



# Main results of the INSPIRE Monitoring and Reporting exercise for reference year 2021

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*15<sup>th</sup> MIG meeting – March 31, 2022*

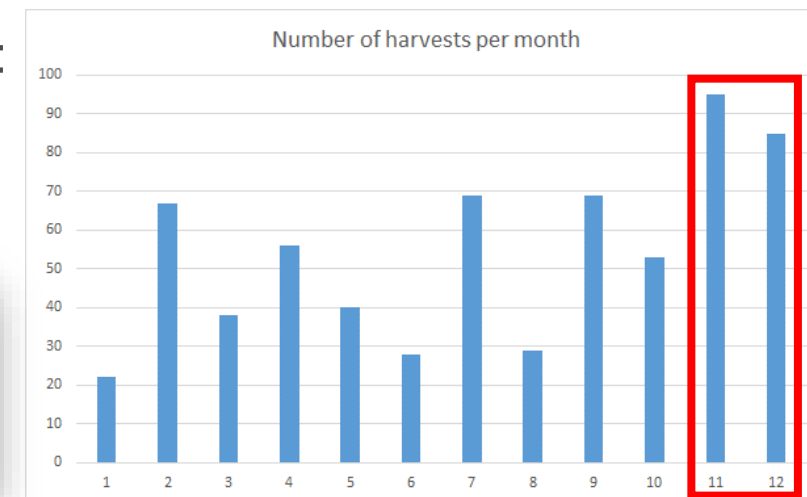
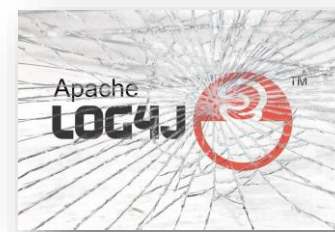
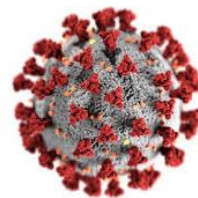
# Context & Preparation

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- 2021 was a transitional year:
  - from 2022 onwards, the INSPIRE Geoportal backend will be substituted with GeoNetwork
  - improved transparency and reproducibility of the results
  - parallel processing of Member States catalogues with the old and new approach

# Context & preparation

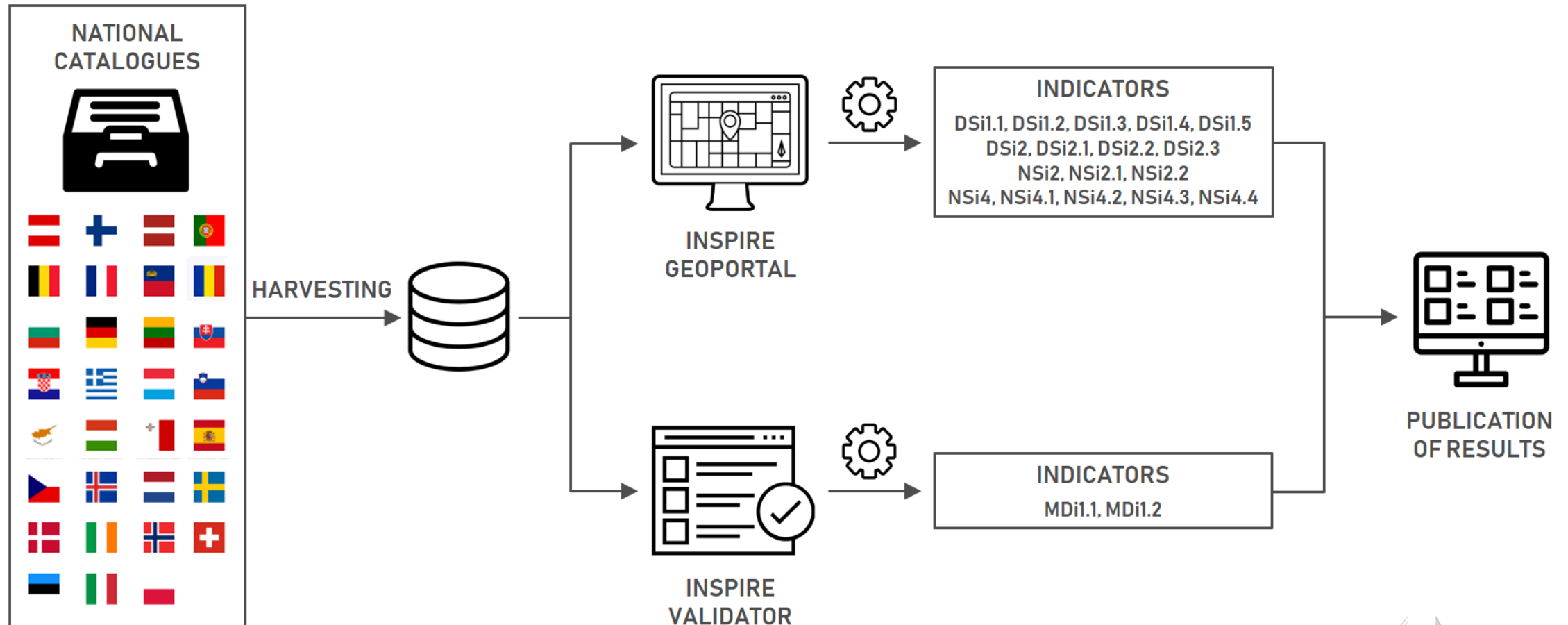
- 2021 was a transitional year:
  - from 2022 onwards, the INSPIRE Geoportal backend will be substituted with GeoNetwork
  - improved transparency and reproducibility of the results
  - parallel processing of Member States catalogues with the old and new approach
- JRC preparation to the 2021 Monitoring and Reporting was not easy:
  - Log4Shell vulnerability discovered on November 24
  - Covid-19 impact on the team
  - Pressure from the Geoportal helpdesk & harvest console:
    - 34% of all 2021 issues opened in Nov-Dec, 53% of all 2021 issues opened in Jan-Feb & Nov-Dec
    - 180 harvest requests in Nov-Dic



