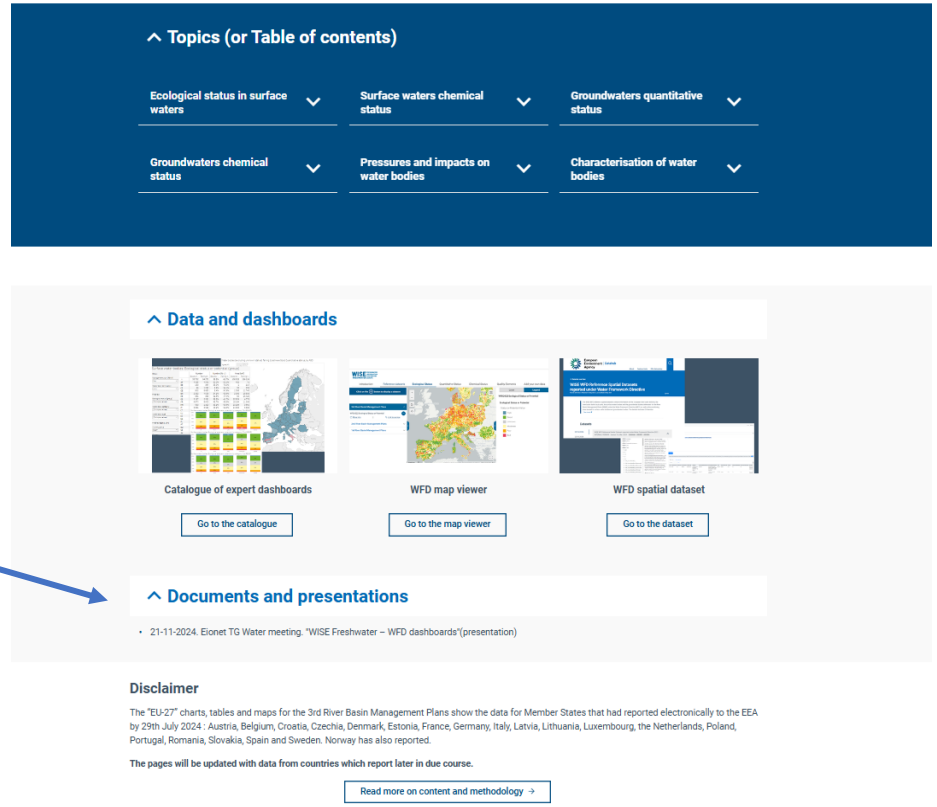
NOTE TO USERS

We intend to present the WISE FW WFD dashboards live in the meeting, so the slides on this topic in this file provide links for later use, as well as a back up in case of issues on the day.

You can find these slides at:
https://water.europa.eu/freshwater/europe-freshwater/water-framework-directive
(under "Documents and presentations")



Eionet TG Water
WISE Freshwater – WFD dashboards

Caroline Whalley, Silvia Dalla Costa, Jorgen Olsen, Fernanda Nery / Eionet TG Water/ 21-11-24

European Environment Agency

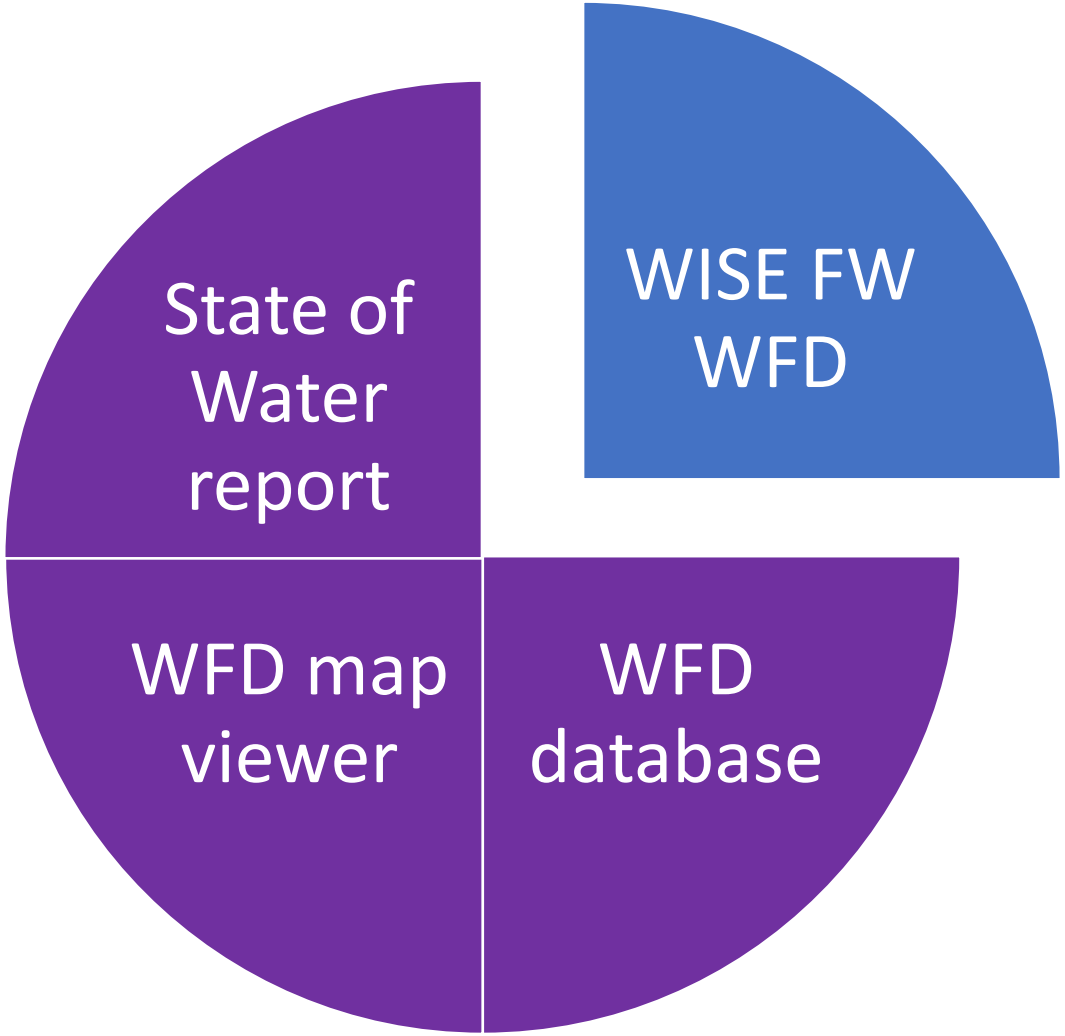
Introduction

- EEA products are based on electronically reported data

- Countries included in 3rd RBMP * (ie EU-27) are AT, BE, CZ, DK, EE, EL, ES, FR, DE, HR, IT, LT, LU, LV, NL, PL, PT, RO, SE and SK.
  NO data also available in the dashboards.

- Although Europe's State of Water 2024 assessment has been published, countries can still report 3rd RBMP electronically to EEA, results will be updated in the dashboards.

EEA's package of products around the 3rd RBMP reporting



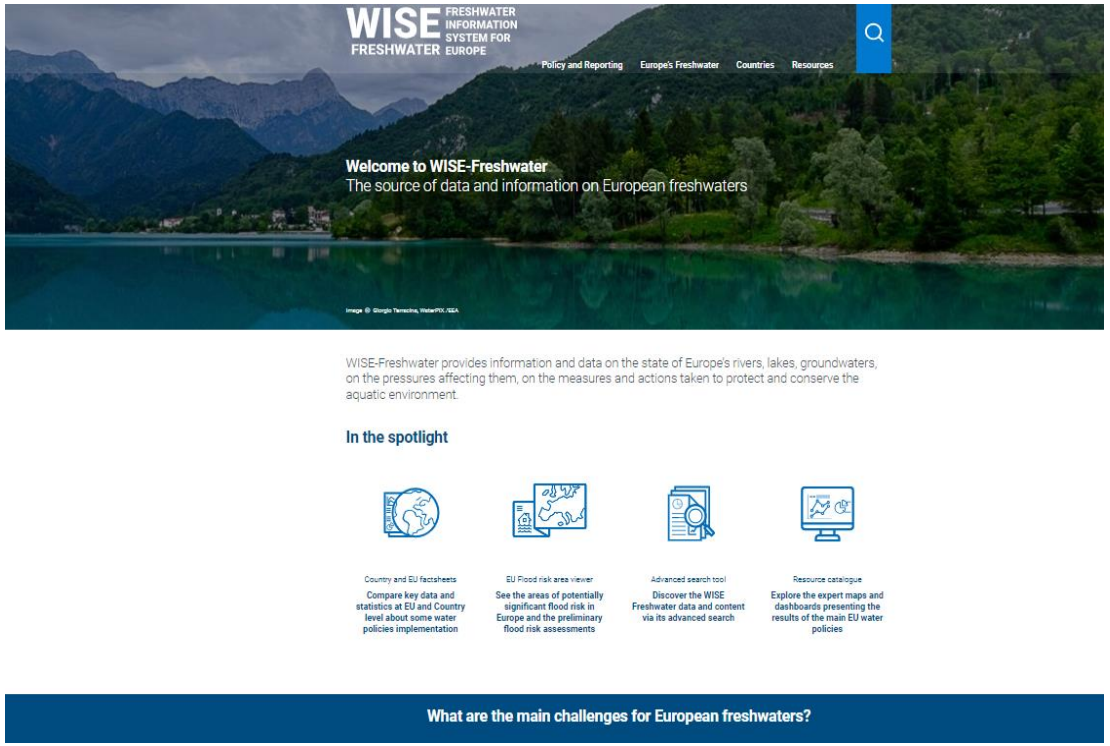
European Environment Agency

WISE Freshwater mission and objectives

Jointly owned and managed by EEA-EC (DG Env)

One of the "ISEs" (Freshwater, Marine, Biodiversity) Information Systems for Europe

> WISE-Freshwater is a gateway for searching, accessing, retrieving and understanding data and information on the environmental status and policy assessments of the European fresh waters



