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JOINT RESEARCH CENTRE

Directorate B – Growth and Innovation  
UNIT B06 - Digital Economy

**INSPIRE Community Forum**  
**on Biodiversity and Area Management**  
**Phase 2 - 2020 final report (Deliverable - D3)**

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## 1. State of play in the thematic domain

In 2020 the discussions in the Biodiversity and Area Management cluster have mostly addressed the harmonisation of the Priority datasets: issues and doubts regarding the provision of spatial data reported under Habitats Directive and Birds Directive but also of river basin districts and water bodies of the Water Framework Directive.

The Species Distribution discussion subgroup was however the most active with several questions related to harmonisation of gridded data.

Interesting discussions in the Area Management subgroup debated on

- the interpretation of the constraint on the legalBasis association role and the relevant validation test implemented by INSPIRE Validator (ETF). After several interactions with the ETF team, the agreement was reached to make the validation test less restrictive
- two change proposals for the AM data model, that would respectively allow nesting of the *specialisedZoneType* in the related *zoneType* attribute and referencing the Protected Sites spatial objects.

October 2020 deadline for provision of harmonised INSPIRE datasets and services coincided with increased activity on the INSPIRE Community Forum in the second half of 2020.

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

- *The OPERANDUM project*

The OPERANDUM (OPEn-air laboRatories for Nature baseD solUtions to Manage hydro-meteo risks) project contributes to the implementation of EU policies for disaster risk prevention and climate change adaptation. OPERANDUM intends to respond to these challenges with a plan based on the deliberate agreement of 26 partners in 14 countries covering multiple approaches and multi-disciplines expertise, technology, market, and policy players. The goal of the OPERANDUM project 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 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.

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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 reporting

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>

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

*Discussion Title: [ManagementRestrictionOrRegulationZone.competentAuthority voidable but role mandatory?](#)*

Short description:

Requests of clarifications related to:

1. the 'competentAuthority' voidable attribute, for which a constraint specifies that "*the role attribute of the competentAuthority shall take the value 'authority'*".

The initial behaviour of the staging version of the INSPIRE Validator raised an error in case the role was not provided even for void competentAuthority.

Outcome of the discussion: it was acknowledged an erroneous interpretation of the Validator and the ETF test was updated accordingly.

2. the 'legalBasis' voidable association for which a constraint specifies that "At least the most specific legal instrument that required the establishment of zone shall be provided using the legalBasis association role." The initial behaviour of the staging version of the INSPIRE Validator raised an error in case the legalBasis was not provided

Outcome of the discussion: after several interactions with the ETF team, the agreement was reached to make the validation test less restrictive.

*Number of views: 273 - Number of replies:12*

URL link:

<https://inspire.ec.europa.eu/forum/discussion/view/266637/managementrestrictionorreulationzonecompetentauthority-voidable-but-role-mandatory>

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*Discussion Title: Properly encoding of Area Management Restriction and Regulation Zones (AM) spatial data set*

Short description

Proposal for two modifications in the AM schema allowing respectively to nest the specialisedZoneType in the related zoneType attribute and to refer Protected Sites objects.

Discussion highlighted that the proposed modifications would require a change in the INSPIRE Implementing Rules and would not allow the backwards compatibility of the schema.

Number of views: 55 - Number of replies:1

*URL link:*

<https://inspire.ec.europa.eu/forum/discussion/view/268562/properly-encoding-of-area-management-restriction-and-regulation-zones-am-spatial-data-set>

*Discussion Title: Species Distribution countigUnit*

Short description

Request on how to provide detailed information about the distribution of a species in a regular 10x10 meters regular grid (currently more detailed allowed value is 1x1km grid)

Outcome of the discussion: Detailed 10x10 m grid data fits better the "observation" concept and therefore the EF data theme.

*URL link:*

<https://inspire.ec.europa.eu/forum/discussion/view/270098/species-distribution-countigunit>

*Discussion Title: Recommended grid for Species Distribution*

*Short description:*

Request on what would be a recommended 50 km grid and coordinate system for species distribution when producing a harmonised dataset. Does for example EEA have a cross-European grid dataset to fit the information into?

Outcome of the discussion:

Suggestion to make sure to be in line with the data specification for Species Distribution, which would not allow for a 50 spare kilometer grid, but only 1, 10, 100, 1000 and so on.

Examples from EEA of datasets with 10km reference grid

Number of views: 90 - Number of replies:3

*URL link:*

<https://inspire.ec.europa.eu/forum/discussion/view/268425/recommended-grid-for-species-distribution>

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

*Short description:*

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Request 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: 153 - Number of replies:2*

*Discussion 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: 119 - Number of replies:2*

*Discussion 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: 323 - Number of replies: 6*

A similar topic has been faced in below posts:

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

*Discussion 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*

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

*Discussion 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: 259 - Number of replies: 4

*Discussion 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: 1136 - Number of replies: 19

*Discussion 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.

