INSPIRE Monitoring and Reporting 2021

JRC INSPIRE Team

14th MIG meeting – November 25, 2021

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INSPIRE Monitoring and Reporting 2021

- Based on Commission Decision 2019/1372:
  - 19 indicators calculated from the metadata of spatial data sets & spatial data services published by Member States through discovery services

DECISIONS

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)

https://eur-lex.europa.eu/eli/dec_impl/2019/1372/oj

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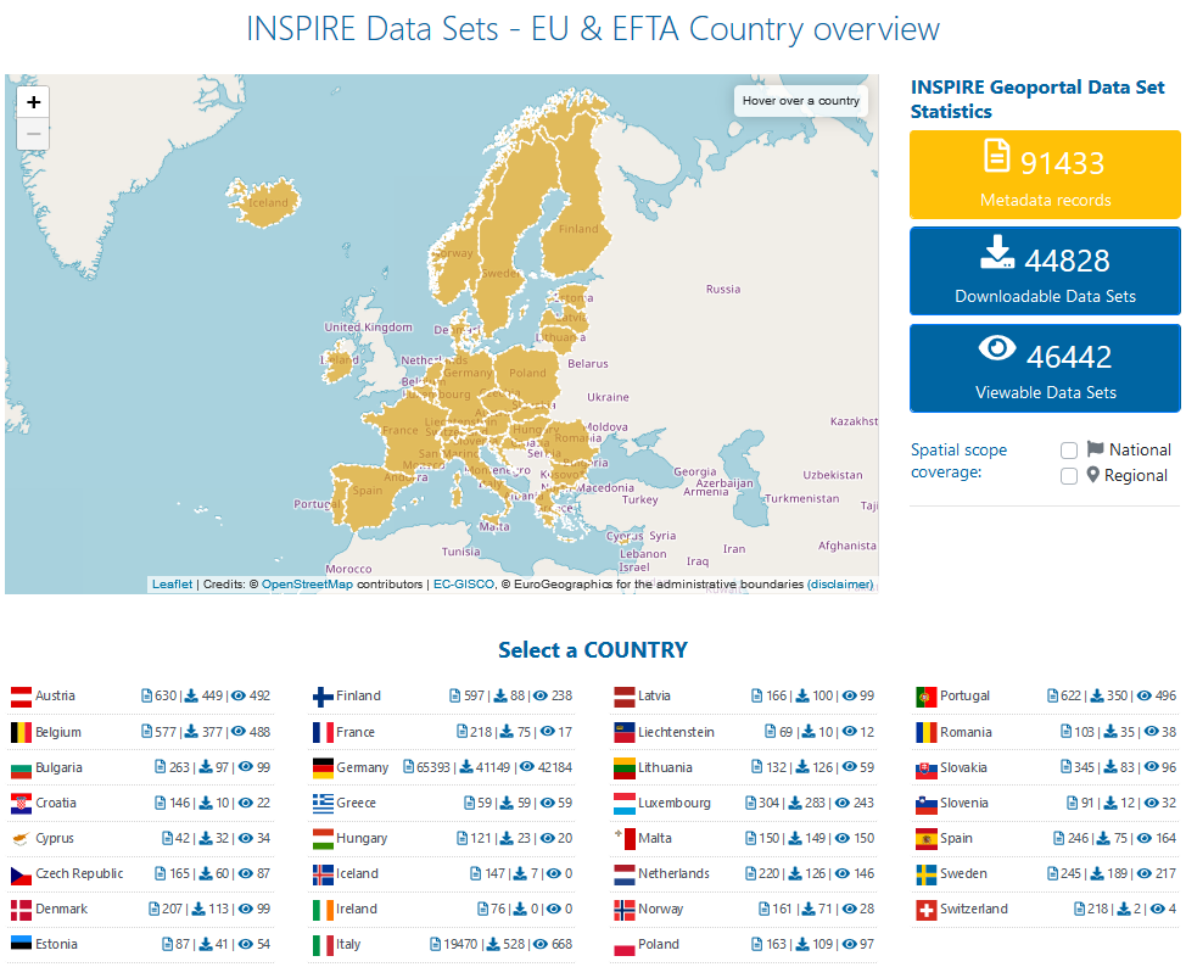
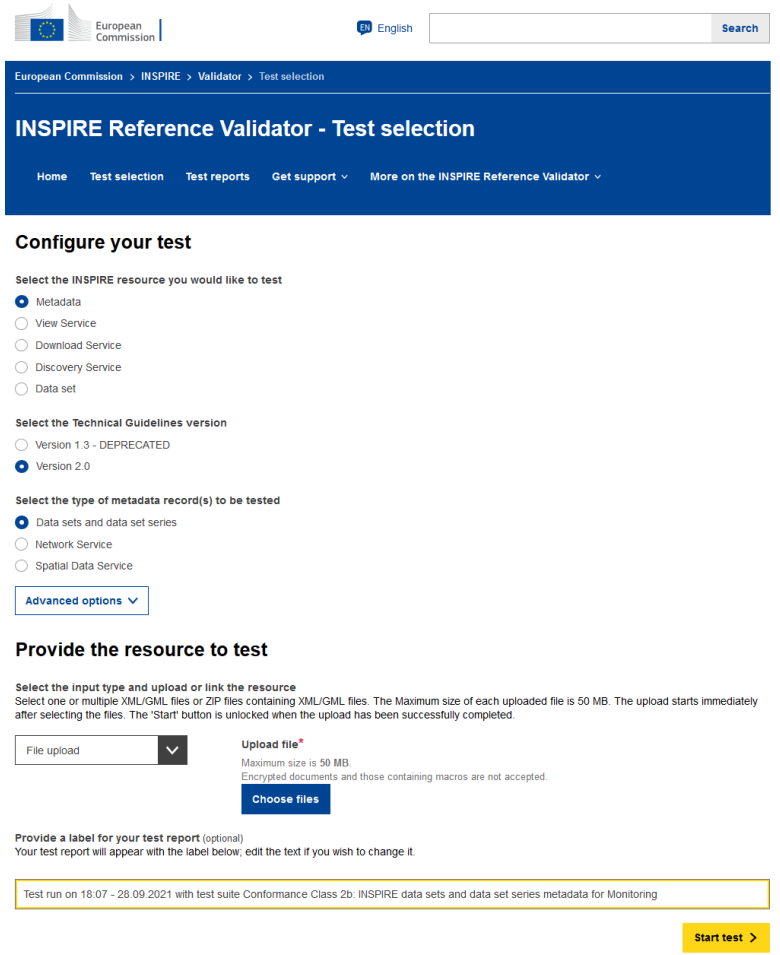
INSPIRE Monitoring and Reporting 2021