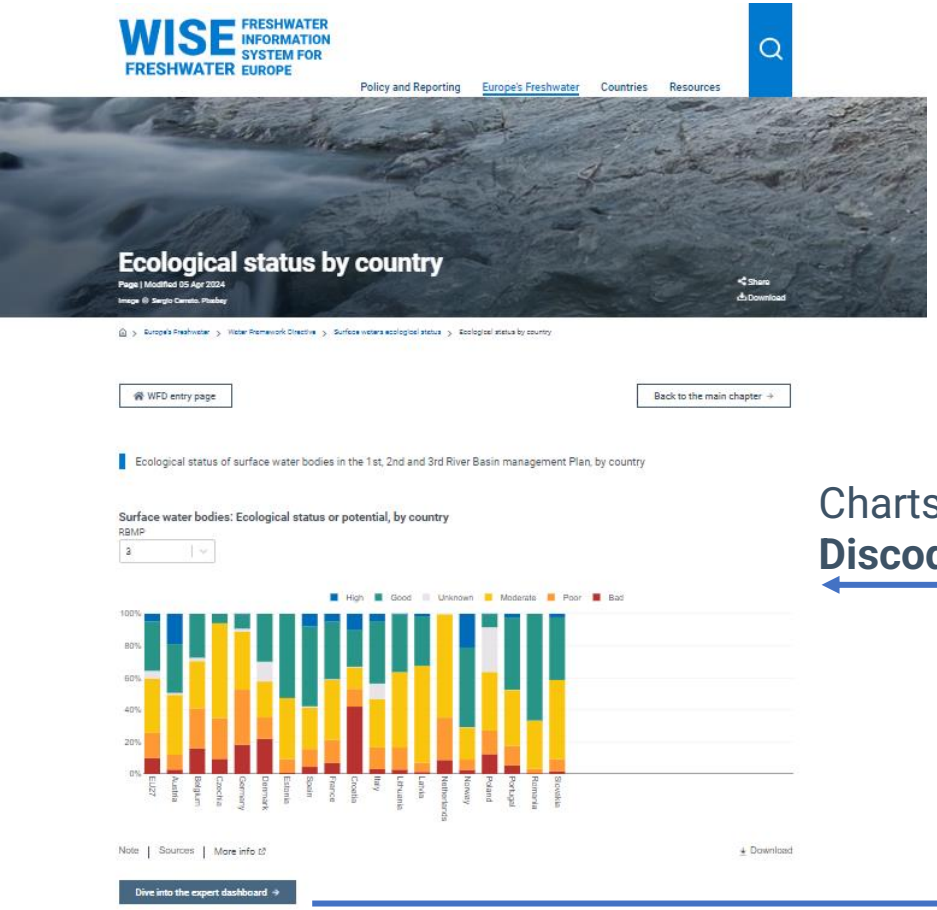
EU reference gateway to search, access and retrieve:

- **"Freshwater" data** collected in the context of the water **policies / reporting obligations**
- **Data, information and knowledge** about the **status** of our the fresh/ground water environment
- **Results of assessments** on environmental policies effectiveness

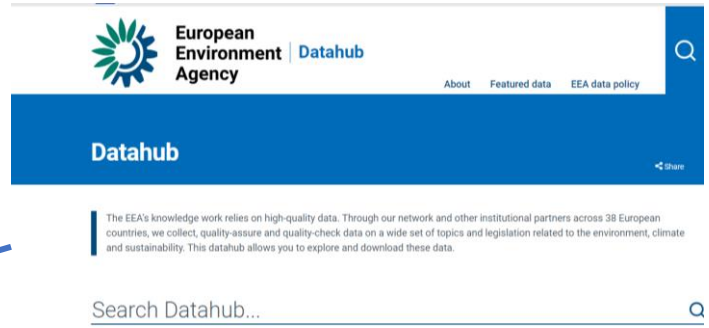
European Environment Agency

WISE Freshwater is

- **Fully integrated with the EEA web design and part of the EEA IT and data applications**



Data download via **EEA Datahub**

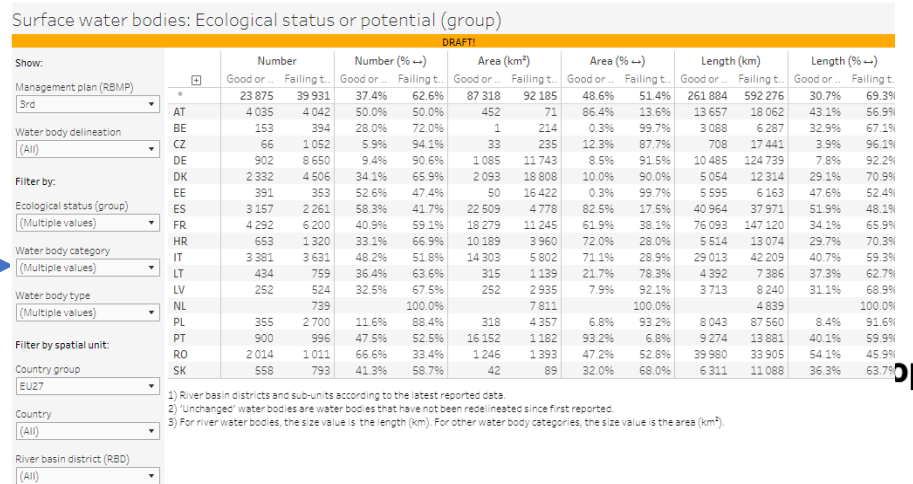


Charts created and updated via **EEA Discodata**

Discodata

Database explorer

Charts are linked to **Tableau expert dashboards**



opean Environment Agency

Water Framework Directive data through WISE Freshwater

WISE Freshwater WFD

This section is dedicated to the Water Framework Directive and presents the results on the status and pressures on groundwater and surface waters in Europe, based on data reported electronically to EEA for River Basin Management Plans. The results provide an overview at EU, Member State and River Basin District level.

Key findings

37%
of surface waters are in good or better ecological status
Discover more →

29%
of surface waters are in good chemical status
Discover more →

91%
of groundwater area is in good quantitative status
Discover more →

77%
of groundwater area is in good chemical status
Discover more →

52%
of surface waters are under pressure from changes to natural flow and physical features
Discover more →

3.8 million Km2
groundwater area was monitored for the 3rd River Basin Management Plans
Discover more →

WFD entry page

29%
of surface waters are in good chemical status

The Water Framework Directive (WFD) requires assessment of the chemical status of surface waters. Assessment is based on a list of priority substances. EU-wide standards are set for these substances. If concentrations exceed the standard in a water body, the water body fails to meet good chemical status.

- The Water Framework Directive requires that all water bodies be in good status by 2015, or at the latest by 2027.
- Chemical status in the Water Framework Directive refers to the quality of water in terms of its chemical composition.
- Good status represents the water body condition being as it would be with little or no human impact.
- Furthermore, the assessment of surface waters also includes ecological status.

Chemical status of surface water bodies in the 3rd River Basin Management Plan

In Europe (EU-27), around 29% of surface water bodies currently reported (2022) are in good chemical status.

A large proportion of surface waters fail to meet good chemical status. This mainly owes to widespread pollution by mercury and brominated diphenyl ethers (flame retardants).

This chart shows the proportion of surface waters in good, failing to achieve good, and unknown chemical status for the EU-27 or selected country.

Country: EU27

Number of surface water bodies (%)

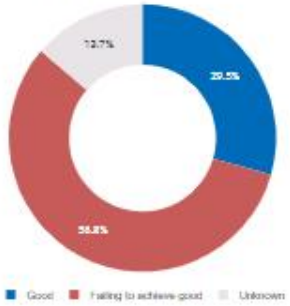


Table of contents

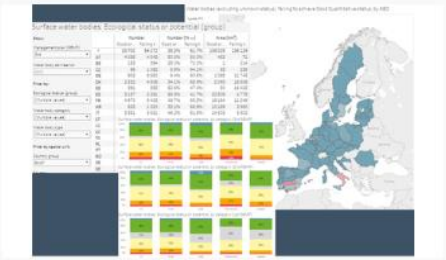
- Ecological status in surface waters
- Surface waters chemical status
  - Chemical status by country
  - Priority substances causing failure to good chemical status
  - Ecological and chemical status
- Groundwater quantitative status
- Groundwaters chemical status
- Pressures and impacts
- Characterisation of water bodies

nt Agency

Water Framework Directive data through WISE Freshwater

water.europa.eu/freshwater/europe-freshwater/water-framework-directive/

Data and dashboards



Catalogue of expert dashboards

Go to the catalogue

WFD map viewer

Go to the map viewer

WFD spatial dataset

Go to the dataset

Disclaimer

The "EU-27" charts, tables and maps for the 3rd River Basin Management Plans show the data for Member States that had reported electronically to the EEA by 29th July 2024 : Austria, Belgium, Croatia, Czechia, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain and Sweden. Norway has also reported.

The pages will be updated with data from countries which report later in due course.

Read more on content and methodology →

Access data through https://discodata.eea.europa.eu/
WISE_WFD
> latest

Link to all expert dashboards

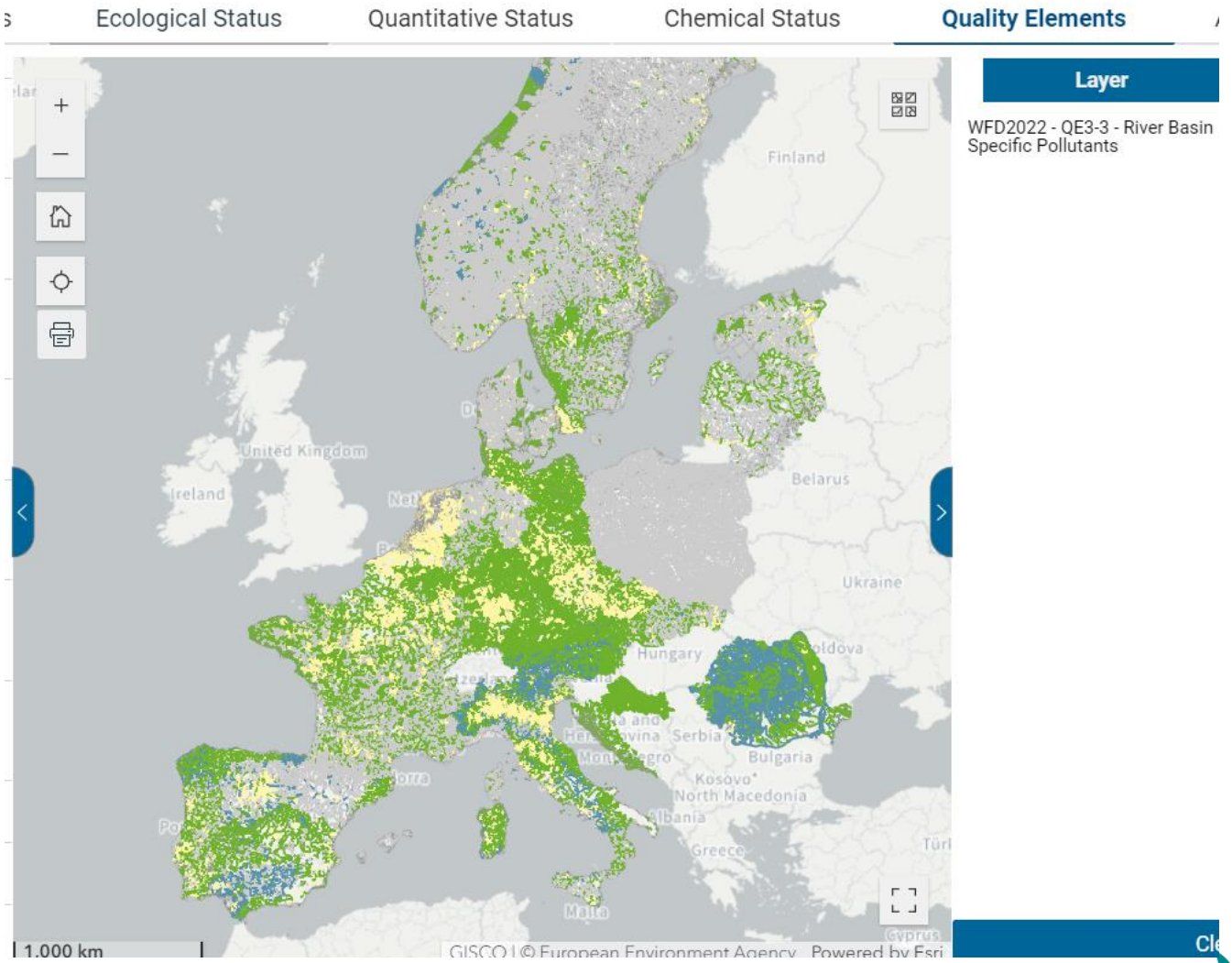
European Environment Agency

Water Framework Directive mapviewer

Welcome to the WISE Freshwater Map Viewer

Use the map viewer to explore European spatial datasets related to river basin districts and sub-units, surface water bodies, groundwater bodies, monitoring sites and other information related to freshwater.

