The webinar will be started at 11:00

Water quantity data reporting to the European Environment Agency

Dr. Nihat Zal, *Project manager, Water resources, water scarcity and droughts*

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Technical instructions

- Thank you for participating in the Webinar
- The Webinar will be recorded and made available after the Webinar
- Presentation will also be available on the Eionet Forum and the link will be sent for downloading after the Webinar
- Use the chat for making comments or asking questions
- Avoid detailed questions on your data, you should use the WISE SoE Helpdesk when you start reporting

Agenda

1. Introductions and technical instructions (10mins)
2. Uses of the WISE-3 data (15 mins)
3. Linking WISE 3 with WISE 5 (15 mins)
4. Feedback on the 2020 WISE-3 datacall (15 mins)
5. 2021 WISE-3 datacall (15 mins)
6. Discussion (20 mins)

Who we are

EEA-Eionet Strategy 2021-2030
Data and knowledge to support Europe's environment and climate ambitions

It is the European Environment Agency's (EEA) task to provide objective, reliable and comparable information on the environment in order to allow the European Commission, Member Countries and the general public to judge the effectiveness of environmental policy and the needs for policy development. This comprises 'state of the environment' assessments using indicators to assess current status, pressures *and impacts as well as trends in the mid and long-term*

Strategic objectives

1. Supporting policy implementation and transitions to sustainability
2. Timely input to solutions for sustainability challenges
3. Building stronger networks and partnerships
4. Making use of the potential of data, technology and digitalization
5. Resourcing our shared ambitions

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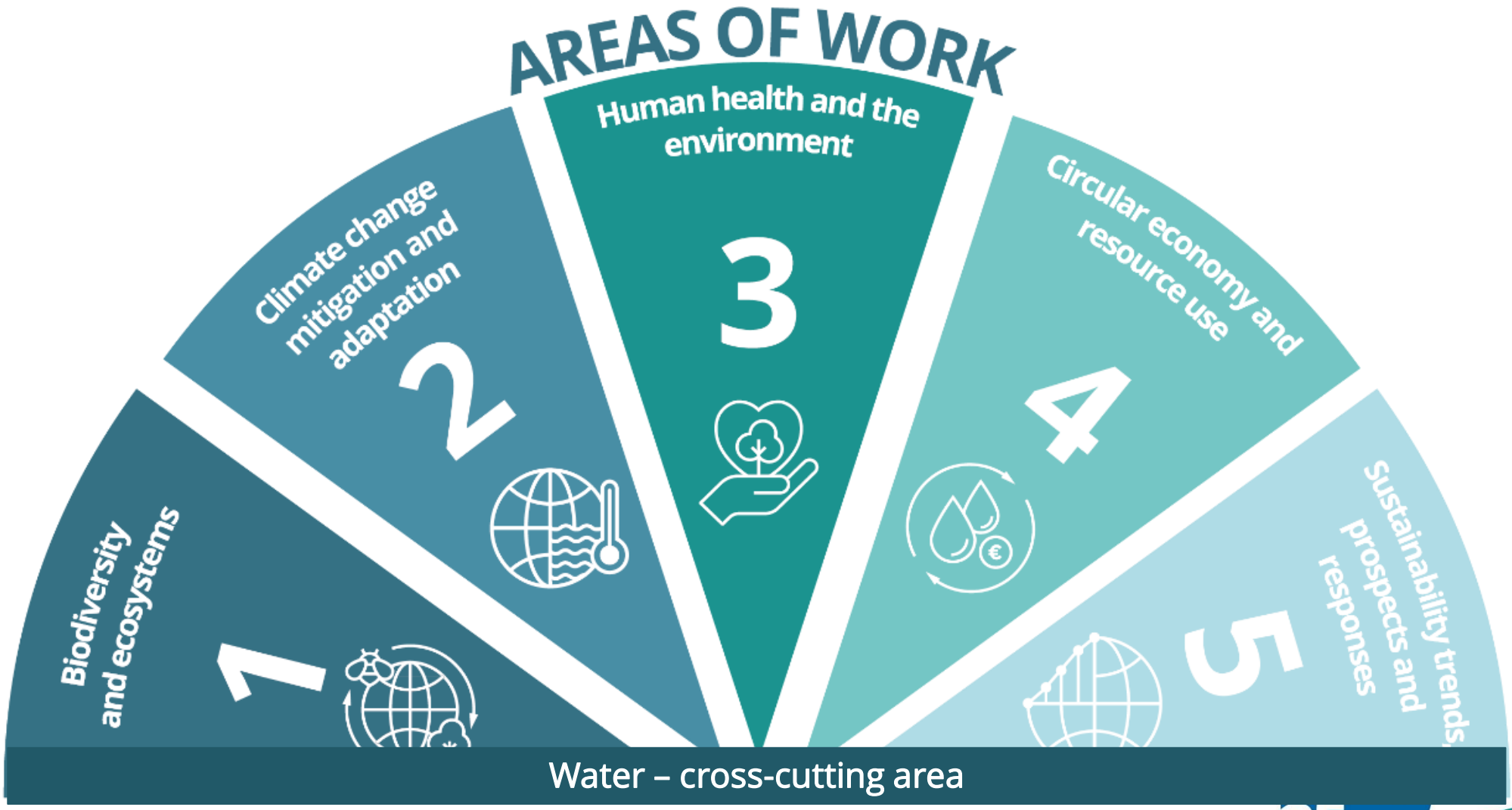
EEA-Eionet Strategy 2021-2030



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EU and Global policy hooks

The European Union Water Framework Directive **(2000/60/EC) sets the purpose of the Directive –inter alia- as follows (Article 1);**

(a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, ***with regard to their water needs***, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;

(b) promotes ***sustainable water use*** based on a long-term ***protection of available water resources***;

Achieving good ecological status with all WBs

EU and Global policy hooks

"Addressing the challenge of water scarcity and droughts" from the European Commission adopted in 2007 [COM(2007)414] – Review in 2012

...to ensure access to good quality water in sufficient quantity for all Europeans, and to ensure the good status of all water bodies across Europe.

European Green Deal and a set of policy initiatives

The European Green Deal- ...protect, conserve and enhance the ***EU's natural capital...***

- 2030 Biodiversity Strategy ... acknowledges the importance of ***natural capital to industry and agriculture...***
- Farm-2-Fork Strategy ... addressing to ***protecting the water...***
- Zero Pollution Action Plan
- Climate Change Adaptation Strategy – ***Water scarcity and droughts are strongly highlighted***
- New Circular Economy Action Plan .. address explicitly to the ***water stress*** and holds provisions for ***improving resource efficiency*** in the context of water resources management
- Sustainable Finance
- 8 th EAP – ***Sustainable use of the EU natural capital***
- The UN SGD 2030 Agenda ... Water use efficiency and prevention from water scarcity by 2030

