



INSPIRE

Infrastructure for Spatial Information in Europe

MIWP Action 2016.5: Priority list of datasets for eReporting

Questions and answers on the list of priority datasets and use of metadata keywords

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Contents

Introduction	3
1. Restructured list of priority datasets for eReporting version 3	4
2. How to use the hierarchical INSPIRE code list for priority datasets?.....	5
3. PDS - datasets related to Drinking Water Directive	6
4. The list of priority datasets includes the spatial datasets related to the reporting data flow, which has not started yet.	6
5. The reporting obligation includes optional data. Why are the spatial datasets still included in the list of priority datasets?	7
6. The spatial dataset that is included in the list of priority datasets does not exist or is neither reported nor required by a reporting obligation.	8
7. The dataset or a part of the dataset is not public data.....	8
8. Other European Commission programmes might help in setting secure environments.	9
9. Spatial datasets with different geometries of the same spatial objects might be required.	9

Introduction

The INSPIRE Maintenance and Implementation work programme (MIWP) 2017 – 2020 continued with action MIWP 2016.5 to further develop a list of datasets related to environmental reporting and support Member States with making these datasets accessible through the European Spatial Data Infrastructure in a stepwise manner. The INSPIRE priority list of datasets for eReporting (PDS list) also reflects the data gaps identified during the evaluation of the state-of-implementation and the fitness of the Directive for its intended purpose (a so-called REFIT evaluation). The INSPIRE MIWP 2016.5 action contributes to the INSPIRE implementation in particular of the INSPIRE Directive Annex III spatial data themes. It focuses on prioritisation of datasets, metadata tagging, disseminating information on streamlining reporting obligations with INSPIRE specifications and improving user experiences and visualisations of PDS in the INSPIRE Geoportal.

This PDS list is a living inventory of environmental information needs and provides an instrument to incrementally build comparable INSPIRE maturity across MS for all INSPIRE components (metadata, services, interoperability, data sharing), promote data dissemination related to reporting obligations and monitor progress on INSPIRE implementation in general and for the reporting use case in specific. It aims to describe the identified priority datasets at general level, while detailed information, e.g. data content or formats, are defined in the corresponding reporting guidelines that are regularly updated in the reporting cycles.

The PDS list is to be considered the reference version of the list for implementation by Member States.

This document summarises explanations to frequently asked questions with aim to increase understanding of the priority list of datasets for eReporting, provide information related to the reporting data flows in the scope of environmental legislation and support INSPIRE implementation for priority datasets, e.g. applying metadata keywords or mapping to INSPIRE spatial data themes.

The priority list of datasets for eReporting and this document are published on wiki¹.

¹

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

1. Restructured list of priority datasets for eReporting version 3

The restructuring of the INSPIRE list of priority datasets for eReporting (PDS) establishes a list of unique datasets and references to those datasets from diverse reporting obligations, where applicable. The priority list includes the following thematic sections:

- **Fitness check for reporting** includes information on legal basis, summary information on reporting requirements and indication of requested datasets;
- **Relevant datasets** includes detailed information of each individual (unique) dataset;
- **Reporting information** (new in the restructured version 3):
 - **Reported data or reference data** category distinguishes reference geospatial data (e.g. pan-European dataset of bio-geographical regions) from datasets included in the reporting data flow (reported or optional in reporting²);
 - **Responsibility** indicates the main role for provision of a dataset;
 - **Expected reported form** provides general information from the reporting requirements and data flow organisation (e.g. dataset, attribute or other types; mandatory or optional dataset or attribute);
 - References to the Reporting Obligation Database (ROD³) and reporting guidelines connects to regularly updated reporting information, including reporting obligations, deadlines and guidelines (**ROD Legal Instrument, Reporting information and guidelines**);
- **References to dataset from other legislation** (new in the restructured version 3) includes known references from other legislation to the unique dataset in the PDS list. The PDS list includes eight references;
- Status and progress information provides information on the priority list development and indicates needs for a review due to the changes of legislation (**PDS status, PDS Progress**);
- Example of detailed information from the reporting data flows and practice provides additional support for implementation (**Support information on reporting data flow**). The initial information, compiled in 2016, is updated in the version 2.1 and 3.0;
- **Mapping to INSPIRE themes** (updated in the version 2.1) has been completed considering three basic criteria: known INSPIRE alignment in the reporting obligation, clearly identifiable scope of spatial data themes in the INSPIRE Directive, Implementing Rules on Interoperability and technical guidelines, and expert knowledge. The mapping indicates the INSPIRE spatial data theme, and where feasible, a more detailed application schema or feature type. Additional category Mapping status distinguishes among different levels of certainty that the mapping is / is going to be implemented in a harmonised way in the reporting obligation.