The datasets are categorised by topic (e.g. Reference datasets, Ecological status, Chemical status, etc.).



European Environment Agency

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

European Environment Agency

Ecological status in surface waters

Modified 18 Oct 2024

Image © Sergio Cerrato. Pixabay

Share

WFD entry page

37%
of **surface waters**
are in **good** or **better**
ecological status

The Water Framework Directive requires assessment of the ecological status of surface waters. This is an expression of the quality of the structure and functioning of the water body. It shows the combined impact of pressures such as pollution, habitat degradation and climate change.

- The Water Framework Directive requires that all water bodies be in good status by 2015, or at the latest by 2027. Good or high status represents the water body condition being as it would be with little or no human impact.
- Ecological Status in the Water Framework Directive refers to the overall health of water bodies, including rivers, lakes, and coastal waters, based on the condition of their ecosystems. The directive aims to ensure that all water bodies achieve good ecological status
- Furthermore, the assessment of surface waters includes **chemical status**.

Ecological status of surface water bodies in the 3rd River Basin Management Plan

Table of contents

Ecological status of surface water bodies in the 3rd River Basin Management Plan

In Europe (EU-27) **around 37%** of the surface water bodies are reported in good or high ecological status.

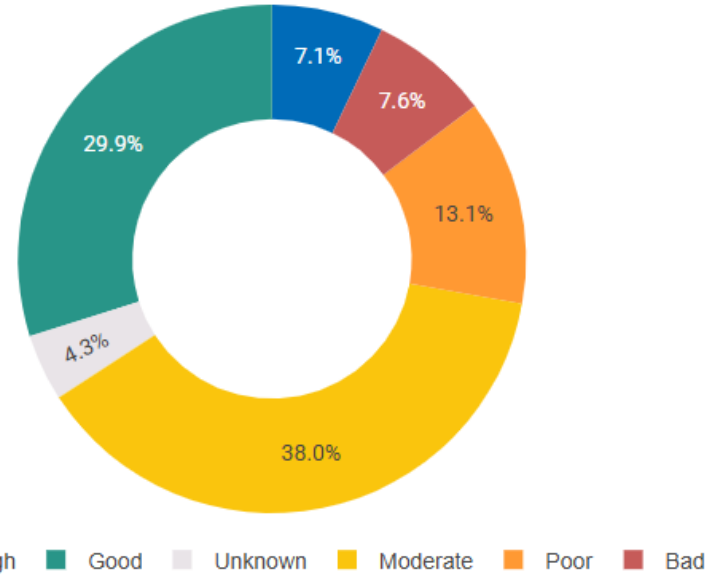
A large proportion of surface waters fail to meet good ecological status. Several parameters are included in the assessment of good status, including biological quality, pollutants, consideration of the natural flow and physical features (see the dedicated pages available from the menu on the right).

Failure of just one of these means that it is not possible to achieve good ecological status.

Country

EU27

Number of surface water bodies (%)



Note | Sources | More info

Download

Table of contents

European Environment Agency

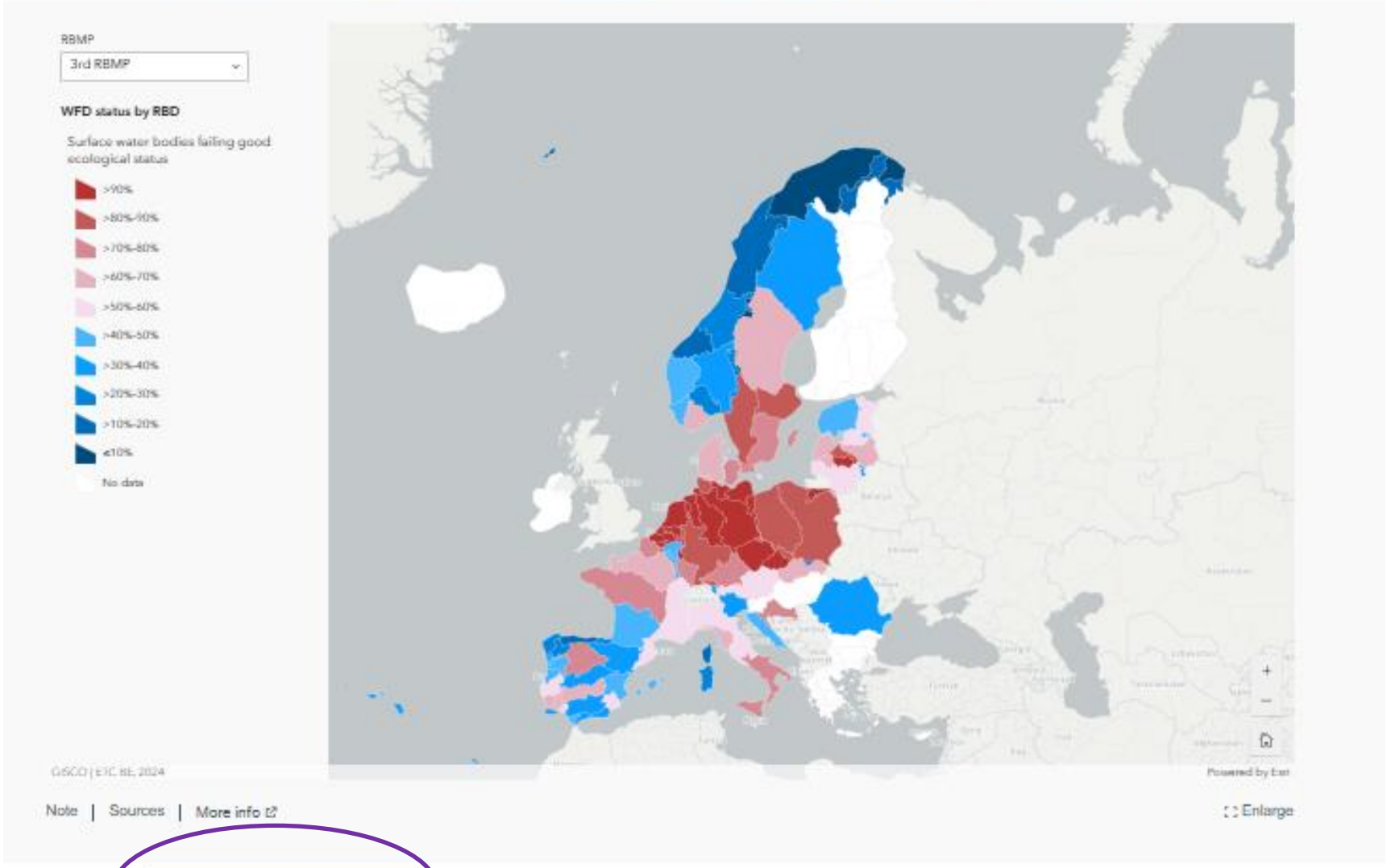
Ecological-status-of-surface-water

Ecological status in surface waters

This map shows the ecological status across Europe at River Basin District level. It shows the share of surface waters achieving good status. Blue river basins are those where the share of surface waters in good status is greater than 50%, whereas those coloured red are where the share in good status is less than 50%.

A map showing ecological status in 1st, 2nd or 3rd River Basin Management Plans can be selected through the drop down menu at the top left.

The map shows that many parts of Europe are challenged to meet good ecological status. Less densely populated areas tend to be in better condition.



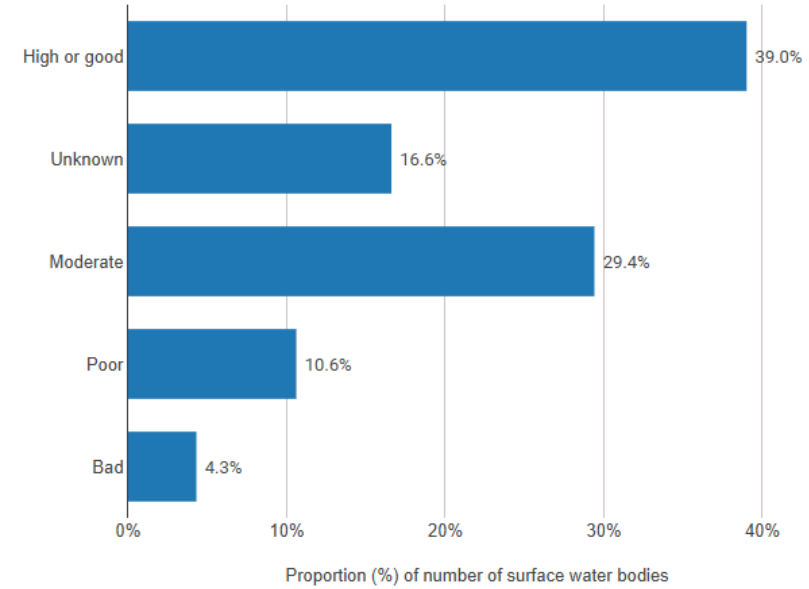
Surface water bodies achieving or failing to achieve a good ecological status 1st, 2nd and 3rd RBMP

