



Monitoring and Reporting: Preparations for the 2023 monitoring cycle

ENV & JRC INSPIRE Team

18th MIG meeting – November 30, 2023

Monitoring and Reporting 2023 – Legal base

- Based on
 - Commission Implementing Decision 2019/1372:
 - 19 indicators calculated from the metadata of spatial data sets & spatial data services published by Member States through discovery services
 - Proposal for a Decision of the European Parliament and of the Council
 - country fiches to be updated every 2 years starting from March 2025, in alignment with reporting for high-value datasets

COMMISSION IMPLEMENTING DECISION (EU) 2019/1372

of 19 August 2019

implementing Directive 2007/2/EC of the European Parliament and of the Council as regards monitoring and reporting

(notified under document C(2019) 6026)

(Text with EEA relevance)

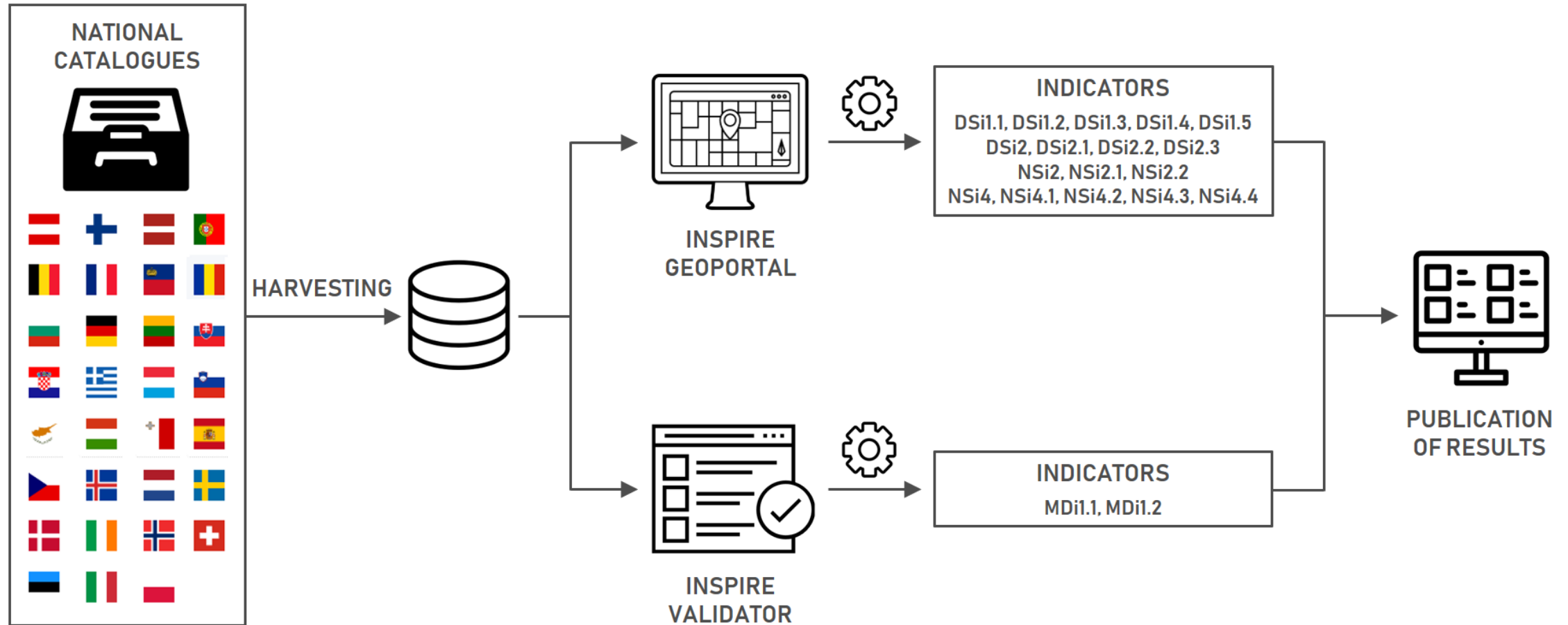
Proposal for a

DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 2007/2/EC as regards certain reporting requirements for infrastructures for spatial information

