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**INSPIRE Community Forum**  
**on *INSPIRE & Environmental Policy***  
**Phase 2 - 2020 activity report (Deliverable - D2)**

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

The INSPIRE Directive is approaching its full implementation phase, with only two deadlines remaining: 21/10/2020 (interoperability for Annex II and III spatial data sets) and 10/12/2021 (interoperability for invocable spatial data services). Meanwhile the number of geospatial data sets available through the INSPIRE Spatial Data Infrastructure keeps growing, there is an increasing number of initiatives aimed at:

- taking advantage of the INSPIRE Directive to improve efficiency and coherence of spatial information in other political sectors and thematic domains;
- leveraging INSPIRE data at EU level (e.g. creation of Pan-European data sets, supporting to impact assessments, risk management, research and innovation).

Several recent Commission activities, like the revised Open Data Directive<sup>1</sup> (introducing the concept of *High Value Data Sets*), the increased demand for spatial data in scope of the INSPIRE Directive from other Commission DGs in various thematic domains (AGRI, GROW, ENER, MOVE, ESTAT), and the EC Data Strategy are creating high expectations on the usability of the INSPIRE data infrastructure.

Having comparable maturity levels of data availability and accessibility across Europe is a prerequisite for these expectations to be fulfilled and one of the key points of the 2020-2024 Work Programme for the INSPIRE Directive. The aim is the creation of a *'common implementation landing zone'* in which the full interoperability will be required only for a limited core set of data based on tangible use cases (e.g. the priority data sets for e-reporting, the priority geospatial datasets for the European Commission, the High Value Dataset under the Open Data Directive).

Further needs to simplify and mainstream the technical requirements of INSPIRE will be assessed during the next evaluation of the Directive in 2022, whose results might feed in the possible revision of the legal framework.

It is worth highlighting that the request for a more pragmatic application of the existing data specifications *'to make the INSPIRE infrastructure more user-centric, simpler for users and ready to deliver short terms results (and benefits) building on implementation efforts'* was already in the recommendations of the *Report from the Commission to the Council and the European Parliament on INSPIRE Directive implementation*<sup>2</sup> (2016) and is as well behind the specific actions under the current Maintenance and Implementation Work Programme 2016-2020 (e.g. the Action 2017.2 on alternative encodings for INSPIRE data and Action 2018.1 on *Streamlining the Monitoring and Reporting for 2019*).

The above mentioned common implementation landing zone will be the starting point for the development of a European spatial data infrastructure aligned with the objectives of the new European Data strategy and the European Green Deal (the *Common European Green Deal data space* envisaged in the European Data Strategy).

New opportunities are emerging but as well new challenges, requiring an ability to address new user requirements and leverage new advances in technology (linked data, semantic web, internet of things and much more).

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<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1561563110433&uri=CELEX:32019L1024>

<sup>2</sup> [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. Overview /list of relevant EU Projects /technology /SW activities

### 2.1. Streamlining of the environmental reporting

“The future of eReporting and the link to INSPIRE”<sup>3</sup> 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. In this context, the AQD, the *EU Registry on Industrial sites* and the *CDDA 2018* are operational pilot examples, based on different methodological approaches, of streamlined environmental reporting reusing INSPIRE.

On-going projects from the European Environment Agency are targeting the alignment to INSPIRE of the reporting under the Environmental Noise Directive, the Floods Directive, the matching between the INSPIRE Protected Sites and the Natura 2000 Standard Data Form (in order to prepare a reporting based on the combination of INSPIRE and Natura 2000 requirements), the provision of Marine Reporting Units under the MSFD according to INSPIRE AM data theme.

#### Focus on:

##### ➤ The EU Registry on Industrial sites

#### Short description:

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 to 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 2018 reporting

#### Short description:

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 in order to include new pieces of information or new constraints stemming from environmental legislation. Conversely, it aims at re-using “as is” the

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<sup>3</sup> <https://ies-svn.jrc.ec.europa.eu/attachments/download/2098>

already existing INSPIRE data in order to get spatial reference and, potentially, other pieces of information relevant to environmental reporting purposes.

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

### ***Update on the activities related to the streamlining of the environmental reporting (April 2020)***

#### **Focus on:**

#### ➤ *Environmental Noise Directive (END) alignment to INSPIRE*

At the time of this writing, the streamlining of the reporting under the Noise Directive obligation is still under finalisation, however some modelling choices relating to the reuse of INSPIRE alternative encodings are already worth mentioning.

Meanwhile the new data models for the spatial data in the END scope are a formal extension of the relevant INSPIRE data specifications, 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*<sup>4</sup> (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 envisaged delivery of European Noise Directive spatial data in GeoPackage format (more suitable than the GML to handle the big data volumes involved), is closely aligned to the proposal for a GeoPackage alternative encoding for INSPIRE data, namely the '*INSPIRE UML-to-GeoPackage encoding rule*'<sup>5</sup>

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.

### *2.2. Integration of INSPIRE & SDMX data infrastructures for the 2021 population and housing census*

In Europe, geospatial information is shared using the spatial data infrastructure INSPIRE while statistical information is exchanged following Standard for Data and Metadata eXchange (SDMX). A joint Eurostat - JRC good practice document "*Integration of INSPIRE & SDMX data infrastructures for the 2021 population and housing census*" has been presented to the INSPIRE MIG-T in October, defining a mapping between these two standards. Combination of these two types of information will create greater value for the data and produce integrated datasets, allowing statistics organisations to enrich their datasets with geospatial information and re-use INSPIRE enabled tools and services.