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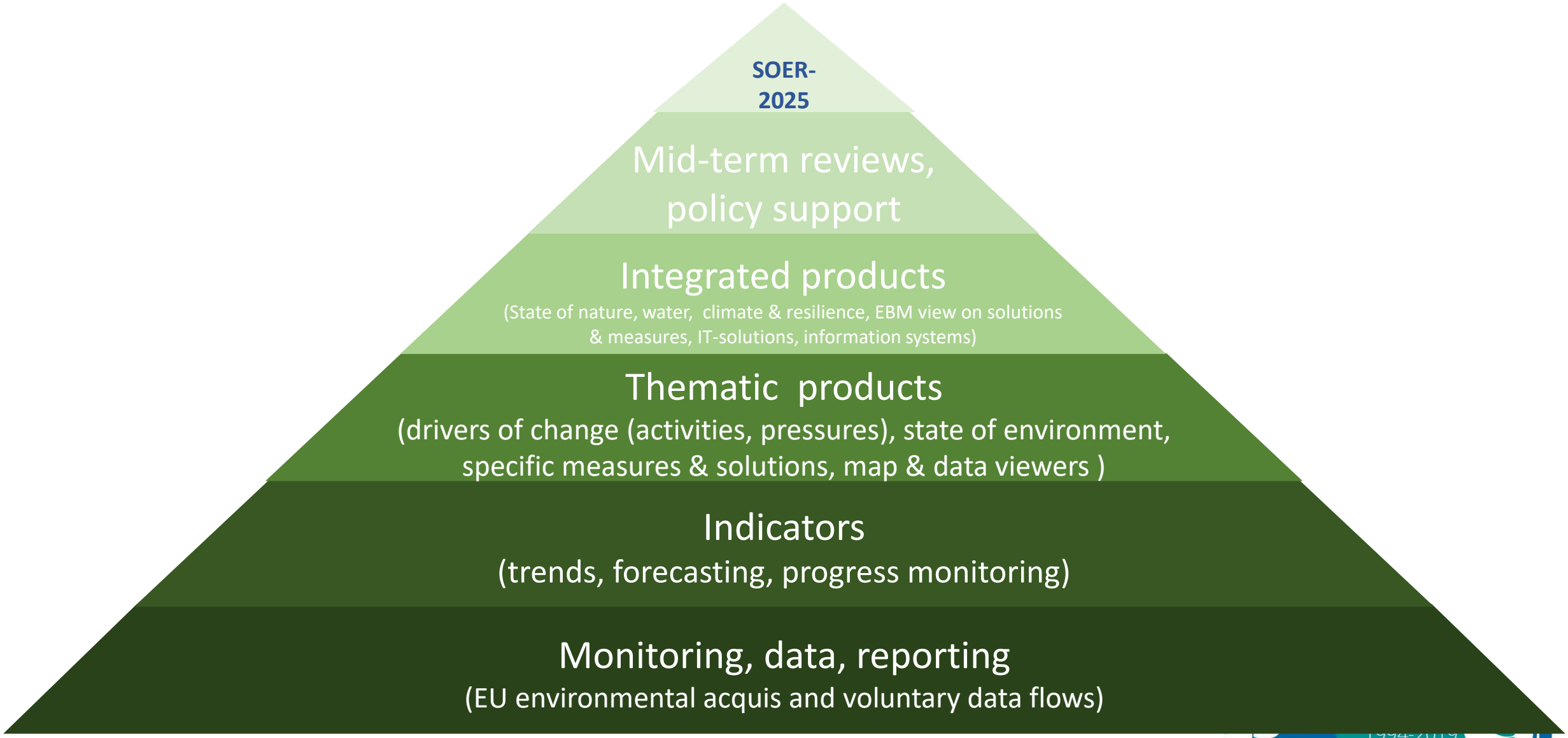
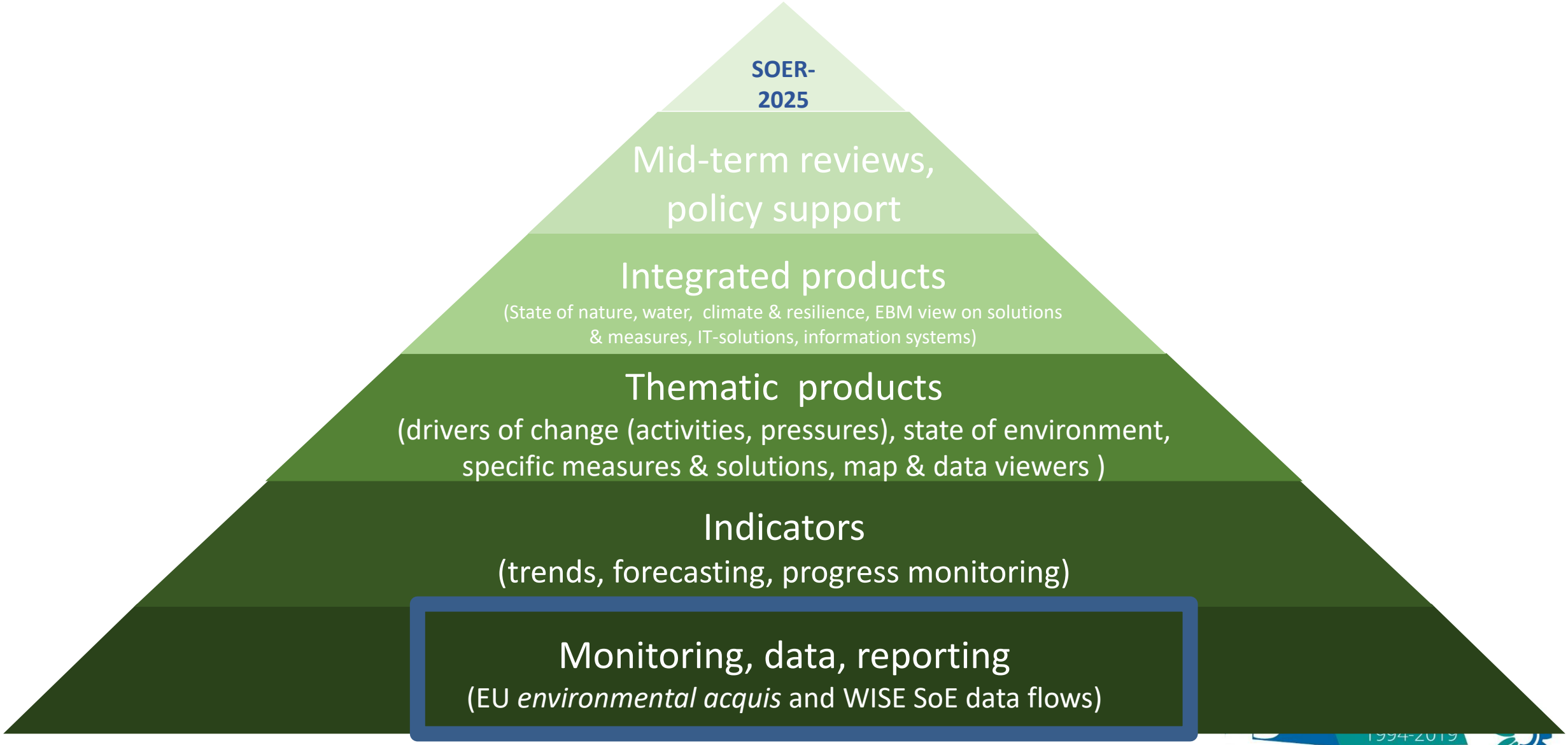
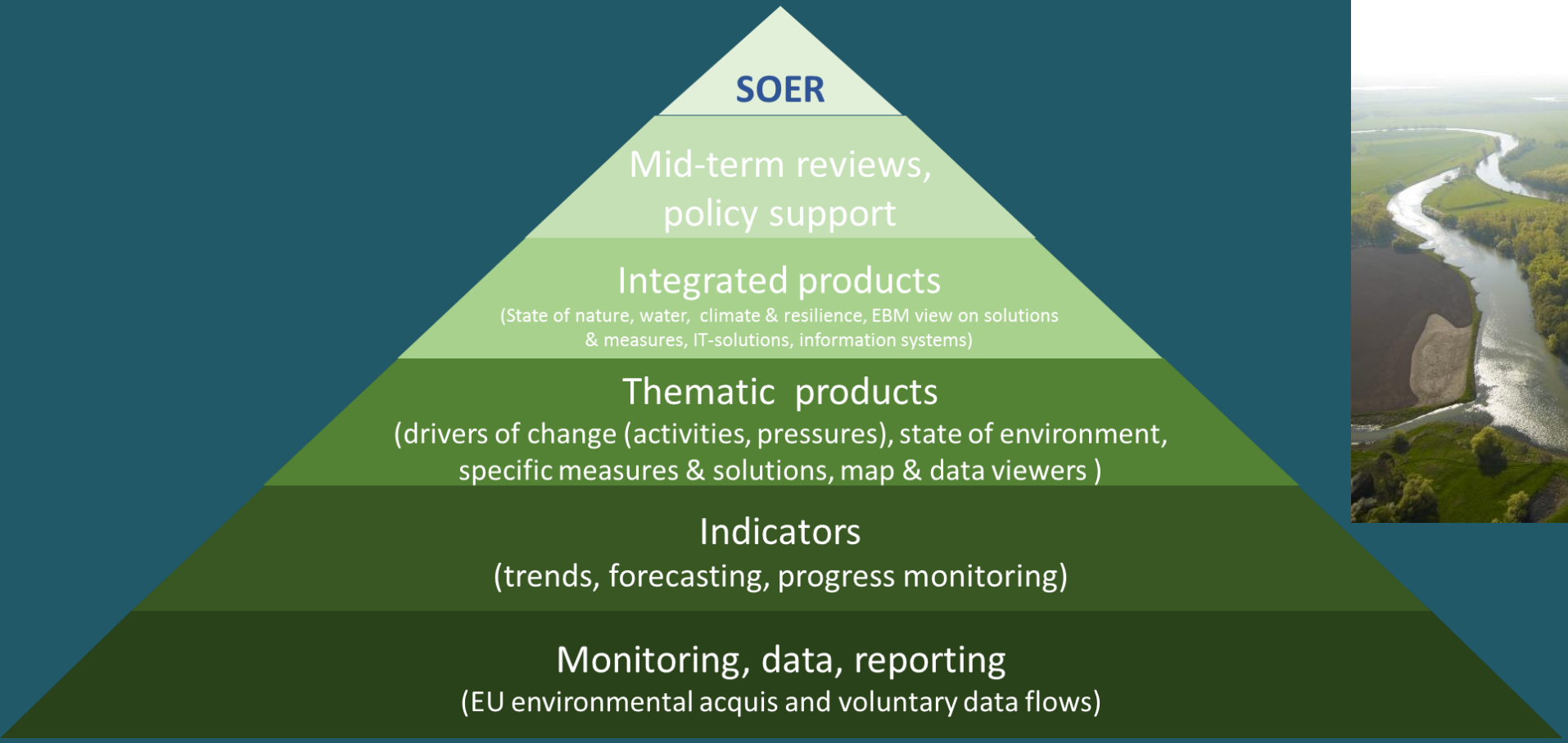
EEA responses



Who we are


SOER-
2025
Mid-term reviews,
policy support
Integrated products
(State of nature, water, climate & resilience, EBM view on solutions
& measures, IT-solutions, information systems)
Thematic products
(drivers of change (activities, pressures), state of environment,
specific measures & solutions, map & data viewers)
Indicators
(trends, forecasting, progress monitoring)
Monitoring, data, reporting
(EU *environmental acquis* and WISE SoE data flows)

What we are doing with the WISE water quantity data?



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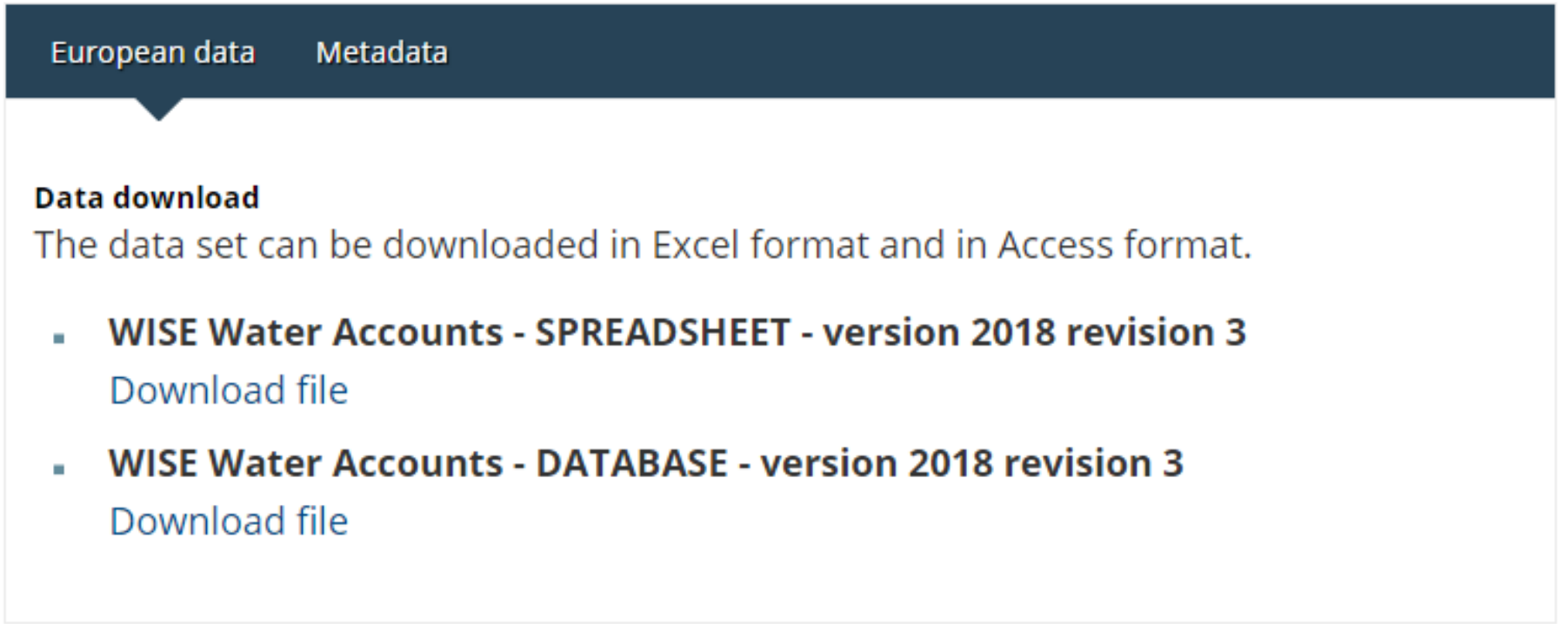
What we are doing with the WISE water quantity data?

Data provisions to the interested stakeholders

- Updating the European water accounts (Link)



EEA is currently updating the European water accounts; but limited data support from the WISE 3

What we are doing with the WISE water quantity data?

Data provisions to the interested stakeholders

- Developing the European water accounts (Link)
- Data support to other Commission's services (JRC, Eurostat, DG AGRI…) and various end users, e.g researchers…

Collaboration between **EEA** and **Eurostat** to report data to the *UN SDG 6.4.2 - Level of water stress: freshwater withdrawal as a proportion of available freshwater resources*

What we are doing with the WISE water quantity data?