European Environment Agency

Ecological status development between River Basin Management Plans, EU-27

First River Basin Management Plan

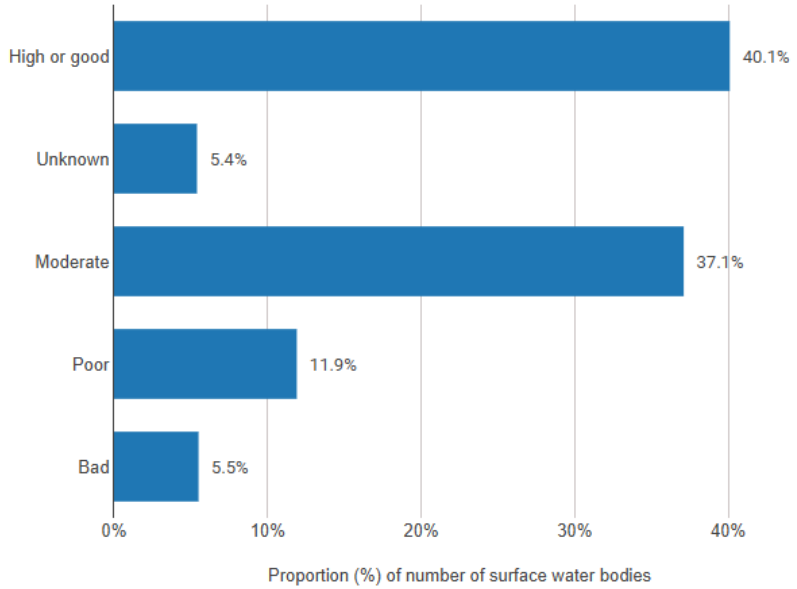
Total number of reported surface water bodies: **116,812**



Sources | More info ↗ ⬇ Download

Second River Basin Management Plan

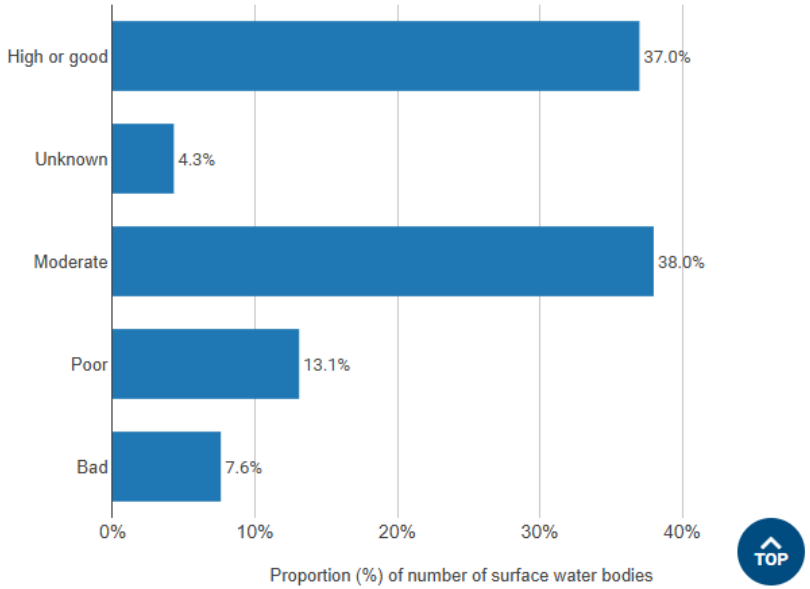
Total number of reported surface water bodies: **108,892**



Sources | More info ↗ ⬇ Download

Third River Basin Management Plan

Total number of reported surface water bodies: **93,203 (see the Note)**



Note | Sources | More info ↗ ⬇ Download

TOP

European Environment Agency

odies in the 3rd River Basin Management Plan

vater bodies are reported in good or high ecological status.

et good ecological status. Several parameters are included
ological quality, pollutants, consideration of the natural
pages available from the menu on the right).

t possible to achieve good ecological status.

e water bodies (%)

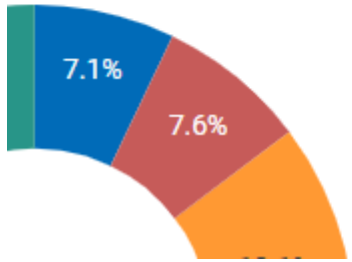


Table of contents

Status of biological quality elements, all surface water body categories

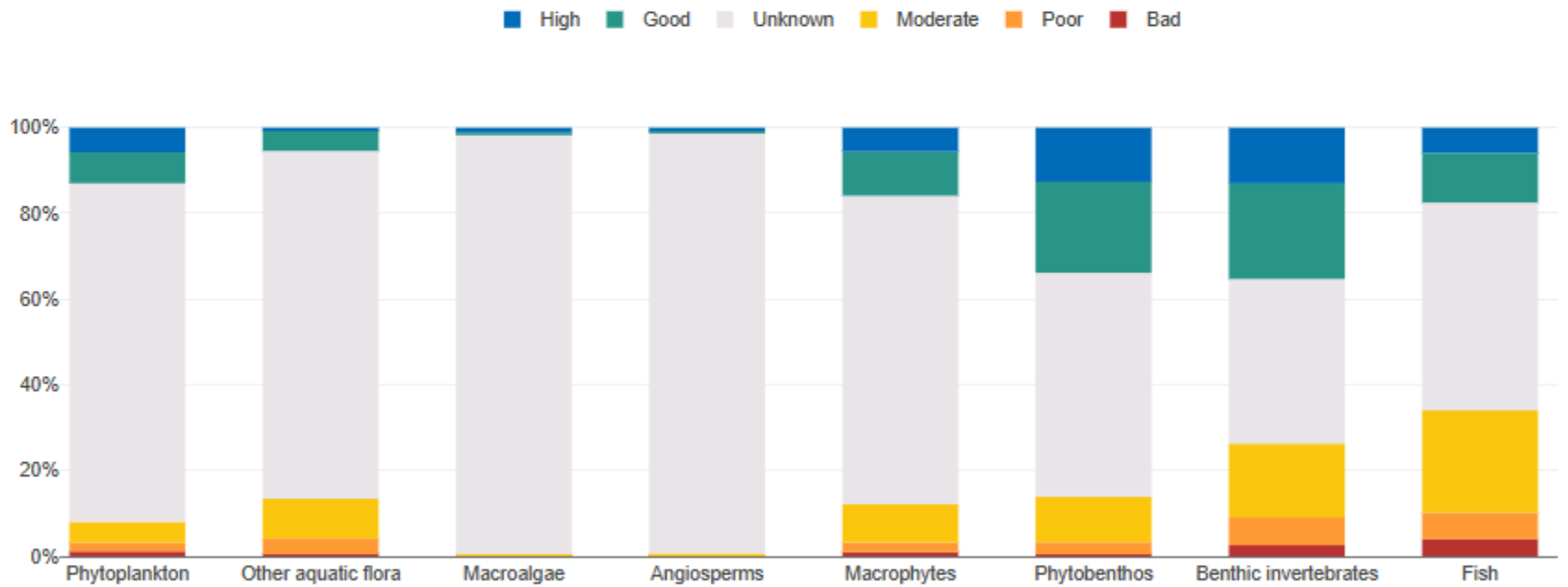
The chart shows the status of biological quality elements for all surface waters (rivers, lakes, transitional and coastal waters combined) by number of water bodies. It is possible to select 1st, 2nd or 3rd river basin management plan (RBMP).

Angiosperms (sea grass) and macro algae are only assessed in transitional and coastal waters, as they are not present in rivers and lakes. Fish are not monitored in coastal waters.

There is a high proportion of unknown status. In 3rd RBMP, the most frequently assessed biological quality elements are phytobenthos, benthic invertebrates and fish.

RBMP

3



Note | Sources | More info

Download

Dive into the expert dashboard →

Agency

Status of biological quality elements, all surface water body categories

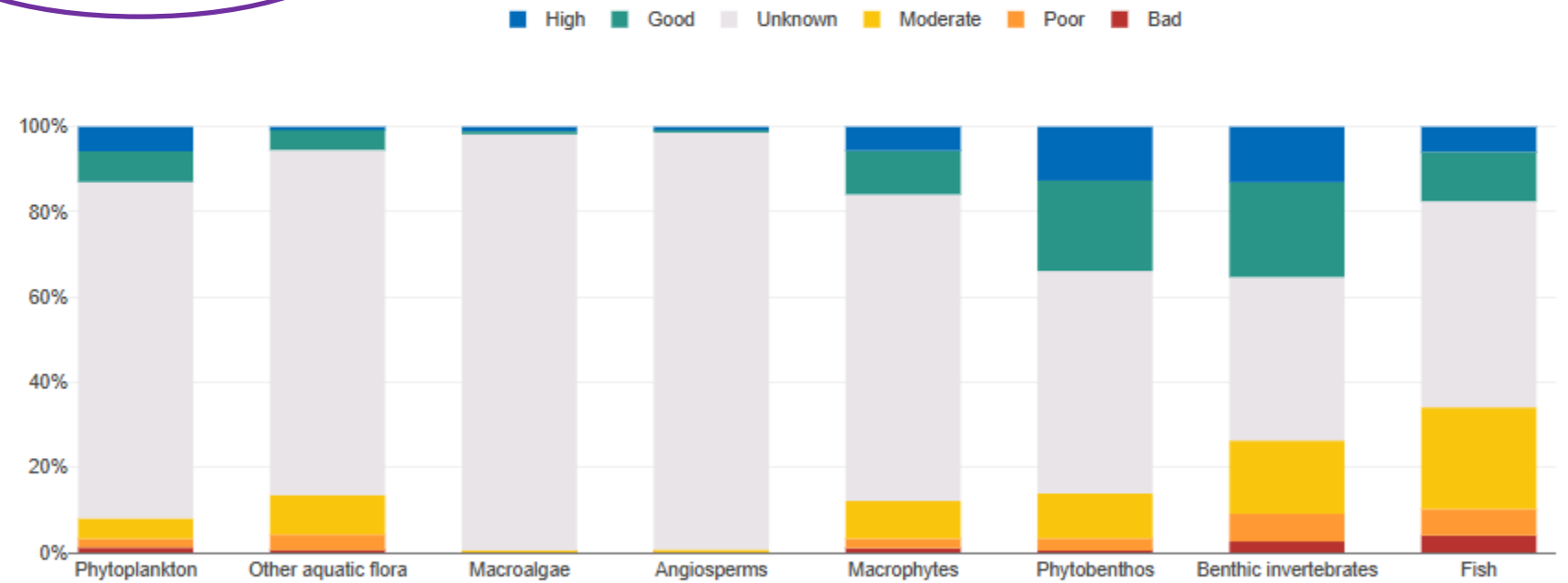
The chart shows the status of biological quality elements for all surface waters (rivers, lakes, transitional and coastal waters combined) by number of water bodies. It is possible to select 1st, 2nd or 3rd river basin management plan (RBMP).

Angiosperms (sea grass) and macro algae are only assessed in transitional and coastal waters, as they are not present in rivers and lakes. Fish are not monitored in coastal waters.

There is a high proportion of unknown status. In 3rd RBMP, the most frequently assessed biological quality elements are phytobenthos, benthic invertebrates and fish.

