



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE

Directorate B – Growth and Innovation
UNIT B06 - Digital Economy

INSPIRE Community Forum
on INSPIRE & Environmental Policy
Phase 2 - 2020 final report (Deliverable - D3)

Author(s)	Stefania Morrone
Reviewed by	Vlado Cetl
Approved by	Vlado Cetl
Date of Approval	

Title	INSPIRE Community Forum on INSPIRE & Environmental Policy Phase 2 - 2020 final report (Deliverable - D3)
Creator	Stefania Morrone
Date of last revision	2020/12/30
Subject	
Type of Deliverable	Report
Status	Draft
Publisher	European Commission JRC
Description	Final report regarding the use of the INSPIRE Community Forum platform and the Status of Implementation of INSPIRE in the INSPIRE & Environmental Policy domain using the platform content.
Contributor	
Rights	
Language	English
Distribution List	DG JRC, DG ENV, EEA
Identifier	INSPIRE Community Forum - Report

1. State of play in the INSPIRE & Environmental Policy thematic domain

The INSPIRE Directive is approaching the end of its implementation cycle, with only one deadline still to be met: the provision of interoperable invocable spatial data services by 10/12/2021.

The number of initiatives that are reusing INSPIRE to improve efficiency and coherence of spatial information in other policy areas and thematic domains is increasing, as well as the number of projects exploring the possibility to leverage the INSPIRE infrastructure, e.g. to create pan-European datasets and applications and for the environmental reporting purposes.

Data falling under the obligation of the Directive should at this point be harmonised and available through network services, however to date less than 30% of the data discoverable in the INSPIRE Geoportal is downloadable and /or viewable, and the percentage is even lower when it comes to harmonised data.

Moreover, the perception by many stakeholders that requirements of the Directive are still too complex and cumbersome, and the unavailability of mainstream software tools for a proficient use of INSPIRE data and services result into heterogeneous implementation levels in the Member States and limit the uptake of the INSPIRE infrastructure.

The request to make INSPIRE infrastructure *more user-centric, simpler for users and ready to deliver short terms results (and benefits) building on implementation efforts* was already included in the recommendations of the *Report from the Commission to the Council and the European Parliament on INSPIRE Directive implementation*¹ (2016), and underpinned specific actions under the past MIWP² 2016-2020, e.g. the Action 2017.2 on Alternative encodings for INSPIRE data.

To continue the work *on simplifying and mainstreaming the technical requirements of the INSPIRE Directive, taking into account emerging paradigms, standards and technologies and their usability for the Green Deal data space* is one of the strategic objectives of the MIWP 2020-2024, that also envisages the creation of a “common implementation landing zone” in which to maximise availability, ensure interoperability and reach pan European spatial coverage only for a well-defined set of priority data.

A light-weight procedure has been defined by the MIG for proposing, documenting, reviewing and publishing good practices³ to solve specific INSPIRE implementation issues or to leverage opportunities offered by emerging technologies and standards.

Endorsed INSPIRE good practices, such as those proposing the use of the OGC API – Features and OGC SensorThings API as INSPIRE download services, can contribute with concrete approaches and lessons learned to the simplification of the INSPIRE implementation.

A mandatory evaluation of the INSPIRE Directive is due by 1 January 2022, according to Regulation 2019/1010 on the alignment of reporting obligations in the field of legislation related to the environment⁴.

As reported in the Evaluation Roadmap⁵ document, the evaluation will measure INSPIRE against the Better Regulation evaluation criteria: “*effectiveness (degree by which it reaches its*

¹ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0478R\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0478R(01)&from=EN)

² Maintenance and Implementation Work Programme

³ <https://inspire.ec.europa.eu/portfolio/good-practice-library>

⁴ <http://data.europa.eu/eli/reg/2019/1010/oj>

objectives), efficiency (in terms of costs and benefits), relevancy for the policy stakeholders, coherence with other actions and legislation and the EU added value” and will assess to what extent the current legal framework fulfils “data sharing between the public authorities and making data publicly accessible in a user-friendly manner objectives”.

The outcome of the evaluation will provide an important evidence base for possible follow-up actions under the European Strategy for Data and its role as a digital enabler for the European Green Deal. Therefore, the findings of the evaluation may lead to further EU actions, such as revised legislation subject to the results of a possible impact assessment.

In the new digital strategy initiative of the Commission, aiming inter alia to support deliver on Europe’s goals for sustainability set out in the European Green deal⁶, the overall relevance of the INSPIRE Directive as digital enabler remains high.

The European Data Strategy⁷ recognises the importance of INSPIRE with the ‘GreenData4All’ initiative, whose starting point is the assessment of the interaction between the INSPIRE Directive and the Directive on public access to environmental information⁸ having the overall goal “to align both Directives with the contemporary state of technology, promote sharing of government- and private-held public data in support of the environmental acquis and the Green Deal objectives, and define and implement interoperable building stones for sharing public data in the Green Deal data space”.

Finally yet importantly, synergies are possible between INSPIRE and the revised Open Data Directive⁹, on aligning provisions on data sharing and re-use and on creation of the “high-value datasets” associated with important benefits for the society, the environment, and the economy envisaged by the Open Data Directive.

2. List of relevant EU Projects /technology/ SW activities

2.1. Work Programme for the implementation and evolution of the INSPIRE Directive for the period 2020 – 2024 (MIWP 2020-2024)

Driven by the favourable political and technological context for the evolution and sustainability of INSPIRE within the Green Deal Data space (and beyond) the new work programme develops around the following 3 areas of work that will start in parallel:

1. A digital ecosystem for the environment and sustainability

Core actions in this area are aimed to outline a new reference architecture for the INSPIRE infrastructure as part of the Green Deal data space. They will take into account emerging technologies, data sources and approaches and will consider ‘enabling’ good practices for data provision (based on OGC APIs and on the use of different encodings e.g. GeoJSON, GeoPackage), discoverability (through search engines) and combination with other sources (citizen data, private data, research).