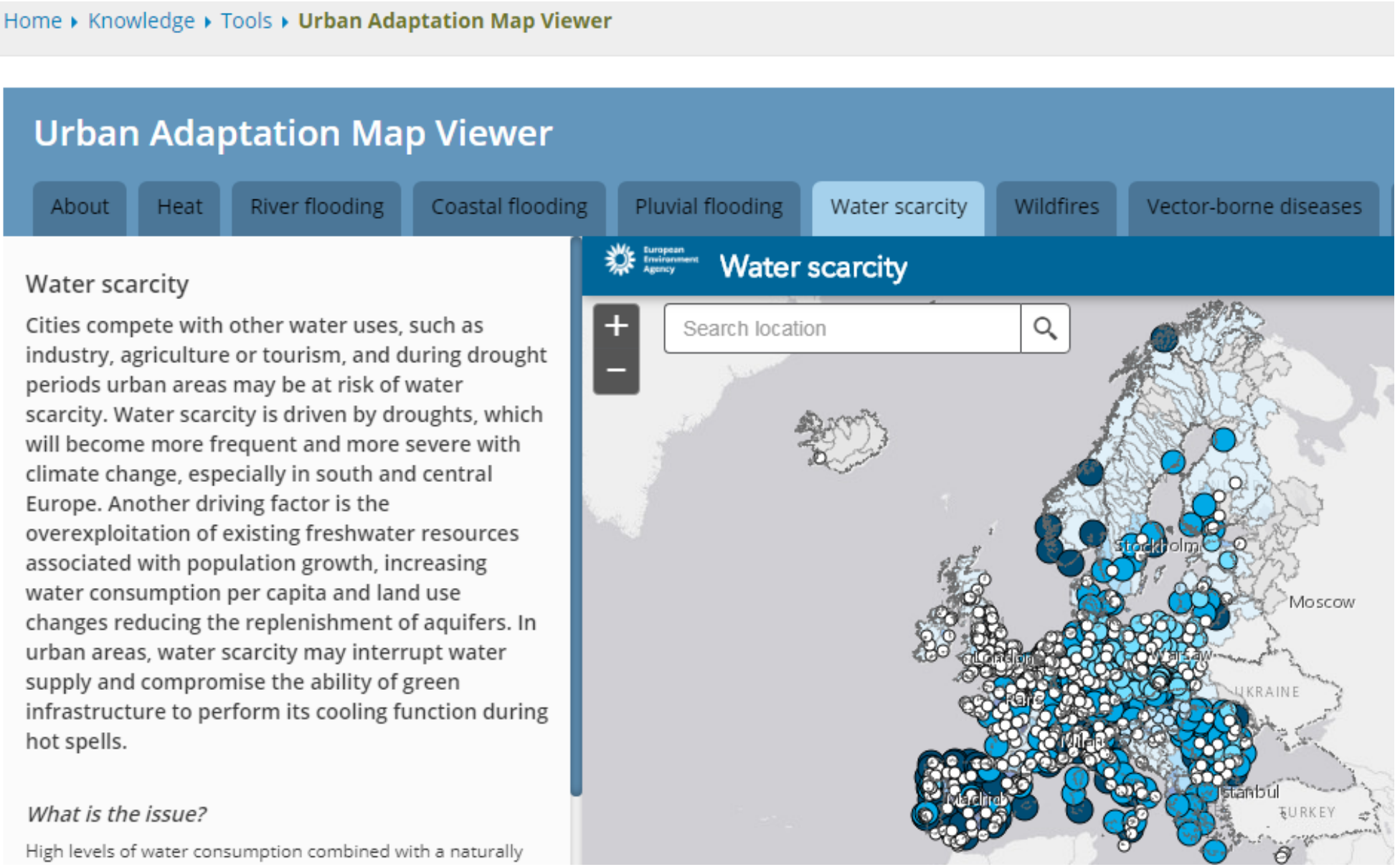
Data provisions to the interested stakeholders

- Developing the European water accounts (Link)
- Data support to other Commission's services (JRC, Eurostat, DG AGRI…) and various end users, e.g researchers…
- Internal data support to other platforms/assessments, e.g. **Climate-ADAPT**

What we are doing with the WISE water quantity data?

Data provision

- Developing
- Data suppor and various
- Internal data ADAPT

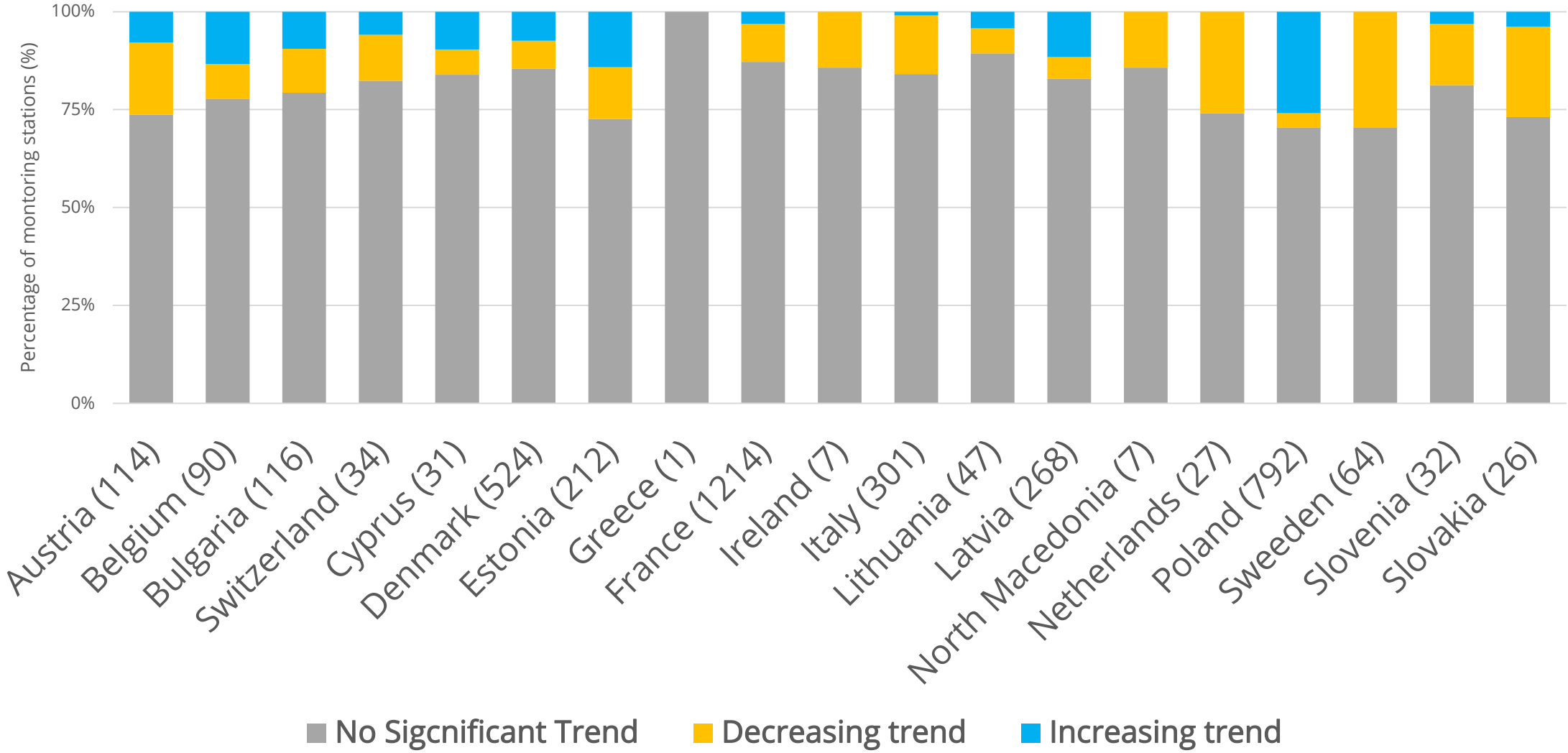


What we are doing with the WISE water quantity data?

Indicators

- CSI 018, Use of freshwater resources (Water exploitation index plus)
- WAT 006, Water intenisty of crop production in Europe
- **Groundwater level trend (under the Eionet consultation)**
- **Water pricing and cost recovery** – Mostly data reported under the WFD RBMPs reporting with the ancillary data from WISE 3 on water abstraction
- **Water abstraction by source and sectors**

Groundwater level trend in Europe (a new indicator)



The underlying data needs to be improved by Eionet member countries to enable more robust assessment on the change in groundwater level in Europe.

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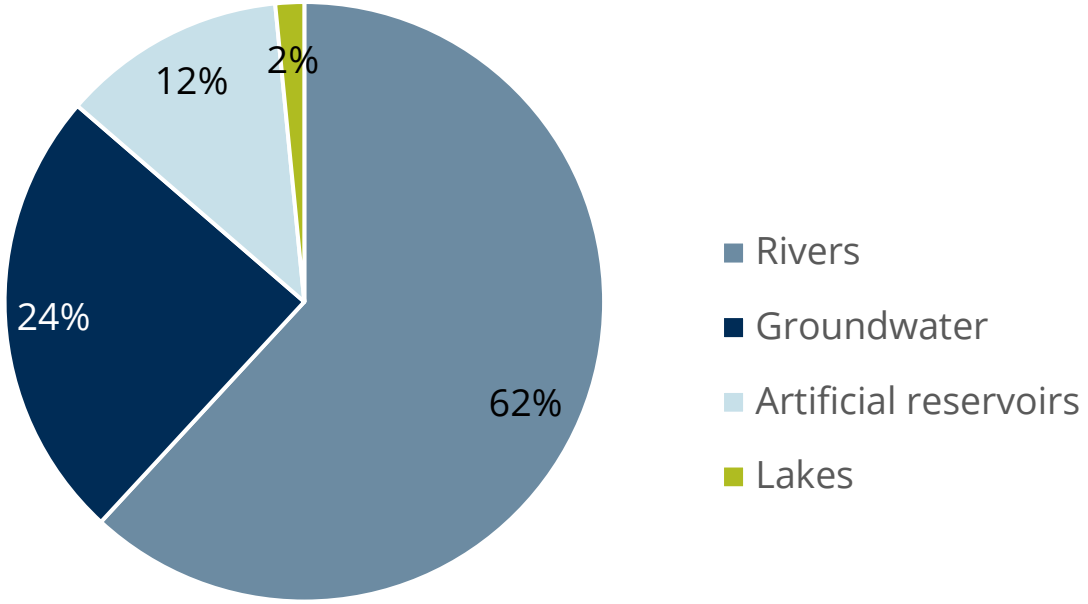
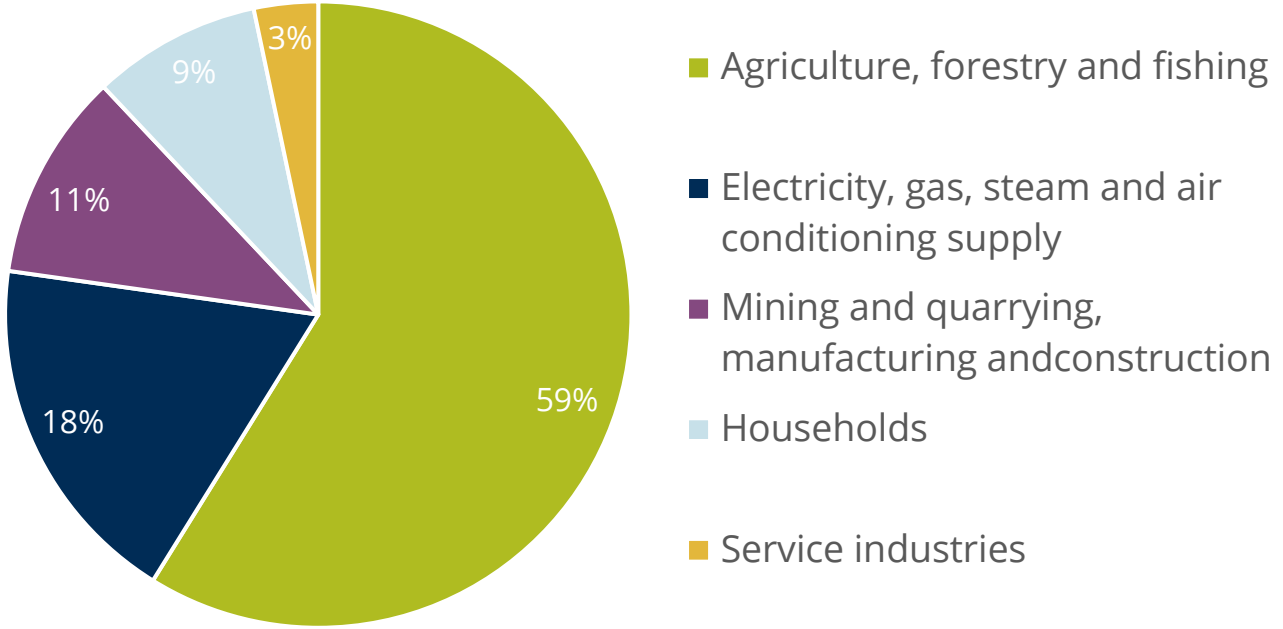
Water abstraction by source and sectors

