirely future proof. Its complexity and level of detail seem to be one of the root causes of the technological lag between INSPIRE and current practices and tools applied in the geospatial and environmental data reporting fields.

The models used for data specifications are not fit for all purposes, since different users can have different needs. For example, mapping agencies have one way of depicting transports, but railway companies need different models. We should therefore focus on better instructions for the purpose and use of the required dataset domains. Data specifications of themes should also be more generic and they should be defined under implementation guidelines that do not need to follow legislative procedures for updates. This way technical issues can be dealt with by the practitioners involved in the implementation of the Directive.

³ <https://inspire.ec.europa.eu/inspire-implementing-rules/51763>:

Indeed, a problem resulting from (excessively) detailed data specifications set in legislation, is that they cannot cope with the fast technological evolution in the field, what in turn reduces their potential added value for users. An alternative scenario, which meets this challenge, could be to use these data specifications being technical advice to data providers, being updated by practitioners coordinated by a European geospatial hub. In this situation, technological changes can be swiftly introduced and passed on to staff working in the field and across all Member States, instead of having one legal document with outdated legal requirements and, in parallel, ad-hoc procedures to solve the problems raised by the outdated requirements.

Specific issues on the local and regional level are the following:

- Technical complexity makes the use/publication of data produced at local and regional level difficult. Fewer requirements in terms of adaptation to the Implementing Rules (namely at the metadata level, while the data itself is available without the need for additional adjustments and would remain "as is") would remove barriers to the availability of such data. To ensure interoperability, semantics need to be specified;
- Local districts, cities and municipalities are often overburdened with the implementation of INSPIRE, as the respective data structures are very different and a joint implementation is limited. In general, INSPIRE requires considerable professional, technical, personnel and financial capacities;
- Optimising the data and service specifications, which in many cases do not cover the practical needs in the Member States, would increase the usefulness of the Directive;
- Currently, the further development of INSPIRE specifications at the European level cannot keep up with technological progress and the needs on the ground. There is therefore an urgent need for faster and leaner decision-making processes across all levels of government in order to anchor INSPIRE as a cross-cutting component in line with the EU Commission's data strategy, and beyond environmental policies;
- In some cases, different agencies at different administrative levels are working on comparable issues, which causes multiple resource requirements and can render the implementation of the Directive inefficient;
- Other challenges pointed out by local and regional authorities are that in some cases the specifications are too complex and detailed, and incomplete in others, and that a smooth transformation of existing databases is therefore very difficult. In the specific case of public utility services, the specification is excessive, with too much detail, making it almost impossible to transform existing databases 'on the fly' to achieve the publication of information according to the specification. An example is Annex III.6 (Public Utility and State Services) of the Directive, which includes municipal service networks (water, sewerage and public lighting) and also the inventory of services and facilities⁴;

⁴ This is an extensive, complex and diverse subject, but it is worth commenting, as an example, that the "FeatureTypeManhole" does not make it sufficiently clear to which service network it belongs, given that it does not inherit the "FeatureTypeNetworkElement". At the same time, if focusing on the specification of the

- It should be borne in mind that, although legal coherence at national and sub-national level is outside the scope and remit of the INSPIRE Directive, in the case of federal or decentralized states there are sub-national regulations in addition to the national law, which can cause additional burden for geodata-holding agencies operating nationwide.
- Linguistic barriers also arise when the local and regional authorities produce data in a language that is official in that region, but it is not an official EU language.

SUGGESTIONS

Suggestion 1: Update technical guidelines and make them more adaptable

Description: Data specifications can be less technology-bound, more generic and focused on the purpose. Because technical details need to be updated to match the evolving technologies, they should be subject to rules foreseeing more flexible coordination and update mechanisms. Implementing rules must not contain detailed technical specifications, which should be described, developed and updated in the technical guidelines.

