



High-value datasets: a technical perspective

The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

Objectives

- Zoom into the technical requirements for implementing HVD
- Initiate a discussion with the MIG and MIG-T on the challenges and opportunities related to the joint technical implementation of INSPIRE and the HVD
- Identify the needs for additional scientific/technical work and support

Policy context

- Provisions of the Open Data Directive

- Six categories of HVD

- HVD shall be

- available free of charge;
 - machine readable;
 - provided via APIs; and
 - where relevant provided as a bulk download,.

- Implementing act on HVD

- Thematic scope/list of HVD within each of the categories, incl. key attributes
 - Arrangements for their publication and reuse
 - Requirements defined regarding licenses, accessibility (API and bulk download), metadata

1. Geospatial

2. Earth observation and environment

3. Meteorological

4. Statistics

5. Companies and company ownership

6. Mobility

HVD should:

- generate significant socioeconomic or environmental benefits and innovative services;
- benefit a high number of users, in particular SMEs;
- assist in generating revenues; and
- be combined with other datasets.

Applicable definitions

- ‘standard licence’ *set of predefined re-use conditions in a digital format, preferably compatible with standardised public licences available online;*
- ‘machine-readable format’ - *structured so that software applications can easily identify, recognise and extract specific data, including individual statements of fact, and their internal structure;*
- ‘open format’ - *platform-independent and made available to the public without any restriction that impedes the re-use of documents;*
- ‘formal open standard’ - *laid down in written form, detailing specifications for the requirements on how to ensure software interoperability;*
- ‘API’ - *set of functions, procedures, definitions and protocols for machine-to-machine communication and the seamless exchange of data (HVD IA);*
- ‘bulk download’ - *a function that enables a download of an entire dataset in one or several packages;*
- **Additional considerations**
 - Definition of dataset available in the Open Data Directive
 - ‘Documents’ with high reusability potential
 - ‘Document’ – *any content whatever the medium; any part of such content*
 - How to organise data into datasets (to discuss)

Links with INSPIRE

- The HVD Implementing Act is well aligned with INSPIRE
 - Both legal acts reinforce each other
 - Technical provisions for several categories of HVD are based on INSPIRE
 - Explicit open data requirements for datasets in the scope of INSPIRE are introduced
 - Newly updated Geoportal Frontend interface prototype is prepared (more info later)
 - HVD and INSPIRE data in the Green Deal Data space
 - Opportunities for new important use cases proving high value