RBMP

3



Note | Sources | More info

Download

Dive into the expert dashboard →

Agency

Surface water bodies: quality elements status [table]

Dashboard | Modified 10 Oct 2024

Share
Download

The tabular dashboard shows the different surface water bodies' quality elements, required for assessing their overall ecological status. Several filters allow the user to explore the data such as: quality elements, water body types and categories, RBMP cycle, at country, EU27 and "All" countries level.

Send your feedback →

Show:

Management plan (RBMP)
3rd

Measure
Number

Water body delineation
(All)

Filter by:

Parent quality element (note 4)
QE1 - Biological quality el...

Quality element
(All)

Surface water bodies: QE1 - Biological quality elements status

		Number									
RBMP	Quality element	High	Good	Modera..	Poor	Bad	High	Good	Modera..	Poor	Bad
3rd	QE1-1 - Phytoplankton	2 411	3 030	2 006	885	507	27%	34%	23%	10%	6%
	QE1-2 - Other aquatic flora	222	2 209	4 112	1 655	223	3%	26%	49%	20%	3%
	QE1-2-1 - Macroalgae	351	243	102	46	10	47%	32%	14%	6%	1%
	QE1-2-2 - Angiosperms	182	278	129	72	27	26%	40%	19%	10%	4%
	QE1-2-3 - Macrophytes	3 831	6 995	6 004	1 557	676	20%	37%	31%	8%	4%
	QE1-2-4 - Phytobenthos	9 833	16 476	8 189	2 240	336	27%	44%	22%	6%	1%
	QE1-3 - Benthic invertebr..	11 405	19 450	15 060	5 670	2 256	21%	36%	28%	11%	4%
	QE1-4 - Fish	5 046	9 571	19 569	5 143	3 282	12%	22%	46%	12%	8%

count..	Quality element	High	Good	Modera..	Poor	Bad	High	Good	Modera..	Poor	Bad

[Biological quality elements dashboard]

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

European Environment Agency

Surface waters chemical status

Modified 17 Oct 2024

Image © Sergio Cerrato. Pixabay

Share

WFD entry page

30%

of **surface waters**

are in **good**

chemical status

The Water Framework Directive (WFD) requires assessment of the chemical status of surface waters. Assessment is based on a list of priority substances. EU-wide standards are set for these substances. If concentrations exceed the standard in a water body, the water body fails to meet good chemical status.

- The Water Framework Directive requires that all water bodies be in good status by 2015, or at the latest by 2027.
- Chemical status in the Water Framework Directive refers to the quality of water in terms of its chemical composition.
- Good status represents the water body condition being as it would be with little or no human impact.
- Furthermore, the assessment of surface waters also includes **ecological status.**

surface-water-chemical-status

Chemical status of surface water bodies in the 3rd River Basin Management Plan

Table of contents

With uPBT | without uPBT

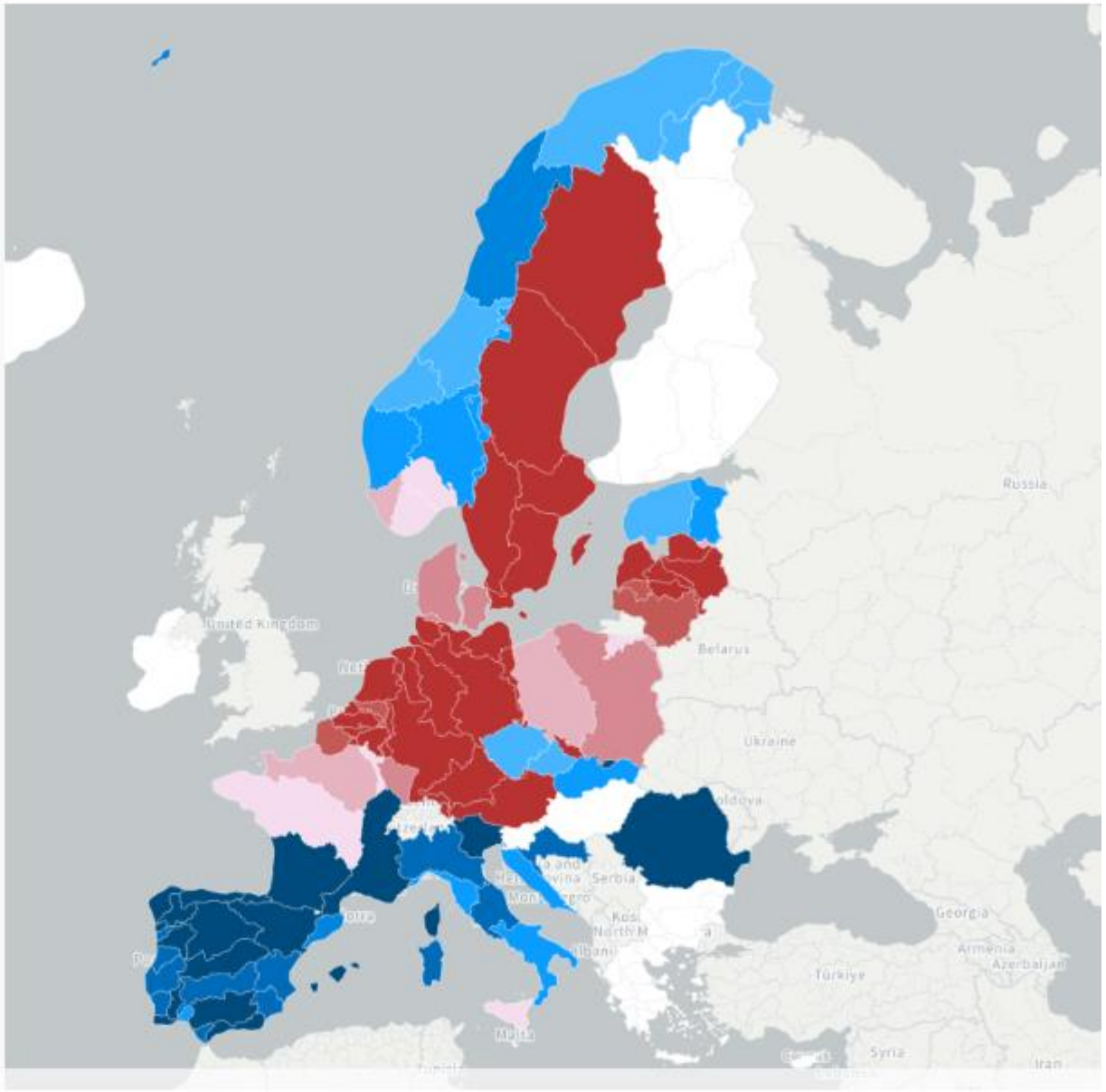
RBMP

3rd RBMP

WFD status by RBD

Surface water bodies failing good chemical status

- >90%
- >80%-90%
- >70%-80%
- >60%-70%
- >50%-60%
- >40%-50%
- >30%-40%
- >20%-30%
- >10%-20%
- ≤10%
- No data



GISCO | ETC BE, 2024

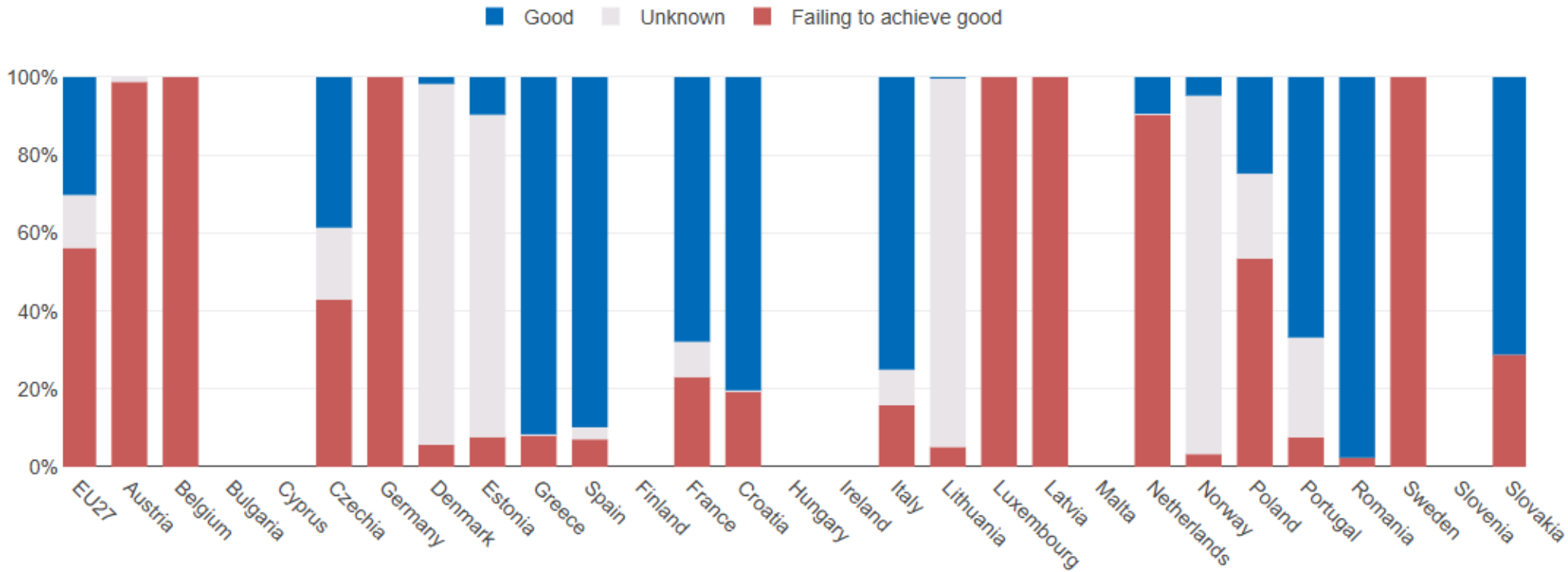
Note | Sources | More info

nent Agency

Surface water bodies: chemical status, by country

RBMP

3



Note | Sources | More info

Download

[SW chemical status by country]

European Environment Agency

Priority substances causing failure to good chemical status

The table shows the priority substance, the number of surface water bodies failing good chemical status for that substance, the number of categories (up to 5, for rivers, lakes, transitional, coastal and territorial waters), and the number of countries reporting that priority substance. The higher the numbers, the more widespread the substance is across Europe. The total number of monitored surface water bodies is 93,280.

It is possible to filter by 2nd or 3rd River Basin Management Plan, EU-27 or country, and by pollutant name.

Mercury and brominated diphenylethers (or "brominated flame retardants") cause large areas of Europe's surface waters to fail to achieve good chemical status.