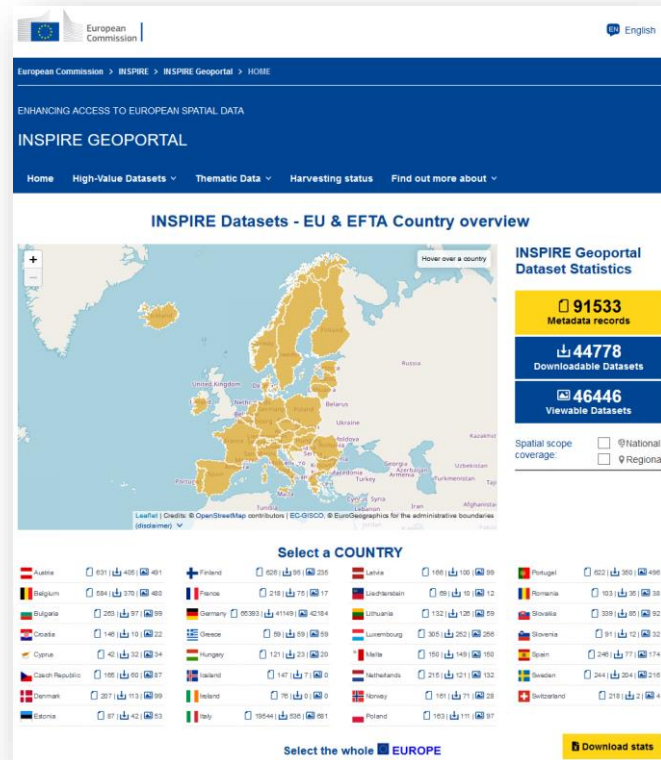
(Text with EEA relevance)

Monitoring and Reporting 2023 – Process

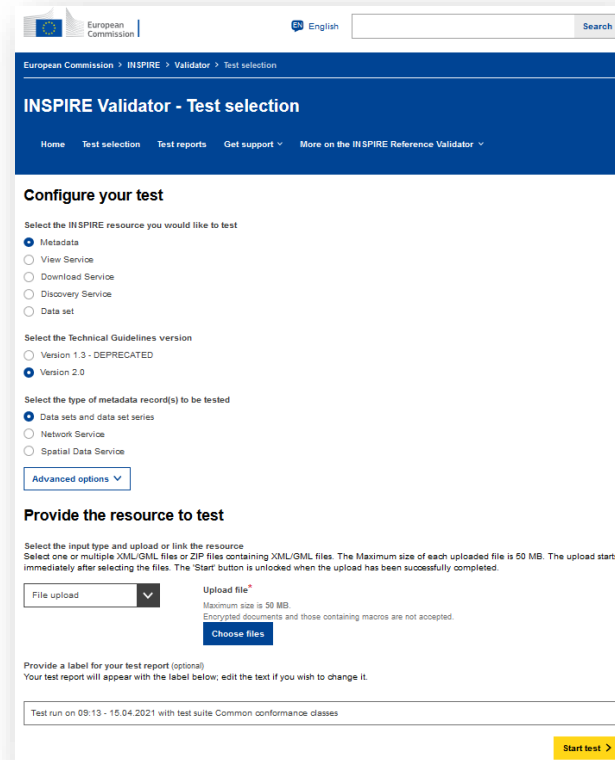


Monitoring and Reporting 2023 – Software

- Software components used:



- INSPIRE Geoportal (new version based on GeoNetwork)



- INSPIRE Reference Validator v.2023.3 (released on 18/09/2023)
- Bulk validation tool v.2021.1.0 (released on 5/10/2021)

Monitoring and Reporting 2023 – Indicators

- Indicators grouped into 5 categories:

- availability of spatial data and services

- DSi1.1, DSi1.2, DSi1.3, DSi1.4, DSi1.5

- conformity of metadata

- MDi1.1, MDi1.2

- conformity of spatial data sets

- DSi2, DSi2.1, DSi2.2, DSi2.3

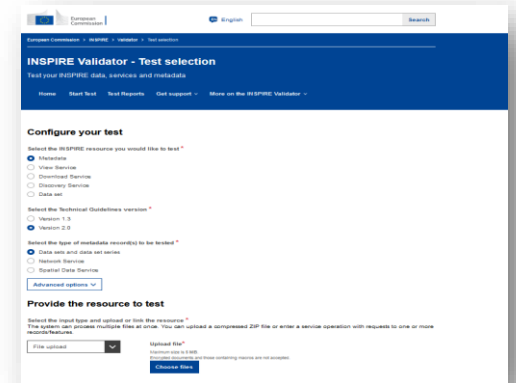
- accessibility of spatial data sets

- NSi2, NSi2.1, NSi2.2

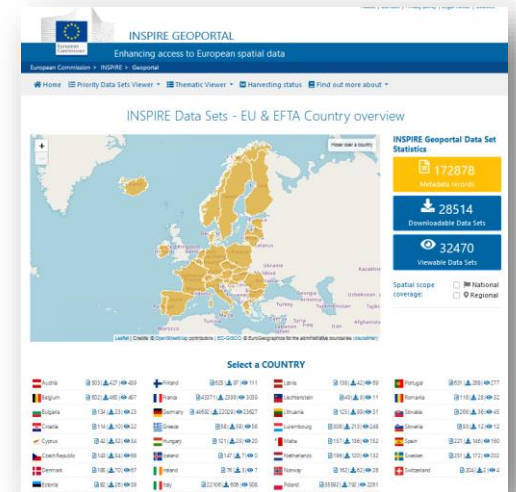
- conformity of network services

- NSi4, NSi4.1, NSi4.2, NSi4.3, NSi4.4

**INSPIRE
Reference
Validator**
(metadata
validation)



**INSPIRE
Geoportal**
(linkages check)



Monitoring and Reporting 2023 – Indicators

- Indicators grouped into 5 categories:

- availability of spatial data and services

- DSi1.1, DSi1.2, DSi1.3, DSi1.4, DSi1.5

absolute values

- conformity of metadata

- MDi1.1, MDi1.2

- conformity of spatial data sets

- DSi2, DSi2.1, DSi2.2, DSi2.3

- accessibility of spatial data sets

- NSi2, NSi2.1, NSi2.2

- conformity of network services

- NSi4, NSi4.1, NSi4.2, NSi4.3, NSi4.4

relative values

(percentages)

INSPIRE Geoportal – Rollout

- A new stable version of the GeoNetwork backend was delivered last week:
 - updated to GeoNetwork v4.2.6
 - resolution of some vulnerabilities (Known CVE ones + findings from JRC security assessment)
 - upgraded cloud server to address performance issues
- Rollout of the new Geoportal (new UI including browsing by HVD)
- It will be used for the Monitoring and Reporting process
- Still experiencing issues harvesting the endpoints from 5 countries
 - reasons: endpoint unavailability, not supporting POST requests, etc.
 - JRC will contact ad-hoc these countries from next week

INSPIRE Reference Validator – v.2023.3

v2023.3 - 18/09/2023 Latest

The version published at this time contains non-breaking changes related to the INSPIRE Reference Validator.

Bugfixes

- [#823](#) SNI Error validating services
- [#642](#) Problem with the test case "OpenSearch Description Query examples for each dataset" of predefined-ATOM - [#815](#)

Validator UI

- [#47](#) Remove beta instance entry from the menu

Deployment instructions

The section containing the deployment process using Docker image and troubleshooting section. You can also find these in the [training material](#)

```
docker login docker.pkg.github.com
#Provide Github credentials
docker run --name inspire-validator -d -p 8090:8090 -v ~/etf:/etf docker.pkg.github.com/inspire-mif/helpdesk-validator:latest
#Launches a container with the image, exposing the UI in port 8090 through the same port in the host machine, and u
```

<https://github.com/INSPIRE-MIF/helpdesk-validator/releases/tag/v2023.3>

Calculation of indicators using the Validator

- Indicator MDi1.1:
 - percentage of metadata for spatial data sets conformant with Commission Regulation (EC) No 1205/2008 as regards metadata
 - metadata filtered as:
 - `<gmd:hierarchyLevel>/<gmd:MD_ScopeCode>` with codelist value `dataset` or `series`