# Process, Indicators & Results

# Monitoring and Reporting 2021 – Process

- Overall process:



# Monitoring and Reporting 2021 – 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

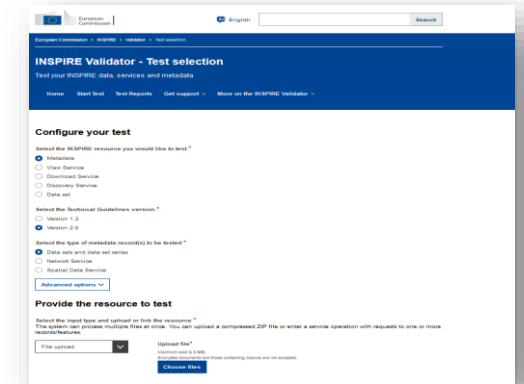
- accessibility of spatial data sets

- NSi2, NSi2.1, NSi2.2

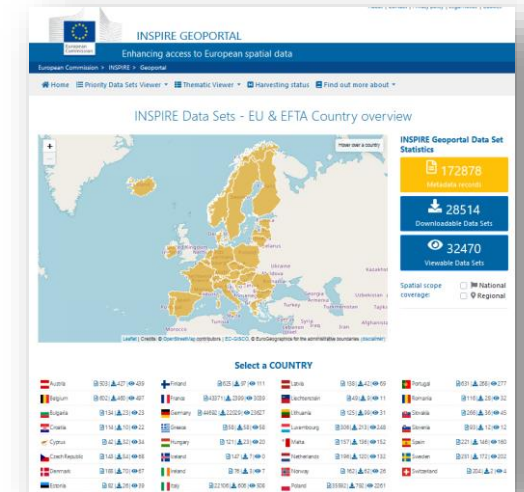
- conformity of network services

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

**INSPIRE  
Reference  
Validator**  
(metadata  
validation)



**INSPIRE  
Geoportal**  
(linkages check)



# Monitoring and Reporting 2021 – 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)



# Monitoring and Reporting 2021 – Results

- Median values of all indicators in the years 2019-2021:
  - overall a huge improvement!

**calculated automatically (Validator)**

YEAR	DSi1.1	DSi1.2	DSi1.3	DSi1.4	DSi1.5
2019	164	142	47	0	74
2020	161	182	51	0	94
2021	167	192	55	2	109

availability of spatial data and services

YEAR	MDi1.1	MDi1.2
2019	38%	38%
2020	55%	67%
2021	78%	92%

conformity of metadata

YEAR	DSi2	DSi2.1	DSi2.2	DSi2.3
2019	38%	73%	33%	35%
2020	43%	75%	47%	38%
2021	70%	87%	67%	62%

conformity of spatial data sets

**calculated automatically (Geoportal)**

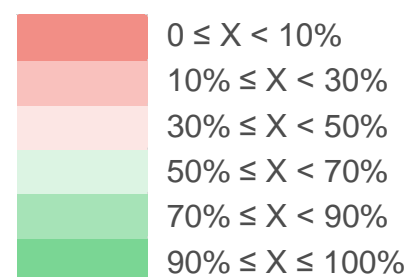
YEAR	NSi2	NSi2.1	NSi2.2
2019	16%	32%	20%
2020	32%	44%	42%
2021	45%	57%	54%

accessibility of spatial data sets

YEAR	NSi4	NSi4.1	NSi4.2	NSi4.3	NSi4.4
2019	49%	50%	46%	51%	0%
2020	71%	67%	67%	83%	0%
2021	92%	100%	94%	92%	100%