2. Towards a common implementation landing zone

⁵ <https://ec.europa.eu/info/law/better-regulation/>

⁶ https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0066>

⁸ <https://eur-lex.europa.eu/eli/dir/2003/4/oj>

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1561563110433&uri=CELEX:32019L1024>

INSPIRE Community Forum on INSPIRE & Environmental Policy	p. 5 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

Core actions in this area are aimed to facilitate a common and comparable implementation of the INSPIRE Directive across Europe based on common data priorities and fit-for-purpose interoperability levels.

Main goals include developing a roadmap for priority-driven implementation and simplifying INSPIRE implementation (e.g. ensuring that all requirements can be met through off the shelf software tools and libraries, improving data-service linking, bug-fixing existing artefacts)

3. GreenData4All

Core actions in this area are aimed to support the GreenData4All initiative.

The strategic objectives of the Work Programme can be summarized as follows:

- Develop a future vision for the evolution of the Directive and its role in the Green Deal Data space.
- Define the INSPIRE “jewels” –those data sets/themes, for which tangible benefits for environment policy and the implementation of the European Green Deal can be expected.
- Develop an implementation plan to focus implementation efforts, to maximise availability, ensure interoperability and reach pan-European spatial coverage for this well-defined set of priority data.
- Continue work on simplifying and mainstreaming the technical requirements of the INSPIRE Directive, taking into account emerging paradigms, standards and technologies and their usability for the Green Deal data space.
- Define the transition from the current legal framework to a digital ecosystem for environment and sustainability.

2.2. Priority list of datasets for e-Reporting (MIWP 2016-2020, Action 2016.5)

In the context of the data falling under the INSPIRE obligation, the European Commission and the European Environment Agency have identified a list of datasets produced and managed according to the environmental reporting obligations whose availability through the European Spatial Data Infrastructure is considered a priority. The datasets in this list are called "Priority datasets" and the Member States should make them first and foremost discoverable in the INSPIRE Geoportal and accessible through INSPIRE View and Download services. If not yet harmonised to relevant INSPIRE data specifications, these data sets should be published ‘as-is’ and harmonised later, without prejudice to the deadlines in the INSPIRE implementation roadmap.

To allow the straightforward identification of priority datasets in the INSPIRE Geoportal, the related metadata shall contain appropriate keywords from the [INSPIRE Priority Dataset metadata code list](#) available in the INSPIRE metadata code list register.

The [Priority Data Sets Viewer](#) application from the INSPIRE Geoportal provides statistical overviews of the availability of priority data sets as well as simplified access to view or download selected data sets.

An updated version of the Priority Datasets list is available (version 2.1, October 2020) and must be considered the reference version for implementation by Member States. In the updated document, a “Mapping to INSPIRE themes” section provides guidance on consistent mapping of

priority datasets to INSPIRE themes /application schemas /spatial objects, which is crucial for the development of pan-European data sets.

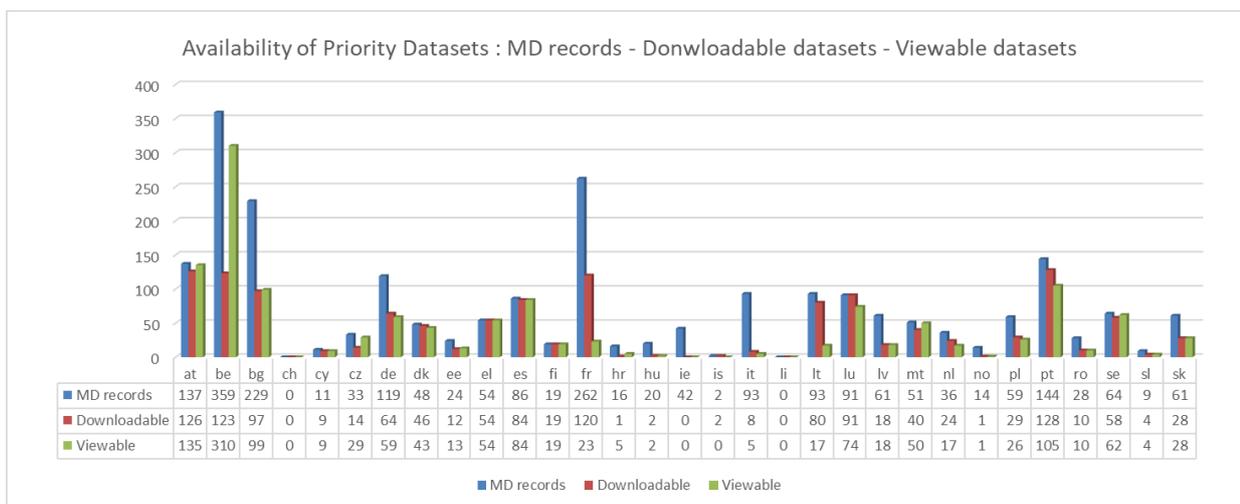
URL link:

<https://webgate.ec.europa.eu/fpfis/wikis/display/InspireMIG/Action+2016.5%3A+Priority+list+of+dataset+s+for+e-Reporting>

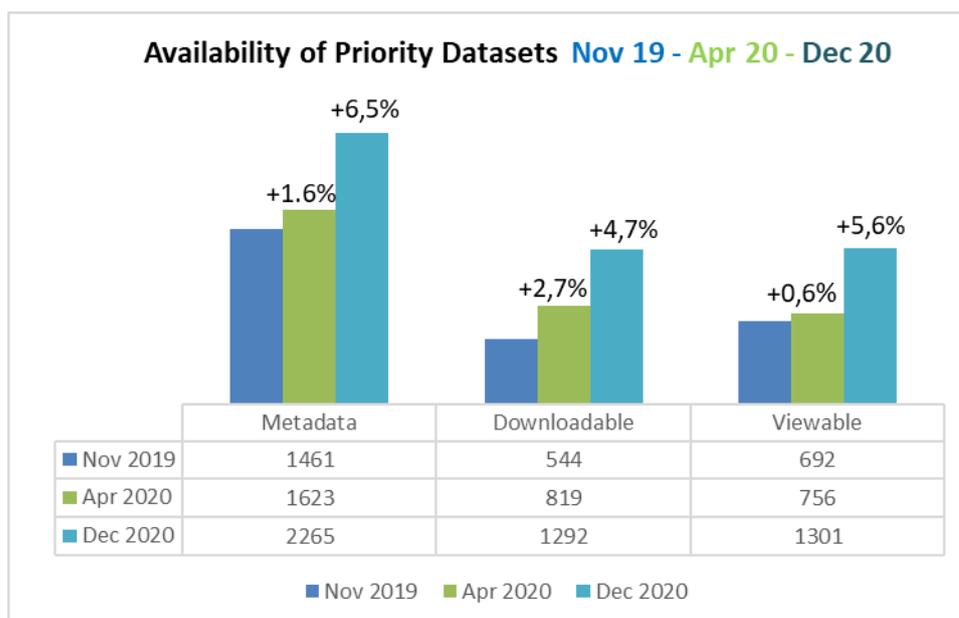
2.3. Statistics on the availability of Priority data sets in the INSPIRE Geoportal