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<sup>4</sup><https://github.com/INSPIRE-MIF/2017.2/blob/master/model-transformations/TransformationRules.md>

<sup>5</sup><https://github.com/IAAA-Lab/U2G/blob/master/GeoPackage/geopackage-encoding-rule.md>

URL link: [https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.58/2017/mtg3/2017-UNECE-Standards-Workshop-INSPIRE-SDMX-paper-V2\\_1\\_.pdf](https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.58/2017/mtg3/2017-UNECE-Standards-Workshop-INSPIRE-SDMX-paper-V2_1_.pdf)

### 2.3. High Value datasets

Making data available as open data across the EU Member States is increasingly crucial for the European society and economy e.g. to enhance research, inform decision making, or develop new products and services, cross-border applications. In this perspective, the Open Data Directive tasks the European Commission to adopt an implementing act specifying those dataset with biggest potential for society and the economy, the so-called high-value datasets (HVDs), that organizations in the scope of the Directive will have to make available free of charge, in machine-readable format and via APIs. Definition of the HVD, however, is not trivial because the value of a datasets depends on several factors: the perceptions and expectations of the stakeholders are quite different, as well as the specification of common quality criteria (for example, the use of standard formats, the lack of errors, and the frequency of updates). Datasets, defined under the Open Data Directive, have a clear overlap with the data scope of the INSPIRE Directive and could benefit from reusing already available spatial data in the INSPIRE infrastructure.

#### **Initiatives around high-value datasets**

The topic of high-value datasets is gaining more and more attention in the Member States and beyond: hackathons and roundtables, governments encouraging citizens to submit their data requests to public sector bodies, so that they are aware of data demand and can prioritise accordingly.

**Focus on:** the GO-PEG project.

#### ➤ 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 harmonised thematic high value dataset(s) and their corresponding metadata, starting from spatial datasets discoverable in the INSPIRE Geoportal and in the spatial data infrastructures in the Member States. The datasets will be harmonised in terms of data content, level of detail, data structure, vocabularies, license conditions and will be published on the EDP (European Data Portal) and via APIs. 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.

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

URL link: [www.go-peg.eu](http://www.go-peg.eu)

#### 2.4. Pan-European data sets from the INSPIRE data - Proof-of-concept

A few proof-of-concept activities have been started aimed to assess the feasibility to produce Pan-European data sets from the INSPIRE data discoverable in the INSPIRE Geoportal.

Particularly relevant those involving the Copernicus in-situ activities with the creation of multi-country (targeting however a Pan-European dimension) data sets of Administrative Units and Buildings and the inventory of Land Use Information and other Landscape Characteristics available at country level to be used in the populating the CLC core (the 'all-in-one' data container for land monitoring information according to the EAGLE data model).

In this context (of research for relevant data), the [INSPIRE Thematic Viewer](#) application of the INSPIRE Geoportal is proving to be particularly useful, allowing simplified access to view or download of the needed data sets.

**Focus on:** the CORDA (Copernicus Reference Data Access) project

##### ➤ The CORDA project

###### *Short description*

One of the most interesting pilot activities is led by the EEA in the framework of the CORDA (Copernicus Reference Data Access) project, in which 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). INSPIRE Administrative Units data was chosen as a first test case, and obtained results are quite promising, considering the following main conclusion from the 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"*.

The data is available in the CORDA platform, in which however the access is restricted to access by Copernicus Services providers only.

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>

#### 2.5. 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 in the current version. This will meet INSPIRE network services requirements.

### *2.6. 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:** the work of the UN-GGIM Europe Working Group on core data

#### ➤ *UN-GGIM Europe Working Group on core data*

Short description:

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/>

### *2.7. The LAND-deFeND database*

"LANDslides and Floods National Database" (LAND-deFeND) is a new database structure able to store, organize and manage in a single digital structure spatial information on historical landslides and floods – collectively called "geo-hydrological hazards" - collected with different accuracy from various sources. The aim of LAND-deFeND is to manage in a single standardized structure spatial information on landslide and flood events, collected at different geographical scales and by different institutions and organizations, in compliance to the Floods Directive and INSPIRE Data specification on Natural Risk Zones.

In the scope also possible future extensions of the Natural Risk Zones data model and the implementation of INSPIRE network services for LAND-deFeND databases.

### *2.8. The OPERANDUM project*

The goal of the OPERANDUM project (OPEn-air laborAtories for Nature baseD solutions to Manage hydro-meteo risks) is to provide a science-based assessment of the usability and effectiveness of Nature-Based Solutions (NBS). Nature-Based Solutions refer to the sustainable management, protection and use of nature to mitigate risks and to preserve ecosystems, demonstrating environmental, social and economic benefits. Currently, the vast number of existing datasets that could be used in the NBS domain are poorly documented, and this limits their discoverability and usage. The INSPIRE geoportal has been recognized as a valuable source of harmonized data for NBS and therefore the OPERANDUM project is creating metadata about all managed geospatial datasets in an INSPIRE compliant form (more specifically, the INSPIRE

schema is extended with additional metadata specific for the NBS domain in order to fulfil specific needs of NBS stakeholders). The NBS metadata will be made available via web services. Within OPERANDUM project, a web portal called Geospatial Information Knowledge Platform (GeoIKP) is being developed with advanced webGIS functionalities that will provide web services compliant to the INSPIRE specifications, the OGC standards and the concepts of semantic web.