- INSPIRE Geoportal



https://inspire-geoportal.ec.europa.eu

- INSPIRE Reference Validator



https://inspire.ec.europa.eu/validator

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

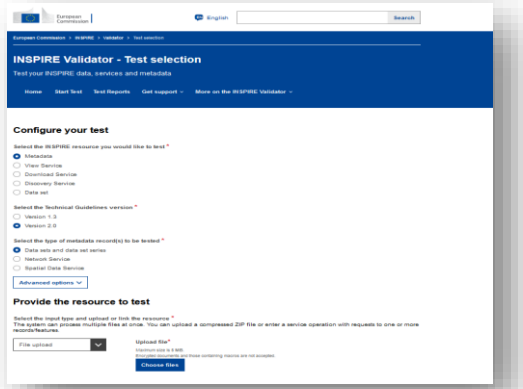
  - conformity of metadata
    - MDi1.1, MDi1.2
  - conformity of spatial data sets
    - DSi2, DSi2.1, DSi2.2, DSi2.3
  - accessibility of spatial data sets
    - NSi2, NSi2.1, NSi2.2
  - conformity of network services
    - NSi4, NSi4.1, NSi4.2, NSi4.3, NSi4.4

relative values
(percentages)

Monitoring and Reporting 2021 – 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)

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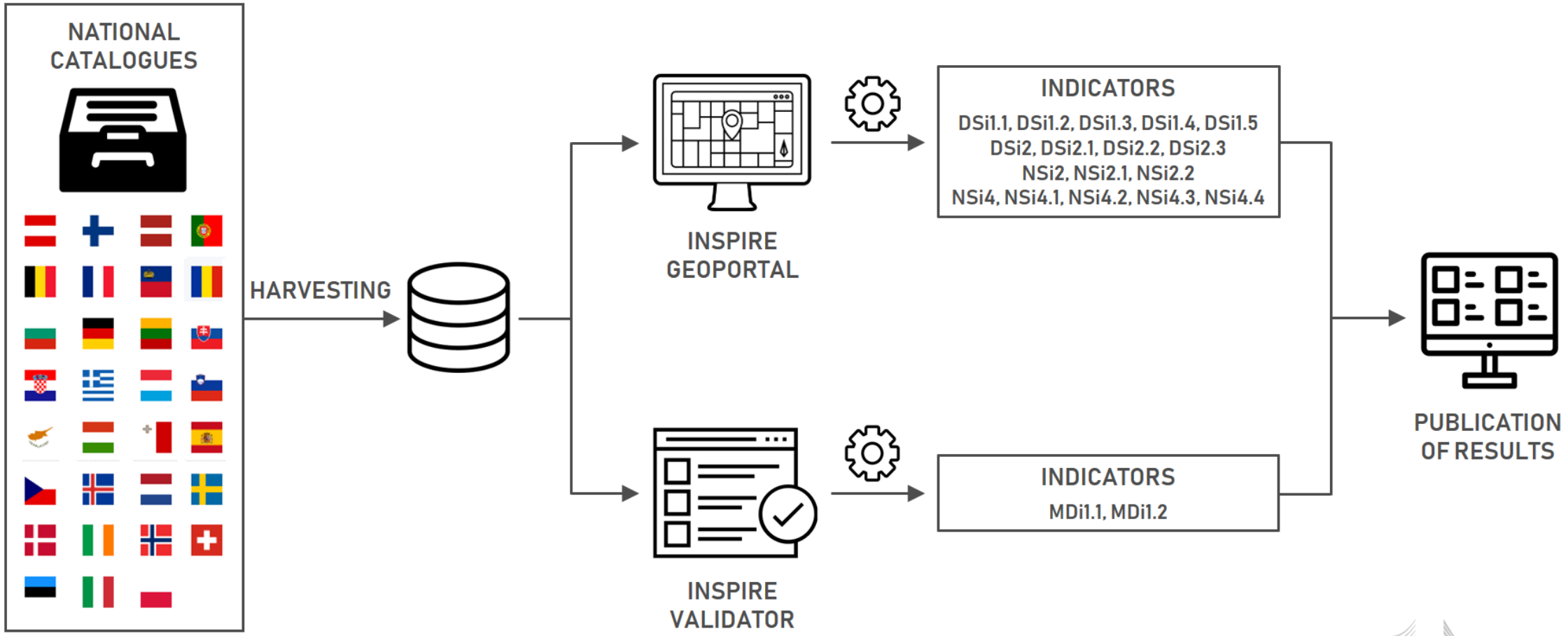
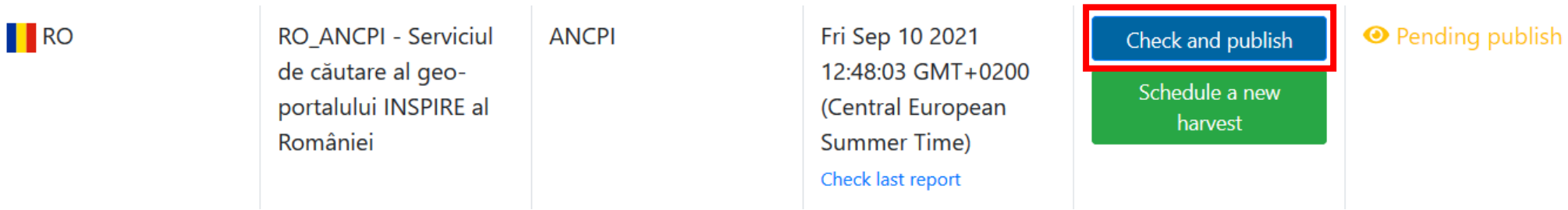
Monitoring and Reporting 2021 – Process