conformity of network services

# Overall results – 2021 performance

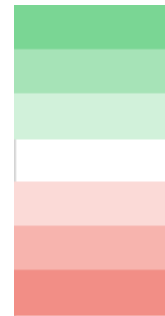


country	DSi1.1	DSi1.2	DSi1.3	DSi1.4	DSi1.5	MDi1.1	MDi1.2	DSi2	DSi2.1	DSi2.2	DSi2.3	NSi2	NSi2.1	NSi2.2	NSi4	NSi4.1	NSi4.2	NSi4.3	NSi4.4
AT	522	596	135	262	258	98%	99%	77%	89%	81%	71%	50%	87%	56%	97%	100%	96%	97%	#N/A
BE	597	242	283	498	85	93%	64%	70%	95%	67%	66%	61%	88%	65%	92%	83%	92%	92%	#N/A
BG	174	35	130	55	109	41%	60%	98%	100%	100%	99%	48%	48%	52%	0%	0%	0%	0%	#N/A
CH	212	33	0	0	7	0%	0%	2%	6%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	42	61	11	0	0	0%	0%	2%	0%	25%	0%	0%	0%	62%	0%	#N/A	0%	0%	#N/A
CZ	90	192	33	12	78	56%	93%	48%	95%	91%	21%	50%	66%	79%	96%	100%	96%	96%	100%
DE	77193	117891	209	2879	167	71%	94%	74%	57%	60%	74%	60%	66%	63%	99%	100%	98%	99%	#N/A
DK	196	234	61	0	194	62%	57%	61%	95%	63%	57%	24%	51%	29%	95%	100%	94%	96%	#N/A
EE	85	114	23	0	85	95%	73%	100%	100%	100%	100%	55%	65%	55%	96%	100%	94%	98%	#N/A
EL	60	21	55	0	36	97%	100%	3%	40%	#N/A	0%	98%	98%	98%	5%	100%	0%	0%	#N/A
ES	243	301	92	50	180	93%	98%	100%	100%	100%	100%	43%	79%	45%	100%	100%	100%	100%	#N/A
FI	646	205	35	177	153	55%	44%	23%	14%	14%	30%	9%	36%	15%	55%	0%	55%	55%	#N/A
FR	224	56	146	11	101	2%	27%	78%	84%	92%	75%	4%	10%	25%	7%	0%	9%	0%	#N/A
HR	147	224	18	22	98	96%	94%	97%	100%	100%	95%	26%	65%	28%	92%	100%	90%	97%	#N/A
HU	120	63	21	0	9	0%	0%	39%	46%	37%	43%	8%	11%	13%	13%	50%	7%	11%	#N/A
IE	79	21	42	0	79	99%	100%	100%	100%	100%	100%	53%	56%	54%	100%	100%	100%	100%	#N/A
IS	91	27	5	2	86	98%	96%	55%	67%	71%	38%	0%	0%	40%	0%	#N/A	0%	0%	#N/A
IT	4942	1920	236	3168	833	99%	99%	30%	33%	22%	28%	5%	10%	13%	3%	25%	3%	3%	0%
LI	70	3	0	0	51	1%	0%	11%	87%	16%	7%	13%	17%	16%	50%	#N/A	100%	0%	#N/A
LT	132	130	109	0	132	96%	100%	98%	97%	100%	99%	45%	45%	95%	100%	100%	100%	100%	#N/A
LU	309	59	94	0	309	100%	100%	72%	100%	94%	62%	80%	86%	91%	100%	100%	100%	100%	#N/A
LV	167	258	73	0	0	0%	0%	75%	77%	64%	81%	33%	59%	37%	3%	#N/A	5%	2%	#N/A
MT	150	152	48	0	150	99%	99%	100%	100%	100%	100%	99%	100%	99%	100%	100%	100%	100%	#N/A
NL	203	342	59	0	175	56%	65%	50%	65%	67%	42%	55%	67%	58%	94%	100%	94%	94%	#N/A
NO	144	238	14	2	142	1%	0%	10%	11%	11%	8%	15%	19%	46%	15%	100%	16%	14%	#N/A
PL	147	244	55	0	146	100%	100%	94%	100%	50%	92%	50%	54%	56%	97%	100%	95%	99%	#N/A
PT	505	508	149	208	201	100%	97%	50%	63%	49%	49%	57%	79%	66%	69%	#N/A	75%	62%	#N/A
RO	103	76	27	15	88	40%	87%	42%	70%	31%	34%	18%	21%	20%	90%	100%	94%	85%	#N/A
SE	242	215	60	9	240	78%	86%	100%	100%	100%	99%	79%	90%	83%	100%	100%	100%	100%	100%
SI	91	128	9	0	77	69%	92%	88%	100%	79%	90%	1%	57%	9%	98%	#N/A	95%	100%	#N/A
SK	213	367	59	10	180	100%	98%	15%	18%	9%	15%	62%	75%	65%	24%	100%	24%	23%	100%

# Overall results: Absolute number indicators

## Comparison vs. 2020

country	DSi1.1	DSi1.2	DSi1.3	DSi1.4	DSi1.5
AT	522	596	135	262	258
BE	597	242	283	498	85
BG	174	35	130	55	109
CH	212	33	0	0	7
CY	42	61	11	0	0
CZ	90	192	33	12	78
DE	77193	117891	209	2879	167
DK	196	234	61	0	194
EE	85	114	23	0	85
EL	60	21	55	0	36
ES	243	301	92	50	180
FI	646	205	35	177	153
FR	224	56	146	11	101
HR	147	224	18	22	98
HU	120	63	21	0	9
IE	79	21	42	0	79
IS	91	27	5	2	86
IT	4942	1920	236	3168	833
LI	70	3	0	0	51
LT	132	130	109	0	132
LU	309	59	94	0	309
LV	167	258	73	0	0
MT	150	152	48	0	150
NL	203	342	59	0	175
NO	144	238	14	2	142
PL	147	244	55	0	146
PT	505	508	149	208	201
RO	103	76	27	15	88
SE	242	215	60	9	240
SI	91	128	9	0	77
SK	213	367	59	10	180

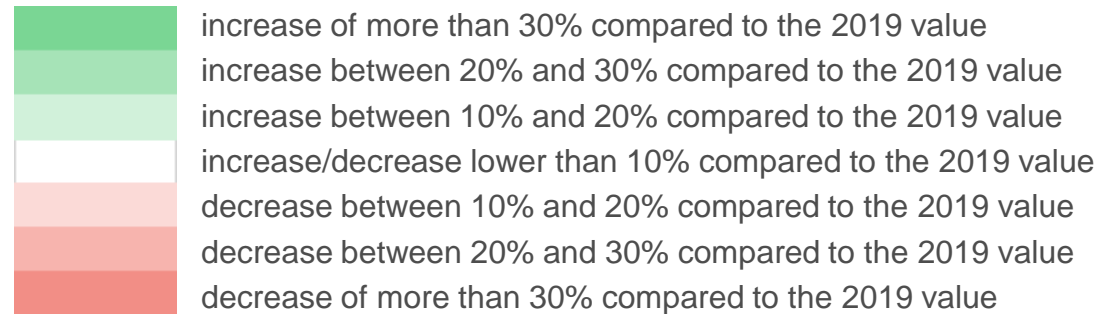


increase of more than 30% compared to the 2020 value  
 increase between 20% and 30% compared to the 2020 value  
 increase between 10% and 20% compared to the 2020 value  
 increase/decrease lower than 10% compared to the 2020 value  
 decrease between 10% and 20% compared to the 2020 value  
 decrease between 20% and 30% compared to the 2020 value  
 decrease of more than 30% compared to the 2020 value