Based on results from the Priority datasets Viewer, find in diagrams below:

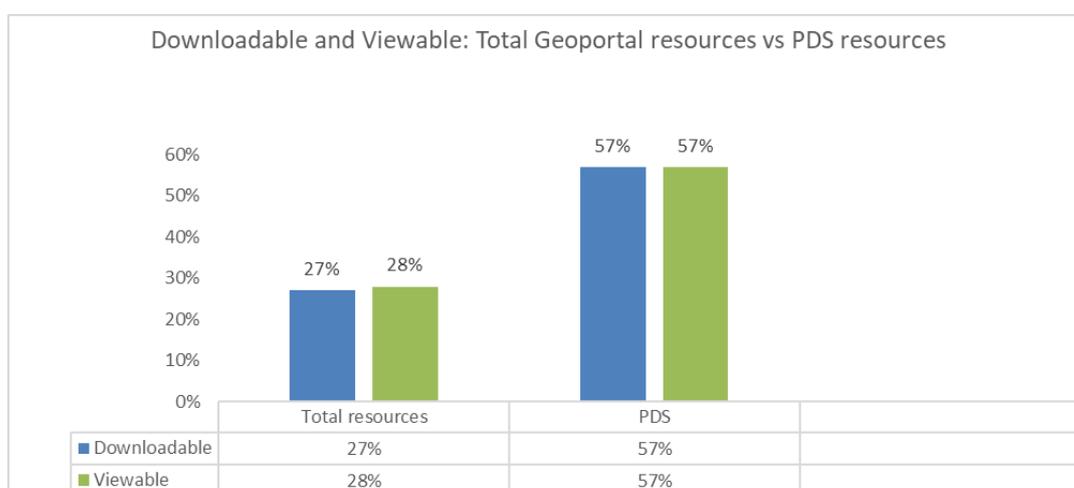
- an overview of the availability of priority datasets (PDS) in the EU Geoportal per country (number of metadata records, number of downloadable datasets, number of viewable datasets) as of December 2020.



- a comparison between the total numbers of metadata records, downloadable datasets, viewable datasets in November 2019 - April 2020 – Dec 2020, with calculation of percentual increase



- a comparison between the percentage of downloadable / viewable resources calculated on the total numbers of the resources available in the INSPIRE Geoportal and the percentage of downloadable / viewable resources calculated on the total of the available Priority Datasets.



As can be easily deduced from the diagrams, the percentage of priority datasets that are downloadable and viewable varies greatly from country to country, with a few Member States doing well and all others lagging behind.

It is worth highlighting however that the percentage of Priority datasets that are downloadable/viewable is considerably higher with respect to relevant percentage calculated on the total number of resources available in the Geoportal.

2.4. INSPIRE Good Practices

INSPIRE good practice documents are intended to support and simplify the implementation of INSPIRE.

A distinction is made between three types of "good practices":

- Extension and further development of the key elements of INSPIRE to support the needs of the community, such as extended data models (*Good practice related to INSPIRE implementation*).
- Useful tools and techniques for INSPIRE implementation that do not fully cover all INSPIRE requirements, but are helpful for linking INSPIRE to other initiatives, e.g. alternative encoding (*Good practice related to tools and techniques useful for INSPIRE implementation*).
- Technologies that build on INSPIRE but go beyond the requirements of the IRs and TGs in order to improve the user-friendliness or usability of the infrastructure, e.g. APIs for network services (*Good practice related to technologies that build on top of INSPIRE*).

To promote good practices to the wider INSPIRE community, a light-weight procedure was defined for proposing, documenting, reviewing and publishing such good practices.

Widely adopted good practices could also lead to the development of new or extension of existing TGs.

The good practice documents are published in the [INSPIRE Knowledge Base](#) .

Adopted Good practice documents:

- [GeoDCAT-AP](#)
- [SDMX for Human Health and Population Distribution](#)
- [INSPIRE download services based on OGC API - Features](#)
- [OGC SensorThings API as an INSPIRE download service](#)

The following topics are currently being discussed in the MIG-T as possible "good practice" documents (good practice candidates):

- [Building one access point to dispersed data sources](#)
- [Making spatial data downloadable via WMS services](#)
- [OGC compliant INSPIRE Coverage data and service implementation](#)

A good practice proposal for the use of GeoPackage as alternative encoding for INSPIRE data is under finalization (and not yet presented to the MIG).

2.5. Streamlining of the environmental reporting

"*The future of eReporting and the link to INSPIRE*"¹⁰ concept note, released in May 2017, already outlined the vision on the future use of INSPIRE in environmental reporting, describing a practical and stepwise approach to achieve more effectiveness leveraging the overall INSPIRE infrastructure as well as the INSPIRE acknowledgement of the Member States.

¹⁰ <https://ies-svn.jrc.ec.europa.eu/attachments/download/2098>

INSPIRE Community Forum on INSPIRE & Environmental Policy	p. 9 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

In this context, the [AQD](#), the [EU Registry on Industrial sites](#) and the [Nationally designated areas \(CDDA\)](#) are operational examples of INSPIRE-based environmental reporting. The EEA document "[Referencing INSPIRE in environmental reporting](#)" describes the two different methodological approaches behind these pilot examples, namely the "extension approach" and the "linked approach", and the lessons learned that can help modelling of future environmental reporting based on INSPIRE. It is important to highlight that one of the key lessons learned is of organisational nature: a strong cooperation between thematic reporters and INSPIRE implementers is vital to set up an efficient reporting workflow based on INSPIRE.