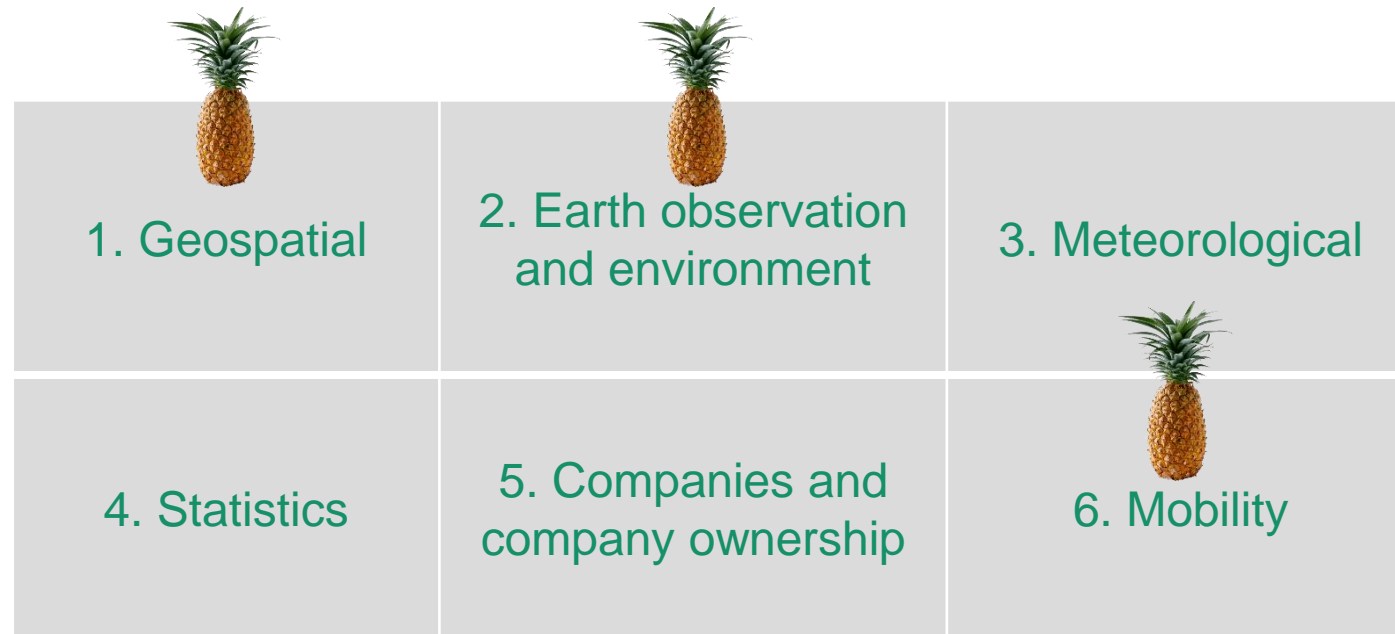
Links with INSPIRE

- There is probably no 100 % overlap between the HVD Implementing provision and INSPIRE
 - Other data may exist in the MS (e.g. in the Open Data portal) that is not explicitly spatial

e.g. csv containing data under the scope of a HVD category

Therefore the implementation of **INSPIRE alone** does not satisfy all the requirements of the HVD Implementing Act

Thematic scope



Thematic scope: Geospatial

- Includes datasets within the scope of:

1) INSPIRE data themes:

- Administrative Units
- Geographical Names
- Addresses
- Buildings
- Cadastral Parcels

2) Reference & Agricultural parcels (IACS)

- Single or multiple datasets that shall cover the entire Member State when combined.
- Datasets to be published in their most up-to-date version

Thematic scope: EO and environment

- Earth Observation data, including remotely-sensed data, as well as in situ data, environmental and climate datasets within the scope of:
 - INSPIRE data themes
 - Hydrography
 - Protected sites
 - Elevation
 - Geology
 - Land cover
 - Orthoimagery
 - Area management / restriction / regulation zones & reporting units
 - Bio-geographical regions
 - Energy resources
 - Environmental monitoring facilities
 - Habitats and biotopes
 - Land use
 - Mineral resources
 - Natural risk zones
 - Oceanographic geographical features
 - Production and industrial facilities
 - Sea regions
 - Soil
 - Species distribution

Thematic scope: Mobility

- Includes datasets within the scope of:
 - INSPIRE data themes:
 - Mobility

Key attributes

- Based on the INSPIRE Data models
- Common for all data:
 - Unique identifier; Geometry; others
- E-reporting attributes for data in the EO and Environment category

Requirements: Metadata & Licensing

- **Metadata**

- Describing the datasets within the scope of the INSPIRE data themes shall contain at least the metadata elements set out in Commission Regulation (EC) No 1205/2008

- **Licensing**

- Datasets to be made available under the conditions of the **Creative Commons BY 4.0** licence or **any equivalent or less restrictive open licence**;
- Licenses in INSPIRE
 - Wide variety of standards in use, incl. custom ones
 - Licensing information very often missing

Requirements: Data encoding formats

- Datasets to be made available in a publicly documented, Union or internationally recognised open, machine-readable format.
- All formats supported through INSPIRE TG and Good practices comply to the provisions, including:
 - GML
 - GeoJSON
 - GeoPackage

Requirements: Granularity

- All levels of generalisation available with a granularity up to the scale of 1:5000.
- If datasets are not available at this scale but are available at higher spatial resolution(s)*, these shall be provided in their original scale.