Complex Implementing Rules

According to the European Commission's public consultation on INSPIRE, "(a) large part of respondents (79%, 50 respondents) indicated that the process for standardising spatial data could be simplified. In addition, more than half of the respondents (over 30 respondents) indicated that the processes for transforming, documenting and publishing spatial data along with the process of making spatial data downloadable could be simplified".⁵

The Implementing Rules in particular are too complex, according to contributions received from both Fit for Future (F4F) Platform members and from the RegHub consultation. More concretely, the technical requirements are too demanding and, when INSPIRE network services are developed in accordance with those requirements, only a few software products can use the data. This makes the developed services difficult to use and limits the re-use of data by users and added value providers. This has also transpired from the RegHub consultation: several respondents stated that the Directive is at times too ambitious in its requirements and creates an overburdening complexity for national and regional authorities.

The RegHub consultation further identifies a need for revisions mainly for the implementing rules on data specification and to a lesser extent for the implementing rules on metadata and network services. Several respondents consider that the implementing rules of INSPIRE are not 'feasible and proportionate in terms of likely costs and benefits'. This perception may be due to the fact that, despite the key importance of spatial data availability, the share of INSPIRE

electrical network in order to report the municipal public lighting network, there are important and interesting attributes that cannot be reported (e.g. the power of the lighting, which is very useful for light pollution studies). If we focus on the "electricityCable" and "electricityCableExtended" classes, there is essential information, such as the fact of indicating that the lighting is public, or the length of the distribution lines, which require the extended model;

⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12427-Sharing-geospatial-data-on-the-environment-evaluation-INSPIRE-Directive-/public-consultation_en, p. 16;

implementation costs is asymmetrical, with most costs borne by the public data providers while most benefits accrue to end-users.

Inconsistencies in Data Specifications

It transpires from the RegHub consultation that the technical guidelines for transforming datasets are sometimes too heterogeneous, depending on the theme. Respondents indicate that they cannot easily transform data sets or that they do not know to which theme they should assign them. The adoption of simpler data specifications would make it possible to standardise geospatial information more efficiently.

Overall, the level of detail of the implementation rules is assessed as inconsistent, with data specifications that are incomplete and at times ambiguous. It would be desirable for the Commission to standardise the level of detail of the implementing provisions with the involvement of the Member States. INSPIRE datasets must be as easy as possible to process, refine and, if necessary, transform into products. Through new technical specifications, hurdles can be dismantled and new user groups can be opened up via standard web technologies.

Specifications that are too prescriptive also prevent data to be made accessible in a way that is compatible with the Directive. This means that specific datasets do not pass the INSPIRE Reference Validator.⁶ The Validator could also see its role expanded for automated validation of datasets and services conformity, if the toolbox is widened to pragmatically used GIS formats beyond GML, which has its restrictions. More realistic results on spatial datasets and services conformity with implementing rules in the yearly Monitoring report will only be achieved if the Reference Validator is used also for calculating these indicators instead of relying on conformity elements indicated in metadata documents.

Improving use and accessibility

According to the European Commission's public consultation on INSPIRE, "(n)early 60% of respondents (41 in total) indicated that the ease of accessing spatial data through services and of downloading spatial data could be simplified. In addition, 58% (40 respondents) indicated that the ease of utilising spatial data and discovering spatial data sources could be simplified."⁷

In recent years, the standards of the Open Geospatial Consortium (OGC) have formed a solid foundation for the product-independent handling of geographic information and its distributed provision and use via the internet. However, the internet is constantly developing, so that with INSPIRE standards that are in part up to 20 years old are well established and embedded in stable software products. Without keeping the community active in further technical developments, there is a risk of drifting into a niche

The use of the data provided and the associated interfaces currently usually requires GIS tools or additional application programming, as well as sufficient familiarisation with the underlying standards and specifications. The RegHub consultation outlines that for non-experts - because of the rich material and functionality - this is often a considerable, if not insurmountable, hurdle. For developers, it would be sufficient in many cases to access the data in a simpler way and

⁶ <https://inspire.ec.europa.eu/validator/home/index.html>

⁷ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12427-Sharing-geospatial-data-on-the-environment-evaluation-INSPIRE-Directive-/public-consultation_en , p. 1/;

with less functionality. This should also allow the general web developer without special knowledge to make geodata usable for lay-persons ("making geodata easy to use").

Changing technological paradigms

A point that was raised both by F4F Platform member contributions and by RegHub respondents concerned the question of how much is INSPIRE up to date with the latest technical developments in the field of geodata.