Abiding to requirements in the *Regulation (EU) 2019/1010 on the alignment of reporting obligations in the field of legislation related to the environment*, the reporting under the Environmental Noise Directive is being aligned to INSPIRE (project is under finalisation).

Focus on:

The EU Registry on Industrial sites

the EU Registry is intended as a coherent database of industrial entities that release emissions, to which relevant thematic reporting on LCPs under the IED and facilities under the E-PRTR Regulation will link to. The EU Registry is an INSPIRE extended data model and can be considered a good, working example of how INSPIRE can contribute to effectively streamline environmental reporting. More specifically, the EU Registry extends the INSPIRE Production and Industrial Facilities (PF) data specifications in accordance with the rules set out in the INSPIRE Generic Conceptual Model i.e. the EU Registry does not change anything in the INSPIRE PF data specification and the new elements/constraints introduced to cater for the specific requirements stemming from the industrial emissions legislation do not break any existing INSPIRE requirement. This implies important advantages for countries, as investments in implementing the EU Registry are building on their INSPIRE compliance.

URL link: <http://cdr.eionet.europa.eu/help/euregistry>

The CDDA reporting

the 'Nationally designated areas' (CDDA) reporting has been revised to take advantage, by means of a "linked approach" methodology, of the INSPIRE Protected sites data sets already produced by the Member states to fulfil relevant INSPIRE obligation. The "Linked Approach" does not extend INSPIRE core data models to include new pieces of information or new constraints stemming from environmental legislation. Conversely, it aims at re-using "as is" the already existing INSPIRE data to get spatial reference and, potentially, other pieces of information relevant to environmental reporting purposes.

URL link: <http://cdr.eionet.europa.eu/help/cdda>

Focus on:

Environmental Noise Directive (END) alignment to INSPIRE

Building on the lessons learned from the CDDA and the EU Registry, the revised END reporting data model ensures that reported spatial data are provided in conformity to INSPIRE, abiding to the data specification extension rules set out in the INSPIRE Generic Conceptual model.

More specifically reporting data models for

- *Major roads and Major railways* extend the relevant *Transport Networks* application schemas

- *Agglomerations, Quiet Areas and spatial delineations of Noise action plans extend Area management /restriction /regulation zones & reporting units*

The reporting data model for the *Noise Contours of the Strategic Noise Maps* coincides with the revised data model of the INSPIRE Human Health and Safety described in the IR Change Proposal for the *EnvHealthDeterminantMeasure* spatial object type.

This change proposal bug-fixes the current application schema (not allowing the provision of the noise 'source') and proposes a modification to cater for cases when the measure of the determinant cannot be provided through the ISO 19103 Measure type. A typical example is represented by the noise levels in a certain area (in the specific 'noise contour') which are characterized by a db range relating to a specific sound level indicator (e.g. value= Lden 50-54).

All the above-mentioned reporting data models include (optional) links to reference INSPIRE datasets already published by the Member States, e.g. through a metadata URL or a 'GetSpatialDataset' request to a download service (thus, being already equipped for possible future data harvesting in the modernised reporting infrastructure Reportnet 3.0, e.g. through the Member States' INSPIRE network services).

Finally yet importantly, a particular effort is being made to improve the consistency and the coherence of the overall END reporting benefitting from the outcomes of the MIG Action 2017.2 on the Alternative encodings for INSPIRE data. In particular:

- the simplified data structures proposed in the *model transformation rules for INSPIRE alternative encodings*¹¹ (e.g. *Simple Geographical Name, Simple Citation*) are used to model specific END requirements and to replace INSPIRE optional properties having complex data types with simpler data structures;
- the GeoPackage reporting deliveries (GeoPackage format is particularly suitable to handle possible big sizes of END reporting data) are closely aligned to the proposal of GeoPackage alternative encoding for INSPIRE data, namely the '*INSPIRE UML-to-GeoPackage encoding rule*'¹²

The new END reporting could as well be considered as an evidence of practical use and implementation of the proposed alternative encoding for INSPIRE data.

2.6. Modernised e-Reporting with Reportnet 3.0

To promote and modernise eReporting with the latest IT solutions, EEA is working since 2018 to develop Reportnet 3.0. This project is a collaboration involving the EEA, Commission Services (DG ENV, DG CLIMA, JRC), European Topic Centres and EEA Member Countries. This modern reporting infrastructure will stepwise replace the current reporting system, integrate data flows under the EU environmental legislation and provide a platform that supports new types of data and formats (e.g. Copernicus, citizen science). As one of several flexible data delivery modes, data harvesting will be supported meeting INSPIRE network services requirements. The new platform is supposed to be fully operational in 2021.

URL link: <https://projects.eionet.europa.eu/reportnet-3.0-project-public>

¹¹<https://github.com/INSPIRE-MIF/2017.2/blob/master/model-transformations/TransformationRules.md>

¹² <https://github.com/IAAA-Lab/U2G/blob/master/GeoPackage/geopackage-encoding-rule.md>

2.7. High Value datasets

Making data available as “open data” across the EU Member States is vital to leverage their potential for the European society and economy, e.g. to enhance research, inform decision making, develop cross-border applications or new products and services.

In this perspective, the Open Data Directive, into force since July 2019, tasks the Commission to adopt implementing acts laying down a list of specific “high-value datasets” held by public sector bodies and public undertakings with potential to generate significant socioeconomic or environmental benefits and innovative services.

High-value datasets shall be made available free of charge and under open licenses, in machine readable formats, via APIs and (where relevant) as bulk downloads.

An impact assessment study has been contracted by DG CNECT to identify potential high-value datasets in the 6 thematic categories set out in the Annex I of the Open Data Directive, namely: *Geospatial - Earth observation and environment - Meteorological - Statistics - Companies and company ownership - Mobility*.

An Implementing Act from the Commission specifying the list of High Value Datasets and relevant publication measures (licenses, formats, update frequency...) is planned for the first quarter of 2021.