Water abstraction by source in Europe (2017)

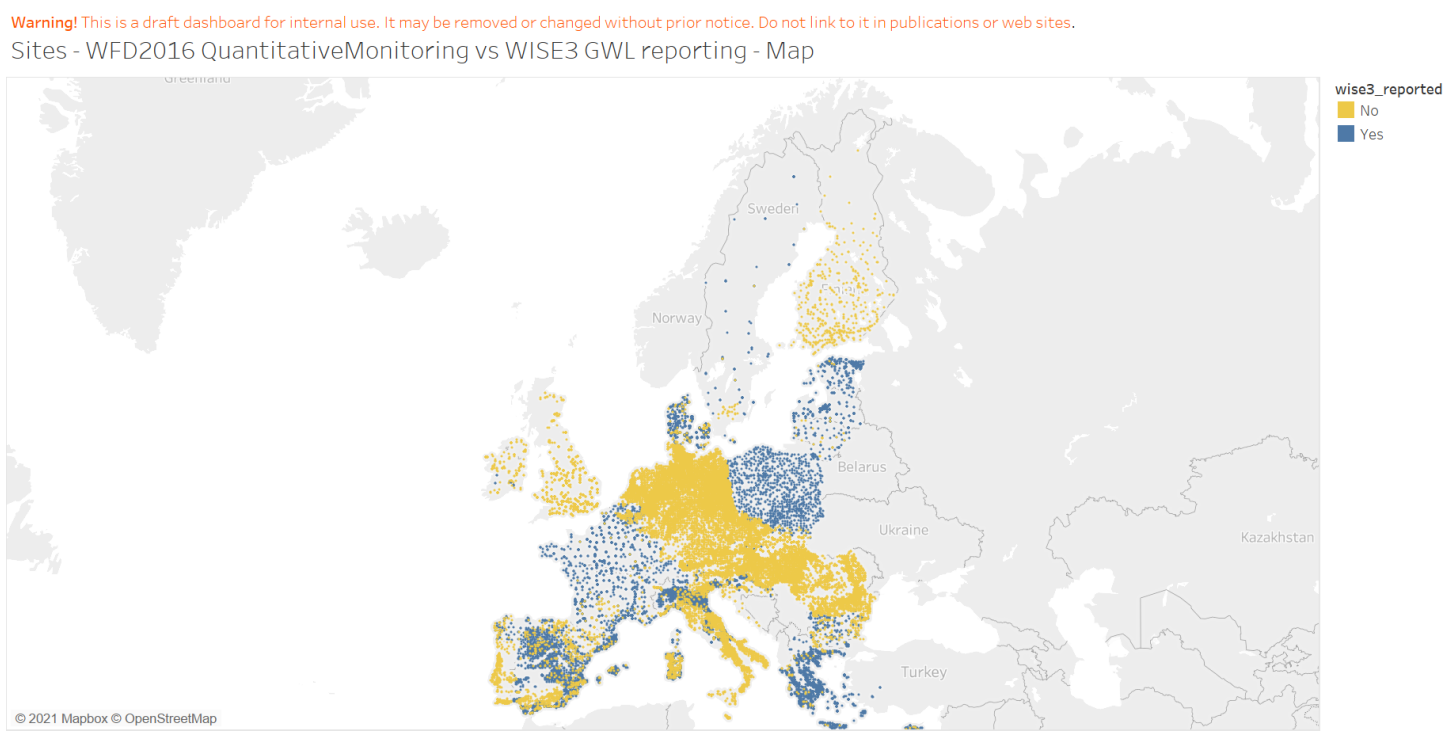


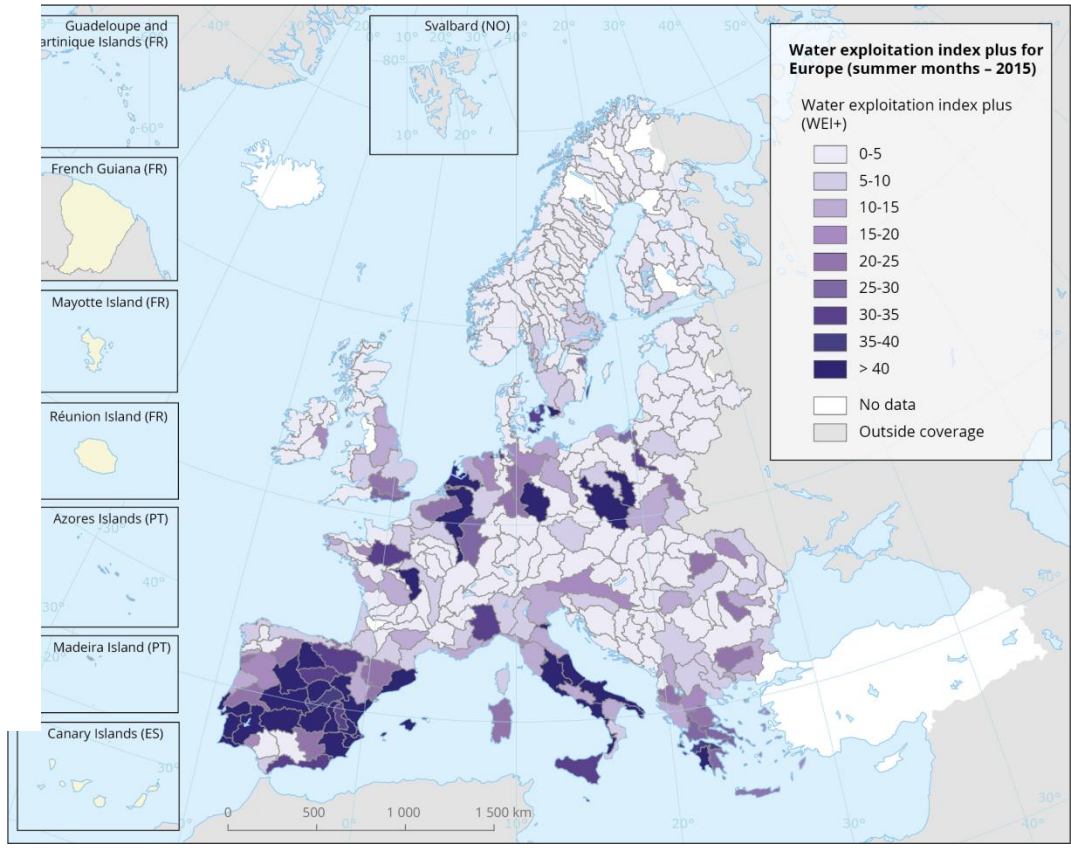
Water use by sectors in Europe (2017)



The new update will include two years in the current assesment i.e. 2018 and 2019

Interactive maps/charts





https://www.eea.europa.eu/data-and-maps/indicators/use-of-freshwater-resources-3/assessment-4

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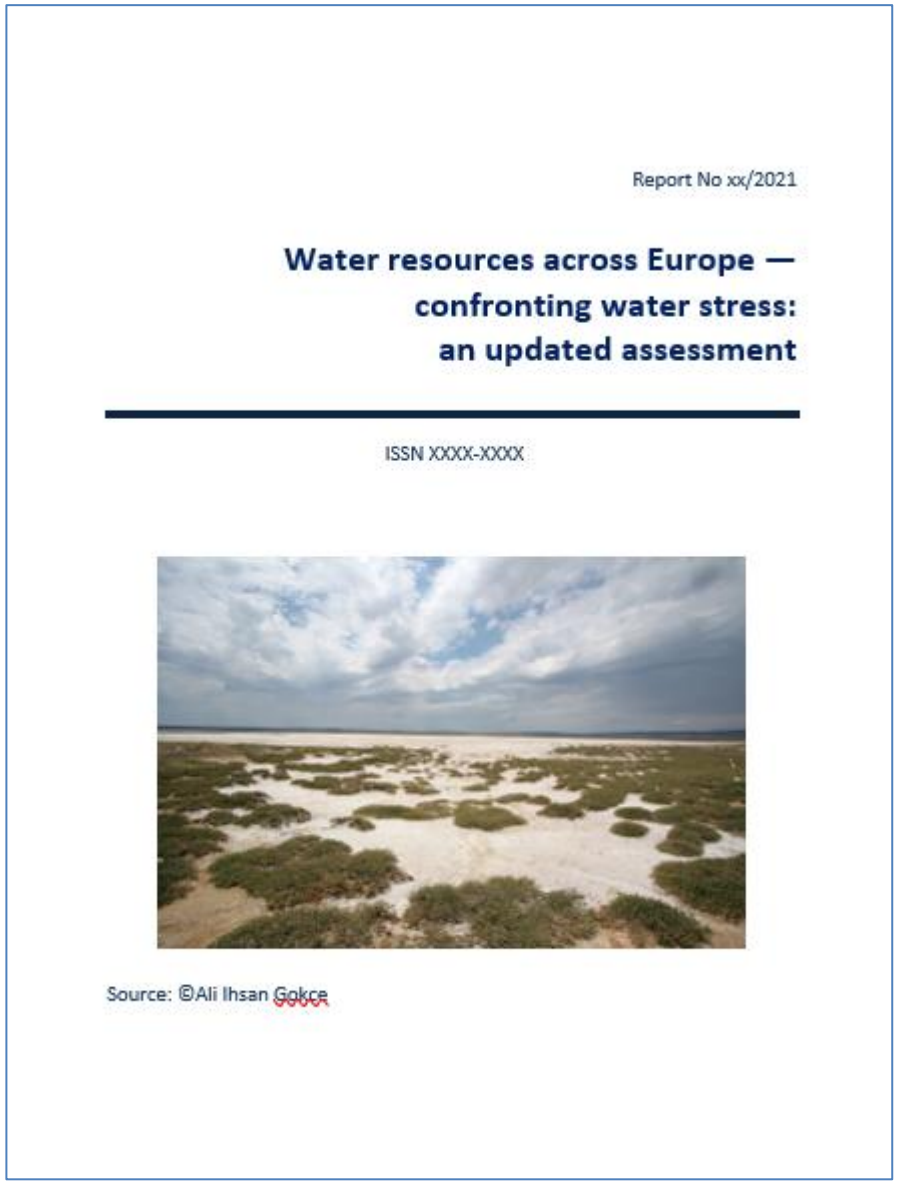
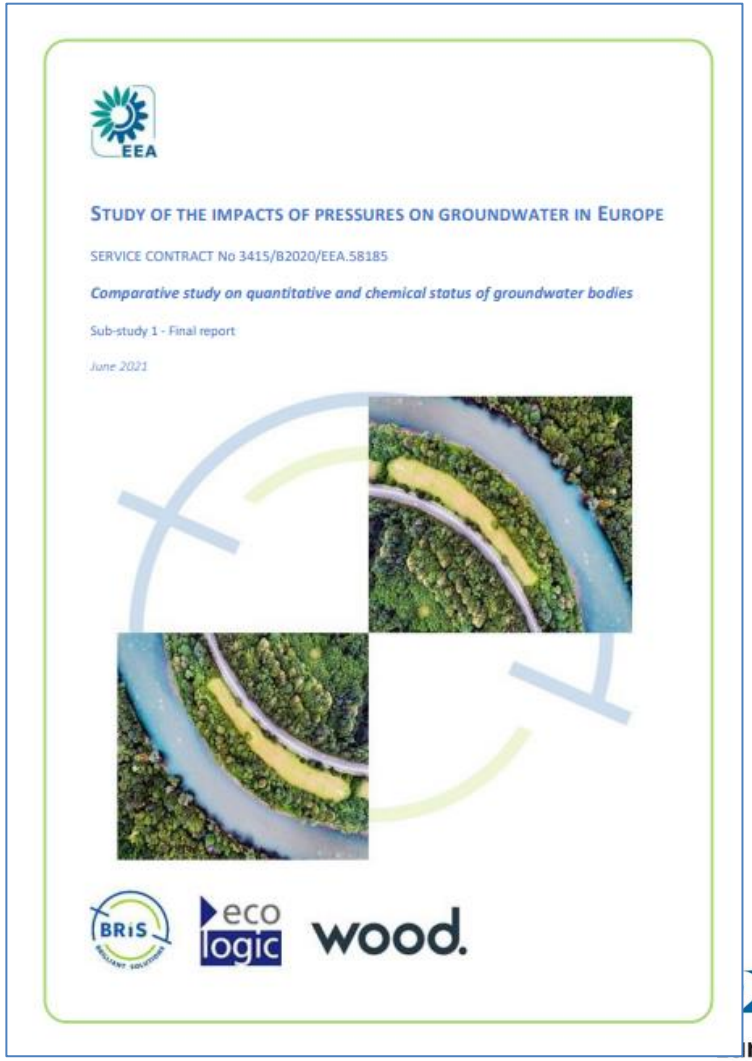
EEA report - Water resources across Europe — confronting water stress: an updated assessment