URL link: <https://www.operandum-project.eu/>

### 2.9. MIWP 2016-2020

Taking into consideration the results from the REFIT evaluation (assessment of the state-of-implementation and the fitness of the INSPIRE Directive for its intended purpose), the Maintenance and Implementation Work Programme (MIWP) 2016-2020 is strategically oriented to support the full implementation of the INSPIRE Directive meanwhile focusing on *"identification of simplification, flexibility and efficiency gains in the INSPIRE Framework (Infrastructure components, Implementing Acts and the supporting guidance)"*.

The actions under the work programme are mainly targeted to

- strengthen the end-user perspective - e.g. further enhancing the exchange of implementation experiences, best practices, development of re-usable tools;
- promote simplification (*"simplification of requirements"* and *"simplification of use"*);
- deliver short term results - e.g. helping to streamline reporting, territorial planning and disaster/risk management;
- ensure alignment and synergies with EU emerging policies (Better Regulation, Digital Single Market).

The complete list of actions under the MIWP 2016-2020 is available on the MIG Platform at <https://webgate.ec.europa.eu/fpfis/wikis/display/InspireMIG/MIWP+2016-2020> and include, just to mention a few, the *Priority list of datasets for e-Reporting*, the *Alternative Encodings for INSPIRE data* and *Streamlining the Monitoring and Reporting for 2019*.

**Focus on:** Priority list of datasets for e-Reporting, Alternative Encodings for INSPIRE data

➤ *Priority list of datasets for e-Reporting (Action 2016.5)*

*Short description:*

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 on, 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.

URL link:

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

### ➤ *The Alternative Encodings for INSPIRE data (Action 2017.2)*

*Short description:*

Addressing an improved usability of INSPIRE data, the INSPIRE Maintenance and Implementation Group (MIG) has put forward Action 2017.2 aimed at defining alternative encoding rules (mainly for the purpose of viewing/analysis in GIS environments) for a number of selected application schemas and procedure for proposing and endorsing additional encoding rules in the future.

The GeoJSON was selected as a first example of alternative (to default GML) encoding, with the creation of:

- a general [UML-to-JSON](#) encoding rule
- a set of [model simplification rules](#) that can be used as part of different encoding rules (e.g. general flattening of nested structures, simple geographic name, simple period)
- specific simplified GeoJSON encodings for the themes [Addresses](#) and [Environmental Monitoring Facilities](#) (incl. simple observations)

These encoding rules will be maintained as separate INSPIRE Good Practice documents, and in the future additional theme-specific encoding rules may be developed by thematic communities and proposed for endorsement by the MIG following the INSPIRE Good Practice procedure.

URL link:

<https://webgate.ec.europa.eu/fpfis/wikis/display/InspireMIG/Action+2017.2+on+alternative+encodings+for+INSPIRE+data>

## **3. Overview / list of selected Forum contributions**

### *3.1. 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).

### 3.2. Special Pages statistics

In the above-described context, the availability of INSPIRE & Environmental Policy '*Special Pages*' dedicated to specific topics is particularly fit for purpose.

The below table provides the list of Special Pages and the relevant number of views in November 2019 (1 month after their publication) and in April 2020. As can be seen, most visited are the pages related to the *EU Registry on Industrial* and the *Priority list of datasets* for e-reporting.

#### Statistics on the visualisation of the Special Pages:

Title	Number of Views (Nov 2019)	Number of Views (April 2020)
EU Registry on Industrial Sites	192	300
Air Quality	60	100
INSPIRE Administrative Units, Hydrography and Buildings data for Copernicus	70	128
Priority list of datasets for e-Reporting	72	180
Action 2017.2 on alternative encodings for INSPIRE data	33	75
Action 2017.4 on validation and conformity testing	27	55
Action 2018.1: Streamlining the monitoring and reporting for 2019	25	58
Action 2019.2: Improving accessibility of data sets through network services	35	58

### 3.3. List of highly visited / highly replied 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 tags<sup>6</sup> in the scope of the cluster:

<sup>6</sup> more details on tags categories can be found in the forum page

<https://inspire.ec.europa.eu/forum/ctags>

*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 thematic clusters and is mainly related to issues and doubts related to the harmonisation of priority datasets under the Annex II and III and to the IR Change Proposals (most used tags: '*TC-Data-specification*', '*TC-Question*', '*TC-Change-request*').