In the further development of INSPIRE, the new "OGC API building blocks"⁸, which are currently under development, and specifications for Web Coverage Services (WCS) services and 3D services, which are based on the current web standards, should therefore be consistently used.

The current technical developments are moving towards web API. This should be taken into account when evaluating INSPIRE. The XML no longer corresponds to the latest state of technical development. Especially for applications on mobile devices, XML is rather unsuitable.

Overall, greater flexibility in the organisation of data would be helpful to meet the requirements set out in the implementing provisions of the Directive. Reworking INSPIRE data specifications, the choice of the datasets that should fall under the INSPIRE scope and at which level of compliancy could be done with the assistance of the INSPIRE Maintenance and Implementation Group⁹.

Expected benefits: Data specifications would accompany technological evolution. This would increase also legal certainty, since there would be no contradiction between the legislation and the actual practice. Instead of finding ad-hoc solutions to overcome outdated legal requirements, technical requirements could be updated continuously by the European Commission and national experts, and shared with all interested parties online via the INSPIRE Knowledge Base.

Suggestion 2: Clarify pan-European needs and prioritize metadata

Description: There must be a clarification of the data that is effectively needed at Pan-European level. This should be given priority. Data not needed at European level should be optional. To guarantee interoperability and cost-efficiency, the focus should furthermore be at the metadata level, especially for data that is only used at national, regional or local levels.

The costs of unclear priorities

Contributions from F4F Platform members and from the RegHub consultation show that the listed data topics are often too general and unspecific. This makes the identification process very cumbersome and time-consuming. The legal and technical requirements could be made more precise.

Because it is unclear which data is effectively needed at European level and for which end, some RegHub respondents stated that it is safer and less costly to use the data as it is produced by the data producer, without any further elaboration. The transformation into the INSPIRE data

⁸ <https://ogcapi.ogc.org/>

⁹ <https://wikis.ec.europa.eu/display/InspireMIG>

models and the provision of the spatial data sets via spatial data services incur substantial costs that are not covered in the National Spatial Data Infrastructure subjects. These include, among others:

- Costly realisation of the infrastructure for the creation of services and metadata;
- Time-consuming verification of metadata and services;
- The implementation of various geodata (collection, recording, maintenance) is personnel- and time-intensive;
- Effort in clarifying/solving technical problems (functions, metadata).

The required infrastructure is a challenge especially for smaller data providers (e.g. municipalities), which often neither have the geo and IT expertise nor technical capabilities. National, regional and local authorities are already facing limited resources to complete the INSPIRE metadata of all maps; implementing the data specifications is even more complex. As mentioned in answers to the RegHub consultation, this would require a remaking of many map bases implemented prior to the INSPIRE guidelines.

Examples and best practices

Besides the need for a simplification of implementing rules, the RegHub consultation shows that data providers would appreciate the provision of good practice application examples and of clear and precise guidelines to identify the required data. To provide such support and complement it with specific trainings and capacity building – in particular at the subnational level - would help to ensure a full implementation of the Directive. Some respondents explicitly state that if the benefits emanating from the Directive were clearer and more visible, this would encourage a better implementation, especially by smaller administrative structures, which are often overburdened by the Directive's requirements.

Concrete implementation examples in the run-up to the implementation of INSPIRE data/services would thus be helpful for the creation of standardised data content. Besides examples directly produced at European level to illustrate INSPIRE requirements, the provision of best practice cases, of solutions coming from national, regional and local data providers could also be useful.

Data and metadata standards

Some changes are needed for clearer and less burdensome data provision. Data models require standardisation at the technical level, in particular with regard to structural simplification and content enhancement to meet the data needs identified in Member States' practices. Concerning metadata, we need simpler metadata standards (e.g. from Open Government Data) instead of ISO 191xx metadata in order to simplify their coding, and making them easier and more error-free to capture. Simplification measures must be carefully reflected before implementation, to avoid o avoid having less usable metadata. Concerning network services, we should rely on specifications that are also supported in practice by existing software modules and specifications that allow to use modern web interfaces along the lines of the "Open API" of the Open Geospatial Consortium.