Groundwater assessment ; impacts of pressures (2021)



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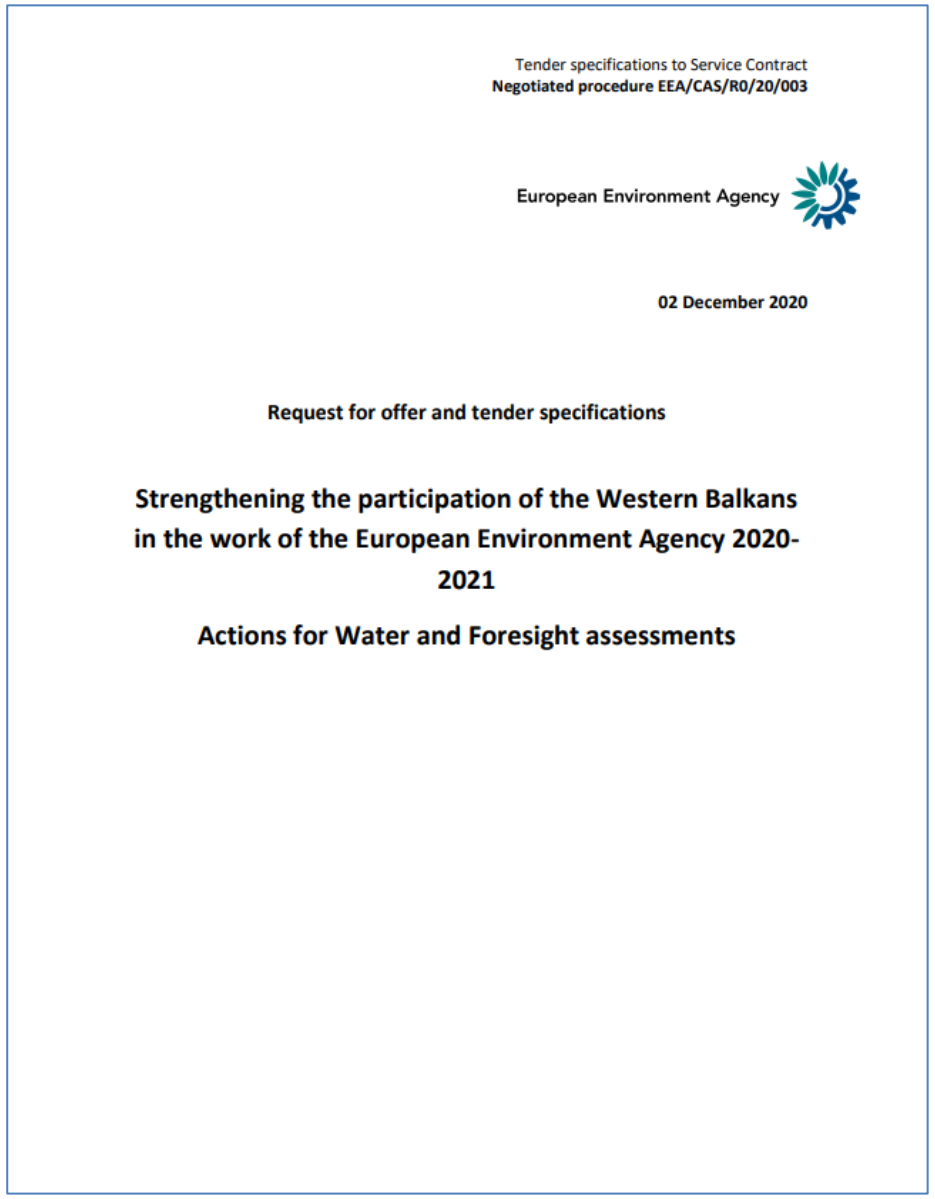
Capacity building in Western Balkans



Tender specifications to Service Contract
Negotiated procedure EEA/CAS/R0/20/003

European Environment Agency

02 December 2020

Request for offer and tender specifications

Strengthening the participation of the Western Balkans in the work of the European Environment Agency 2020-2021

Actions for Water and Foresight assessments

- Capacity building on data reporting to WISE
- Developing the indicators as part of the integrated assessment
- Undertaking national pilots tailored to the national needs in the area of water

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Water quantity roadmap – 2022-2024

Updating and developing indicators

- Updating CSI 018 (2022)
- Updating WAT 006 – Water use intensity of crop production (2022)

- Water abstraction by source and by sectors – (2021)
- Groundwater level index 2021)
- Water pricing and cost recovery (2021)

Dashboard on the WISE

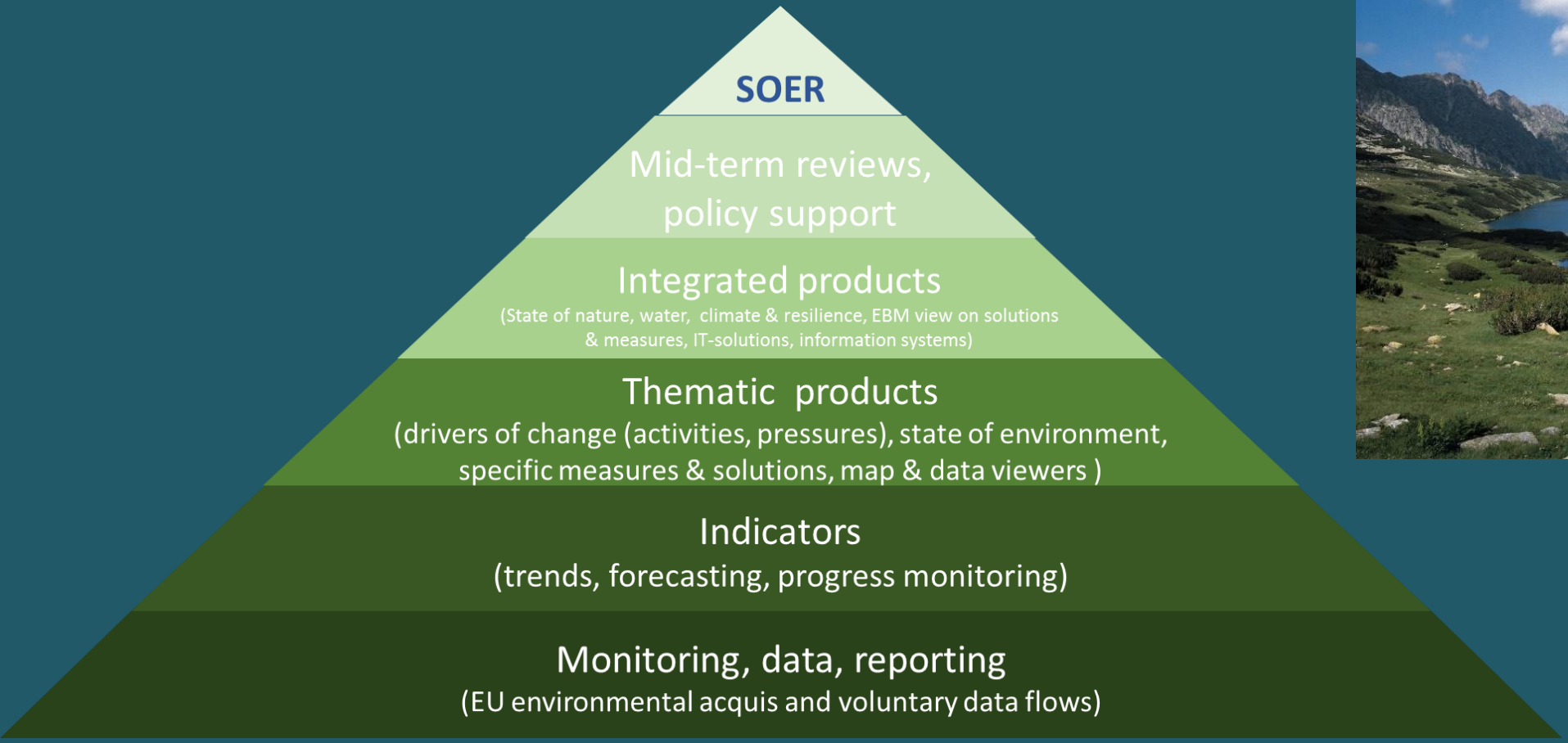
- Country profile on water resources (2022)