High Value Datasets have a clear overlap with the INSPIRE data scope and could benefit from reusing /combining spatial data already available in the INSPIRE infrastructure, as well take advantage of the INSPIRE data specifications.

Expected impact of High Value Datasets on INSPIRE could be considerable:

- increased availability & consumption of INSPIRE datasets
- implementation driven by tangible use cases
- open data requirement added to INSPIRE requirements
- increased/easier accessibility of INSPIRE datasets (via standard-based APIs)
- alternative data encodings

Synergies between INSPIRE and Open Data Directive are possible as well on aligning provisions on data sharing and re-use.

2.8. The GO-PEG project

GO-PEG (*Generation of cross border Pan European Geospatial Datasets and Services*) is a project under the Connecting European Facility (CEF) Telecom call on "Public Open Data".

The project aims to generate cross-border, location-enabled services providing access to high value, harmonised thematic open datasets in the field of environment, emergency and disaster management.

The selection of the project use cases (at least 10) foresees the active participation of stakeholders from the different Member States and, in the projects Steering Committee, of the Joint Research Centre (JRC).

Non-INSPIRE data sources will be integrated with INSPIRE data discoverable in the INSPIRE Geoportal (focusing on INSPIRE Priority Datasets) for the purpose of creating cross-border datasets. When feasible, INSPIRE data models will be re-used and simplified /extended to cater for specific use case requirements.

Among the project’s use cases:

INSPIRE Community Forum on INSPIRE & Environmental Policy	p. 12 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

- Support adaption of forest management to climate change
- Preserve and secure the European drinking and fresh water supplies
- Organize and deliver subsurface information for a sustainable and safe use of natural resources
- Combine statistical information on population and buildings data to calculate the impact on the population of an emergency event
- Leveraging geospatial data and cutting-edge technologies for a common understanding of the different phases of the COVID-19 pandemic and its impacts (building on outcomes of the API4INSPIRE)

In the scope of the project also the development of cutting-edge ETL (Extract, Transform, Load) processes to significantly automate data harmonisation and to reduce the entrance hurdle for data providers in bringing their resources to open platforms.

Harmonised datasets will be made available via standard-based APIs and published in the European Data portal, thus being in line with the evolution of environmental data sharing in Europe (European Strategy for data and European single market for data) and the requirements of the Open Data Directive on High Value Datasets.

URL link: www.go-peg.eu

2.9. The CORDA (Copernicus Reference Data Access) project

The Copernicus Reference Data Access portal, CORDA, is a comprehensive catalogue and web address directory that provides cartographic reference data to Copernicus Service Providers, particularly those involved in map-making. In CORDA context, heterogeneous data sources across Europe are classified and indexed, following a thorough methodology for data gathering, validation, registration, and maintenance.

However, the Copernicus Services would benefit even more from the access to up-to-date and harmonised pan-European geospatial information that can be created from INSPIRE data. Since 2017, activities aimed at benefitting from INSPIRE for the Copernicus Services purposes are ongoing. The INSPIRE infrastructure (metadata, data and services) is being re-used to create Administrative Units, Hydrography and Building multi-country reference datasets for the Copernicus users, and in particular for the CEMS (Copernicus Emergency Management Service). The data, in GeoPackage format, is downloadable from the CORDA platform, whose access is restricted to Copernicus Services providers only.

Integration with non-INSPIRE resources is still needed to fill in information gaps due to lack of relevant resources in the INSPIRE Geoportal. Notwithstanding this, the results are quite promising, considering the following main conclusion from the Administrative Units proof-of-concept: *“reusing INSPIRE harmonised data allowed to generate in a very short time a (almost) Pan-European dataset, based on authoritative data and created mostly through automated procedures”*.

Starting from April 2020, the feasibility /the added value to produce pan European Land Use (HILUCS) datasets is under study.

URL link: <https://insitu.copernicus.eu/spatial-data>

2.10. UN-GGIM Europe core data initiative

The UN-GGIM Europe core data initiative aims at increasing the data interoperability and harmonisation of core geospatial data for the analysis and the monitoring of the SDGs (Sustainable Development Goals). UN-GGIM Europe 'Core data recommendations for content' build on existing standards, mainly on the INSPIRE Data Specifications (extended to cater for specific user needs).

Focus on: UN-GGIM Europe Working Group on core data

Main purpose of the working group on core data is to define priorities for production of new data or enhancement of existing ones. In a first phase, 14 out of the 34 INSPIRE data themes have been selected for reference. In a second phase, "Recommendations for content" for the selected themes have been developed based both on user requirements (with focus on SDG related use cases) and on existing standards, mainly the INSPIRE Data Specifications.

URL link: <https://un-ggim-europe.org/working-groups/working-group-core-data/>

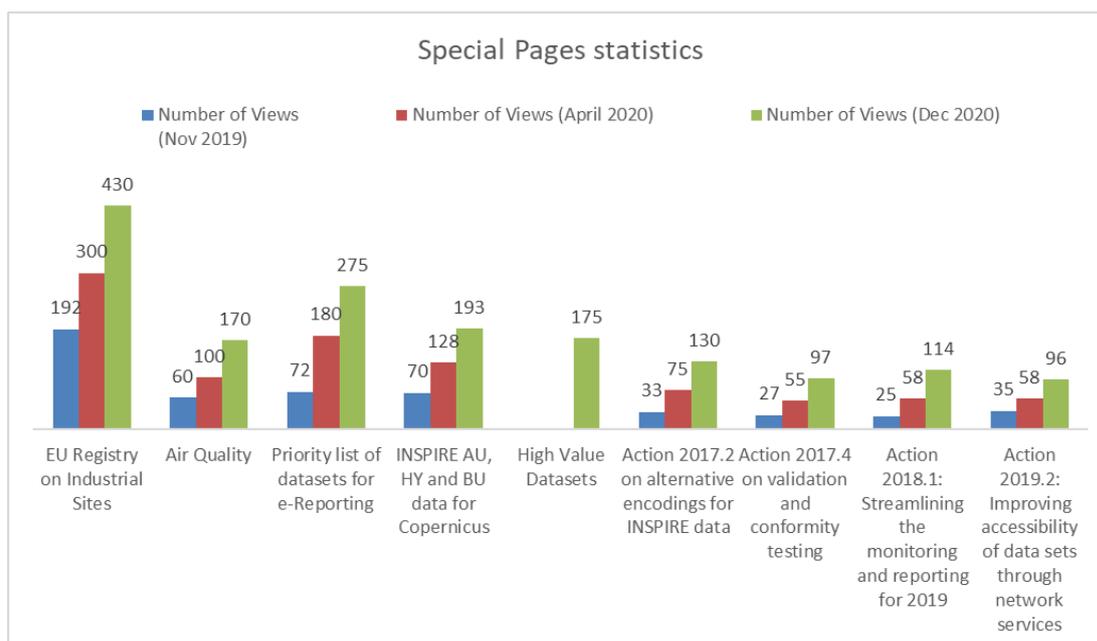
3. Structure of the INSPIRE & Environmental Policy cluster