Competing demands, limited resources and unclear priorities constitute, each in itself, obstacles to a good implementation of INSPIRE. Together, they substantially limit its potential.

Expected benefits: Data sharing should bring benefits to all levels of administration from local to European, in terms of policy development, implementation and enforcement. At the same time, data sharing contributes towards environmental democracy¹⁰, the concept founded in the principle that land and natural resource decisions must adequately and equitably address citizens' interests. Both data quality and legal compliance will be enhanced if the Commission clarifies which data is effectively needed at European level. Authorities responsible for delivering data will focus on guaranteeing that the (smaller) amount of data effectively needed for European policymaking is of good quality. Non-priority data can still be provided, according to the available human and technical resources. A special focus on metadata will in particular allow that national, regional and local authorities with constrained resources can still contribute to the overall goal of interoperable geospatial data.

Suggestion 3: Avoid and solve inconsistencies in European legislation and geospatial data

Description: Contradictions or diverging requests concerning geospatial information in different pieces of EU legislation should be avoided and solved when they occur. A coordination function in the Commission could serve as geospatial hub, coordinating European geospatial information and help achieve this aim.

The difficulties of achieving Pan-European trusted data

Although the scope of the INSPIRE Directive sets interoperability rules regarding the data structure, this implies comparability of data, therefore inevitably raises questions about data quality. To have trusted data that serves European purposes, it is necessary to coordinate standardisation rules at the EU level and among Member States. To access such trusted Pan-European geospatial datasets, the solution so far has been outsourcing, but currently no legislation is tackling the issue of geographic data standardisation based on the components of authoritative datasets owned by the Member States. As an example, the process for matching data across borders is not coordinated nor regulated, which means that it is either left to the good will of the Member States or it is supported by some data users, interested in Pan-European datasets (which in turn can be very costly and hard to maintain). In the past, the European Commission has supported initiatives that aim at overcoming some of these issues, such as the European Location Framework¹¹ and the Open European Location Services¹². Nevertheless, without a mandate, staff and financial resources permanently allocated to oversee this field and to overcome these limitations, the impact cannot be expected to be significant.

¹⁰ Environmental democracy involves three mutually reinforcing rights that, while independently important, operate best in combination: the ability for people to freely access information on environmental quality and problems, to participate meaningfully in decision-making, and to seek enforcement of environmental laws or compensation for damages. Link: [Environmental Democracy & Access Rights - Center for International Environmental Law \(ciel.org\)](https://www.ciel.org/)

¹¹ <https://www.elfproject.eu/>

¹² <https://openels.eu/>

Solving legislative inconsistencies

Several practitioners have found inconsistencies across EU legislation. For example, issues of compatibility between the Noise Directive¹³ and INSPIRE were raised already in the past. This required, a regulation to overcome these problems¹⁴. The standardised data model now covers all six reporting data flows, re-uses good practice from the previous reporting data structure, and includes spatial information based on INSPIRE as well as agreed vocabularies.

Within INSPIRE, and as it has emerged from the RegHub consultation, data specifications are sometimes incomplete and in part misleadingly interpretable (e.g. attributes with the note "voidable"). In addition, implementation specifications are missing, especially for Web Map Service interface standards.

An INSPIRE consistent with the European Data Strategy

In the public consultation on INSPIRE launched by the Commission on INSPIRE most of the respondents indicated that INSPIRE supports the obligations under the Open Data Directive. It was stressed by several RegHub respondents that INSPIRE should be used as a basis for the implementation of the European Data Strategy¹⁵ in the field of spatial data and further developed into the Directive on open data and the re-use of public sector information¹⁶. According to those respondents, it must be ensured that with an update of INSPIRE for the geospatial sector, the requirements from the legislation on open data are covered and the INSPIRE-relevant data do not have to be provided again in a different form (data model and metadata). Obstacles related to parallel, competing and partially contradicting national policies on open data and eGovernment deserve attention, as they may hinder the success of INSPIRE.