Active filters clear all

Country: EU 27 Countries ⊠ River Basin Management Plan: 3rd River Basin Management Plan ⊠

Substance ⌄ Country (1) ⌄ River Basin Management Plan (1) ⌄

Priority substance	Countries	Number of water bodies failing	Number of water body categories
Mercury and its compounds	19	45,504	5
Brominated diphenylethers (congener numbers 28, 47, 99, 100, 153 and 154)	17	45,295	5
Benzo(a)pyrene	17	5,439	5
Fluoranthene	17	2,489	4
Benzo(g,h,i)perylene	16	2,190	5
Heptachlor and heptachlor epoxide	11	2,117	5
Perfluorooctane sulfonic acid (PFOS) and its derivatives	18	1,956	5
Benzo(b)fluoranthene	15	1,602	5

[Priority substances]

t Agency

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

Groundwater quantitative status

Modified 18 Oct 2024

Image © Sergio Cerrato. Pixabay

Share

WFD entry page

91%

of **groundwater area** is in **good** quantitative status

The Water Framework Directive requires assessment of the quantitative status of groundwaters. Assessment is based on the changes in groundwater level. If the groundwater resources are over-abstracted, so that the amount of water used is more than that which is recharged, the groundwater body fails to meet good quantitative status.

- The quantitative status of groundwater can also fail if ecosystems dependent on groundwater deteriorate owing to there not being enough groundwater.
- The WFD requires that all water bodies be in good status by 2015, or at the latest by 2027. Good status represents the water body condition being as it would be with little or no human impact.
- Good status represents the water body condition being as it would be with little or no human impact.

Furthermore, the assessment of groundwaters also includes **chemical status.**

Quantitative status of groundwater bodies in the 3rd River Basin Management Plan (by area)

Table of contents

Quantitative status of groundwater bodies in the 3rd River Basin Management Plan (by area)

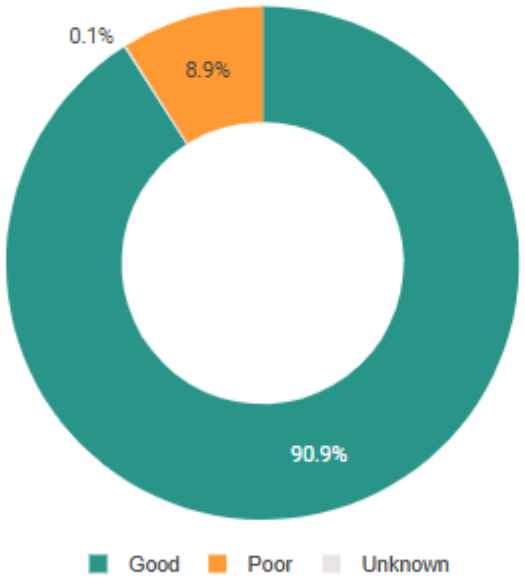
This chart shows the proportion of groundwaters in good, failing to achieve good, and unknown quantitative status for the EU-27 or selected country.

In Europe (EU-27), **around 91%** of groundwater bodies currently reported (2022) are in good quantitative status.

Country

EU27

Area of groundwater bodies (%)



Note | Sources | More info

Download

Dive into the expert dashboard →

Table of contents

groundwater-quantitative-status

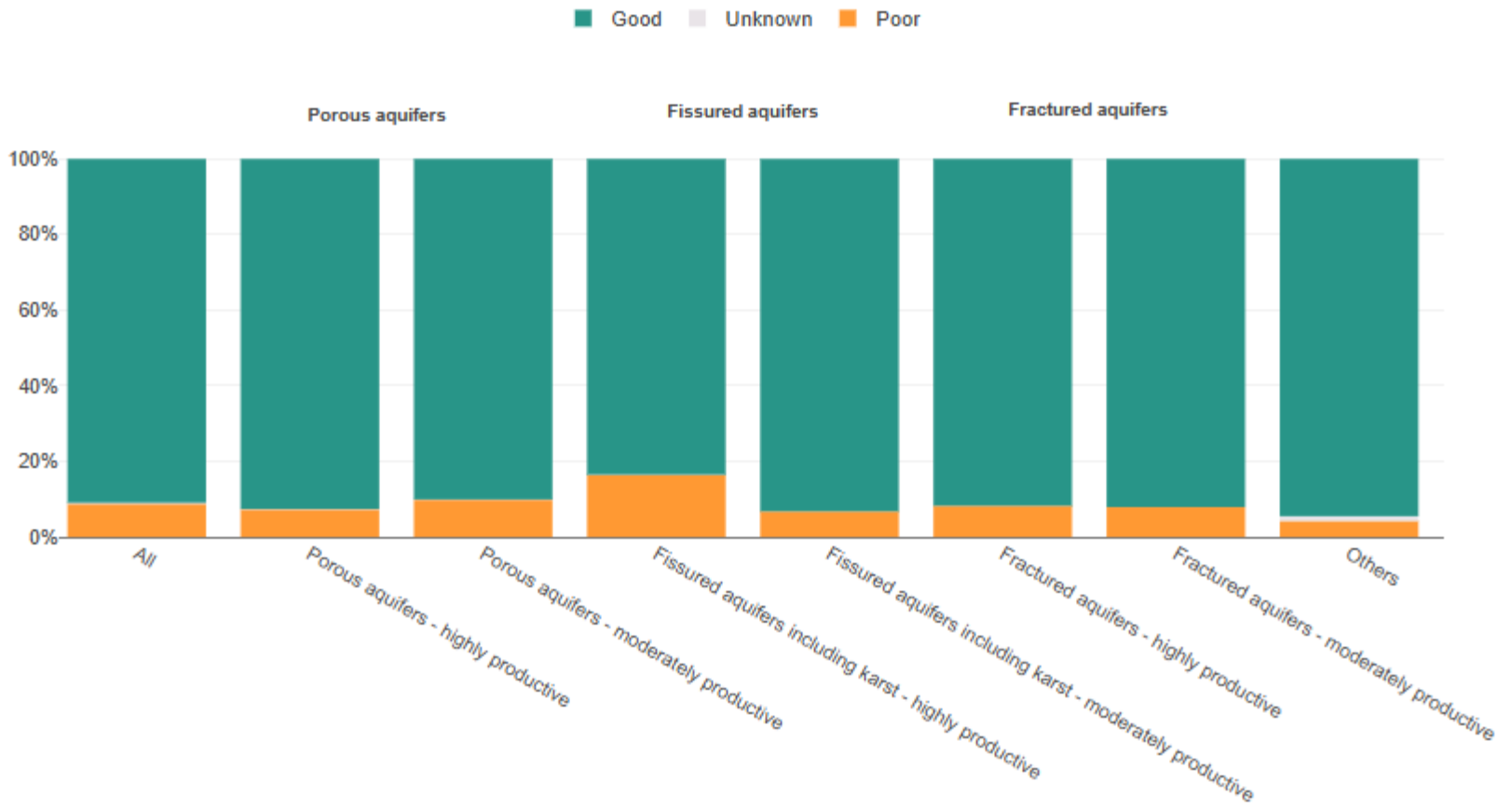
Environment Agency

Quantitative status by geological formation

The chart shows the total area of groundwater bodies by quantitative status in porous, fissured, and fractured aquifers. It is possible to select 1st, 2nd and 3rd River Basin Management Plan through the drop down menu.

RBMP

3



Note | Sources | More info

Download

Dive into the expert dashboard →

gency

Groundwater bodies: quantitative status by geological formation [table]

Dashboard | Modified 12 Oct 2024

Share
Download

Resources > WISE Freshwater resource catalogue > Water Framework Directive experts da... > Groundwater bodies: quantitative statu...

The tabular dashboard show the quantitative status of European groundwater bodies, by geological formation in the 1st, 2nd and 3rd River Basin Management Plans. It is possible to select and display data from one or more countries, the EU-27 or "All" reporting countries.

Send your feedback →

Show:

Management plan (RBMP): 3rd

Measure: Area (km²)

Percentage: none

Water body delineation: (All)

Filter by:

Quantitative status: (Multiple values)

Aquifer type: (Multiple values)

Aquifer productivity: (All)

Groundwater bodies: Geological formation and Quantitative status

	Porous		Fissured		Fractured		Other	
	Good	Poor	Good	Poor	Good	Poor	Good	Poor
(*)	1 720 303	166 225	1 195 239	143 299	263 119	22 760	367 622	16 548
AT	25 733		68 674		1 626			
BE	27 324	10 432	8 769	6 654	12 224	392	629	
CZ	5 554	954	17 229	2 370			61 924	50
DE	141 908	15 621	89 566	580	63 294	468	56 675	
DK	102 531	160	15 472	2 785				
EE	73 564		25 876	1 101	10 170		861	74
EL	21 739	6 971	35 719	651	14 263	83	14 575	
ES	113 082	42 132	94 893	29 552	45 563	2 435	42 694	470
FR	351 134	48 585	652 057	74 993	23 310	6 051	90 083	764
HR	21 718		29 624	63	33		7 119	
IT	114 327	18 416	36 337	16 969	35 386	5 918	32 430	3 226
LT	51 241		12 601		1 057			
LU			21		2 875			
LV	90 541				20 809			
NL	36 365	2 993	632					
PL	227 731	15 096	50 073	2 494	14 169	2 404		

groundwater-bodies-quantitative-status-by-geological-formation

Agency

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

Groundwaters chemical status

Modified 18 Oct 2024

Image © Sergio Cerrato. Pixabay

Share

Europe's Freshwater > Water Framework Directive > Groundwaters chemical status

WFD entry page

77%

of **groundwater area** is in **good** chemical status

The Water Framework Directive requires assessment of the chemical status of groundwaters. Assessment is based on threshold values. EU-wide thresholds are set for nitrates and pesticides. Countries need to consider other pollutants and set thresholds for those, if they could impact the quality of surface waters such as wetlands or rivers. If concentrations exceed the threshold in a groundwater body, the water body fails to meet good chemical status.

- Groundwater chemical status in the WFD refers to the quality of underground water in terms of its chemical composition.
- The Water Framework Directive requires that all water bodies be in good status by 2015, or at the latest by 2027.
- Good status represents the water body condition being as it would be with little or no human impact.

Furthermore, the assessment of groundwaters also includes **quantitative status.**

groundwater-bodies-chemical-status

Under the Water Framework Directive, the chemical status of groundwaters is assessed based on the presence of nitrates and pesticides. It is also assessed for substances that put the groundwater body at risk. Threshold values are used to assess status. If the threshold value for substances is exceeded, the water body fails to meet good chemical status.
The table shows the pollutant, the number of countries reporting that substance and the area of water bodies failing good chemical status for that substance (km^2). The higher the numbers, the more widespread the substance is across Europe.
It is possible to filter by 2nd or 3rd RBMP, EU-27 or country, and by pollutant name.

groundwater-pollutants

Active filters clear all

Country: EU 27 Countries ⊠ River Basin Management Plan: 3rd River Basin Management Plan ⊠

Substance ⌄ Country (1) ⌄ River Basin Management Plan (1) ⌄

Pollutant	Countries	Area of groundwater bodies failing (in km^2)
Nitrate	16	527,504
Pesticides (Active substances in pesticides, including their relevant metabolites, degradation and reaction products)	11	374,385
Sulphate	11	91,638
Ammonium	11	90,756
Chloride	14	71,592
Chloridazon desphenyl	4	58,524
Arsenic and its compounds	10	40,048
Electrical conductivity	9	37,885
Phosphate	6	37,439

1 2 3 4 5 › »

Notes Sources

onment Agency

To find all the detailed dashboards https://water.europa.eu/freshwater/resources/metadata/wfd-dashboards

Water Framework Directive experts dashboards

Page | Modified 11 Oct 2024

Share
Download

Resources > WISE Freshwater resource catalogue > Water Framework Directive experts da...