The INSPIRE & Environmental Policy cluster is intended as a panoramic view on the activities related to the implementation, the evolution and the re-use of INSPIRE in other policy domains and thematic communities - *e.g. support to the streamlining of the environmental reporting, creation of multi-country datasets for use by Copernicus*- with insights on the actions under the Maintenance and Implementation Work Programme (MIWP 2016-2020) - *e.g. Priority list of datasets for e-Reporting, Alternative Encodings for INSPIRE data, Streamlining the Monitoring and Reporting for 2019*.

The user of the Forum may have from this cluster straightforward access to related Forum content (discussions, news, good practices, example files) and be supported by dedicated **Special Pages** with useful links, insights and examples for the specific topic areas:

- **INSPIRE & Environmental Reporting** (common domain pilot activities);
- **INSPIRE & Pan European / High Value datasets** (reuse of INSPIRE to support the creation of pan-European and High Value datasets);
- **MIWP 2016-2020** (actions under the Maintenance and Implementation Work Programme 2016 - 2020).

The below table provides the list of Special Pages and the relevant number of views in November 2019 (1 month after their publication), in April 2020 and December 2020. As can be seen, the interest in the pages has been good. Indeed, the availability of 'Special Pages' has been particularly appreciated by the users because, meanwhile focusing on INSPIRE related aspects, thanks to the ad hoc 'Useful Links' section they provide the possibility to get deeper into details (e.g. legal basis, guidelines, help pages) and easily find useful examples. Most visited pages related to *EU Registry on Industrial Sites, Priority datasets and High Value datasets, and reuse of INSPIRE data for Copernicus*.



4. Overview / list of selected Forum contributions

Considering the particular cross-cutting domain of the INSPIRE & Environmental Policy cluster, the relevant '*List of selected good / highly visited / highly replied Forum contributions*' provided below is derived with reference to the following category of tags¹³ in the scope of the cluster: *MIWP Actions and ENV Domains - Other EU relevant activities/communities - Typology of use - INSPIRE Components* and, of course, the specific '*TC-ENV_Policy*' tag.

The posting of /participation to discussion topics in the broader scope of the INSPIRE & Environmental Policy domain mostly comes from the other clusters and is mainly related to the harmonisation of Priority Datasets, the creation of Persistent Identifiers for INSPIRE data, IR Change Proposals, bug-fixing of INSPIRE artefacts (most used tags: '*TC-MIG-2016.5*', '*TC-Encoding*', '*TC-Data-specification*', '*TC-Question*', '*TC-eReporting*').

Whilst number of users visiting the INSPIRE & Environmental Policy cluster 'Special Pages' is high, there is a low engagement in the discussions directly posted in the discussion group. This could however be considered 'normal' bearing in mind the cross-cutting nature of the cluster and its prerogative to be somehow an "information" cluster, i.e. a cluster aimed to provide pieces of information /useful links to dedicated resources on the implementation status of the Directive, EU datasets and the re-use of INSPIRE in other domains.

Top discussion topics are related to:

- *harmonisation of Priority Datasets*
e.g. how to provide Noise Contours of the Strategic noise maps under the HH data theme, which is the target data theme for the harmonisation of detailed species distribution gridded data (10m x 10m grids)

¹³ more details on tags categories can be found in the forum page <https://inspire.ec.europa.eu/forum/ctags>

INSPIRE Community Forum on <i>INSPIRE & Environmental Policy</i>	p. 15 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

- *interpretation of legal requirements, bug-fixing of the INSPIRE artefacts and the use of the additional recommended schemas in the INSPIRE draft repository*

e.g. the interpretation of the constraint on the legalBasis association in the AM application schema, the inability to provide, through current HH schema, the 'source' of the noise, and the 'component' and the 'media' of the concentration, the missing "type" definition for the "EnvironmentalManagementFacility" element in the relevant application schema.

- *good practices for the creation/ management of persistent identifiers.*

The topic is present in several cluster discussions, demonstrating a widespread need for guidance on the subject with clear and shared rules across the Member States.

List of Top Forum contributions

- *InspireID guidance for the INSPIRE priority datasets (and environmental reporting obligations)*

The reuse of / the reference to INSPIRE in the environmental reporting, brings with it the absolute necessity that the values of the INSPIRE identifiers of the reported spatial objects are known to the environmental reporters, usually not in charge for the INSPIRE harmonisation.

Clear rules for the creation and management of such identifiers, possibly agreed at European level and crosscutting to the different legislation, as well as information-sharing procedures for the departments in charge of the different related data flows would avoid potential reporting issues and/or inconsistencies.

The above is also relevant to the INSPIRE harmonisation of the priority datasets, produced and managed according to the environmental reporting obligations and falling as well under the INSPIRE obligation.