A mandate to lead on geospatial information

In order to ensure the successful sharing of information in the geospatial field, creating a new hub at the European Commission could be considered, serving as an operational coordination body to support Member States. Provided with a stable institutional framework at the European level, including the necessary resources and the mandate to oversee the geospatial sector, such geospatial hub could listen to the concerns and questions of Member States, regions and municipalities, data providers and users. It could then take their concerns into account and involve with them when developing data specifications, guidelines, models, etc. As a consequence, this enhanced cooperation across levels could avoid, or at least better solve, incompatibilities of geospatial information across European legislation.

In conclusion and as stated in the 2021 study on integration of geospatial and statistical information by the Committee of the Regions, *"ideally, a European geospatial agency with clear competences that would go beyond fostering coordination and exchange between national authorities should be created. Otherwise, alternative mechanisms, given the political, legal and administrative constraints surrounding this possibility, should be put in place to strengthen*

¹³ https://ec.europa.eu/environment/noise/directive_en.htm

¹⁴ Regulation on the alignment of reporting obligations in the field of legislation related to the environment (2019), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL%3A2019%3A170%3ATOC>

¹⁵ <https://digital-strategy.ec.europa.eu/en/policies/strategy-data>

¹⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1561563110433&uri=CELEX:32019L1024>

*Eurostat's Geographic Information System of the Commission (GISCO) to become the European geospatial hub*¹⁷.

Expected benefits: A European geospatial hub could help to work towards avoiding contradictory European rules and inconsistent data across Member States. It could be the single contact point for line DGs and Agencies in charge of different policy areas and monitor all legislation affecting geospatial data. The loss of information that naturally occurs during the cooperation on cross-sector policies would thus not affect the coherence of European legislation.

Suggestion 4: Expand the application of INSPIRE beyond environment

Description: INSPIRE has been deemed useful for environmental policy development and implementation, and it has positive spill overs in other policy fields. An expansion of INSPIRE outside this field (or a new, INSPIRE-compatible, legislative initiative) should be considered.

Data for all policy-making

For INSPIRE to achieve its full potential it is important to accept a key principle of the European Data Strategy. Data should be used for any purposes possible, regardless of the policy area: "the value of data lies in its use and re-use"¹⁸. More data available for use in the economy and society (while keeping companies and individuals who generate the data under reasonable control) will deliver better resources for economic growth, competitiveness, innovation, job creation and societal progress and a sound evidence-base for futureproof policies at all levels of governance.

Moreover, the European Green Deal (EGD) also recognised the potential of digitalisation and the availability of data as essential enablers of the changes needed for a just green transition. The EU Strategy for data announced a common EGD data space, to use the major potential of data in support of the Green Deal priority actions on climate change, circular economy, zero-pollution, biodiversity, deforestation and compliance assurance. "GreenData4All" is the core initiative for the creation of the European Green Deal data space. The revision of the INSPIRE Directive is part of the "GreenData4All" initiative and will support the development of the Green Deal data space to provide the EGD strategies on zero pollution, circular economy action plan (incl. product passport) and biodiversity with timely and digitally available data (such as observations from Member States' monitoring networks on water quality). Additionally, this data should be shared with other data spaces, in respect of the relevant existing and upcoming EU rules, to maximise its reuse and avoid duplication and additional burden on the side of the data providers (e.g. linking spatial data on population, pollution and pathologies to visualize the impact of pollution on the spatial distribution of pathologies such as cancer).

Annexes I to III of INSPIRE already identify data topics that do not exclusively serve the environmental sector. In line with the contributions from F4F Platform members and from the RegHub consultation, the scope of the Directive should therefore be expanded to cover policy areas that go beyond the environment. As an alternative to the further development of the INSPIRE Directive (or in parallel), new legislation compatible with INSPIRE would have to be created for other policy areas. This could be accompanied by support/funding programmes to make datasets accessible.