- Overall process:



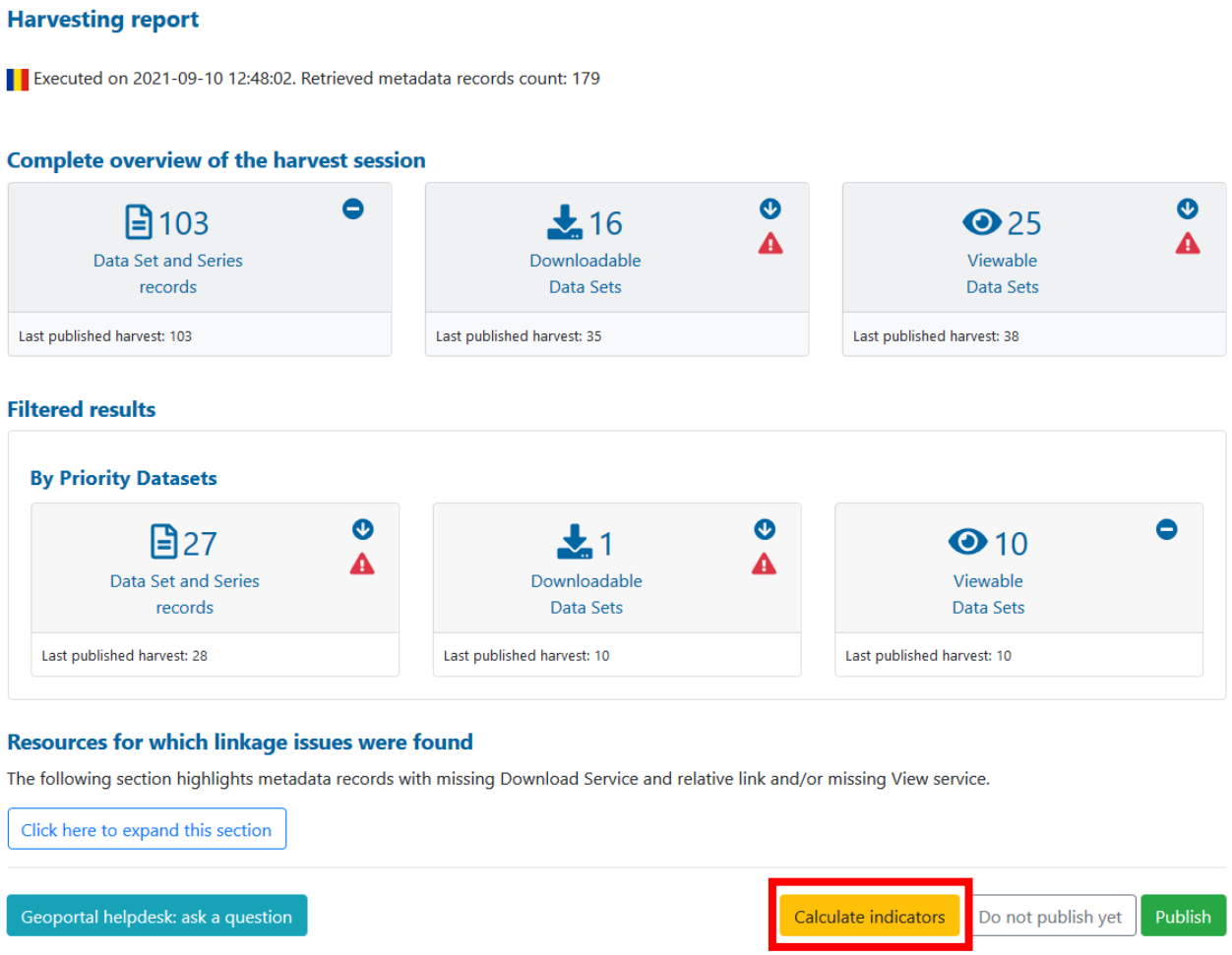
INSPIRE Geoportal – Preparation for Monitoring and Reporting 2021

- Preview of values of the 17 indicators calculated by the Geoportal through the harvest console:



INSPIRE Geoportal – Preparation for Monitoring and Reporting 2021

- Preview of values of the 17 indicators calculated by the Geoportal through the harvest console:



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INSPIRE Geoportal – Preparation for Monitoring and Reporting 2021

- In view of the transition to the new backend, focus is placed on solving the most relevant issues having an impact on Monitoring and Reporting:
  - bugs on the calculation of specific indicators (e.g. DSi2.2 and NSi4.1, reported by BE)
  - issues with harvests (recently reported by DE, EE, PT, AT, SK)
  - prioritisation of issues open in the helpdesk

https://github.com/INSPIRE-MIF/helpdesk-geoportal/issues

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INSPIRE Reference Validator – Releases

Annual releases

As mentioned above, several releases of the INSPIRE Reference Validator are scheduled each year with the main goal of concentrating breaking changes in the first half of the year in order to produce the major release used for the end-of-year Monitoring process already in June. The scheduled annual releases are described in detail in the next sub-sections. In addition to the different infrastructure and deployment environments, the different releases are managed using different branches of the *ets-repository* repository.