Requested by the colleagues in charge for the environmental reporting about the collection of InspireIDs for the reported spatial objects, the SK INSPIRE national contact point asks for any *guidance at EC level on this topic and any similar experience from the other Member states.*

A remarkably interesting discussion is ongoing, with proposal to encode:

- InspireId.namespace in the form of http URIs
- gml:identifier = concatenation of InspireId.namespace and InspireId.localId (concatenated URL)
- InspireId.localId = gml:id

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/264948/inspireid-guidance-for-the-inspire-priority-datasets-and-environmental-reporting-obligations>

Posted on: 16.03.2020 - Number of views: 271 - Number of replies: 5

- *EnvhealthDeterminantMeasure - how to express the type of noise measure*

In the TG on Human Health and Safety, the 'EnvhealthDeterminantMeasure' feature type allows to represent noise raw measurements. However, the application schema does not

cater for cases when the measure of the determinant cannot be provided through the ISO 19103 Measure type. A typical example is represented by the noise levels in a certain area (in the specific 'noise contour') which are characterized by a db range relating to a specific sound level indicator (e.g. value= Lden 50-54).

A relevant IR Change Proposal - elaborated in the framework of a specific EEA task for the alignment of END reporting to INSPIRE- has been submitted for the 'EnvHealthDeterminantMeasure' that allows the provision of measure 'categories' (via related Eionet code lists).

This change proposal is particularly interesting since would allow the provision of noise contours data as INSPIRE core Human Health data sets.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/261192/envhealthdeterminantmeasure-how-to-express-the-type-of-noise-measure>

Posted on: 08/07/2019 - Number of views: 766 - Number of replies: 11

- *Provision of noise exposure delineation Priority Datasets under the Human Health and Safety data theme (Environmental Health Determinant Measure spatial objects)*

In the streamlining process of the environmental reporting, the European Environment Agency has re-designed the Environmental Noise Directive reporting and aligned it to the INSPIRE Directive. In the revised reporting data model, the Noise Contours of the Strategic Noise Maps will be provided as INSPIRE Environmental Health Determinant Measure spatial objects, as per the submitted IR change proposal to the HH data model. Meanwhile waiting for the revised END reporting to become operational, this cluster post provides guidance on the encoding proposals that will be recommended in the revised END reporting and can already be provided for the harmonisation of the relevant Priority Dataset using the current schema.

Posted on: 24.09.2020 - Number of views: 81 - no replies

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/268807/provision-of-noise-exposure-delineation-priority-datasets-under-the-human-health-and-safety-data-theme-environmental-health-determinant-measure-spatial-objects>

Though posted more than one year ago, following discussions still rouse a good interest from users (with number of views steadily increasing)

- *HabitatsAndBiotopes in WCS*

After having addressed the issue related to possible provision of HB data through WCS (the HB data theme is listed in the Technical Guidance for the implementation of INSPIRE Download Services using Web Coverage Services but the HB (core) schema does not allow to provide gridded data), the discussion turns on the usage of HB distribution schema and on the adapting the existing INSPIRE Coverage based data models to the requirements of the WCS service specification.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/207594/habitatsandbiotopes-in-wcs>

Posted on: 28.06.2018 - Number of views: 1131 - Number of replies: 19

- *Drinking Water Directive - Water Supply Zones*

Providers of DWD data ask the Forum support concerning the preparation of Water Supply Zones layer reported under Drinking Water Directive for INSPIRE purposes.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/234890/drinking-water-directive-water-supply-zones>

Posted on: 30.11.18 - Number of views: 408 - Number of replies: 3

- *The EU Registry on Industrial Sites*

Request for any examples of creation of INSPIRE IDs for EU Registry on Industrial Sites. Open question: how will PIDs be created in specific countries? How to guarantee consistency?

URL link:

<https://inspire.ec.europa.eu/forum/file/view/221204/the-eu-registry-on-industrial-sites#elgg-object-261245>

Posted on: 26.09.18 Number of views: 352 - Number of replies: 2 - Example file uploaded

- *HabitatsAndBiotopesDistribution XSD*

Short description:

The post deals with the possibility to harmonise Article 17 reporting data according to best fitting habitat and biotopes distribution schema, currently in the INSPIRE draft schema repository and therefore to be “*considered as draft and be used with caution*”. Moreover, as well as all the schemas in the draft repository, the HB distribution schema does not reflect the changes introduced in the amendment of the Implementing Rules (Commission Regulation (EU) No 1253/2013) and the corresponding Data Specification Technical Guidelines -that led to the creation of v4.0 of the “approved” schemas- and presents a minor issue due to the import of BaseType.xsd.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/261751/habitatsandbiotopesdistribution-xsd>

Posted on: 15.10.2019 Number of views: 321 - Number of replies: 6

- *INSPIRE Good Practice: SDMX for Human Health and Population Distribution*

Discussions address the joint Eurostat - JRC good practice document “Integration of INSPIRE & SDMX data infrastructures for the 2021 population and housing census” that was presented to the INSPIRE MIG-T in October and the testing being performed in Eurostat.

The relevant Good Practice has been endorsed.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/261536/inspire-good-practice-sdmx-for-human-health-and-population-distribution>

Posted on: 12.09.2019 - Number of views: 160 - Number of replies: 4

INSPIRE Community Forum on <i>INSPIRE & Environmental Policy</i>	p. 18 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

- *Re-using INSPIRE as reference data for Copernicus users*

In the framework of the European Environment Agency CORDA ([Copernicus Reference Data Access](#)) project, the INSPIRE infrastructure (metadata, data and services) is being re-used to create HY and BU pan-European datasets as reference data for Copernicus and in particular CEMS (Copernicus Emergency Management Service) users.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/261088/re-using-inspire-as-reference-data-for-copernicus-users>

Posted on: 12.06.2019- Number of views: 238 No replies

- *INSPIRE data, metadata and services for a (quasi) Pan-European data set of Marine Reporting Units*

During the 7th meeting of Marine Strategy Technical Group on Data and IT (3-4 December 2018 – Copenhagen) there were presented the results from an exercise commissioned by EEA in order to create INSPIRE data, metadata and services for a multi-country (aiming to become Pan-European) data set of Marine Reporting Units under the AM data theme.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/238490/inspire-data-metadata-and-services-for-a-quasi-pan-european-data-set-of-marine-reporting-units>

Posted on: 14.12.2018 - Number of views: 189 No replies

5. Overview of the facilitator's activity

The facilitator has been regularly updating the INSPIRE & Environmental Policy cluster content:

- posting on activities related to the alignment of INSPIRE and environmental reporting and main outcomes from ongoing pilots and MIG Activities
- updating Forum Selected Highlights with links to harmonised data and services from the INSPIRE Geoportal (above all related to the Priority datasets)
- creating a new Special Page dedicated to the High Value datasets
- updating the already created Special Pages with latest information available

Moreover, the facilitator contributed to several Forum discussions related to the cross-cutting policy domain and posted in different Discussion groups.