¹⁷ https://cor.europa.eu/en/engage/studies/Documents/CoR_Geodata_report.pdf, Conclusion, pp. ii and iii;

¹⁸ https://ec.europa.eu/info/sites/default/files/communication-european-strategy-data-19feb2020_en.pdf, p. 6;

The place of general purpose data in INSPIRE

In the Commission's public consultation on INSPIRE it became apparent there that the most used types of geospatial data are general purpose in nature. "Five types of geospatial data are used frequently by more than half of the respondents to the consultation, these are, administrative units (64%), land use (56%), cadastral parcels (56%), orthoimagery (53%), buildings (52%) and protected sites (51%)."¹⁹

The potential of the INSPIRE infrastructure

From F4F Platform member contributions and from the RegHub consultation it transpires that the existence of the INSPIRE infrastructure is one of the most valued elements of the Directive. They highlight it should be used to provide access to spatial data in the interest of all EU policies, not only those related to the environment. Data from Member States can be found via the INSPIRE portal (<https://inspiregeoportal.ec.europa.eu/>), but the use and identification of interoperable data is made more difficult by a high degree of heterogeneity in the implementation status in the Member States. In order to improve the interoperability of data, there is a need, for example, for uniform language specifications or data-service coupling.

Expected benefits: Geospatial data interoperability is interesting for all policies that are territorially sensitive. Adopting common standards will allow for more efficiency in terms of policy planning, monitoring and reporting. The INSPIRE infrastructure is already in place and can thus, without additional significant efforts, provide a ready to use platform to new sorts of spatial data.

Suggestion 5: Enhance INSPIRE compliance via training and knowledge-exchange

Description: To strengthen the overall goal of legislative simplification and compliance, and to overcome technical and financial barriers, non-legislative initiatives (education and training, and good-practice fora) could be encouraged. Insufficient financial resources at the disposal of national, regional and local authorities can pose serious obstacles to compliance, and European initiatives can, with limited investment, have significant impacts at the level of data providers and users.

Supporting the existing human resources

A proper implementation of INSPIRE requires properly trained human resources. According to the contributions received from the RegHub consultation, this means extra staff with very specific technical profiles as well as the training of existing staff to acquire the necessary technical skills. It also involves investing in new technological infrastructure and resources so that the existing infrastructure can evolve into a new one that is compatible with INSPIRE. Reaching INSPIRE compliance to the full requires both the political will and the technical and financial resources that are sometimes difficult to obtain. According to respondents who took part in the RegHub consultation, further support at all levels of government in charge of

¹⁹ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12427-Sharing-geospatial-data-on-the-environment-evaluation-INSPIRE-Directive-/public-consultation_en , p. 5;

geospatial data provision and management can help overcome technical, financial and legal barriers and give a political incentive to further invest in the sector.

Education and the future of INSPIRE

In addition, the topic of geospatial information/ spatial data infrastructure could be introduced in school education (e.g. upper secondary schools and vocational education and training) and a strong link with academia could also be fostered. Awareness of the INSPIRE Directive and its integration in higher education curricula would help provide the necessary skills for both public administrations and the private sector to allow the operation of a European spatial data infrastructure and its future improvement.

Knowledge sharing

Fora where practitioners and other interested parties (public administration, academia, private sector, NGOs) can share their experiences and needs are fundamental. They can emerge from independent initiatives of the interested parties themselves, but the EU could play a more active role in stimulating such exchanges. Furthermore, projects that support the application and further development of INSPIRE data and services and their applications (for clients) at European level could be promoted and supported by the European Commission. In this context, cooperation between industry and research is crucial to ensure the adaptation to real needs and requirements and improve the (re-) usability of data for public and private sector actors. Further simplification of INSPIRE, taking on board greater clarification of the expectations and requirements of data providers and data users, would help improve INSPIRE's cost-efficiency.

Expected benefits: European support to secondary, vocational and higher education institutions will raise attention to the need to guarantee a supply of knowledgeable experts in the field, benefitting both public authorities and private companies. Training opportunities to practitioners will improve the capacity of existing human resources to answer to both the new technological challenges, and the legislative requirements. Finally, the support to new or existing good practice exchange fora such as UN-GGIM Europe²⁰ or the INSPIRE Knowledge Exchange Network²¹ will guarantee that stable channels of communication between experts are in place and knowledge is shared at European level.

²⁰ <https://un-ggim-europe.org/>

²¹ <https://eurogeographics.org/knowledge-exchange/inspire-ken/>

ABSTENTIONS

- 1 Member State