The list of priority datasets for eReporting is complemented by the:

- Proposed use of metadata keywords from the INSPIRE priority dataset⁴ code list,
- Overview of changes in the list of priority datasets between version 2.1 and 3.0, and
- One example of country specific information.

² 'optional in reporting' means that a dataset is not required to be reported in all reporting cycles but it is still in the INSPIRE scope, included in the PDS list and marked as PDS and statistics in Geoportal are still monitored

³ <https://rod.eionet.europa.eu/>

⁴ <https://inspire.ec.europa.eu/metadata-codelist/PriorityDataset>

2. How to use the hierarchical INSPIRE code list for priority datasets?

The INSPIRE priority dataset code list is published in the INSPIRE Registry at: <http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset>. It is created as a hierarchical code list where the codes indicate different levels of information – from a general to a detailed description. The highest level provides information on legislation and more detailed thematic information is provided at the lower levels.

The metadata tagging of the priority datasets should use the most appropriate code, preferably at the most detailed level of the code list hierarchy, when feasible. If this is not feasible, the best-fitted keyword of a more general description should be provided. Providing one code / keyword from the code list hierarchy will fulfil the purpose of tagging. It is also possible to apply several keywords from diverse thematic domains.

Example 1: For a spatial dataset of lakes that are provided in the scope of the Water Framework Directive reporting obligation, the following most detailed keyword is recommended to be used:

- Lakes (Water Framework Directive)
<http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset/Lakes-dir-2000-60>

Example 2: Demonstrates use of multiple metadata keywords that identify different legislation where a dataset is applicable, e.g. a dataset of Natura 2000 sites (Habitats Directive) will be tagged with the metadata keywords that define this dataset. Additionally, if this dataset applies as water protected areas under the Water Framework Directive, it can be tagged with specific keywords for such protected areas as following:

- Natura 2000 (Habitats Directive)
<http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset/Natura2000Sites-dir-1992-43>
- Water dependent Natura 2000 sites (Water Framework Directive)
<http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset/WaterDependentNatura2000Sites-dir-2000-60>

Example 3: Demonstrates use of multiple metadata keywords that identify different legislation where dataset is applicable, e.g. a dataset of Natura 2000 sites (Habitats Directive) will be tagged with the metadata keywords that define this dataset. The dataset might include also designated special protection areas in the scope of Birds Directive. Therefore, the dataset can be tagged with multiple keywords as following:

- Natura 2000 (Habitats Directive)
<http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset/Natura2000Sites-dir-1992-43>
- Natura 2000 sites (Birds Directive)
<http://inspire.ec.europa.eu/metadata-codelist/PriorityDataset/Natura2000Sites-dir-2009-147>

More examples of metadata tagging can be found in the INSPIRE Geoportal, e.g. for Natura 2000 datasets:

- (LU) - metadata file identifier: 227ba25a-a36a-42bd-bfba-67c01d2ec016
- (CZ) – metadata file identifier: 5a004b1e-c12c-405f-9d61-30cf0a02080a

3. PDS - datasets related to Drinking Water Directive

The implementation of the Drinking Water Directive (DWD) recast will require the review of the correlated datasets in the INSPIRE priority list of datasets for eReporting (PDS). The text of the new Directive⁵ is currently under legal/linguistic review. Once finalised, the new Directive will be adopted and enter into force (probably early 2021), replacing the old Directive, which will be repealed.

Currently, the INSPIRE PDS version 2.1 includes datasets on water supply zones and drinking water abstraction points according to the reporting obligations under the DWD 98/83/EC⁶. This type of data has been reported in different formats as spatial (direct or indirect) or non-spatial (tabular) data. The water supply zone is the water consumption area. Each supply zone should be represented as polygon or point (centroid of that area) to represent the water supply zones as precise as possible. If more precise data is available, a data provider can go beyond current reporting and provide water supply zones as areas or centroids of these areas. If not available, a centroid of a city, LAU or NUTS, or only LAU / NUTS codes can be provided following the current reporting practice. Regarding drinking water quality parameters for Water Supply Zones, although this information is currently not directly mentioned in the INSPIRE priority list of datasets (PDS), it is in scope of the INSPIRE Directive and if available, should be provided.