# Overall results: Absolute number indicators

## Comparison vs. 2019

country	DSi1.1	DSi1.2	DSi1.3	DSi1.4	DSi1.5
AT	522	596	135	262	258
BE	597	242	283	498	85
BG	174	35	130	55	109
CH	212	33	0	0	7
CY	42	61	11	0	0
CZ	90	192	33	12	78
DE	77193	117891	209	2879	167
DK	196	234	61	0	194
EE	85	114	23	0	85
EL	60	21	55	0	36
ES	243	301	92	50	180
FI	646	205	35	177	153
FR	224	56	146	11	101
HR	147	224	18	22	98
HU	120	63	21	0	9
IE	79	21	42	0	79
IS	91	27	5	2	86
IT	4942	1920	236	3168	833
LI	70	3	0	0	51
LT	132	130	109	0	132
LU	309	59	94	0	309
LV	167	258	73	0	0
MT	150	152	48	0	150
NL	203	342	59	0	175
NO	144	238	14	2	142
PL	147	244	55	0	146
PT	505	508	149	208	201
RO	103	76	27	15	88
SE	242	215	60	9	240
SI	91	128	9	0	77
SK	213	367	59	10	180





# Overall results: Relative number indicators

## Comparison vs. 2020

increase of more than 10 percentage points compared to 2020  
 increase/decrease of less than 10 percentage points compared to 2020  
 decrease of more than 10 percentage points compared to 2020

country	MDi1.1	MDi1.2	DSi2	DSi2.1	DSi2.2	DSi2.3	NSi2	NSi2.1	NSi2.2	NSi4	NSi4.1	NSi4.2	NSi4.3	NSi4.4
AT	98%	99%	77%	89%	81%	71%	50%	87%	56%	97%	100%	96%	97%	#N/A
BE	93%	64%	70%	95%	67%	66%	61%	88%	65%	92%	83%	92%	92%	#N/A
BG	41%	60%	98%	100%	100%	99%	48%	48%	52%	0%	0%	0%	0%	#N/A
CH	0%	0%	2%	6%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	0%	0%	2%	0%	25%	0%	0%	0%	62%	0%	#N/A	0%	0%	#N/A
CZ	56%	93%	48%	95%	91%	21%	50%	66%	79%	96%	100%	96%	96%	100%
DE	71%	94%	74%	57%	60%	74%	60%	66%	63%	99%	100%	98%	99%	#N/A
DK	62%	57%	61%	95%	63%	57%	24%	51%	29%	95%	100%	94%	96%	#N/A
EE	95%	73%	100%	100%	100%	100%	55%	65%	55%	96%	100%	94%	98%	#N/A
EL	97%	100%	3%	40%	#N/A	0%	98%	98%	98%	5%	100%	0%	0%	#N/A
ES	93%	98%	100%	100%	100%	100%	43%	79%	45%	100%	100%	100%	100%	#N/A
FI	55%	44%	23%	14%	14%	30%	9%	36%	15%	55%	0%	55%	55%	#N/A
FR	2%	27%	78%	84%	92%	75%	4%	10%	25%	7%	0%	9%	0%	#N/A
HR	96%	94%	97%	100%	100%	95%	26%	65%	28%	92%	100%	90%	97%	#N/A
HU	0%	0%	39%	46%	37%	43%	8%	11%	13%	13%	50%	7%	11%	#N/A
IE	99%	100%	100%	100%	100%	100%	53%	56%	54%	100%	100%	100%	100%	#N/A
IS	98%	96%	55%	67%	71%	38%	0%	0%	40%	0%	#N/A	0%	0%	#N/A
IT	99%	99%	30%	33%	22%	28%	5%	10%	13%	3%	25%	3%	3%	0%
LI	1%	0%	11%	87%	16%	7%	13%	17%	16%	50%	#N/A	100%	0%	#N/A
LT	96%	100%	98%	97%	100%	99%	45%	45%	95%	100%	100%	100%	100%	#N/A
LU	100%	100%	72%	100%	94%	62%	80%	86%	91%	100%	100%	100%	100%	#N/A
LV	0%	0%	75%	77%	64%	81%	33%	59%	37%	3%	#N/A	5%	2%	#N/A
MT	99%	99%	100%	100%	100%	100%	99%	100%	99%	100%	100%	100%	100%	#N/A
NL	56%	65%	50%	65%	67%	42%	55%	67%	58%	94%	100%	94%	94%	#N/A
NO	1%	0%	10%	11%	11%	8%	15%	19%	46%	15%	100%	16%	14%	#N/A
PL	100%	100%	94%	100%	50%	92%	50%	54%	56%	97%	100%	95%	99%	#N/A
PT	100%	97%	50%	63%	49%	49%	57%	79%	66%	69%	#N/A	75%	62%	#N/A
RO	40%	87%	42%	70%	31%	34%	18%	21%	20%	90%	100%	94%	85%	#N/A
SE	78%	86%	100%	100%	100%	99%	79%	90%	83%	100%	100%	100%	100%	100%
SI	69%	92%	88%	100%	79%	90%	1%	57%	9%	98%	#N/A	95%	100%	#N/A
SK	100%	98%	15%	18%	9%	15%	62%	75%	65%	24%	100%	24%	23%	100%