For simplicity, the descriptions make explicit reference to releases in the years 2021/2022, but the same release schedule will be applied consistently over the following years:

- **v2021.1 - 15/03/2021**: it includes both breaking and non-breaking changes.
- **v2021.2 - 15/06/2021**: it includes both breaking and non-breaking changes.
- **v2022.b - 15/06/2021**: it includes both breaking and non-breaking changes which are planned to become effective (for Monitoring purposes) in the following year.

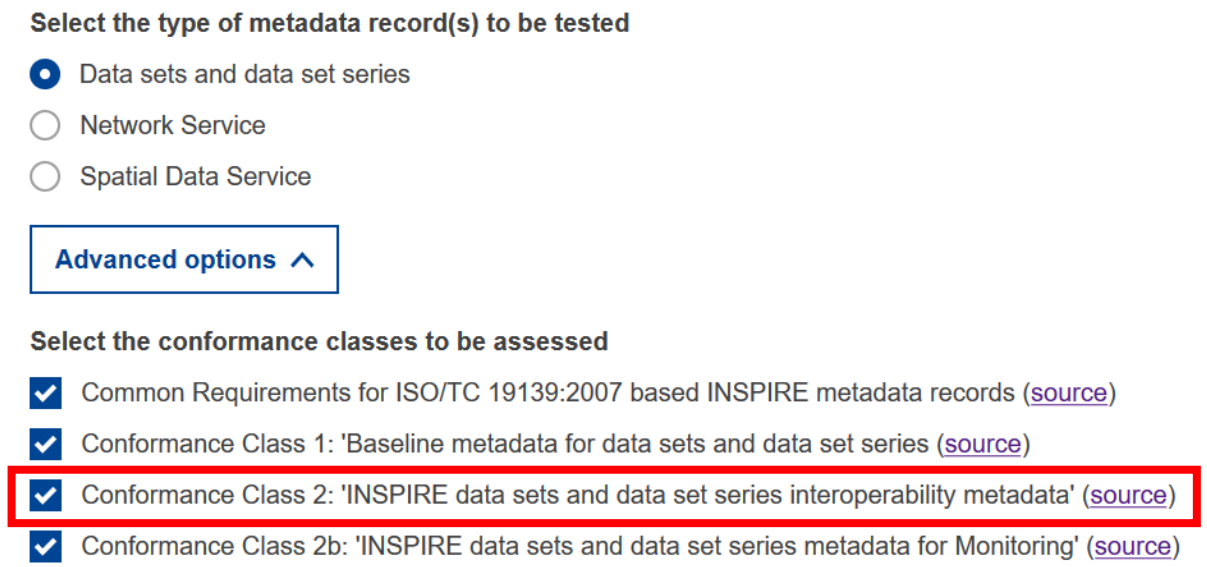
used for Monitoring and Reporting 2021

- **v2021.3 - 15/09/2021**: it only includes non-breaking changes, so that any INSPIRE resource passing the test in the previous release automatically passes the same test in this release. This release is the one used for the end-of-year Monitoring process.
- **v2022.0 - 15/01/2022**: it includes both breaking and non-breaking changes, including those available in the beta instance of the previous year.

https://github.com/INSPIRE-MIF/helpdesk-validator/tree/master/release%20strategy

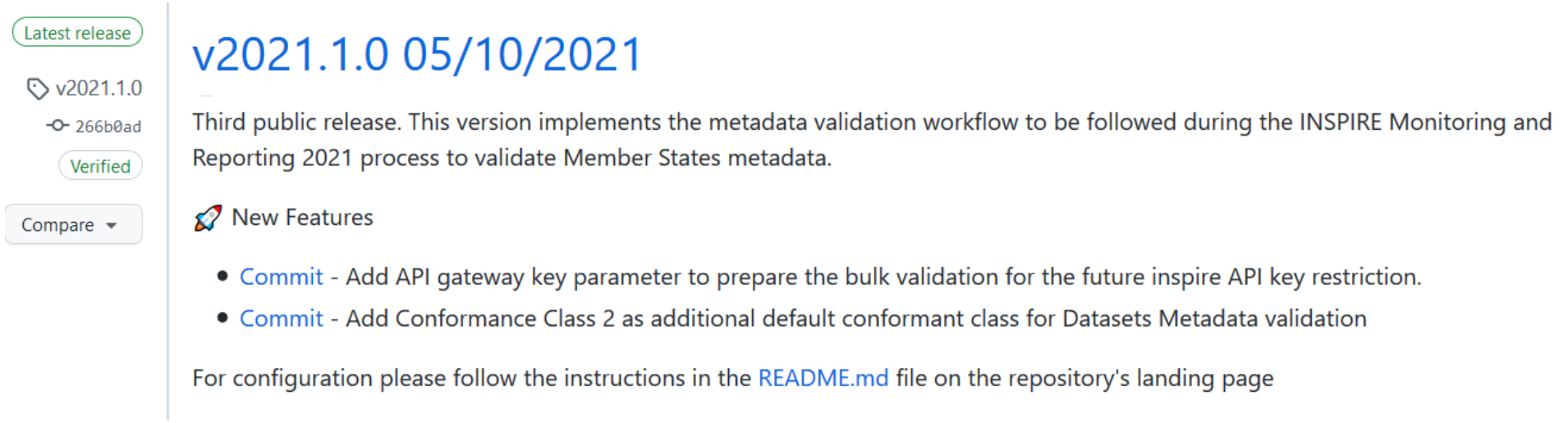
INSPIRE Reference Validator – Preparation for Monitoring and Reporting 2021