The abovementioned situation could have been predictable /can be considered normal bearing in mind the cross-cutting nature of the INSPIRE & Environmental Policy cluster and its prerogative to be somehow an 'Information cluster' - i.e. a cluster addressed 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:

- the harmonisation of priority datasets
- the use of the additional recommended schemas in the INSPIRE draft repository (indeed more fit for purpose than the ones in the official repository, because mostly created having in mind the harmonisation of environmental reporting data);
- good practices for the creation/ management of persistent identifiers

#### *List of Top Forum contribution*

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

##### *Short description:*

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:

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- 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: 100 - Number of replies: 5*

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

*Short description:*

In the TG on Human Health and Safety, the 'EnvhealthDeterminantMeasure' feature type allows to represent noise raw measurement points. However, the application schema does not allow to specify the type of measure. A relevant IR Change Proposal - elaborated in the framework of a specific task for the alignment of END reporting to INSPIRE- has been proposed for the 'EnvHealthDeterminantMeasure'. If accepted, this will allow 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: 445 - Number of replies: 8*

- *Title: 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>

*Number of views: 868 - Number of replies: 19*

- *Title: Drinking Water Directive - Water Supply Zones*

Providers of DWD data ask 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>

Number of views: 270 - Number of replies: 3

- *Title: The EU Registry on Industrial Sites*

Short description:

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>

*Number of views: 243 - Number of replies: 2 - Example file uploaded*

- *Title: Reuse of INSPIRE Protected Sites data sets in CDDA 2018 reporting.*

Short description:

In the framework of a modernization and streamlining of environmental reporting flows, the reuse of INSPIRE can be an opportunity to leverage INSPIRE acknowledgements of the Member States, thus reducing reporting burden, lowering costs of data management and provision, improving data quality and coherence. In this context, the 'Nationally designated areas' (CDDA) reporting has been revised to take advantage of INSPIRE Protected sites data sets already produced by the Member states to fulfil INSPIRE obligation. The 2018 complete data reporting (spatial data plus related specific thematic data) is obtained through a "linked approach" i.e. the specific thematic data sets are 'linked' to INSPIRE Protected Sites data sets in order to get geospatial reference and other relevant information.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/218761/reuse-of-inspire-protected-sites-data-sets-in-cdda-2018-reporting>

*Number of views: 204 - Number of replies: 3 - Example file uploaded*

- *Title: 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>

*Number of views: 180 - Number of replies: 6*

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

Short description:

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

It is planned to integrate the SDMX and INSPIRE data infrastructures to enable fulfilment of INSPIRE requirements by publishing data in SDMX.

URL link:

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

*Number of views: 160 - Number of replies: 4*

- *Title: Outcomes of Action 2017.2 on Alternative encodings for INSPIRE data: call for feedback*

Short description:

INSPIRE stakeholders are invited to provide feedback on the outcomes of the Action 2017.2 on Alternative encodings for INSPIRE data that will be proposed for endorsement by the MIG as INSPIRE good practice documents.

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/260974/outcomes-of-action-20172-on-alternative-encodings-for-inspire-data-call-for-feedback>

*Number of views: 135 No replies*

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

Short description:

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>

Number of views: 180 No replies

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

Short description:

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>

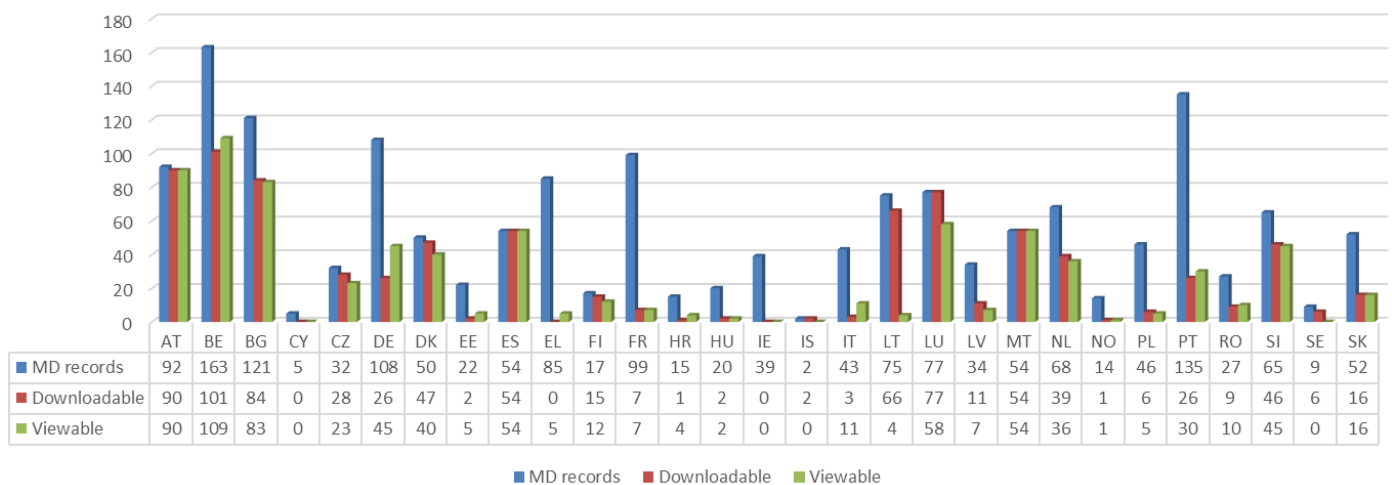
Number of views: 136 No replies

#### 4. Priority data sets statistics

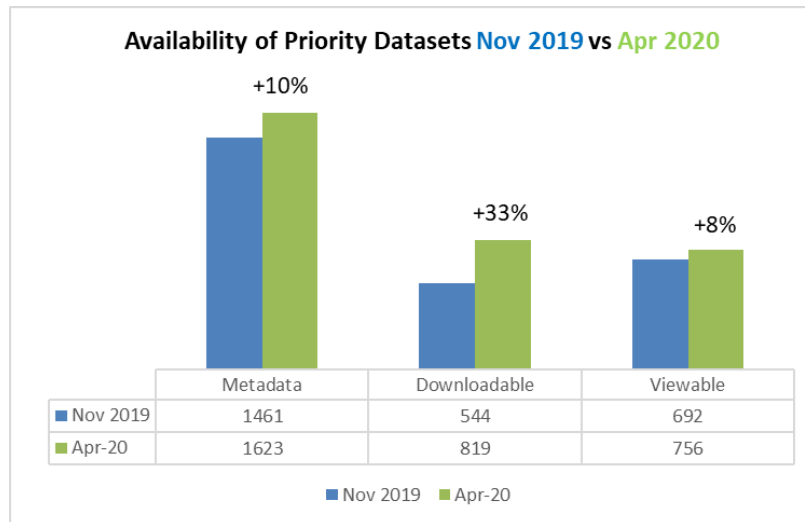
Based on results from the Priority datasets Viewer, find below:

- 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) in April 2020

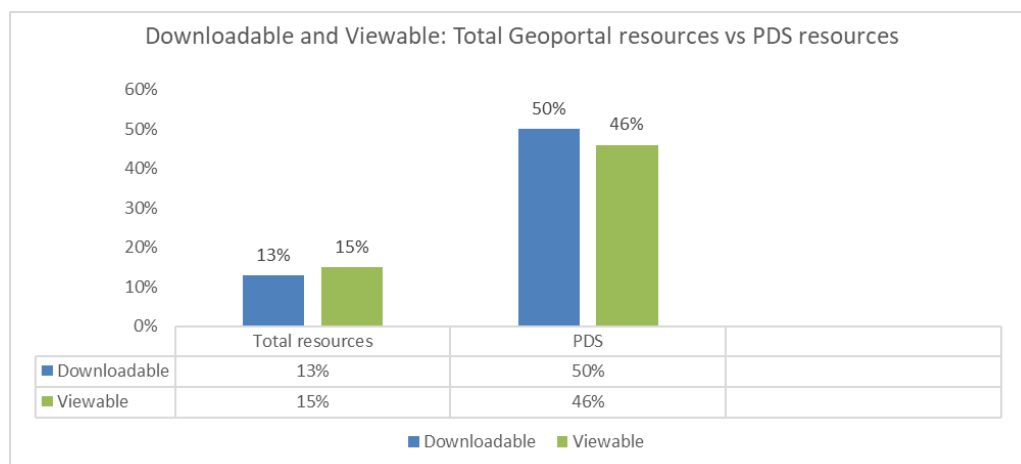
Availability of Priority Datasets : MD records - Downloadable datasets - Viewable datasets



- a comparison between the total numbers of metadata records, downloadable datasets, viewable datasets in November 2019 and April 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 deduced from the above diagrams, for many countries the discrepancy between the number of metadata records and number of datasets for which view or download services are available is still considerable. However, when comparing the total numbers in November 2019 and April 2020, a good increment is registered in the number of downloadable datasets (+



**33%**). Best results are achieved by Malta and Spain (100% downloadable and viewable data), but good results are obtained also by Finland, Austria, and Luxemburg.

It is worth highlighting 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 in the Geoportal.

## 5. Overview of the facilitator's activity

In the last quarter of 2019, the design of the layout for the new *INSPIRE & Environmental Policy* cluster, the search for relevant documentation and the selection of the specific content to be shared engaged much of the facilitator's activity. Major effort was dedicated to the creation of the Special Pages, aimed to introduce the Forum user to the fundamental concepts relating to selected INSPIRE and Environmental Policy topics. While focusing on INSPIRE related aspects, the Special Pages provide the readers with the possibility to get deeper into details (e.g. legal basis, guidelines, help pages) through the direct links to different sources of information, in the ad hoc '*Useful Links*' page section. A coordination with the facilitator of the SW Tools cluster was needed for the creation of the Special pages of the MIWP Actions since they are relevant to both the *INSPIRE & Environmental Policy* and the *SW & Tools* clusters. In order to provide consistent contents and layout, it was decided to share an agreed set of common contents, mostly related to the description of the specific MIWP Actions, and then provide additional customised specific highlights from the perspective of each of clusters.

The activity related to the selection of the specific controlled tags determining the content to be displayed in the *INSPIRE & Environmental Policy* cross-cutting cluster was as well important and still in the fine-tuning phase.

In addition to the creation of special pages, specific discussion topics and news have been posted/ replied by the facilitator, among which:

- [InspireID guidance for the INSPIRE priority datasets \(and environmental reporting obligations\)](#)
- [Improved Client Support for INSPIRE data \(MIWP Action 2017.3\)](#)
- [Outcomes of MIWP Action 2017.2 on Alternative encodings for INSPIRE data](#)
- [INSPIRE data, metadata and services for a \(quasi\) pan-European data set of Marine Reporting Units](#)
- [Inspire Helsinki 2019 - Still time to apply to Data Challenges!](#)
- [ELISE Rapid Study Webinars on Location Interoperability and Digital Transformation](#)
- [Call for Tenders: Impact Assessment Study on High Value Datasets](#)
- [Request for comments on UN-GGIM "Core Data Spatial theme 'Regulated or Managed Areas' - Recommendations for content"](#)