# Overall results: Relative number indicators Comparison vs. 2019

increase of more than 10 percentage points compared to 2019  
 increase/decrease of less than 10 percentage points compared to 2019  
 decrease of more than 10 percentage points compared to 2019

country	MDi1.1	MDi1.2	DSi2	DSi2.1	DSi2.2	DSi2.3	NSi2	NSi2.1	NSi2.2	NSi4	NSi4.1	NSi4.2	NSi4.3	NSi4.4
AT	98%	99%	77%	89%	81%	71%	50%	87%	56%	97%	100%	96%	97%	#N/A
BE	93%	64%	70%	95%	67%	66%	61%	88%	65%	92%	83%	92%	92%	#N/A
BG	41%	60%	98%	100%	100%	99%	48%	48%	52%	0%	0%	0%	0%	#N/A
CH	0%	0%	2%	6%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	0%	0%	2%	0%	25%	0%	0%	0%	62%	0%	#N/A	0%	0%	#N/A
CZ	56%	93%	48%	95%	91%	21%	50%	66%	79%	96%	100%	96%	96%	100%
DE	71%	94%	74%	57%	60%	74%	60%	66%	63%	99%	100%	98%	99%	#N/A
DK	62%	57%	61%	95%	63%	57%	24%	51%	29%	95%	100%	94%	96%	#N/A
EE	95%	73%	100%	100%	100%	100%	55%	65%	55%	96%	100%	94%	98%	#N/A
EL	97%	100%	3%	40%	#N/A	0%	98%	98%	98%	5%	100%	0%	0%	#N/A
ES	93%	98%	100%	100%	100%	100%	43%	79%	45%	100%	100%	100%	100%	#N/A
FI	55%	44%	23%	14%	14%	30%	9%	36%	15%	55%	0%	55%	55%	#N/A
FR	2%	27%	78%	84%	92%	75%	4%	10%	25%	7%	0%	9%	0%	#N/A
HR	96%	94%	97%	100%	100%	95%	26%	65%	28%	92%	100%	90%	97%	#N/A
HU	0%	0%	39%	46%	37%	43%	8%	11%	13%	13%	50%	7%	11%	#N/A
IE	99%	100%	100%	100%	100%	100%	53%	56%	54%	100%	100%	100%	100%	#N/A
IS	98%	96%	55%	67%	71%	38%	0%	0%	40%	0%	#N/A	0%	0%	#N/A
IT	99%	99%	30%	33%	22%	28%	5%	10%	13%	3%	25%	3%	3%	0%
LI	1%	0%	11%	87%	16%	7%	13%	17%	16%	50%	#N/A	100%	0%	#N/A
LT	96%	100%	98%	97%	100%	99%	45%	45%	95%	100%	100%	100%	100%	#N/A
LU	100%	100%	72%	100%	94%	62%	80%	86%	91%	100%	100%	100%	100%	#N/A
LV	0%	0%	75%	77%	64%	81%	33%	59%	37%	3%	#N/A	5%	2%	#N/A
MT	99%	99%	100%	100%	100%	100%	99%	100%	99%	100%	100%	100%	100%	#N/A
NL	56%	65%	50%	65%	67%	42%	55%	67%	58%	94%	100%	94%	94%	#N/A
NO	1%	0%	10%	11%	11%	8%	15%	19%	46%	15%	100%	16%	14%	#N/A
PL	100%	100%	94%	100%	50%	92%	50%	54%	56%	97%	100%	95%	99%	#N/A
PT	100%	97%	50%	63%	49%	49%	57%	79%	66%	69%	#N/A	75%	62%	#N/A
RO	40%	87%	42%	70%	31%	34%	18%	21%	20%	90%	100%	94%	85%	#N/A
SE	78%	86%	100%	100%	100%	99%	79%	90%	83%	100%	100%	100%	100%	100%
SI	69%	92%	88%	100%	79%	90%	1%	57%	9%	98%	#N/A	95%	100%	#N/A
SK	100%	98%	15%	18%	9%	15%	62%	75%	65%	24%	100%	24%	23%	100%

# Monitoring and Reporting 2021 – Dashboard

- Landing page:
  - number of data sets, data set series & services for all countries
  - documentation to help understand the results

<https://inspire-geoportal.ec.europa.eu/mr2021.html>



#### Documentation:

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 [↗](#)

Technical Report including guidance for the calculation of indicators and description of the Monitoring process (Chapter 2) [↗](#)

Indicators calculation [↗](#)

Guidance on indicator visualisation in the dashboard [↗](#)

Information on the software used to calculate the indicators [↗](#)

# Monitoring and Reporting 2021 – Dashboard

- Country-specific page:
  - overview statistics: number of data sets, data set series & services, number of conformant & non conformant metadata
  - values of Monitoring and Reporting 2021 indicators

<https://inspire-geoportal.ec.europa.eu/mr2021.html>

Indicators in support of Commission Decision (EU) 2019/1372 implementing Directive 2007/2/EC (INSPIRE) as regards to monitoring and reporting

Croatia 🇪🇺

INSPIRE-697db035-9af0-11e3-8508-52540004b857

MD Catalogue URL: <https://geoportal.nipp.hr/geonetwork/srv/hrv/csw-inspire>  
Endpoint ID: INSPIRE-697db035-9af0-11e3-8508-52540004b857  
The date of harvest metadata: Fri, 17 Dec 2021 21:14:02 GMT

Overview statistics of the harvested metadata

Dataset: 132	Series: 15	Services: 224
--------------	------------	---------------

Results of evaluation using [INSPIRE Reference Validator](#)

Metadata Dataset		Metadata Services	
Conformant: 141	NOT Conformant: 6	Conformant: 211	NOT Conformant: 13

[Click to download the test reports of failed records](#)

Summary of metadata failing validation in [this endpoint](#) (batch file identifier, metadata identifier, metadata type, total number and ids of failed test assertions)  
Summary of metadata failing validation in [all endpoints](#) (see "readme" sheet for details)