Water quantity roadmap – 2022-2024

Assessment

- An assessment on potential water savings for building resilience in ecosystems and socio-economy of Europe under the changing climate (2022-2023)
- Water-energy-ecosystem nexus (2022-2024)
- Support the EEA work on the EU climate change adaptation strategy
- Support the EEA Integrated water assessment
- Develop the groundwater quantitative status assessment as part of the EEA State of Europe's Water

Feedback on 2020 reporting

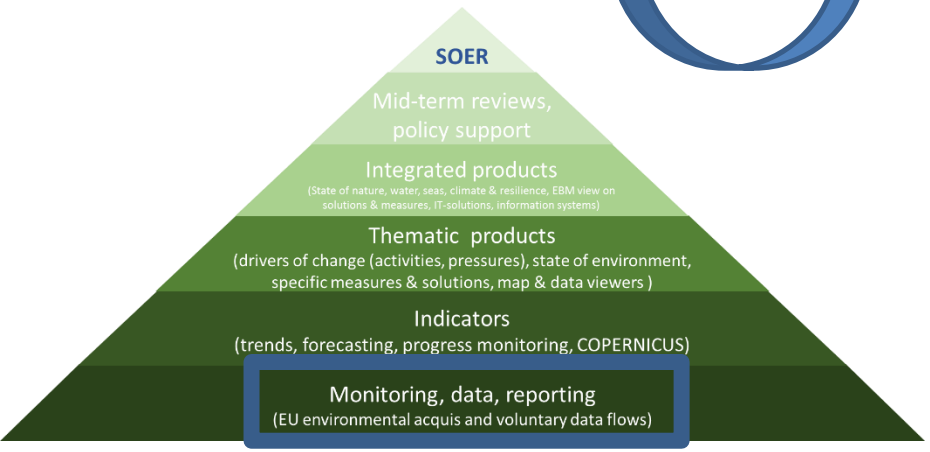


Feedback on 2020 reporting -Waterbase Water quantity - overview

Data reporting

- WISE-SoE data call
- Communication with NRCs (Webinars, Helpdesk)
- Reporting data to Waterbase

Waterbase
Water quantity

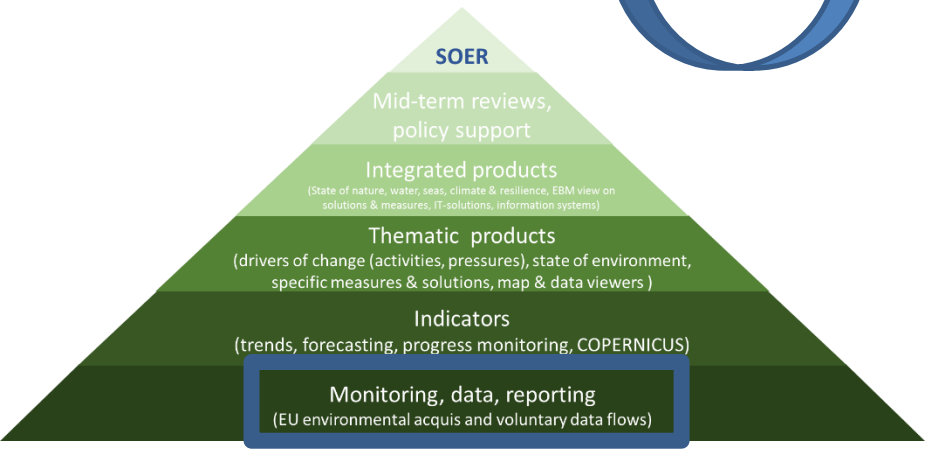


Waterbase Water quantity - overview

Data reporting

- WISE-SoE data call
- Communication with NRCs (Webinars, Helpdesk)
- Reporting data to Waterbase

Waterbase water quantity



Data and information dissemination

Access to Waterbase water quantity data

1) Publish Waterbase water quantity
2) Access via Common WorkSpace (CWS)
3) European water accounts

EEA water quantity indicators

1) Preparation of data for indicators (dashboards)
2) Graphs in Daviz – Indicator in IMS
3) *EEA indicator template*
4) *Automatic generation of charts*
5) *Assessment reports*

Reuse of EEA water quantity indicators results

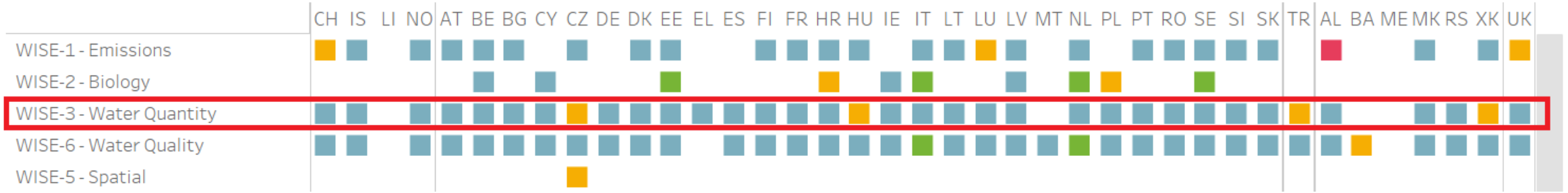
1) EU SDG indicators (water quantity)
2) DG AGRI (CAP implementation indicators) and ESTAT agri-environmental indicators
3) Climate-ADAPT
4) *Water quantity indicators contribution to policy processes*

Monitoring of reporting to WISE 3 in 2020

Overview | StatusOfDelivery | ListOfEnvelopes | MapByObligation

Warning! This is a draft dashboard for internal use. It may be removed or changed without prior notice. Do not link to it in publications or web sites.

WISE: Status of the last data deliveries



Status of the last delivery:

- CorrectionRequested
- Draft
- FinalFeedback
- Complete
- MoreThanOneStatus

Check your folders at CDR:

- WISE3:http://cdr.eionet.europa.eu/tr/eea/wise_soe/wise3/index_html (country code)

Coverage	Envelope	Task	Status	User	Reporting date
Turkey	Turkey Water Quantity 2015.2	Draft	active	gul00cem	2018-12-19 13:15
Turkey	Turkey Water Quantity 2015.1	Draft	inactive	*Not assigned*	2018-12-19 13:14
Turkey	Turkey Water Quantity 2014.2	Draft	active	gul00cem	2018-12-19 11:54
Turkey	Turkey Water Quantity 2014.1	Draft	inactive	*Not assigned*	2018-12-19 11:53

Task list

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Status in reported data for 2020

Country	Streamflow	Groundwater level	Renewable Freshwater Resources	Additional Water Resources	Reservoir Data	Water Abstraction	Water Use	Water Returns
AL			6	1			12	
AT	77 057	15 376	507			19		
BA						2		1
BE	236 819	135 866	7 460	844	88	1 044	345	95
BG	13 823	15 188	119	3	3 488	1 901	132	164
CH	247 017	5 206	808	34	1 486	137	93	14
CY	76 826	4 785	398	514	14 798	40		
CZ	1 525	25	215			210	20	
DE			1 000					
DK	72 378	13 640	6			484	50	
EE	127 747	22 639	114	107	283	1 221	98	65
EL	4 160	17 540	6			26	39	
ES	4 006	16 944			12 707			
FI	192 747		34			45	19	
FR	788 989	85 793	7 477			5 113		
HR	291 510	1 864						
HU			19			7		
IE	140 290	1 701	49	98		476	92	21
IS	6 579		887	1		330	425	2
IT	388 417	130 219	2 192	16	10 001	30	41	
LI	1 500							
LT	24 167	6 269	337	643		1 336	522	120
LU	192			42		157	35	
LV	182	23 946	319	237	63	1 603	817	236
ME	39							
MK	9 837	692	1	3	640	70	39	
NL	30 861		29	136		345	121	27
NO			3 018	42		99	36	9
PL	4 735	6 257	391	10		30	21	6
PT			147	56	353	132	48	39
RO						107		
RS	131 424		37	70		165	59	15
SE	425	8 412	16 045	140		172	60	
SI	949 406	158 291	180	208	8 768	272	150	14
SK	3 279	3 384	4 543		2 458	14 111	93	1 815
TR	14 535	232			1 128	30	12	3
UK						22 247	8 049	2 016

Mapping the status of reported data

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Reported spatial objects to the WISE - 2020

2019

Country	eionetMonitoringSiteCode	euMonitoringSiteCode	Total
AT	21	1	22
BE	78	28	106
BG	26	7	33
CH	81		81
CY		20	20
CZ	2	1	3
DK	106	90	196
EE	11	67	78
EL		432	432
ES	15	74	89
FI	63	76	139
FR	460	116	576
HR	54	4	58
IE	33		33
IS		2	2
IT	160	347	507
LT	6		6
LU	1	3	4
LV	10	3	13
NL	13	5	18
PL	687		687
RS	91		91
SE	3	1	4
SI	67	26	93
SK	6	22	28
Total	**1994**	**1325**	**3319**

2020

Country	eionetMonitoringSiteCode	euMonitoringSiteCode	Total
AT	21	1	22
BE	98	28	126
BG	26	7	33
CH	81		81
CY		20	20
CZ	2	1	3
DK	106	90	196
EE	14	67	81
EL		433	433
ES	15	74	89
FI	63	76	139
FR	460	116	576
HR	54	4	58
IE	33		33
IS		2	2
IT	210	362	572
LT	6		6
LU	1	3	4
LV	10	3	13
NL	15	6	21
PL	696		696
RS	91		91
SE	3	1	4
SI	67	26	93
SK	6	22	28
Total	**2078**	**1342**	**3420**