As well replies were provided to several discussions related to the cross-cutting policy domain, among which:

- [EnvhealthDeterminantMeasure - Codelists ComponentTypeValue](#)

- [EnvhealthDeterminantMeasure - how to express the type of noise measure](#)
- [Usage of INSPIRE WFS 2.0 in GIS-Software](#)
- [HabitatsAndBiotopesDistribution XSD](#)

In some cases, the users of the cluster preferred to send private messages. The facilitator's replies always contained an invitation to post the question as a Forum discussion. In some cases, the recommendation was accepted e.g. in the case of the following two posts:

- <https://inspire.ec.europa.eu/forum/discussion/view/261808/usage-of-inspire-wfs-20-in-gis-software>
- <https://inspire.ec.europa.eu/forum/discussion/view/261694/is-it-necessary-to-set-up-services-for-the-coordinate-reference-systems-rs-and-the-geographical-grid-systems-gg-data-themes>

In this first quarter of 2020, the facilitator is regularly updating the cluster content with activities related to the alignment of INSPIRE and environmental reporting and main outcomes from ongoing pilots and MIG Activities. Particular attention is paid to the provision of links to harmonised data and services from the INSPIRE Geoportal (above all related to the Priority datasets).

#### *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 projects).
- the partners of the EU projects to which the facilitator collaborates.

The facilitator contributed to the Forum newsletter with an article on the *EU Registry on the industrial sites*.

## **6. Facilitator's suggestions for improvements**

### *6.1. For promotion, content generation, reaching new users etc.*

At date (April 2020) the low number of users subscribed to the controlled tags remains a main issue that the Forum must face. The problem is certainly related to the revision of the notification mechanism and the need for re-subscribing but, in my view, it is also related to the shift from reporters of Annex I data (that maybe do not feel the need to re-subscribe) to those of Annex II and III who might have started just now to take action.

The actions carried out in the last months in order to increase the subscriptions to the controlled tags (a popup in the Forum landing page to warn users about the necessity to update notification settings, the newsletters with highlights from the Forum activities) brought indeed some results but the users numbers previous to the change of platform are still far.

The above measures should be continued, along with others such

- posting/ re-tweeting as ‘INSPIRE Community Forum’ ‘hot’ INSPIRE topics and successful implementation examples
- having a link to posted newsletters - e.g. through an icon – in the Forum home page.

In case the JRC and the DGENV organize a series of webinars to replace the INSPIRE Conference 2020, cancelled because of the risk associated with COVID-19 infection, this would be an important opportunity for the promotion of the Forum's activities.

For her part, the facilitator will contribute actively to this as well as to other promotion activities - e.g. contribute to the Forum newsletter with articles related to the most popular topics & news from the cluster domain , create new Special Pages with useful links, insights and examples for the specific topics (upcoming the Special Pages for the *High Value datasets* under the Open Data Directive).

### ***6.2. For the SW collaboration platform use including the new functionality and better management***

- The “*Selected Highlights*” should be ordered by last modification date. Currently order is descending creation date, therefore the recently updated pages (for example, pages updated with new links to harmonized datasets and services / news from the SW world) are hidden at the bottom of the proposed list if created long time ago.
- It would be valuable if the INSPIRE Geoportal could differentiate available resources by (not self-declared) degree of harmonization. Currently one must download the dataset in order to assess if it is harmonized to INSPIRE data models.

Having such a feature in the Geoportal would be particularly significant for the creation of Pan European / multi-country/ high value datasets: in case of harmonized data, in fact, a single ETL (Extract, Transform, Load) process will merge the data coming from the different countries into a single Pan European dataset, conversely multiple ad-hoc ETLs will be needed for non-harmonized data.

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**INSPIRE Community Forum**  
**on **Biodiversity and Management Areas****  
**Phase 1 - 2020 activity report (Deliverable - D2)**

Author(s)	<b>Stefania Morrone</b>
Reviewed by	Robert Tomas
Approved by	Robert Tomas
Date of Approval	

Title	INSPIRE Community Forum on <b>Biodiversity and Management Areas</b> Phase 1 - 2020 activity report (Deliverable - D2)
Creator	<b>Stefania Morrone</b>
Date of last revision	
Subject	
Type of Deliverable	Report
Status	Draft
Publisher	European Commission JRC
Description	Activity Report regarding the on-line facilitation and maintenance of the section of INSPIRE Community Forum on <b>Biodiversity and Management Areas</b> Phase 1 - 2020 activity report (Deliverable - D2)
Contributor	<b>Darja Lihteneger</b>
Rights	
Language	English
Distribution List	DG JRC, DG ENV, EEA
Identifier	INSPIRE Community Forum - Report



## State of play in the thematic domain

With the relevant deadline for interoperability of spatial datasets approaching fast (21/10/2020), discussions on the platform regarding the biodiversity domain are related to INSPIRE Annex II and Annex III data themes. More specifically, during the last quarter of 2019, the most discussions came from the *Area management /restriction /regulation zones & reporting units* cluster, whilst recently the interest has shifted to the *Habitat and Biotopes* and *'Species Distribution'* thematic domains. Discussions are mainly addressing the harmonisation of Priority datasets related to the "Nature" environmental domain.