### Monitoring Indicators 2021

Availability		Conformity	
Monitoring of the availability of spatial data and service			
147 DSi1.1 ↑	224 DSi1.2 ↑	Monitoring of the conformity of metadata	
18 DSi1.3 ↑		★★★★★ MDI1.1 ↑	★★★★★ MDI1.2 =
22 DSi1.4 ↑	98 DSi1.5 ↑	Monitoring of the conformity of spatial data sets	
★★★★★ DSi2 ↑			
Monitoring of the accessibility of spatial data sets through view and download services		★★★★★ DSi2.1 ↑	★★★★★ DSi2.2 ↑
★★★★★ NSi2 ↑		★★★★★ DSi2.3 ↑	★★★★★ NSi4 ↑
★★★★★ NSi2.1 ↑	★★★★★ NSi2.2 ↑	★★★★★ NSi4.1 ↑	★★★★★ NSi4.2 ↑
		★★★★★ NSi4.3 ↑	Not available NSi4.4 -

[Download the calculated indicators for this country](#)



# Monitoring and Reporting 2021 – Dashboard

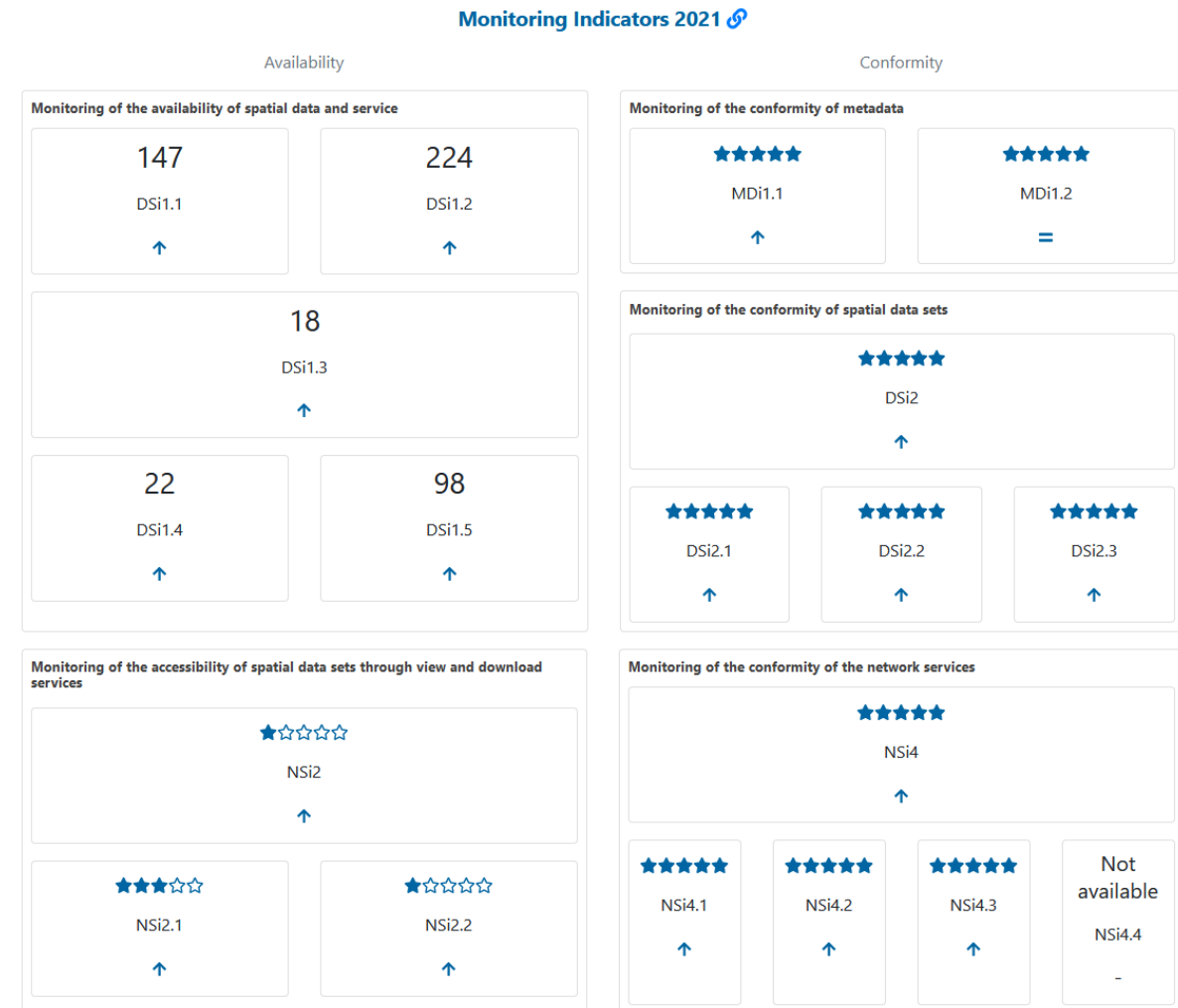
- Visualization of indicators
  - star-based scoring system (for percentage indicators):

- ☆☆☆☆☆  $0 \leq X < 10\%$
- ★☆☆☆☆  $10\% \leq X < 30\%$
- ★★☆☆☆  $30\% \leq X < 50\%$
- ★★★☆☆  $50\% \leq X < 70\%$
- ★★★★☆  $70\% \leq X < 90\%$
- ★★★★★  $90\% \leq X \leq 100\%$

- comparison against 2020 results:

- for relative number indicators:
  - ↑ increase of at least 10%
  - ↓ decrease of at least 10%
  - = increase or decrease of less than 10%
- for absolute number indicators:

same rule but considering 10% of the 2020 values



# Monitoring and Reporting 2021 – Dashboard

- Documentation

- ▼ Notes on calculation of MDi1.1 and MDi1.2

The evaluation of these indicators involves a validation of the collected metadata through the [INSPIRE Reference Validator](#) (v2021.3.1).