This section is dedicated to the Water Framework Directive (WFD) experts dashboards related to the **WFD section**

Dive into the WFD expert dashboards

Surface waters ecological status

Surface waters chemical status

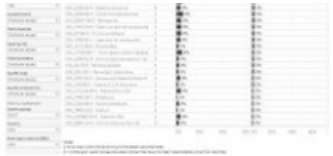
Groundwaters quantitative status

Groundwaters chemical status

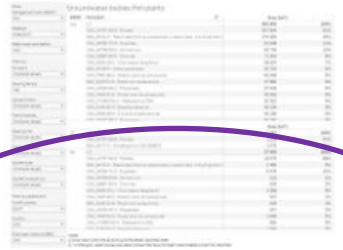
Pressures and impacts

Characterisation of water bodies

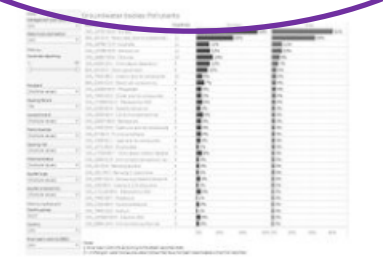
groundwaters-chemical-status



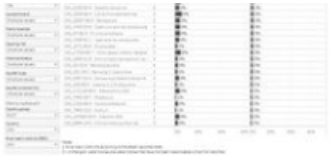
Groundwater bodies: pollutants - causing failure [overview chart]



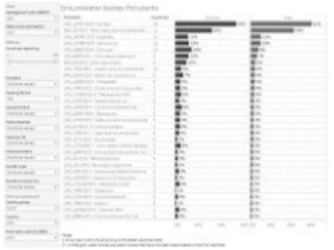
Groundwater bodies: pollutants [table]



Groundwater bodies: pollutants - upward trend [overview chart]



Groundwater bodies: pollutants - causing risk [overview chart]

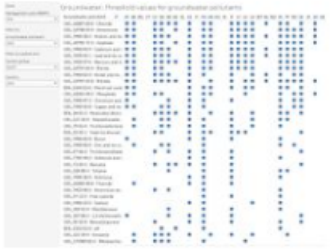


Groundwater bodies: pollutants - trend reversal [overview chart]

Groundwater bodies: pollutants - upward trend [overview table]

Groundwater bodies: pollutants [overview table]

Groundwater bodies: pollutants - trend reversal [overview table]



Groundwater methodology: threshold values for groundwater pollutants...

gency

Groundwater bodies: pollutants [table]

Dashboard | Modified 12 Oct 2024

Share
Download

Resources > WISE Freshwater resource catalogue > Water Framework Directive experts da... > Groundwater bodies: pollutants [table]

The tabular dashboard shows, at Country level, the groundwater pollutants identified to assess chemical status of groundwater bodies, for the 1st, 2nd and 3rd cycle of the Water Framework Directive (WFD) - River Basin Management Plan (RBMP). Several filters allow the user to refine the search and explore the data from one or more countries, the EU 27 or "All" reporting countries.

Send your feedback →

Show:
Management plan (RBMP): 3rd
Measure: Area (km²)
Water body delineation: (All)

Filter by:
Pollutant: (Multiple values)
Causing failure: Yes
Upward trend: (Multiple values)
Trend reversal: (Multiple values)
Causing risk: (Multiple values)
Chemical status: (Multiple values)
Aquifer type: (Multiple values)
Aquifer productivity: (All)

Filter by spatial unit:
Country group: EU27

Groundwater bodies: Pollutants

RBMP	Pollutant	Area (km²)	
3rd	(*)	879 782	100
	CAS_14797-55-8 - Nitrate	535 631	61
	EEA_34-01-5 - Pesticides (Active substances in pesticides, including their r..	374 385	43
	CAS_18785-72-3 - Sulphate	94 002	11
	CAS_14798-03-9 - Ammonium	93 036	11
	CAS_16887-00-6 - Chloride	77 406	9
	CAS_6339-19-1 - Chloridazon desphenyl	58 524	7
	EEA_3142-01-6 - Electrical conductivity	43 106	5
	EEA_00-00-0 - Other parameter	42 725	5
	CAS_7440-38-2 - Arsenic and its compounds	40 048	5
	CAS_14265-44-2 - Phosphate	37 439	4
	CAS_7440-02-0 - Nickel and its compounds	35 564	4
	CAS_172960-62-2 - Metazachlor ESA	32 302	4
	CAS_6190-65-4 - Desethylatrazine	30 226	3
	CAS_2008-58-4 - 2,6-dichlorobenzamide	30 196	3
	CAS_25057-89-0 - Bentazone	30 180	3
		Area (km²)	
AT	(*)	2 581	100
	CAS_14797-55-8 - Nitrate	1 214	47
	EEA_33-77-2 - Dimethachlor CGA 369873	1 576	61
BE	(*)	27 305	100
	CAS_14797-55-8 - Nitrate	18 570	68
	EEA_34-01-5 - Pesticides (Active substances in pesticides, including their r..	2 489	9
	CAS_18785-72-3 - Sulphate	5 976	22
	CAS_14798-03-9 - Ammonium	213	1
	CAS_16887-00-6 - Chloride	625	2
	CAS_6339-19-1 - Chloridazon desphenyl	2 368	9
	EEA_3142-01-6 - Electrical conductivity	625	2
	CAS_7440-38-2 - Arsenic and its compounds	537	2
	CAS_14265-44-2 - Phosphate	537	2

groundwater-bodies-pollutants-table-1

nment Agency

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

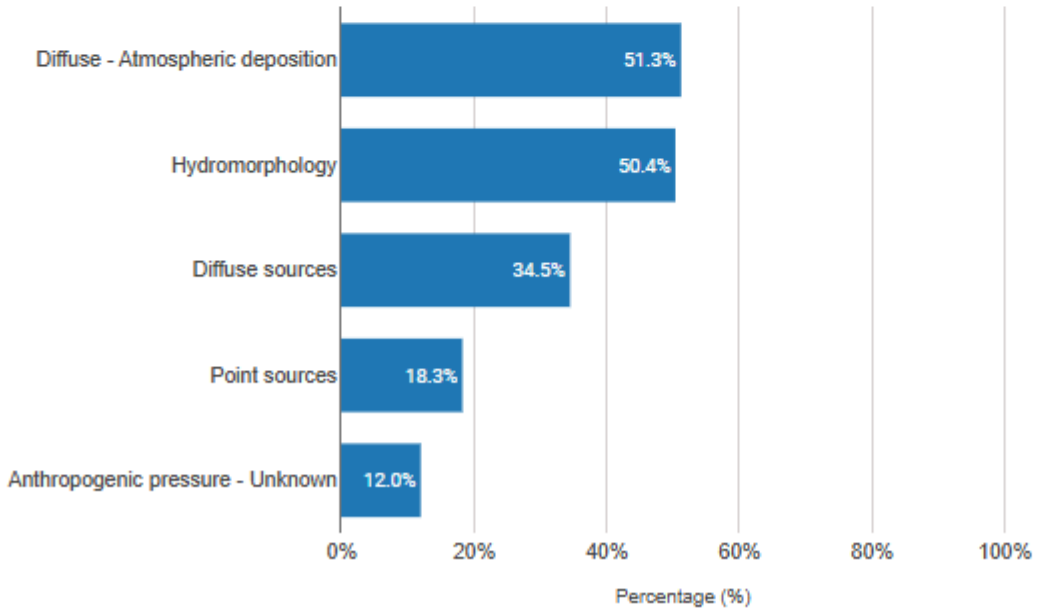
Main pressures on surface water in the 3rd River Basin Management Plan

The chart shows the most frequent pressures on surface waters, by the % of the total number of surface water bodies reported. These include:

- Diffuse pollution, such as from agriculture, burning of coal and other organic matter;
- Point source pollution, such as discharges from urban waste water treatment plants, industry;
- Changes to natural flow and physical features, such as river dams, land drainage, dredging (called "hydromorphology" in the Water Framework Directive);
- Changes to natural flow and physical features, called "hydromorphology" in the WFD, such as river dams, land drainage, dredging;
- Water abstraction, such irrigation, industrial use, drinking water.

Country

EU27



Note | Sources | More info

Download

Table of contents

Agency

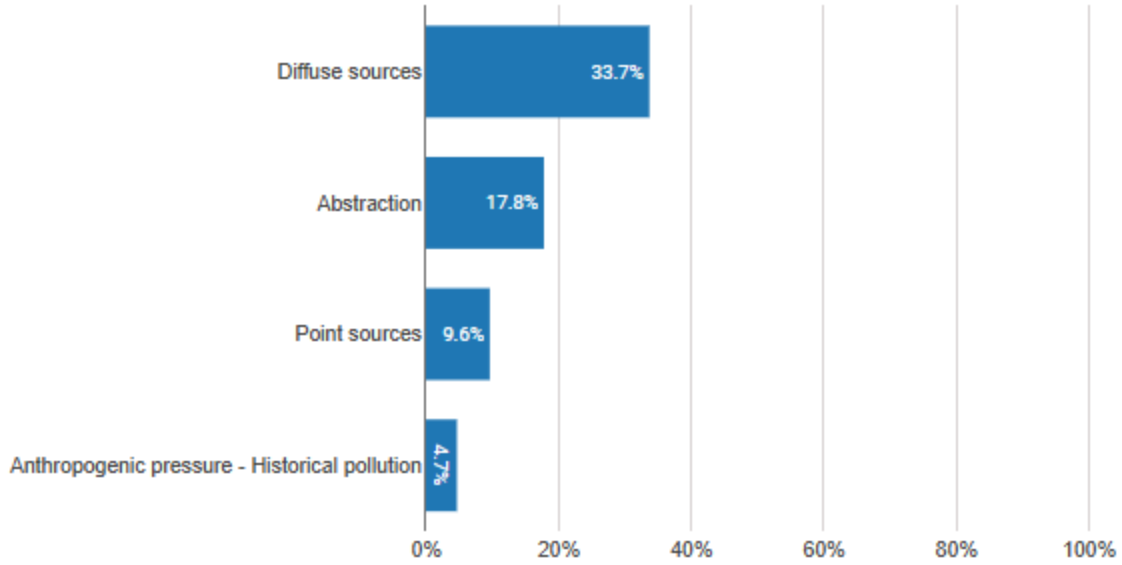
Main pressures on groundwater in the 3rd River Basin Management Plan

The chart shows the most frequent pressures on groundwaters, by proportion of total groundwater body area reported. These include:

- Diffuse pollution, such as from agriculture, urban runoff;
- Point source pollution, such as from contaminated land;
- Abstraction, such as removal of water for drinking water, irrigation, industrial use.