3420 streamflow monitoring sites reported in 2020

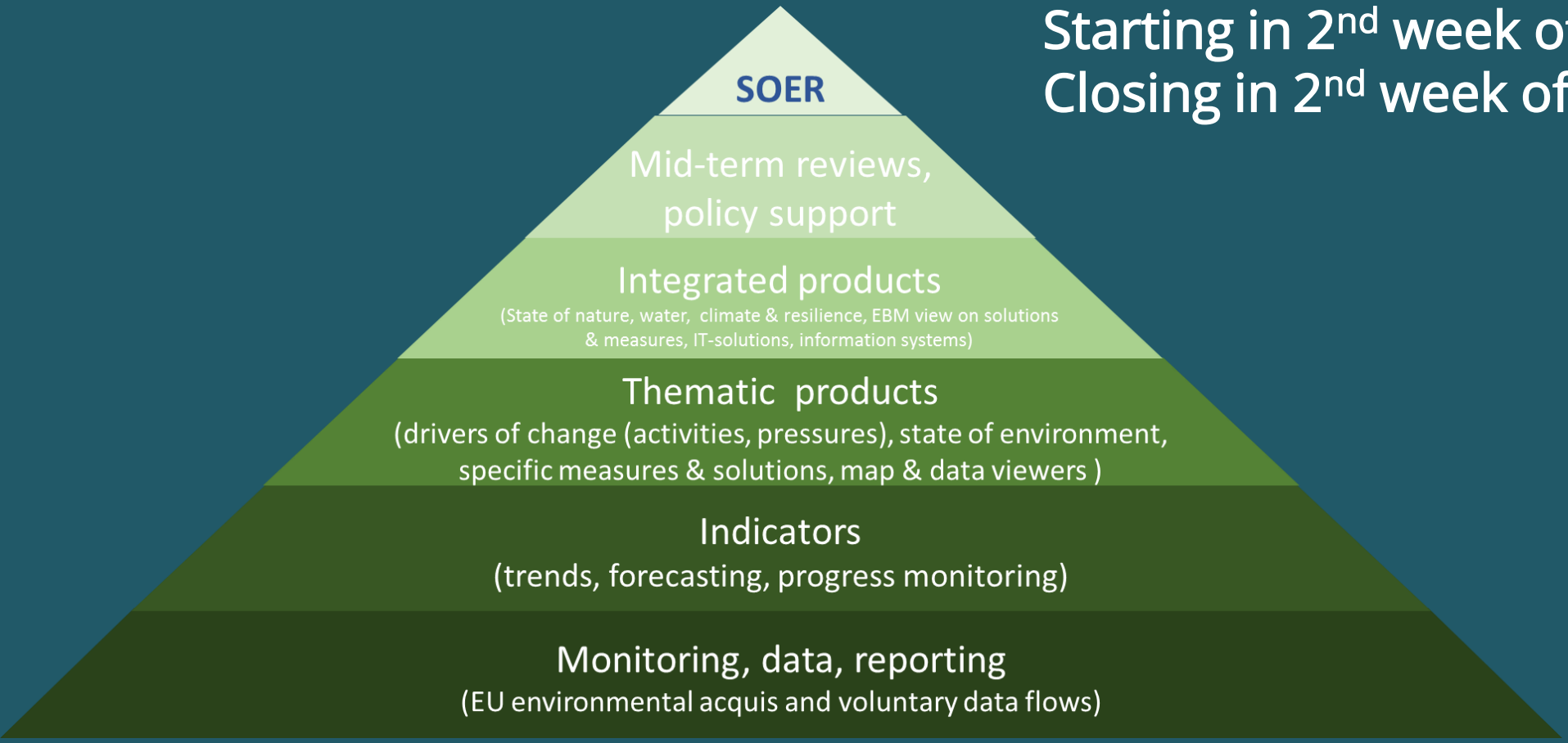
Status in reported data for 2020

Groundwater monitoring sites (2020)

Country	eionetMonitoringSiteCode	euMonitoringSiteCode	Total
AT		115	115
BE		93	93
BG	15	186	201
CH	36		36
CY	11	85	96
CZ		2	2
DK	609	1341	1950
EE	17	356	373
EL	65	1341	1406
ES		2428	2428
FR		1517	1517
HR	25	12	37
IE	6	6	12
IT	318	2186	2504
LT	4	72	76
LV	51	306	357
MK	8		8
PL	324	847	1171
SE	27	80	107
SI	48	119	167
SK	4	22	26
Total	**1568**	**11114**	**12682**

Some of the Eionet Member countries reported data only on the spatial object of the monitoring sites; but not the observed data on the phenomenon

2021 data call- WISE 3



Starting in 2nd week of October, 2021
Closing in 2nd week of January, 2022

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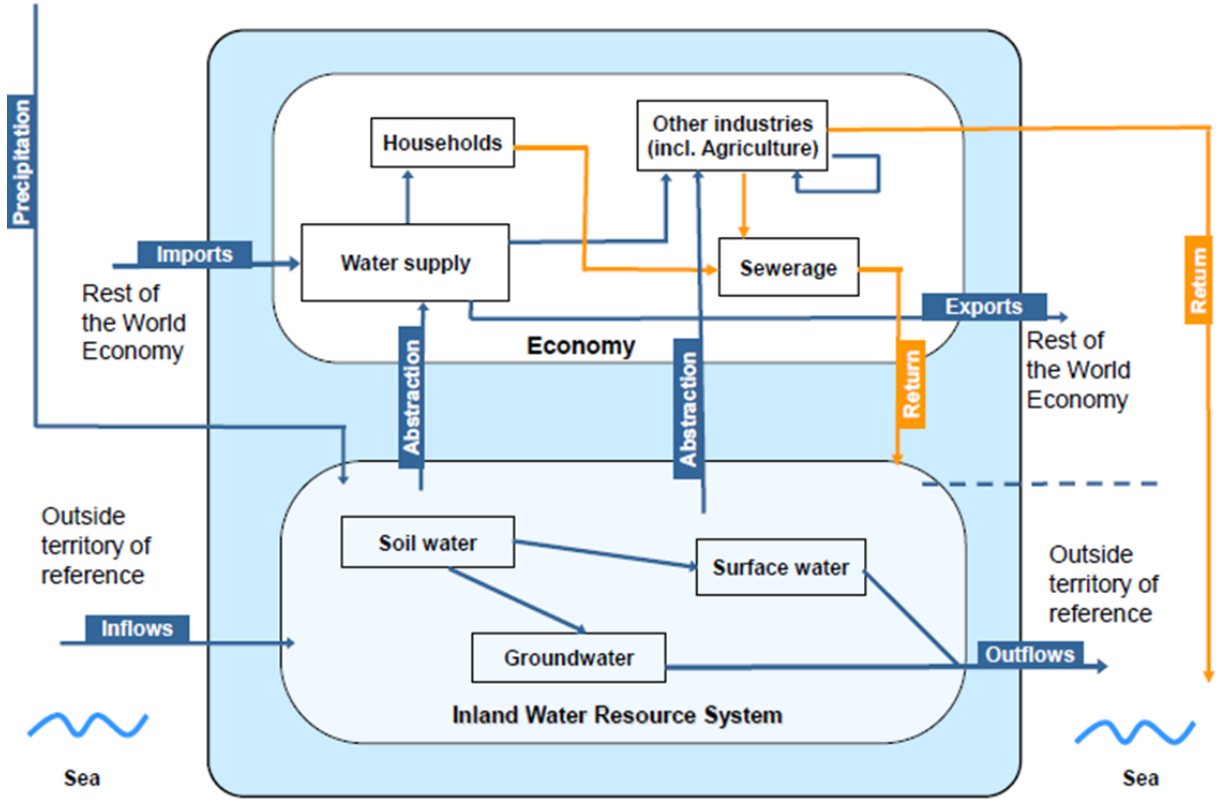
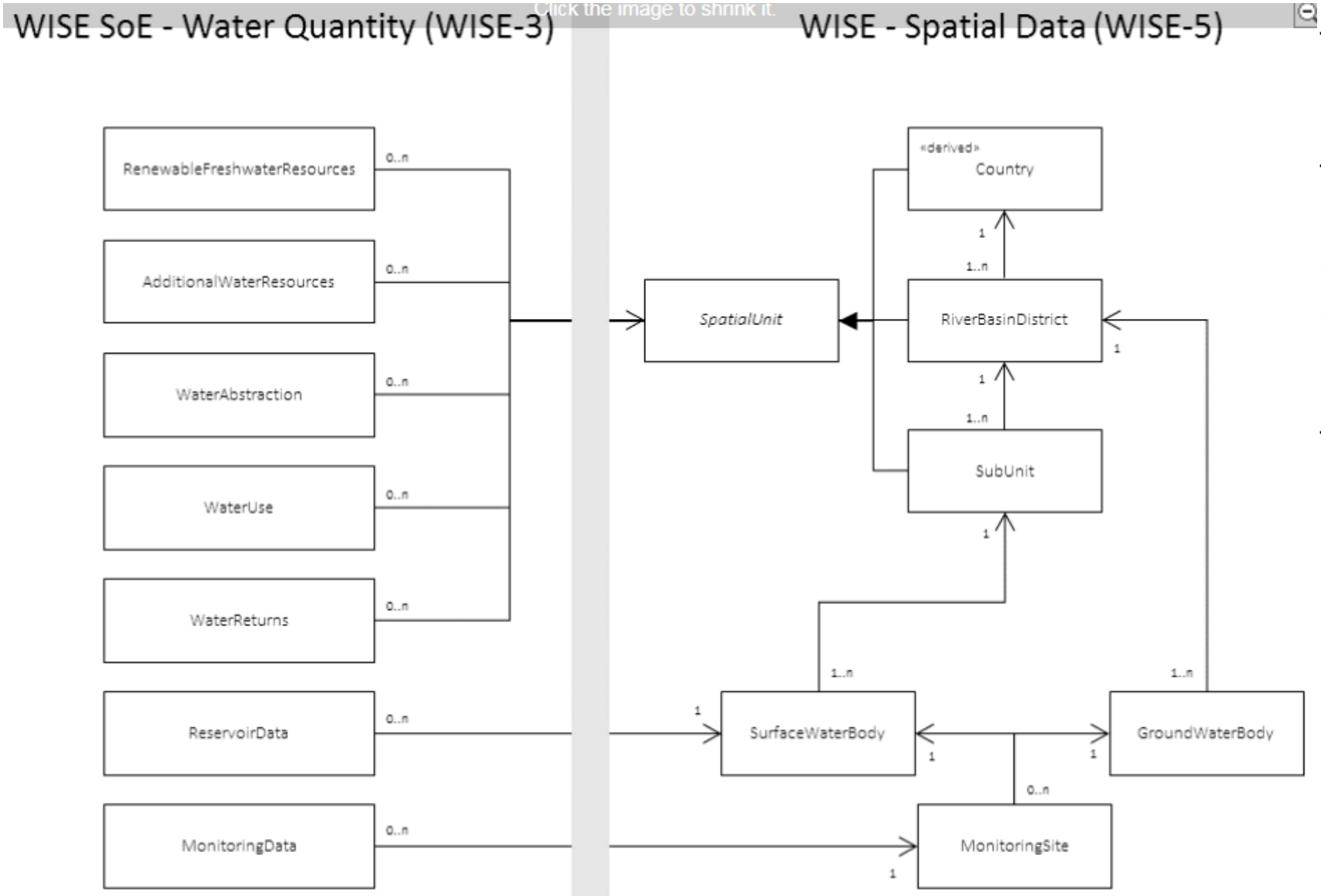
WISE SoE Water quantity conceptual model

Determinants	Variables	No
Renewable Water Resources (RWR)	Climate variables (P, Snowpack and ETA)	3
	GW variables (aquifer recharge and artf.recharge)	2
	Hydrological balance (inflow and outflow)	2
Monitoring Data (MDT)	Streamflow	1
	GWL	1
Reservoir Data (RSD)	Stock, inflow and outflow	3
Abstraction (ABS)	*by source and sector*	33
Additional Water Resources (AWR)	*by source and sector*	14
	Desalinated water	
	Water reuse	
	Water recycle - industry	
	Non-freshwater cooling	
	Water import and export	
Water Use (WU)	*by sector*	12
Returns (RET)	treated/non-treated	2
	Leakages and losses	1
Total		**74**



WISE SoE Water quantity data model



Temporal coverage and temporal resolution

The information can be reported at different temporal resolutions:
- Monthly;
- Quarterly;
- Annual.