- Conformance Class 2 *INSPIRE data sets and data set series interoperability metadata* will be added (compared to last year):
  - included by default when validating data set metadata in the new UI



Bulk validation tool – v.2021.1.0

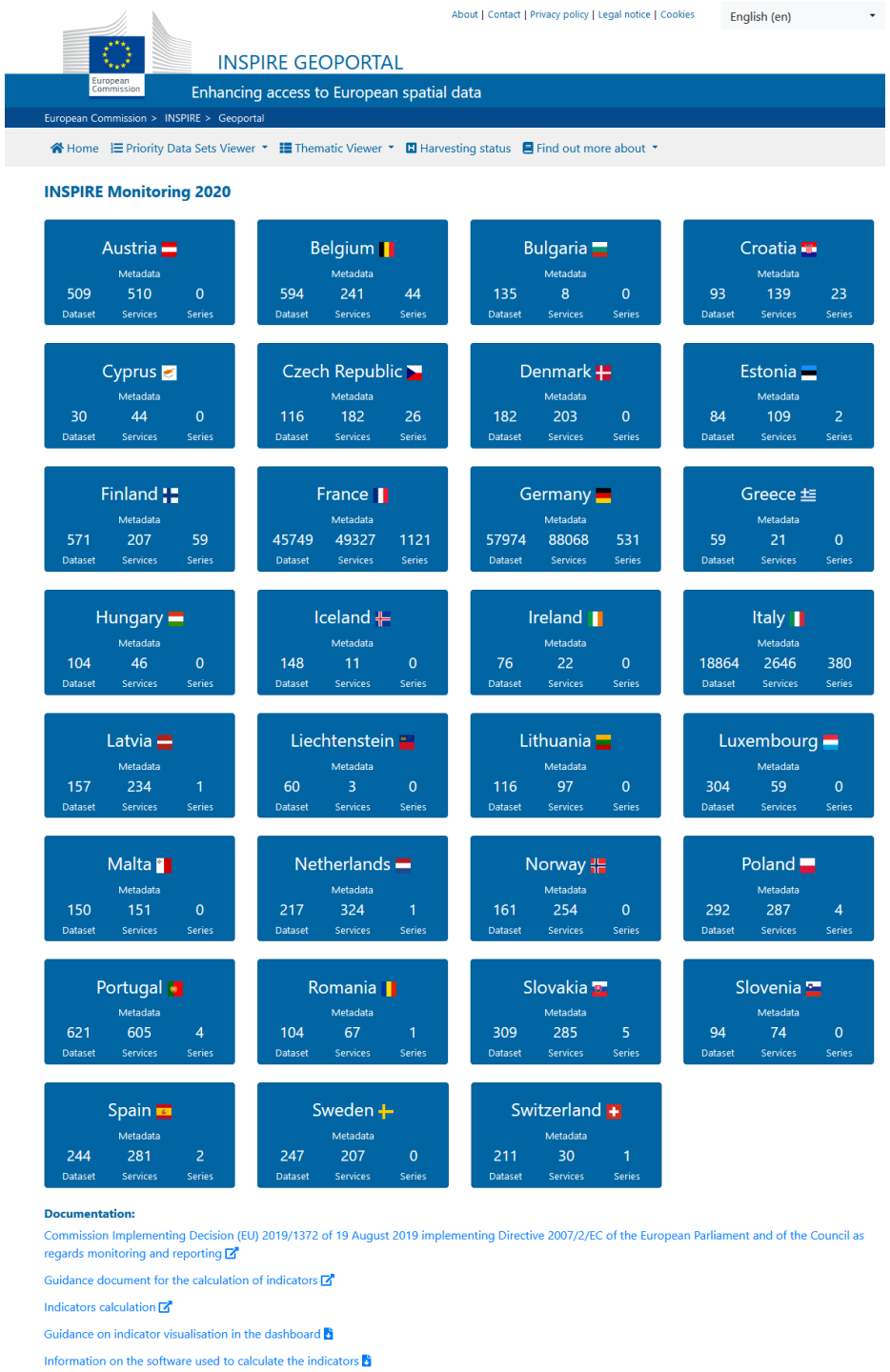
- Allows to validate large numbers of metadata:
  - using the Validator API
  - based on Pentaho Data Integration (PDI)
- New version including the additional Conformance Class 2:
  - to be used with your own instance of the INSPIRE Reference Validator!



https://github.com/inspire-eu-validation/monitoring-bulk-validation-tool/releases/tag/v2021.1.0