## Overview / list of relevant EU Projects/technology/SW activities

- *The OPERANDUM project*

The goal of the OPERANDUM project (OPEn-air laborATORies for Nature baseD solUtions to Manage hydro-meteo risks) is to provide a science-based assessment of the usability and effectiveness of Nature-Based Solutions (NBS). Nature-Based Solutions refer to the sustainable management, protection and use of nature to mitigate risks and to preserve ecosystems, demonstrating environmental, social and economic benefits. Currently, the vast number of existing datasets that could be used in the NBS domain are poorly documented, and this limits their discoverability and usage. The INSPIRE geoportal has been recognized as a valuable source of harmonized data for NBS and therefore the OPERANDUM project is creating metadata about all managed geospatial datasets in an INSPIRE compliant form (more specifically, the INSPIRE schema is extended with additional metadata specific for the NBS domain in order to fulfil specific needs of NBS stakeholders). The NBS metadata will be made available via web services. Within OPERANDUM project, a web portal called Geospatial Information Knowledge Platform (GeoIKP) is being developed with advanced webGIS functionalities that will provide web services compliant to INSPIRE specifications, OGC standards and the concepts of semantic web.

URL link: <https://www.operandum-project.eu/>

- *The UN-GGIM Europe Core Data Spatial theme 'Regulated or Managed Areas'*

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, principally on the INSPIRE Data Specifications (extended to cater for specific user needs). The core theme "**Regulated or Managed Areas**" considers mainly the INSPIRE Area Management/Restriction/Regulation Zones and Reporting Units data theme, but also the Protected Sites and partially the (planned) LU data themes.

URL link: [https://un-ggim-europe.org/wp-content/uploads/2019/05/UN-GGIM-Europe\\_WGA\\_Recommandation\\_Content\\_AM-v1.0.pdf](https://un-ggim-europe.org/wp-content/uploads/2019/05/UN-GGIM-Europe_WGA_Recommandation_Content_AM-v1.0.pdf)

- Natura 2000 and Noise Directive (END) alignment to INSPIRE

European Environment Agency projects are ongoing for the streamlining of the reporting obligation under Nature 2000 and Noise Directive data flows, respectively addressing the reuse of INSPIRE Data Specifications on Protected Sites and INSPIRE Data Specifications on Area management /restriction /regulation zones & reporting units (for reporting of agglomerations and quiet areas).

- Reuse of INSPIRE Protected Sites data sets in CDDA 2018 reporting

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In the framework of a modernization and a streamlining of the environmental reporting flows, the reporting of the 'Nationally designated areas' (CDDA) 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 their INSPIRE obligation. In the linked approach, specific thematic information is 'linked' to related INSPIRE Protected Sites data in order to get geospatial reference and other relevant elements.

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

## Overview / list of selected good / highly visited / highly replied Forum contributions

- *Title: Good practise GML example for species distribution*

*Short description:*

A data provider in Finland is looking for good examples to follow for the implementation of the Species Distribution (SD) application schema.

*URL link:*

<https://inspire.ec.europa.eu/forum/discussion/view/264427/good-practise-gml-example-for-species-distribution>

*Number of views: 73 - Number of replies:2*

- *Title: Clarify INSPIRE Theme for derived capercaillie areas*

*Short description:*

A Forum user asks if data containing potential living/stepping stone areas for capercaillie fall under the INSPIRE obligation and under which theme (AM vs HB).

*URL link:*

<https://inspire.ec.europa.eu/forum/discussion/view/264506/clarify-inspire-theme-for-derived-capercaillie-areas>

*Number of views: 48 - Number of replies:2*

- *Title: 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>

*Number of views: 102 - Number of replies: 6*

A similar topic has been faced in below posts:

*(on the use of draft schemas – AM data theme)*

Title: *“Fishing and shell fishing restrictions in certain areas of the coast” in the scope of the AM*

After having addressed the issue related to the best fitting data theme, the post deals with the possibility to use the Controlled Activities application schema in the INSPIRE draft schema repository.

URL link:

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

Number of views: 370 - Number of replies: 5

**(on the use of draft schemas – HB data theme):**

Title: *Scope of data harmonization – HB*

After having addressed the issue related to possible aggregation of data, the post deals with the possibility to use the HB distribution schema

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/261802/scope-of-data-harmonization-hb>

Number of views: 70 - Number of replies: 4

- Title: *HabitatsAndBiotopes in WCS*

After having addressed the issue related to possible provision of HB data through WCS (data theme is listed in the Technical Guidance for the implementation of INSPIRE Download Services using Web Coverage Services but the core application schema does not allow to provide gridded data), the discussion faces the topics of the usage of HB distribution schema and of 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>

Number of views: 601 - Number of replies: 19

- Title: *Drinking Water Directive - Water Supply Zones*

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

URL link:

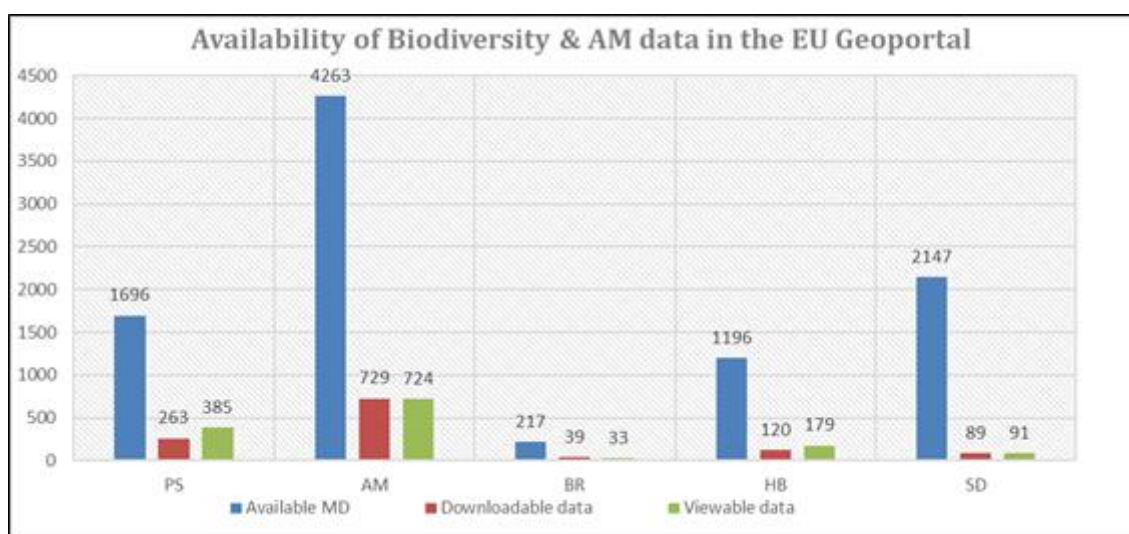
<https://inspire.ec.europa.eu/forum/discussion/view/234890/drinking-water-directive-water-supply-zones>

Number of views: 175 - Number of replies: 3



## Overview and assessment of the availability of thematic domain data sets in the EU Geoportal

The following diagram provides an overview of the availability of datasets in the scope of the Biodiversity & Management Areas cluster in the Geoportal. As can be deduced from the diagram, there is a considerable discrepancy between the number of metadata record provided and number of datasets for which view or download services are available. Best performing data theme is AM, with a total number of 4263 dataset metadata and best '*MD/services*' ratio: 18% of addressed data is both downloadable and viewable. Very poor results for the SD data theme.



Find in the below table the percentages of downloadable and viewable datasets per data theme

Data theme	Downloadable data	Viewable data
AM	18%	18%
PS	15%	22%
BR	18%	15%
HB	10%	14%
SD	4%	4%

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## Overview of the facilitator's activity

Relevant topics and activities in the field of Biodiversity & Management Areas domain have been posted on a regular basis by the facilitator, and discussion topics created by cluster users are addressed with a good level of punctuality.

Dedicated pages (Selected Highlights) have been created and are being periodically updated by the facilitator for services relevant to Biodiversity & Management Areas cluster:

- *Examples of INSPIRE Download Services for the data themes in the Biodiversity and Management Areas Cluster*

The dedicated page provides examples of WFS and atom services for PS, AM, SD, HB data themes.

*Number of views:* 3202

*URL link:*

<https://inspire.ec.europa.eu/forum/pages/view/117531/examples-of-inspire-download-services-for-the-data-themes-in-the-biodiversity-and-management-areas-cluster>

- *Examples of INSPIRE View Services for the data themes in the Biodiversity and Management Areas Cluster*

The dedicated page provides examples of WMS services for PS, AM, SD, HB data themes.

*Number of views:* 1067

*URL link:*

<https://inspire.ec.europa.eu/forum/pages/view/117646/examples-of-inspire-view-services-for-the-data-themes-in-the-biodiversity-and-management-areas-cluster>

In addition to these activities, the facilitator created the following **selected highlights** providing access to the outcomes of chosen closed discussions, SW bugs, recommendations on how to use tools:

- [Usability of INSPIRE data](#) (398 views)
- [Issues related to the setup of WFS 2.0 fully conformant to INSPIRE Technical Guidelines for Download Service](#) (470 views)
- [Orientation of polygons counter-clockwise](#) (205 views)
- [How to extend INSPIRE code lists](#) (700 views)
- [Cultural Heritage Protected Sites](#) (573 views)

## Statistics in the Biodiversity and Management Areas cluster (as of Nov 15th 2019)

- **98** discussion topics, with **418** replies and a total number of **61511** views.
- **11** news with a total of **2736** views,
- **19** files with a total of **4755** views,
- **27** pages with a total of **26056** views

The total visualisations of the resources in the cluster are a good number **95000+**

## Facilitator's suggestions for improvements <sup>7</sup>

### For promotion, content generation, reaching new users etc.

At date (April 2020) the low number of users subscribed to the controlled tags remains a main issue that the Forum must face. The problem is certainly related to the revision of the notification mechanism and the need for re-subscribing but, in my view, it is also related to the shift from reporters of Annex I data (that maybe do not feel the need to re-subscribe) to those of Annex II and III who might have started just now to take action.

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### For the SW collaboration platform used including the new functionality and better management

- The "Selected Highlights" should be ordered by last modification date. Currently order is descending creation date, therefore the recently updated pages (for example, pages updated with new links to harmonized datasets and services / news from the SW world) are hidden at the bottom of the proposed list, if created long time ago.
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<sup>7</sup> The suggestions are mostly the same provided by the facilitator in the "INSPIRE & Environmental Policy" Phase 1 - 2020 activity report (Deliverable – D2)