* Spatial resolution as defined in Annex Part B Section 6.2 of Commission Regulation (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata

Requirements: Accessibility

- Datasets to be made available through Application Programming Interfaces (API) **AND** bulk download;

INSPIRed Network Service	API	Bulk download
OWS: WFS, WCS, SOS	X	X
OGC APIs: STA and OGC API-Features	X	X
ATOM Feeds		X

- API terms of use shall be accompanied by API documentation in a Union or internationally recognised open, human-readable and machine-readable format.
 - OWS: GetCapabilities responses
 - OGC APIs: Open API Documentation, landing pages, conformance declarations
- QoS criteria on its performance, capacity and availability

HVD data in the new INSPIRE Geoportal


- How do we find the HVD in the INSPIRE Geoportal?
 1. Data themes
 2. Tagging
 - PDS
 - IACS (LPIS and GSAA Data)


HVD data in the new INSPIRE Geoportal


High-Value Datasets

The application provides an overview and access to geospatial high-value datasets and other core data (including priority datasets for eReporting), that fall into the scope of the Open Data Directive.

Please select a thematic category



Geospatial
[Show less >](#)



Earth Observation and Environment
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Mobility
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Agricultural parcels


This section includes spatial datasets inserted in the systems and subsystems as defined in Art. 68 of Regulation (EU) No 1306/2013. The Integrated Administration and Control System (IACS) consists of computerised databases of the subsystems. The Identification System for Agricultural Parcels (better known as LPIIS - Land Parcel Identification System) and the Aid Applications and Payments Claims subsystems of IACS contain the spatial data components.



GSAA
Geospatial aid application as part of the Aid applications subsystem of IACS, defined by Art. 68 of Regulation 1306/2013.
[49](#) | [44](#) | [42](#)



LPIIS
Land Parcel Identification System, a subsystem of Integrated Administration and Control System (IACS) as defined by Art. 68 of Regulation 1306/2013.
[78](#) | [65](#) | [63](#)


Other Core reference data


Addresses
[215](#) | [58](#) | [106](#)


Administrative units
[692](#) | [127](#) | [236](#)


Cadastral parcels
[128](#) | [47](#) | [59](#)



Geographical names
[522](#) | [84](#) | [91](#)



Buildings
[644](#) | [143](#) | [126](#)


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Priority Dataset for eReporting


This section includes the datasets identified by EU Member States and EFTA countries as priority datasets for environmental reporting. You can filter by environmental domain, environmental legislation and country.

The list of priority datasets has been defined and is being further developed in the framework of INSPIRE Maintenance and Implementation Work Plan 2016-2020 (MIWP).


The Priority Datasets Viewer provides statistical overviews of the availability of priority dataset as well as simplified access to view or download selected datasets.



Country overview
Priority Datasets grouped by individual EU & EFTA countries



Environmental Domains
Priority Datasets grouped by the Environmental Domains or individual datasets



Environmental Legislation
Priority Datasets grouped by relevant environmental reporting legislation


Other high-value datasets



Hydrography
[1026](#) | [302](#) | [251](#)



Land cover
[681](#) | [282](#) | [233](#)



Land use
[78705](#) | [60630](#) | [65477](#)



Elevation
[784](#) | [203](#) | [146](#)



Geology
[1051](#) | [201](#) | [373](#)



Orthoimagery
[452](#) | [66](#) | [125](#)



Oceanographic geographical features
[313](#) | [31](#) | [149](#)



Sea regions
[771](#) | [44](#) | [47](#)



Protected sites
[885](#) | [363](#) | [349](#)



Bio-geographical regions
[113](#) | [45](#) | [43](#)


Environmental monitoring facilities
[578](#) | [316](#) | [339](#)


Habitats and biotopes
[414](#) | [155](#) | [168](#)


Natural risk zones
[1239](#) | [319](#) | [475](#)



Soil
[582](#) | [200](#) | [285](#)



Species distribution
[250](#) | [128](#) | [127](#)


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Geospatial
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Earth Observation and Environment
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Mobility
[Show less >](#)

Mobility


Transport networks
[1443](#) | [563](#) | [526](#)

Discussion

1. Opportunities from the entry into force of the HVD Implementing Act for modernising the data provider technical stack?
2. What kind of technical support is needed to ensure a successful/smooth implementation?
3. Are there any prominent use cases that show the high-value of the datasets?

Thank you



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