The quarterly resolution is separated into 4 calendar quarters:
Q1: January to March
Q2: April to June
Q3: July to September
Q4: October to December

2021 data call - WISE-3

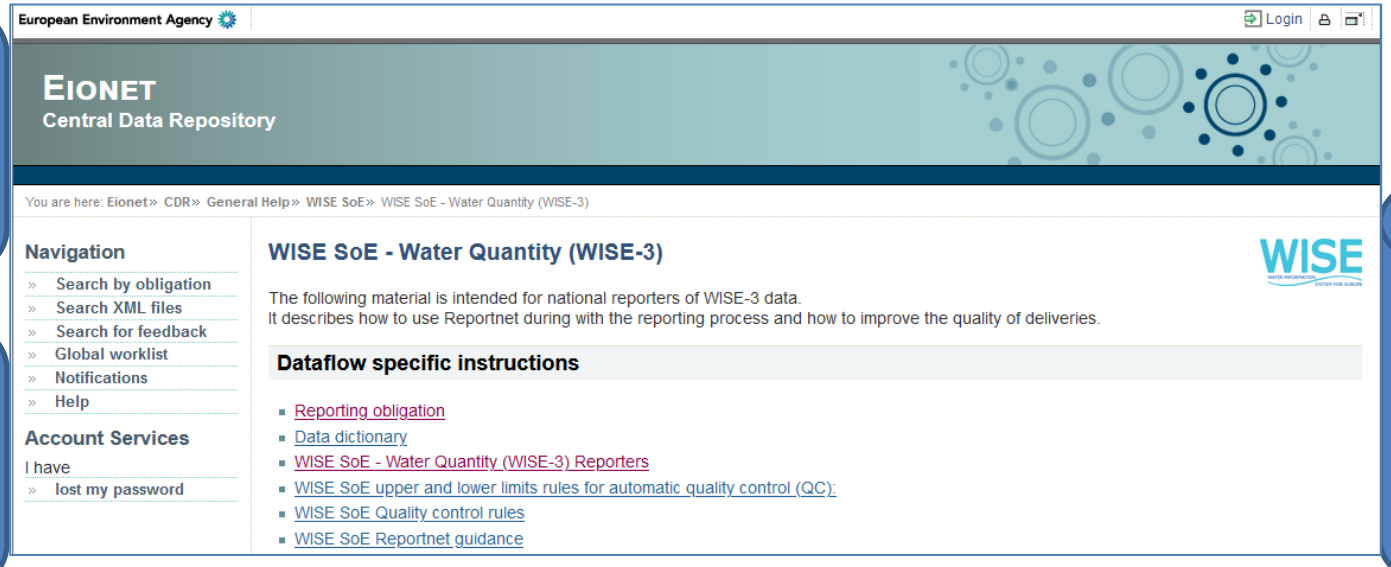
Data call

1) WISE-SoE data call
- Preparation (update to model, codelists and data dictionary)
- QC checks updates
- Data call letter, CDR help

2) Communication with NRCs
- Helpdesk
- Webinars
- QC issues
- Data gaps

3) Update Waterbase
- Harvest data
- Spatial reference update
- QCs
- Flag QC issues

http://cdr.eionet.europa.eu/help/WISE_SoE



Waterbase water quality

WISE SoE - Water Quality (WISE-3)
http://cdr.eionet.europa.eu/help/WISE_SoE/wise3

Dataflow specific instructions

- Reporting obligation
- Data dictionary
- WISE SoE - Water Quantity (WISE-3) Reporters
- WISE SoE upper and lower limits rules for automatic quality control (QC):
- WISE SoE Quality control rules
- WISE SoE Reportnet guidance

If you need support please contact WISE SoE Helpdesk
mailto:wisesoe.helpdesk@eionet.europa.eu

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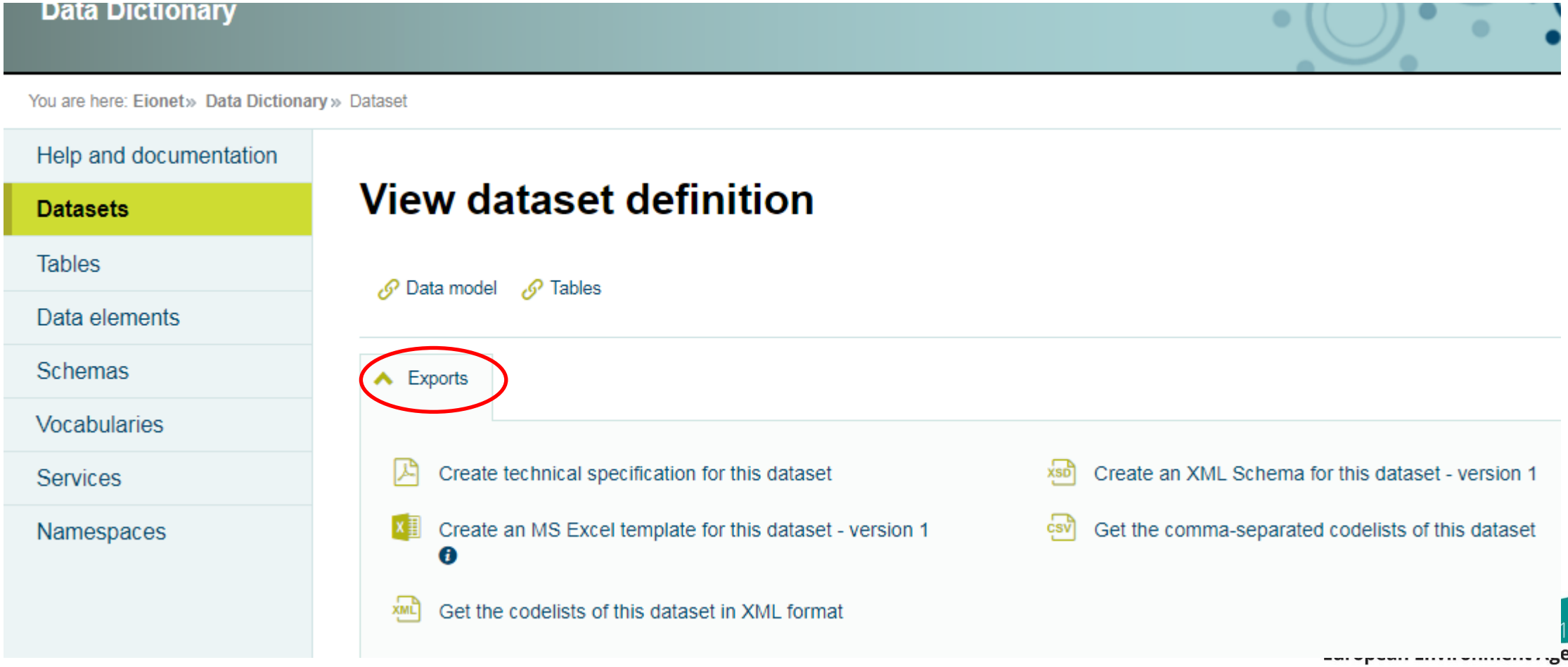
2021 data call – important webpage

2021 data call – Preparation of the data set and steps

- Use the Data Dictionary http://dd.eionet.europa.eu/datasets/latest/WISE-SoE_WaterQuantity
- Export the needed template(s) and codelists (if needed)
- Follow the instructions in the WISE SoE Reportnet Guidance the latest version can always be found here
  http://cdr.eionet.europa.eu/help/WISE_SoE/wise3/WISE_SoE_ReportnetGuidance_v1.9_2019-10-23.pdf
- Prepare your the data set
- Test your files in the https://cdrsandbox.eionet.europa.eu/
  - Username: datareporter
  - Password: datareporter
- Correct blockers, errors and check warnings – ask the WISE SoE Helpdesk for help
- Upload

2021 data call – Preparation of the data set and steps

- Export the needed template(s) and codelists (if needed)



2021 data call – Preparation of the data set and steps

- Use the Data Dictionary http://dd.eionet.europa.eu/datasets/latest/WISE-SoE_WaterQuantity
- Export the needed template(s) and codelists (if needed)
- Follow the instructions in the WISE SoE Reportnet Guidance the latest version can always be found here
  http://cdr.eionet.europa.eu/help/WISE_SoE/wise3/WISE_SoE_ReportnetGuidance_v1.9_2019-10-23.pdf
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- Correct blockers, errors and check warnings – ask the WISE SoE Helpdesk for help
- Upload

WISE3 - Quality control - 1st level quality control

- 1. Mandatory values test - OK
- 2. Record uniqueness test - OK
- 3. Data types test - OK
- 4. Valid codes test - OK
- 5. Monitoring site identifier format test - OK
- 6. Monitoring site identifier reference test - BLOCKER
- 7. Time reference period test - OK

Tested presence of the monitoringSiteIdentifier and its respective monitoringSiteIdntifierScheme in the official reference list. The list has been created from the previously reported data on monitoring sites.

BLOCKER - some of the monitoringSiteIdentifier values are missing in the reference list.

Please assure that it is not due to an error and that they are reported under WFD, or report them under WISE Spatial data reporting.

42 identifiers detected.

Error should either be corrected in Spatial (WISE5/WFD) or WISE3

Document at WISE-SoE help WISE-3 Quality control rules

WISE3 - Quality control - 1st level quality control

Envelope tests. Tests that the XML files reported in the CDR envelope are of the expected schema, and that they **are not empty**.

Mandatory values tests (basic and conditional). Tests the presence of mandatory values. Conditional tests look at the presence of a value if a specific condition is met

Record uniqueness test. Tests the uniqueness of the records. **No duplicate records** can exist with the same combination of values, which must be unique for each record in the delivery.

Data type and constraints tests. Tests that the data type of the reported values matches the dataset definitions (e.g. **no text is reported where a number is expected**).

Valid codes tests. Tests the validity of the values against the respective **code lists**.

Spatial unit identifier tests. Tests syntax of the spatial identifiers and their presence in the reference database.

Value constraints tests. Tests that the specific values match the data definitions (e.g. that the phenomenonTimePeriod has the **expected syntax and the values represent years, months and dates**).

Parameter volume mathematical relation tests. Tests logical relation between values (e.g. that the **total value isn't lower as the sum of the respective partial values**).

2021 data call – Overview and description for the different QC rule categories

- **BLOCKER**. A critical error. The envelope cannot be released. Normally, a blocker is an error in the format of the file, or in the structure or content of the data. Such a critical error makes it impossible for the delivery to be harvested and integrated into the European database. The envelope can only be released if every incorrect file is removed and replaced by corrected files
- **ERROR**. A non-critical error. **The envelope can be released, but part of its content may be excluded from the European database (or be marked as having low reliability).** Data Reporters are strongly advised to correct the non-critical errors. If the automated QC returned errors, a clarification or a resubmission may be requested by the Data Client, when the data is processed, and the final feedback is added to the envelope.
- **WARNING**. An issue that may be an error. Data Reporters are advised to check the correctness of the records or values that raised the warning. **The envelope can be released**. If the automated QC returned warnings, a **clarification may be requested** by the Data Client, when the data is processed and the final feedback is added to the envelope.
- **INFO**. Other issues related to the quality of the data. **The envelope can be released**. A **clarification may be requested** by the Data Client, when the data is processed and the final feedback is added to the envelope. Note that the observation status and the remarks fields can be used to provide include the clarifications in the delivery itself.
- **OK**. The automatic QC did not detect quality issues. **The envelope can be released**.

2021 data call – next steps

- Announcement letter 29 June 2021
- The call for spatial data (WISE-5) is open from now until October 31st 2021.
  - Important to check that the monitoring sites you want to report data from are in the monitoringSite vocabulary http://dd.eionet.europa.eu/vocabulary/wise/MonitoringSite/view
- The call for the other WISE dataflows will run from 12th October 2021 until 14th January 2021.
- Download templates for data; - test the data set in https://cdrsandbox.eionet.europa.eu/
- If there are Blockers that prevent release of the folder
  - correct the issues;
  - contact the helpdesk for help; or
  - split the data set into two files (one data set without Blockers and a separate file with problematic records).
- Upload the files to CDR.

THANK YOU !

For more information:

www.eea.europa.eu