Finally, the facilitator replied to private messages from the Forum users.

Contributions to INSPIRE Forum newsletters

The facilitator contributed actively to Spring, Summer, Autumn and Winter editions of the Forum Newsletter, respectively with articles on:

- The EU Registry on the industrial sites

INSPIRE Community Forum on INSPIRE & Environmental Policy	p. 19 of 20
Report D3 (Phase 2 - 2020)	2020-12-30

- The High Value Datasets in the Open Data Directive
- The alignment to INSPIRE of the reporting under the Environmental Noise Directive
- Key takeaways from the GO-PEG Project online Workshop: “workflows and data requirements for data harmonisation - a step towards High Value Datasets”

Online INSPIRE Conference 2020

The facilitator contributed actively to the [Pan-European datasets management, visualisation and dissemination](#) session organised by the European Environment Agency and presented the work done to align reporting under the Environmental Noise Directive to INSPIRE.

INSPIRE Community Forum webinar

The facilitator contributed actively to the [webinar](#) held on 2020 Dec 11th, providing an overview of the current state of implementation, evolution and reuse of INSPIRE in other policy domains and thematic communities through three presentations:

- INSPIRE & Environmental Reporting
- INSPIRE & Pan European / High Value datasets
- geoCOVID-Watch use case of the GO-PEG project (leveraging the outcomes of the [API4INSPIRE](#) project and building on Good Practice proposals for the use of OGC APIs as INSPIRE download services to provide COVID data via OGC API standards)

Activities related to the promotion of the Forum

The activities related to the promotion of the Forum (direct emails and ad hoc references to Forum activities in the facilitator’s presentations during the meetings /workshops) were addressed to

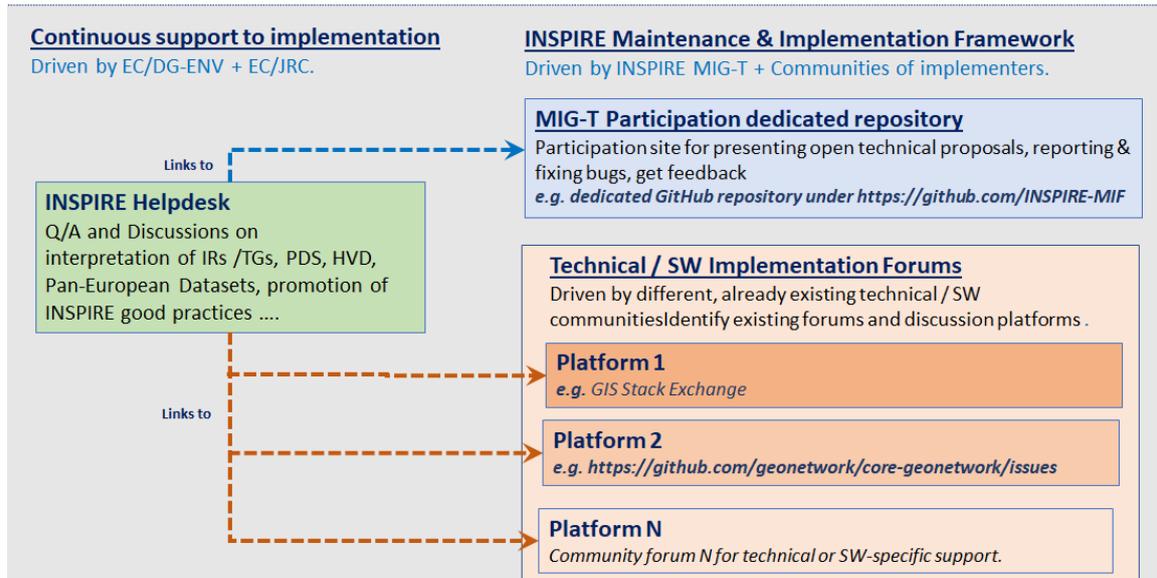
- the European Environment Agency, with which the facilitator collaborates as an INSPIRE expert in various projects, such those addressing the reuse of INSPIRE in environmental reporting and the creation of reference data for Copernicus users (CORDA project).
- the partners of the EU projects to which the facilitator collaborates (e.g. the GO-PEG project).

6. Facilitator’s suggestions for improvements

As a part of an activity of re-organisation of all the components of the INSPIRE infrastructure aimed to ensure long-term sustainability, the INSPIRE Community Forum will be dismissed at the end of year 2020.

In cooperation with the facilitator of the Software and Tools cluster, the facilitator of the INSPIRE and Environmental Policy cluster prepared a proposal for future possible scenarios allowing the continuation of the support to the INSPIRE community.

The proposal, illustrated in diagram below, was presented, discussed, and agreed during the INSPIRE Community Forum internal meeting in October.



It can be summarised as follows:

- Content of the current platform will be available for consultation purposes only, and it will not be possible to post new discussions or reply to previous ones.
- The support related to interpretation of the Implementing Rules / Technical Guidelines, promotion of Good Practices, reuse of INSPIRE in other policy areas and thematic domains (e.g. environmental reporting, Priority datasets, High Value datasets), updates on EU projects and initiatives will continue through the [INSPIRE Helpdesk](#) GitHub repository.
- Technical questions related to change proposals, bug-reporting and bug-fixing will be handled in a dedicated GitHub repository, addressed in close cooperation with MIG-T and in accordance with the new governance process (workflow still to be finalised) aimed to streamline the overall process.
- Technical issues related to the software tools will be addressed making reference to the forums and communication channels of the specific SW communities e.g. in platforms like GIS Stack Exchange or GitHub.

Ad hoc sub-groups and networks of experts will be set up to support the INSPIRE Community through the different platforms, answering questions / redirecting implementers to resources in other platforms, promoting good practices, facilitating interactions with MIG-T, supporting submission of change proposals, as well as bug reporting and bug fixing.