- Metadata
- View Service
- Download Service
- Discovery Service
- Data set

Select the Technical Guidelines version

- Version 1.3 - DEPRECATED
- Version 2.0

Select the type of metadata record(s) to be tested

- Data sets and data set series
- Network Service
- Spatial Data Service

Advanced options ^

Select the conformance classes to be assessed

- Common Requirements for ISO/TC 19139:2007 based INSPIRE metadata records ([source](#))
- Conformance Class 1: 'Baseline metadata for data sets and data set series' ([source](#))
- Conformance Class 2: 'INSPIRE data sets and data set series interoperability metadata' ([source](#))
- Conformance Class 2b: 'INSPIRE data sets and data set series metadata for Monitoring' ([source](#))
- Conformance Class 2c: 'INSPIRE data sets and data set series metadata for IACS' ([source](#))

<http://inspire.ec.europa.eu/validator>

Calculation of indicators using the Validator

- Indicator MDi1.2:
 - percentage of metadata for spatial data services conformant with Commission Regulation (EC) No 1205/2008 as regards metadata
 - metadata filtered as:
 - `<gmd:hierarchyLevel>/<gmd:MD_ScopeCode>` with codelist value `service`
 - `<srv:serviceType>/<gco:LocalName>` with value `view`, `download`, `discovery` or `transformation` for Network Services

- Metadata
- View Service
- Download Service
- Discovery Service
- Data set

Select the Technical Guidelines version

- Version 1.3 - DEPRECATED
- Version 2.0

Select the type of metadata record(s) to be tested

- Data sets and data set series
- Network Service
- Spatial Data Service

Advanced options ^

Select the conformance classes to be assessed

- Common Requirements for ISO/TC 19139:2007 based INSPIRE metadata records ([source](#))
- Conformance Class 3: 'INSPIRE Spatial Data Service baseline metadata' ([source](#))
- Conformance Class 4: 'INSPIRE Network Services' ([source](#))

<http://inspire.ec.europa.eu/validator>

Calculation of indicators using the Validator

- Indicator MDi1.2:
 - percentage of metadata for spatial data services conformant with Commission Regulation (EC) No 1205/2008 as regards metadata
 - metadata filtered as:
 - `<gmd:hierarchyLevel>/<gmd:MD_ScopeCode>` with codelist value `service`
 - `<srv:serviceType>/<gco:LocalName>` with value `other` for Invocable Spatial Data Services

- Metadata
- View Service
- Download Service
- Discovery Service
- Data set

Select the Technical Guidelines version

- Version 1.3 - DEPRECATED
- Version 2.0

Select the type of metadata record(s) to be tested

- Data sets and data set series
- Network Service
- Spatial Data Service

Advanced options ^

Select the conformance classes to be assessed

- Common Requirements for ISO/TC 19139:2007 based INSPIRE metadata records ([source](#))
- Conformance Class 3: 'INSPIRE Spatial Data Service baseline metadata' ([source](#))
- Conformance Class 5: INSPIRE Invocable Spatial Data Services metadata' ([source](#))
- Conformance Class 6: 'INSPIRE Interoperable Spatial Data Services metadata' ([source](#))
- Conformance Class 7: 'INSPIRE Harmonised Spatial Data Services metadata' ([source](#))

<http://inspire.ec.europa.eu/validator>

Bulk validation tool for metadata

- Allows to perform **massive validation of metadata** using any instance of the INSPIRE Reference Validator:
 - used to **automate validation** using the INSPIRE Reference Validator API
 - **v.2021.1.0** released on 5 October 2021
 - **open source** under EUPL v.1.2
 - to be used with **your own instance of the Validator** (NOT the central INSPIRE one)!

Bulk processing tool for the INSPIRE Reference Validator

This software tool allows for validation of large numbers of metadata records using the API of the **INSPIRE Reference Validator**. It was developed to support INSPIRE Monitoring & Reporting activities. The tool was built with **Pentaho Data Integration Community Edition** platform which is required to use it.

<https://github.com/inspire-eu-validation/monitoring-bulk-validation-tool>

Conclusions & Recommendations

- 2023 is **no longer a transitional year**
 - second M&R edition using the new GeoNetwork-based Geoportal, the first using the recently-released stable/final version
 - improved transparency and reproducibility of results
- Make sure to:
 - **provide feedback** (both positive and negative)
 - be ready to **accept the change**
- For indicators whose values are self-declared (**conformity of datasets and services**):
 - use the INSPIRE Reference Validator to check conformity
 - we will make an **a posteriori assessment**
- Overall: do not focus on numbers, but on the actual usability of the infrastructure!

Thank you!



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