The new (recast) Directive maintains the obligation of Member States to provide consumers with information (Article 17 and Annex IV) but expands their obligation to setting-up and maintaining a number of data sets that would be made accessible to the Commission (Article 18)⁷. The Directive strives to implement modern principles of information management and to promote active dissemination, i.e. sharing of data in a structured and easily accessible way. This will provide more timely and fit for purpose information to citizens, businesses and public authorities at all administrative levels. Ideally, all relevant environmental data should be available via open access, and should be easy to retrieve and re-use.

To implement these information management principles, the new provisions make reference to the Directive 2003/4/EC on public access to environmental information and to the INSPIRE Directive 2007/2/EC. Member States will have to put in place a data set gathering only drinking water-relevant data under this Directive in compliance with the INSPIRE Directive. To facilitate sharing and access, it requires Member States to put in place interoperable digital spatial data services.

4. The list of priority datasets includes the spatial datasets related to the reporting data flow, which has not started yet.

The PDS list includes the spatial datasets that are considered of high relevance for the development and evaluation of the environmental acquis. The PDS list can include also identified datasets under the reporting obligation which haven't been reported yet. Once the reporting data flow will start, the

⁵ The latest version of the new DWD reflecting the political agreement reached is accessible at:

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_6060_2020_REV_1&from=EN

⁶ Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption

⁷ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_6060_2020_REV_1&from=EN

relevant spatial datasets will have to be provided according to the reporting obligation specifications and the INSPIRE Directive provisions. For example: In the PDS list version 2.0, the dataset on alien species distribution (Regulation on invasive alien species) is such example of first reporting in 2019 while the dataset has been included in the PDS list already earlier. The reporting requirements have been streamlined with the INSPIRE specifications⁸.

In general, metadata, view and download services for spatial datasets which fall in the scope of the INSPIRE Directive should already be provided according to the INSPIRE Directive implementation roadmap. In accordance with Articles 6, 9 and 16 of the INSPIRE Directive, such datasets should have been made available "as is" since 2013 covering Annexes I to III. The implementation of the harmonised INSPIRE data models for the interoperability of spatial datasets and services corresponds with the deadlines in 2017 (Annex I spatial data themes) and 2020 (Annex II and III spatial data themes). This means that the relevant spatial datasets for the reporting obligation could be already anticipated, identified, and provided according to the INSPIRE Directive even before the reporting obligation data flow will start.

[INSPIRE "Find your Scope"](#) can help in identifying the relevant INSPIRE spatial data themes or spatial object types. Additionally, the PDS list includes information on mapping to the INSPIRE spatial data themes, including more exact information on the INSPIRE application schemas which usually becomes known after the streamlining of reporting and INSPIRE is completed.

5. The reporting obligation includes optional data. Why are the spatial datasets still included in the list of priority datasets?

The spatial datasets included in the INSPIRE PDS are identified according to the current reporting obligations which are dynamic and can change between the reporting cycles to address user needs or technical and technological advances. The details are defined in legislation and reporting guidelines. When the reporting obligation changes, terminates or it includes optional data, the PDS list will be updated to reflect those conditions. Keeping datasets in the PDS list and in the broader INSPIRE scope has several reasons:

- The spatial datasets that were provided in the past and will become obsolete or optional at certain point in the reporting cycle might still have a benefit for specific policy evaluations, e.g. trends, spatial-time based assessments. For example: initially reported habitat types range species range (Habitats Directive) or bird range (Birds Directive) are not included in the next reporting cycle, but related datasets have been reported in the past.
- A reporting obligation may also require dissemination or publication of environmental data also for datasets that are not required to be reported directly but can contribute to active data dissemination through the INSPIRE infrastructure. For example: detailed strategic noise maps - noise contours in agglomerations according to the Noise Directive or detailed flood hazard maps in the scope of the Floods Directive. In some cases, the optional datasets according to the reporting obligation may still be reported in the reporting cycle based on a data provider's decision.