Monitoring and Reporting 2020 – Dashboard

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

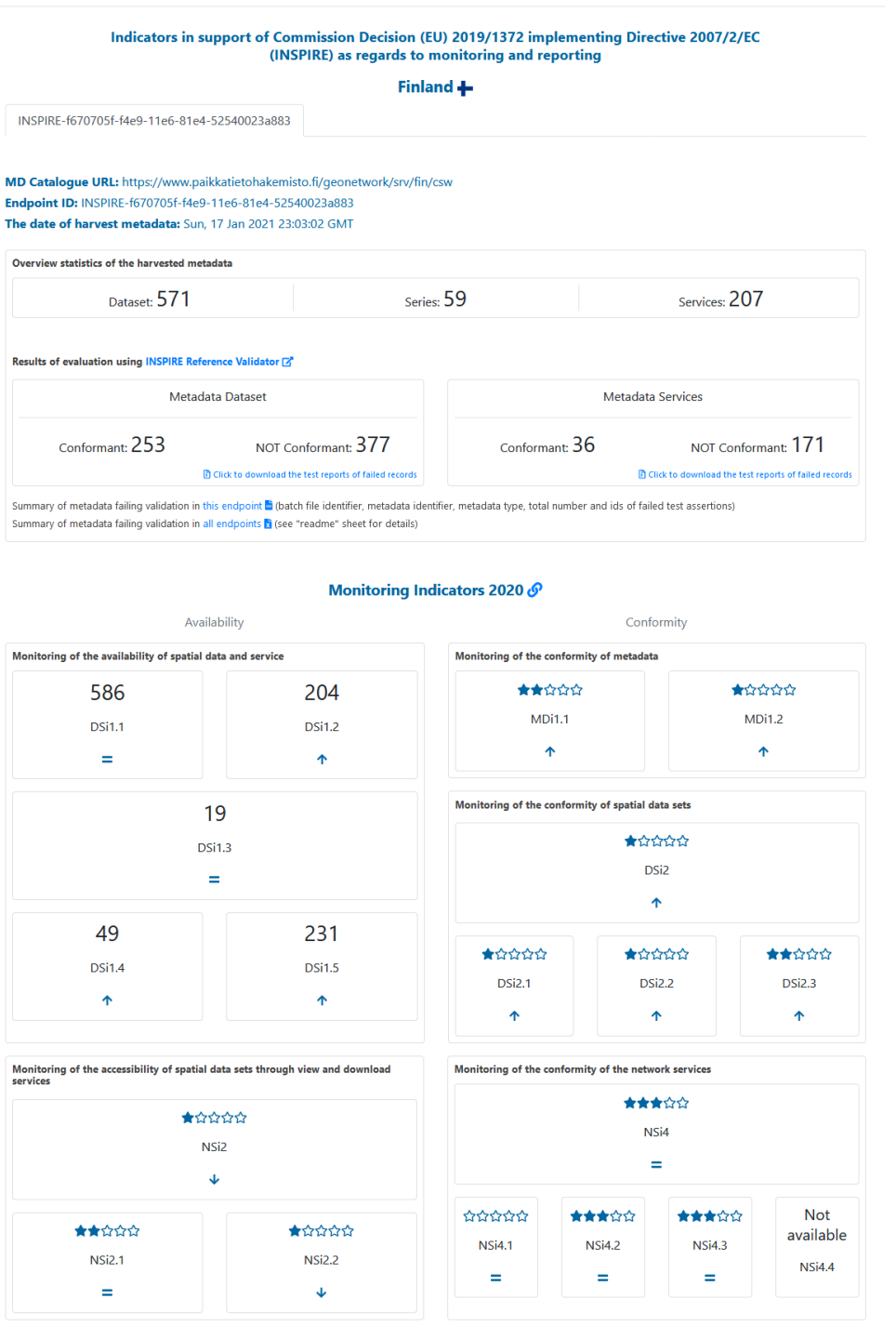


https://inspire-geoportal.ec.europa.eu/mr2020.html

Monitoring and Reporting 2020 – 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 2020 indicators

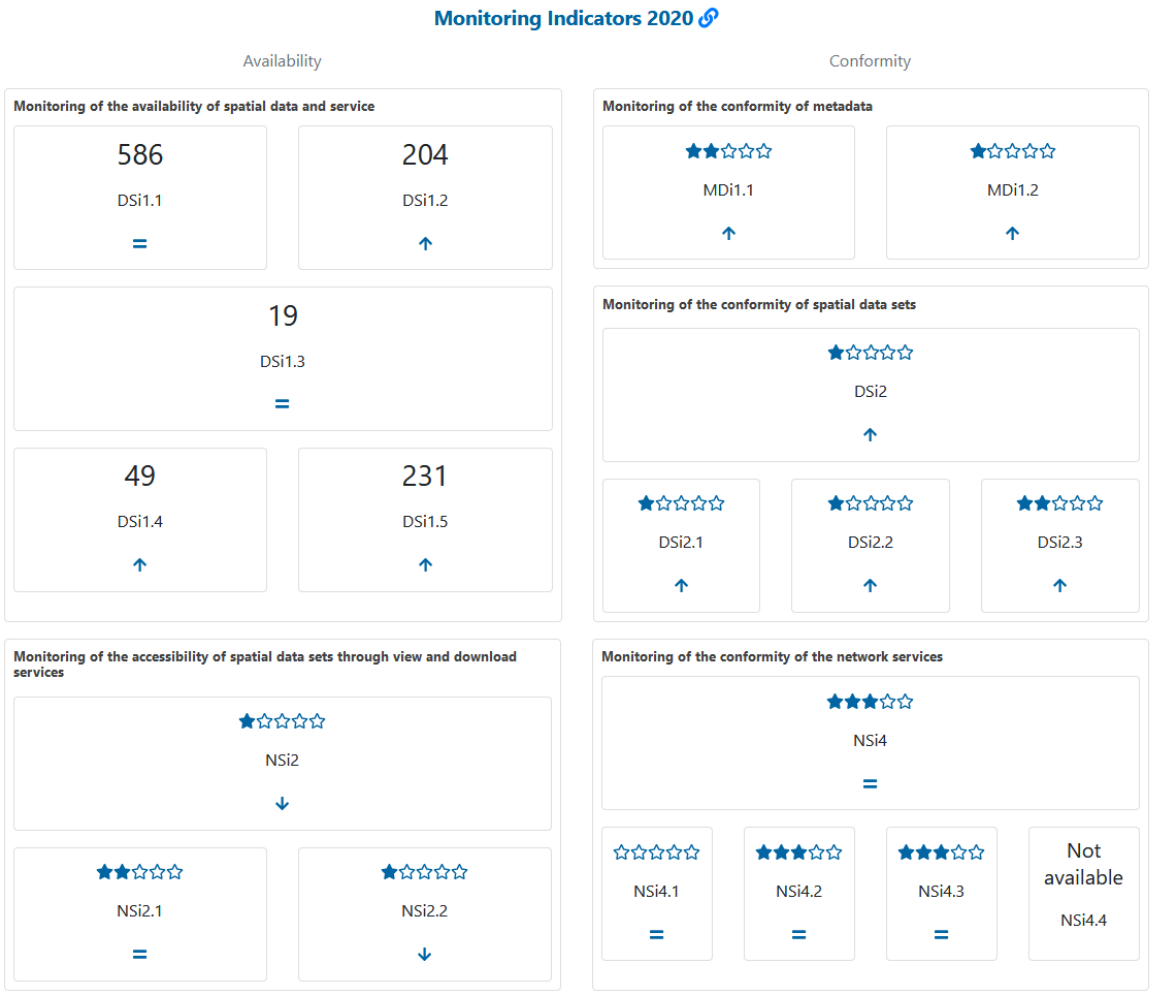
https://inspire-geoportal.ec.europa.eu/mr2020.html