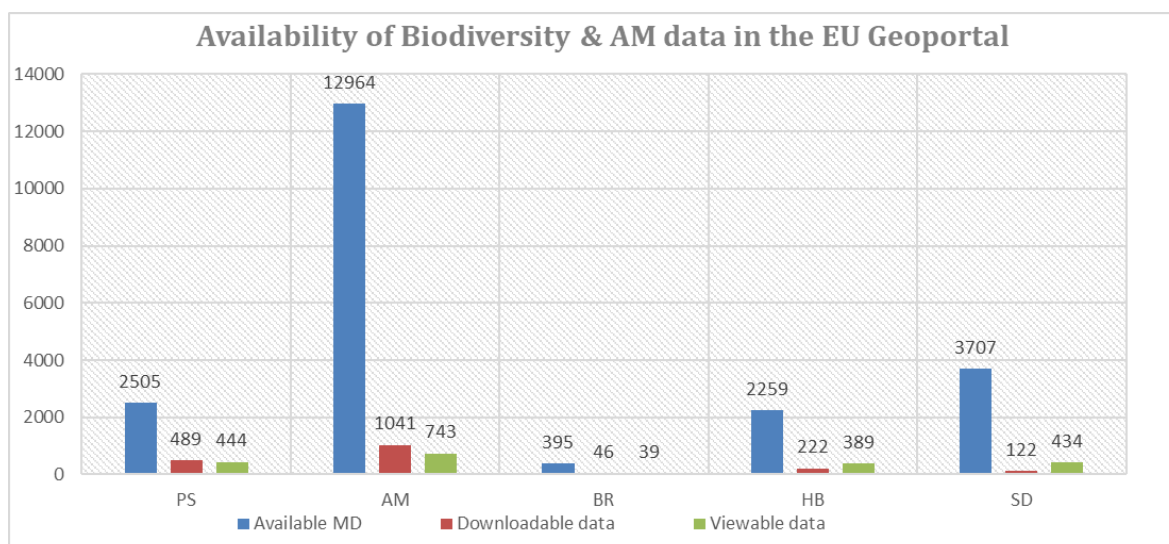
URL link:

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

Number of views:409 - Number of replies: 3

#### **4. 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.



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

Data theme	Downloadable data	Viewable data
AM	8%	6%
PS	19%	18%
BR	11%	11%
HB	10%	17%
SD	3%	11%

## 5. 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 have been 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 Area Management Cluster**

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

Number of views: 4527

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 Area Management Cluster**

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

Number of views: 1551

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>

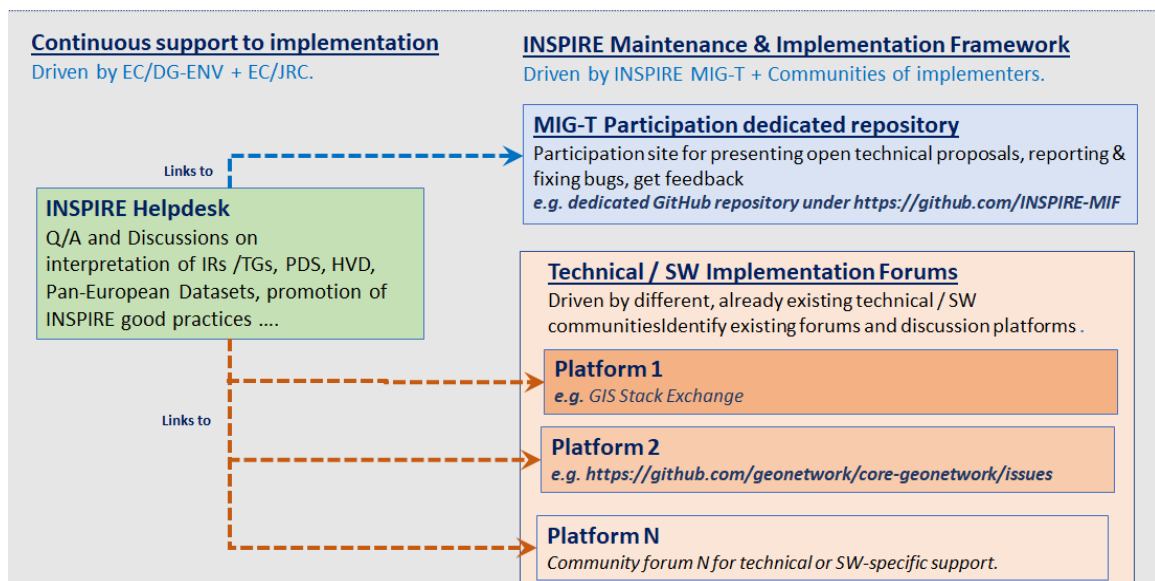
In addition to these activities, the facilitator created the following **selected highlights** providing access to the outcomes of chosen closed discussions, SW bugs, recommendations on how to use tools:

- [Usability of INSPIRE data](#) (755 views)
- [Issues related to the setup of WFS 2.0 fully conformant to INSPIRE Technical Guidelines for Download Service](#) (934 views)
- [Orientation of polygons counter-clockwise](#) (655 views)
- [How to extend INSPIRE code lists](#) (1037 views)
- [Cultural Heritage Protected Sites](#) (1091 views)

## 6. Facilitator's suggestions for improvements

The INSPIRE Community Forum will be dismissed at the end of year 2020.

A proposal for future possible scenarios allowing the continuation of the support to the INSPIRE community, illustrated in diagram below, was discussed, and agreed during the INSPIRE Community Forum internal meeting in October.



Proposal can be summarised as follows:

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- 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.