All metadata records are validated against the Conformance Classes corresponding to the [INSPIRE MD TG v2.0](#):

- ✓ if the recognized INSPIRE Resource Type is "**dataset**" or "**series**", the applied executable test suites are "**Conformance Class 2: INSPIRE data sets and data set series interoperability metadata**" and "**Conformance Class 2b: INSPIRE data sets and data set series metadata for Monitoring**";
- ✓ if the recognized INSPIRE Resource Type is "**service**", the applied executable test suite is:
  - ✓ "Conformance Class 4: INSPIRE Network Services metadata", if the service is a Network Service (service type equal to "view", "download", "discovery" or "transformation")
  - ✓ "Conformance Class 5: INSPIRE Invocable Spatial Data Services metadata", if the service is an Invocable Spatial Data Service (service type equal to "other")

## Implementing Decision

### Documentation:

[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](#)

[Technical Report including guidance for the calculation of indicators and description of the Monitoring process \(Chapter 2\)](#)

**Technical Report on M&R**

[Indicators calculation](#)

**explanation of how indicators are calculated**

[Guidance on indicator visualisation in the dashboard](#)

**explanation of indicator visualisation**

[Information on the software used to calculate the indicators](#)

**info on the versions of Geoportal & Validator used**

# Results from the metadata validation

Results of evaluation using [INSPIRE Reference Validator](#)

Metadata Dataset	
Conformant: 141	NOT Conformant: 6
<a href="#">Click to download the test reports of failed records</a>	

Metadata Services	
Conformant: 211	NOT Conformant: 13
<a href="#">Click to download the test reports of failed records</a>	

Summary of metadata failing validation in [this endpoint](#) (batch file identifier, metadata identifier, metadata type, total number and ids of failed test assertions)

Summary of metadata failing validation in [all endpoints](#) (see "readme" sheet for details)

**ZIP files including failed reports in HTML and JSON**

# Results from the metadata validation

Results of evaluation using [INSPIRE Reference Validator](#)

## Metadata Dataset

Conformant: 141

NOT Conformant: 6

[Click to download the test reports of failed records](#)

## Metadata Services

Conformant: 211

NOT Conformant: 13

[Click to download the test reports of failed records](#)

Summary of metadata failing validation in [this endpoint](#) (batch file identifier, metadata identifier, metadata type, total number and ids of failed test assertions)

Summary of metadata failing validation in [all endpoints](#) (see "readme" sheet for details)

	A	B	C	D	E	F
1	file_id	md_id	type	error_count	errors	
2	121-140/1	59630bde-6361-4175-8f7b-1791ecfa78cf	dataset	1	1.4	
3	281-300/17	e02e7c33-818a-463e-a565-3847f2b8cb30	dataset	1	2.5	
4	341-360/14	aac1ad8b-4fb3-4bea-803c-64c8a22b33fc	dataset	1	C.16	
5	341-360/2	326ef9d6-78fb-496e-9215-07ae1d96afec	dataset	2	C.1 C.16	
6	361-371/5	eeeba0a6-0fe8-4be3-8392-39851d3f98c3	service	1	C.16	
7	361-371/8	f62e9051-5374-4d1d-89db-522f71839a7f	service	1	C.16	
8	41-60/6	242a54d1-9857-4582-9236-68b69ff8695a	service	2	C.1 C.22	
9	281-300/6	d6892cc7-7c63-4d74-a86e-71a2196f9c16	service	2	C.1 C.22	
10	281-300/12	d9e282b1-d016-4eaf-b2b6-ad7ce2fe528a	service	2	C.1 C.22	
11	341-360/3	368e2919-0bfa-43be-89bd-45e91d047cc3	service	1	C.16	
12	321-340/17	10d86cd3-93d6-4056-906b-01c9bedcf6f0	service	1	C.16	
13	341-360/9	77a3b667-68fd-4250-9b26-8ee62e32046f	service	1	C.16	
14	341-360/12	8079e314-508c-4b8e-83ae-e56b518db50c	service	1	C.16	
15	341-360/5	37473a91-068e-4950-a3cd-8bcc0b453ffd	service	1	C.16	
16	341-360/8	7480a470-c674-46c2-91ee-5f342d967678	service	1	C.16	
17	361-371/3	e81e37e8-3c68-42cf-9e78-9e70fe4f2209	dataset	1	C.16	

# Results from the metadata validation

Results of evaluation using [INSPIRE Reference Validator](#)

Metadata Dataset

Conformant: **141**

NOT Conformant: **6**

[Click to download the test reports of failed records](#)

Metadata Services

Conformant: **211**

NOT Conformant: **13**

[Click to download the test reports of failed records](#)

Summary of metadata failing validation in [this endpoint](#) (batch file identifier, metadata identifier, metadata type, total number and ids of failed test assertions)

Summary of metadata failing validation in [all endpoints](#) (see "readme" sheet for details)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Country	Endpoint ID	md_failed	C.1	C.2	C.5	C.6	C.7	C.8	C.9	C.10	C.11	C.12	C.13	C.14	C.15	C.16	C.17	C.18	C.19	C.20
2	AT	INSPIRE-61494	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
3	BE	INSPIRE-21055	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	BE	INSPIRE-b285f6	28	12	0	0	0	0	0	0	0	0	0	0	0	1	0	3	11	0	0
5	BE	INSPIRE-f5201e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	BE	INSPIRE-f0c917	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0
7	BG	INSPIRE-365cf7	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	CH	INSPIRE-7a076	33	0	0	0	22	0	0	0	3	0	0	0	0	0	5	33	33	0	30
9	CY	INSPIRE-db3ec	61	0	0	61	0	0	0	0	0	0	0	0	0	0	0	61	0	0	0
10	CZ	INSPIRE-16542	14	1	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0
11	DE	INSPIRE-4fed3e	7128	0	0	373	2	0	0	0	2	0	1	21	11	796	36	2435	397	0	12
12	DK	INSPIRE-6e835	101	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
13	EE	INSPIRE-608e4	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	EL	INSPIRE-b4838	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	ES	INSPIRE-c6f329	5	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FI	INSPIRE-f67070	115	23	0	78	26	0	5	5	10	0	0	3	3	5	1	114	18	0	3
17	FR	INSPIRE-e9451	41	0	0	13	2	0	0	0	5	0	0	0	0	9	0	41	15	0	14