Monitoring and Reporting 2020 – Dashboard

- New visualization of indicators
  - star-based scoring system (for percentage indicators):
    - ☆☆☆☆☆ 0 ≤ X < 10%
    - ★☆☆☆☆ 10% ≤ X < 30%
    - ★★☆☆☆ 30% ≤ X < 50%
    - ★★★☆☆ 50% ≤ X < 70%
    - ★★★★☆ 70% ≤ X < 90%
    - ★★★★★ 90% ≤ X ≤ 100%
  - comparison against 2019 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 2019 values



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Where do we start from – 2020 performance

0 ≤ X < 10%
10% ≤ X < 30%
30% ≤ X < 50%
50% ≤ X < 70%
70% ≤ X < 90%
90% ≤ X ≤ 100%

	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	509	510	137	265	244	95%	92%	66%	75%	69%	61%	83%	93%	85%	93%	100%	89%	97%	#N/A
BE	636	241	355	531	94	86%	49%	62%	95%	22%	65%	86%	89%	90%	88%	67%	89%	88%	#N/A
BG	132	8	115	42	79	0%	0%	85%	82%	11%	97%	58%	60%	58%	50%	50%	100%	0%	#N/A
CH	212	30	0	0	1	0%	0%	2%	7%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	30	44	9	0	0	0%	0%	3%	0%	50%	0%	40%	53%	80%	0%	#N/A	0%	0%	#N/A
CZ	142	182	33	55	84	58%	79%	39%	87%	73%	24%	37%	62%	40%	80%	100%	75%	84%	100%
DE	58504	88068	144	2098	135	19%	80%	55%	58%	50%	55%	61%	64%	63%	98%	100%	98%	99%	#N/A
DK	180	203	48	0	178	63%	99%	52%	95%	38%	48%	32%	44%	40%	91%	#N/A	89%	92%	#N/A
EE	86	109	24	0	86	100%	100%	100%	100%	100%	100%	42%	56%	42%	96%	0%	94%	100%	#N/A
EL	59	21	54	0	35	98%	100%	3%	40%	#N/A	0%	100%	100%	100%	5%	100%	0%	0%	#N/A
ES	246	281	91	47	181	96%	98%	68%	93%	89%	61%	65%	76%	68%	71%	100%	67%	85%	#N/A
FI	586	204	19	49	231	43%	18%	25%	16%	15%	33%	15%	40%	20%	54%	0%	53%	58%	#N/A
FR	45587	49326	136	0	89	0%	0%	9%	10%	12%	9%	0%	5%	1%	1%	6%	2%	0%	0%
HR	116	139	16	0	56	51%	100%	13%	6%	7%	13%	2%	16%	6%	37%	33%	28%	53%	#N/A
HU	110	48	19	0	1	0%	0%	31%	36%	28%	35%	4%	5%	8%	17%	60%	10%	15%	#N/A
IE	76	22	42	0	76	96%	5%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	100%	#N/A
IS	148	11	0	2	42	27%	36%	34%	94%	100%	93%	0%	0%	21%	83%	#N/A	67%	100%	#N/A
IT	19122	2645	128	9572	813	51%	5%	8%	6%	11%	12%	1%	3%	1%	1%	0%	2%	0%	0%
LI	60	3	0	0	47	0%	0%	15%	11%	17%	9%	15%	20%	17%	0%	#N/A	0%	0%	#N/A
LT	116	97	93	0	116	96%	100%	98%	97%	100%	99%	31%	31%	89%	94%	100%	90%	98%	#N/A
LU	304	59	92	0	304	99%	98%	70%	100%	92%	59%	84%	88%	94%	100%	100%	100%	100%	#N/A
LV	158	234	61	0	0	0%	0%	73%	76%	63%	79%	53%	59%	55%	4%	#N/A	6%	2%	#N/A
MT	150	151	51	0	150	70%	89%	95%	93%	100%	94%	81%	98%	83%	0%	0%	0%	0%	#N/A
NL	218	324	36	0	207	22%	67%	47%	67%	64%	38%	57%	63%	61%	92%	#N/A	93%	92%	#N/A
NO	161	254	14	2	158	1%	0%	43%	68%	43%	37%	14%	17%	42%	0%	0%	0%	0%	#N/A
PL	296	287	60	1	122	36%	6%	40%	91%	13%	29%	16%	17%	34%	83%	100%	72%	88%	#N/A
PT	625	605	145	233	292	55%	41%	41%	65%	41%	38%	56%	80%	64%	55%	#N/A	56%	53%	#N/A
RO	105	67	28	15	88	93%	97%	38%	70%	31%	29%	30%	33%	30%	89%	100%	93%	83%	#N/A
SE	247	206	58	0	247	91%	75%	100%	99%	100%	100%	72%	81%	81%	100%	100%	99%	100%	#N/A
SI	94	74	9	0	80	70%	89%	61%	75%	57%	62%	12%	40%	16%	92%	#N/A	86%	100%	#N/A
SK	286	285	61	5	198	60%	75%	3%	5%	3%	1%	21%	27%	24%	31%	14%	29%	34%	0%