⁸ http://cdr.eionet.europa.eu/help/ias_regulation/

The PDS list includes general information on the role of the dataset in the type “Reported data or reference data” and additional details on optional datasets or attributes according to the reporting guidelines under the type “Expected reported form”.

6. The spatial dataset that is included in the list of priority datasets does not exist or is neither reported nor required by a reporting obligation.

In a few reporting data flows, some commonly agreed and accepted spatial datasets are used by all reporting countries, which usually cover the wider geographical coverage of all reporting countries, e.g. European Union Member States or EEA Eionet member and cooperating countries⁹ (for example: bio-geographical regions in Europe). Those agreed spatial datasets are available to all reporting countries and are not required to be reported again. However, where the same or similar spatial datasets, e.g. in a more precise resolution, exist at national (or sub-national) level that could be used in the preparation of the national reporting data, such spatial datasets are also included in the priority dataset list (for example: national datasets of bio-geographical regions). The INSPIRE Directive (Article 4) does not require collection of new spatial data. If such spatial datasets do not exist in the reporting country, there is no need to provide the dataset in the context of the priority dataset list.

Furthermore, the INSPIRE Directive covers a wider scope beyond the requirements of the reporting obligations. That is why it is important to look into the spatial datasets that have a potential to be re-used in diverse reporting obligations and other policy evaluations. Therefore, spatial datasets that might not be directly reported or are only used for the preparation of reported data but fall within INSPIRE scope are also included in the priority dataset list and shall be made available according to INSPIRE Directive.

Some of the reporting obligation specifications might only indirectly refer to spatial data by requesting information about location, places or addresses. The INSPIRE Directive Article 3(2) defines that spatial data means any data with a direct or indirect reference to a specific location or geographical area. This means that several reported data actually include spatial data that is going to be provided according to the INSPIRE Directive.

7. The dataset or a part of the dataset is not public data.

The reporting data flow may include sensitive or restricted data that are not available for public dissemination or use. This restriction may apply to a complete spatial dataset or to a part of the content within the spatial dataset (related to spatial objects and/or attributes). The INSPIRE Directive defines a way to describe the restriction on public use within the INSPIRE metadata element *Limitations on public access*. This metadata element shall provide information on the limitations and the reasons for them, when the Member States limit public access to spatial datasets and spatial data services under Article 13 of INSPIRE Directive.

Therefore, when such datasets exist, the metadata for spatial datasets and services should include the information about the restriction on public use. One example is the Habitats and Birds Directive which limits sensitive information on the location of endangered species.

⁹ <https://www.eea.europa.eu/about-us/countries-and-eionet>

The authorised access and secure data exchange can be implemented using different approaches, which falls under the remit of the data providers and ultimately the corresponding Member State. Particularly for the reporting data flows, existing technical solutions already providing a secure exchange or reporting of data could still be used.

8. Other European Commission programmes might help in setting secure environments.

For example, the European Commission ISA² - Interoperability solutions for public administrations, businesses and citizens programme includes action Enabling Digital Government through Geospatial and Location Intelligence (**ELISE**) that further promotes the action A Reusable INSPIRE Reference Platform (**ARE3NA**). The platform includes several studies on authentication, authorization and accounting (**AAA**) for data and services in the EU public administrations, and an access control test-bed which includes testing tools and standards in practice so that new barriers and burdens are avoided and existing ISA experience is reused.¹⁰ Spatial datasets with different geometries of the same spatial objects might be required.

9. Spatial datasets with different geometries of the same spatial objects might be required.

Each reporting obligation provides specific requirements how to report spatial data or re-use spatial datasets that have been already reported under other reporting obligations. In principle, if the spatial datasets have been already reported, they should not be reported again. However, if the reporting obligation specifications require adaptation of spatial data to their requirements, this might lead to providing different (slightly modified) geometries of the same spatial objects. This will need to be decided on a case-by-case basis at this stage.

Ultimately, and within the context of the overall EU process of streamlining monitoring and reporting¹¹, the priority dataset exercise will contribute to improve the coherence between different reporting obligations.

¹⁰ https://ec.europa.eu/isa2/actions/elise_en

¹¹ http://ec.europa.eu/environment/legal/reporting/fc_overview_en.htm