# Conclusions & lessons learnt

# General conclusions

- Overall: slight **improvement of results** compared to the 2020 Monitoring and Reporting round and a **significant improvement** compared to the 2019 baseline.
- **Diversity in performance between countries** clearly remains.
- Concerns about the **reliability of indicators on the conformity of datasets and services** (self-declarations).
- Identification of **several issues** and **good practices**.



# Conformity of datasets and services

- Many countries scored values equal or close to 100% for the indicators on the conformity of datasets and services.
- A manual check of the conformity using the INSPIRE Reference Validator revealed values between 0 and 10%:
  - values of those indicators are not reliable
  - the INSPIRE Reference Validator was in general not used to check conformity.

country	MDi1.1	MDi1.2	DSi2	DSi2.1	DSi2.2	DSi2.3	NSi2	NSi2.1	NSi2.2	NSi4	NSi4.1	NSi4.2	NSi4.3	NSi4.4
AT	98%	99%	77%	89%	81%	71%	50%	87%	56%	97%	100%	96%	97%	#N/A
BE	93%	64%	70%	95%	67%	66%	61%	88%	65%	92%	83%	92%	92%	#N/A
BG	41%	60%	98%	100%	100%	99%	48%	48%	52%	0%	0%	0%	0%	#N/A
CH	0%	0%	2%	6%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	0%	0%	2%	0%	25%	0%	0%	0%	62%	0%	#N/A	0%	0%	#N/A
CZ	56%	93%	48%	95%	91%	21%	50%	66%	79%	96%	100%	96%	96%	100%
DE	71%	94%	74%	57%	60%	74%	60%	66%	63%	99%	100%	98%	99%	#N/A
DK	62%	57%	61%	95%	63%	57%	24%	51%	29%	95%	100%	94%	96%	#N/A
EE	95%	73%	100%	100%	100%	100%	55%	65%	55%	96%	100%	94%	98%	#N/A
EL	97%	100%	3%	40%	#N/A	0%	98%	98%	98%	5%	100%	0%	0%	#N/A
ES	93%	98%	100%	100%	100%	100%	43%	79%	45%	100%	100%	100%	100%	#N/A
FI	55%	44%	23%	14%	14%	30%	9%	36%	15%	55%	0%	55%	55%	#N/A
FR	2%	27%	78%	84%	92%	75%	4%	10%	25%	7%	0%	9%	0%	#N/A
HR	96%	94%	97%	100%	100%	95%	26%	65%	28%	92%	100%	90%	97%	#N/A
HU	0%	0%	39%	46%	37%	43%	8%	11%	13%	13%	50%	7%	11%	#N/A
IE	99%	100%	100%	100%	100%	100%	53%	56%	54%	100%	100%	100%	100%	#N/A
IS	98%	96%	55%	67%	71%	38%	0%	0%	40%	0%	#N/A	0%	0%	#N/A
IT	99%	99%	30%	33%	22%	28%	5%	10%	13%	3%	25%	3%	3%	0%
LI	1%	0%	11%	87%	16%	7%	13%	17%	16%	50%	#N/A	100%	0%	#N/A
LT	96%	100%	98%	97%	100%	99%	45%	45%	95%	100%	100%	100%	100%	#N/A
LU	100%	100%	72%	100%	94%	62%	80%	86%	91%	100%	100%	100%	100%	#N/A
LV	0%	0%	75%	77%	64%	81%	33%	59%	37%	3%	#N/A	5%	2%	#N/A
MT	99%	99%	100%	100%	100%	100%	99%	100%	99%	100%	100%	100%	100%	#N/A
NL	56%	65%	50%	65%	67%	42%	55%	67%	58%	94%	100%	94%	94%	#N/A
NO	1%	0%	10%	11%	11%	8%	15%	19%	46%	15%	100%	16%	14%	#N/A
PL	100%	100%	94%	100%	50%	92%	50%	54%	56%	97%	100%	95%	99%	#N/A
PT	100%	97%	50%	63%	49%	49%	57%	79%	66%	69%	#N/A	75%	62%	#N/A
RO	40%	87%	42%	70%	31%	34%	18%	21%	20%	90%	100%	94%	85%	#N/A
SE	78%	86%	100%	100%	100%	99%	79%	90%	83%	100%	100%	100%	100%	100%
SI	69%	92%	88%	100%	79%	90%	1%	57%	9%	98%	#N/A	95%	100%	#N/A
SK	100%	98%	15%	18%	9%	15%	62%	75%	65%	24%	100%	24%	23%	100%



# Issues & good practices

- **Issues** hindering the functionality and performance of the INSPIRE Geoportal:
  - encapsulation of many download services in a single ATOM feed.
  - relevance of URLs (Word, PDF, generic webpages) linked through the Resource Locator
  - availability of INSPIRE discovery services during the harvesting process
- **Good practices** supporting the JRC in the preparation/execution of Monitoring and Reporting:
  - continuous feedback to the INSPIRE Geoportal team on issues detected and rigorous analyses performed at the national level (e.g. DE, BE, AT)
  - regular harvests during the year, without waiting for the annual Monitoring and Reporting deadline to approach (e.g. AT, BE, MT, SE, DK, PL, CZ, ES)

# Thank you!



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