Where do we start from – Comparison against 2019

increase of at least 10% compared to 2019
increase/decrease of less than 10% compared to 2019
decrease of at least 10% compared to 2019

	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	509	510	137	265	244	95%	92%	66%	75%	69%	61%	83%	93%	85%	93%	100%	89%	97%	#N/A
BE	636	241	355	531	94	86%	49%	62%	95%	22%	65%	86%	89%	90%	88%	67%	89%	88%	#N/A
BG	132	8	115	42	79	0%	0%	85%	82%	11%	97%	58%	60%	58%	50%	50%	100%	0%	#N/A
CH	212	30	0	0	1	0%	0%	2%	7%	2%	0%	1%	2%	1%	0%	0%	0%	0%	#N/A
CY	30	44	9	0	0	0%	0%	3%	0%	50%	0%	40%	53%	80%	0%	#N/A	0%	0%	#N/A
CZ	142	182	33	55	84	58%	79%	39%	87%	73%	24%	37%	62%	40%	80%	100%	75%	84%	100%
DE	58504	88068	144	2098	135	19%	80%	55%	58%	50%	55%	61%	64%	63%	98%	100%	98%	99%	#N/A
DK	180	203	48	0	178	63%	99%	52%	95%	38%	48%	32%	44%	40%	91%	#N/A	89%	92%	#N/A
EE	86	109	24	0	86	100%	100%	100%	100%	100%	100%	42%	56%	42%	96%	0%	94%	100%	#N/A
EL	59	21	54	0	35	98%	100%	3%	40%	#N/A	0%	100%	100%	100%	5%	100%	0%	0%	#N/A
ES	246	281	91	47	181	96%	98%	68%	93%	89%	61%	65%	76%	68%	71%	100%	67%	85%	#N/A
FI	586	204	19	49	231	43%	18%	25%	16%	15%	33%	15%	40%	20%	54%	0%	53%	58%	#N/A
FR	45587	49326	136	0	89	0%	0%	9%	10%	12%	9%	0%	5%	1%	1%	6%	2%	0%	0%
HR	116	139	16	0	56	51%	100%	13%	6%	7%	13%	2%	16%	6%	37%	33%	28%	53%	#N/A
HU	110	48	19	0	1	0%	0%	31%	36%	28%	35%	4%	5%	8%	17%	60%	10%	15%	#N/A
IE	76	22	42	0	76	96%	5%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	100%	#N/A
IS	148	11	0	2	42	27%	36%	34%	94%	100%	93%	0%	0%	21%	83%	#N/A	67%	100%	#N/A
IT	19122	2645	128	9572	813	51%	5%	8%	6%	11%	12%	1%	3%	1%	1%	0%	2%	0%	0%
LI	60	3	0	0	47	0%	0%	15%	11%	17%	9%	15%	20%	17%	0%	#N/A	0%	0%	#N/A
LT	116	97	93	0	116	96%	100%	98%	97%	100%	99%	31%	31%	89%	94%	100%	90%	98%	#N/A
LU	304	59	92	0	304	99%	98%	70%	100%	92%	59%	84%	88%	94%	100%	100%	100%	100%	#N/A
LV	158	234	61	0	0	0%	0%	73%	76%	63%	79%	53%	59%	55%	4%	#N/A	6%	2%	#N/A
MT	150	151	51	0	150	70%	89%	95%	93%	100%	94%	81%	98%	83%	0%	0%	0%	0%	#N/A
NL	218	324	36	0	207	22%	67%	47%	67%	64%	38%	57%	63%	61%	92%	#N/A	93%	92%	#N/A
NO	161	254	14	2	158	1%	0%	43%	68%	43%	37%	14%	17%	42%	0%	0%	0%	0%	#N/A
PL	296	287	60	1	122	36%	6%	40%	91%	13%	29%	16%	17%	34%	83%	100%	72%	88%	#N/A
PT	625	605	145	233	292	55%	41%	41%	65%	41%	38%	56%	80%	64%	55%	#N/A	56%	53%	#N/A
RO	105	67	28	15	88	93%	97%	38%	70%	31%	29%	30%	33%	30%	89%	100%	93%	83%	#N/A
SE	247	206	58	0	247	91%	75%	100%	99%	100%	100%	72%	81%	81%	100%	100%	99%	100%	#N/A
SI	94	74	9	0	80	70%	89%	61%	75%	57%	62%	12%	40%	16%	92%	#N/A	86%	100%	#N/A
SK	286	285	61	5	198	60%	75%	3%	5%	3%	1%	21%	27%	24%	31%	14%	29%	34%	0%

Thank you!

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