Country

EU27



Note | Sources | More info ↗ Download

Dive into the expert dashboard →

[pressures-and-impacts]

ın Environment Agency

Topics (or Table of contents)

- Ecological status in surface waters
- Surface waters chemical status
- Groundwaters quantitative status
- Groundwaters chemical status
- Pressures and impacts on water bodies
- Characterisation of water bodies

European Environment Agency

Characterisation of water bodies

Modified 18 Oct 2024

Image © Sergio Cerrato. Pixabay

Share

Europe's Freshwater › Water Framework Directive › Characterisation of water bodies

WFD entry page

Under the Water Framework Directive, countries identify sections of rivers, lakes, transitional and coastal waters and groundwater into units called "water bodies". These are grouped into a river basin district, which is the area of land and sea identified as the main management unit.
Assessment of status is done at the level of the water body.

over 93,000
surface waters

3.9 million Km^2
of **groundwater area**

were monitored for the
3rd River Basin Management Plans

characterisation-of-water-bodies

Surface water bodies in the 3rd River Basin Management Plans

"Categories" refers to the different types of surface water - rivers, lakes, transitional and coastal waters. This chart shows the relative proportion of the number of categories of surface water in the EU or country.

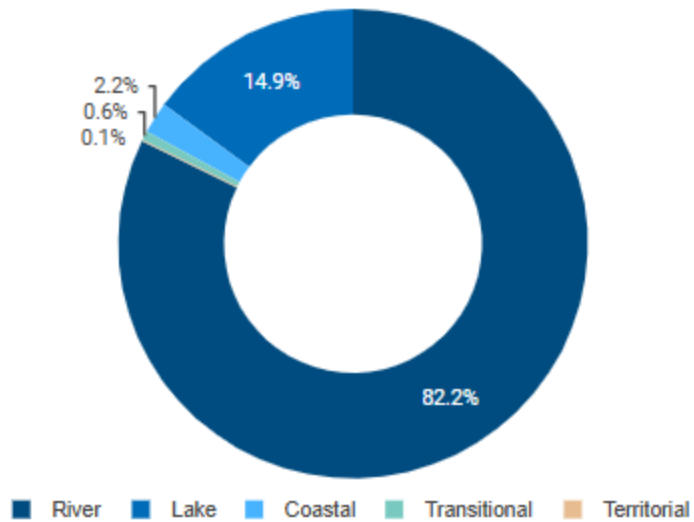
Typically, there is a higher proportion of rivers, because these are broken down into many water bodies. Lakes, transitional or coastal waters may cover a large area but not seem significant in the number of water bodies. To further investigate the significance of these categories, use the expert dashboards to look at the area (km^2) covered.

This chart shows the relative proportion of the number of categories of surface water in the EU or country.

Country

EU27

Number and categories of surface water bodies in the 3rd River Basin Management Plan



Groundwater bodies in River Basin Management Plans

The Water Framework Directive is concerned with aquifers which allow a significant flow, or abstraction of, a substantial quantity of groundwater. A groundwater body provides at least 10 m^3 of water per day, or is sufficient to supply at least 50 people, or to maintain ecosystems such as lakes, rivers, and wetlands.

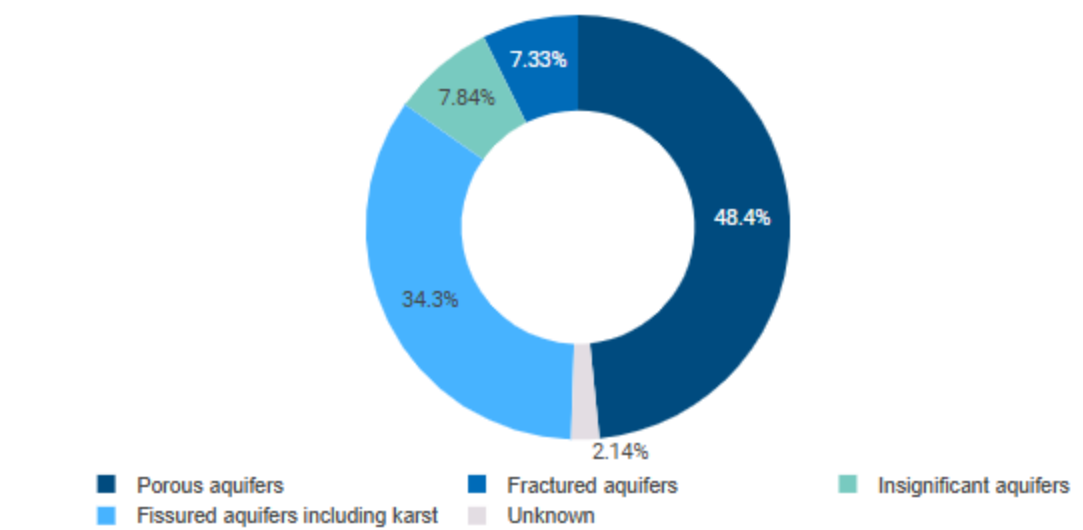
A groundwater body may consist of one or more aquifers. Deep aquifers that do not affect surface ecosystems or are not used for groundwater abstraction need not be identified as groundwater bodies.

This chart shows the proportion of groundwater body area in porous, fractured, fissured and other aquifers for the EU-27 or selected country.

Country

EU27

Areas and geological formation of groundwater bodies in the 3rd River Basin Management Plan



Note | Sources | More info

Download

Surface water bodies: Number and Size [table]

Dashboard | Modified 12 Oct 2024

Share
Download

The dashboard shows the numbers and size (areas and length) of the European surface water bodies. Several filters allow the user to explore the data for the 1st, 2nd and 3rd cycle of the Water Framework Directive (WFD) - River Basin Management Plan (RBMP). It is possible to select and display data from one or more countries, the EU 27 or "All" reporting countries.

Send your feedback →

Show:

Management plan (RBMP): 3rd

Water body delineation: (All)

Filter by:

Water body category: (Multiple values)

Water body type: (Multiple values)

Filter by spatial unit:

Country group: EU27

Country: (All)

River basin district (RBD): (All)

Sub-unit: (All)

Surface water bodies: Number and Size

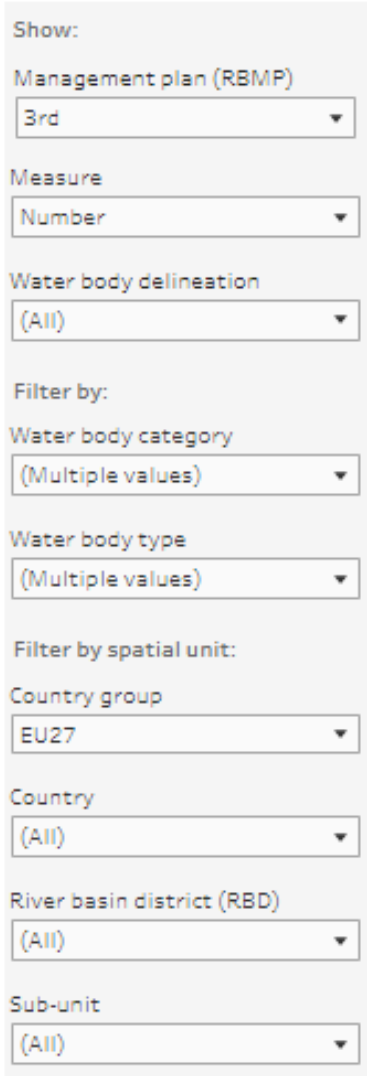
	Number	Number (%)	Length (km)	Length (%)	Median (km)	Area (km²)	Area (%)	Median (km²)
*	93 280	100.0%	993 567	100.0%	7.2	595 149	100.0%	1.2
AT	8 178	8.8%	32 135	3.2%	2.7	523	0.1%	1.5
BE	560	0.6%	9 375	0.9%	13.0	1 525	0.3%	0.7
CZ	1 118	1.2%	18 149	1.8%	15.0	268	0.0%	2.0
DE	9 744	10.4%	136 849	13.8%	8.8	26 139	4.4%	1.3
DK	7 812	8.4%	18 582	1.9%	1.9	44 275	7.4%	0.1
EE	746	0.8%	11 758	1.2%	14.9	27 186	4.6%	1.3
EL	1 188	1.3%	9 478	1.0%	7.8	31 468	5.3%	46.1
ES	5 465	5.9%	79 343	8.0%	13.4	27 307	4.6%	1.4
FR	11 406	12.2%	243 788	24.5%	12.9	35 492	6.0%	2.1
HR	1 978	2.1%	18 584	1.9%	8.3	31 867	5.4%	1.4
IT	7 773	8.3%	78 589	7.9%	8.6	145 775	24.5%	6.8
LT	1 194	1.3%	11 777	1.2%	9.3	3 063	0.5%	1.0
LU	106	0.1%	1 142	0.1%	8.8	55	0.0%	27.5
LV	780	0.8%	11 953	1.2%	21.7	11 620	2.0%	1.0
NL	745	0.8%	4 839	0.5%	13.7	15 492	2.6%	0.3
PL	4 240	4.5%	107 322	10.8%	22.8	5 441	0.9%	1.0
PT	2 056	2.2%	24 041	2.4%	8.2	66 556	11.2%	3.9
RO	3 026	3.2%	73 885	7.4%	14.7	7 080	1.2%	1.9
SE	23 814	25.5%	84 580	8.5%	3.5	113 884	19.1%	1.2
SK	1 351	1.4%	17 399	1.8%	10.1	131	0.0%	1.0

1) River basin districts and sub-units according to the latest reported data.
2) 'Unchanged' water bodies are water bodies that have not been redelineated since first reported.
3) For river water bodies, the size value is the length (km). For other water body categories, the size value is the area (km²).

European Environment Agency

surface-water-bodies-number-and-size-table

When using the dashboards… I



Standard filters allow you to choose (e.g.):

- Between RBMPs
- Number / length (km) / area (km2)
- All/unchanged waterbodies
- Surface water body categories and types / Groundwater body aquifer type and productivity
- EU 27 countries / Other
- Countries
- River basin districts and sub units

E.g. surface-water-bodies-ecological-or-chemical-status

When using the dashboards… II

Depending on the dashboard, other filters can allow you to choose (e.g.):

- Between status (ecological / chemical ; quantitative / chemical)
- With / without unknowns
- Causing failure eg Priority substances , groundwater pollutants
- Pressure type group and pressure type eg SW pressures

Using the dashboards…

Use the numbers as they are in the dashboards: avoid calculations* based on the data because of the risks of double counting etc

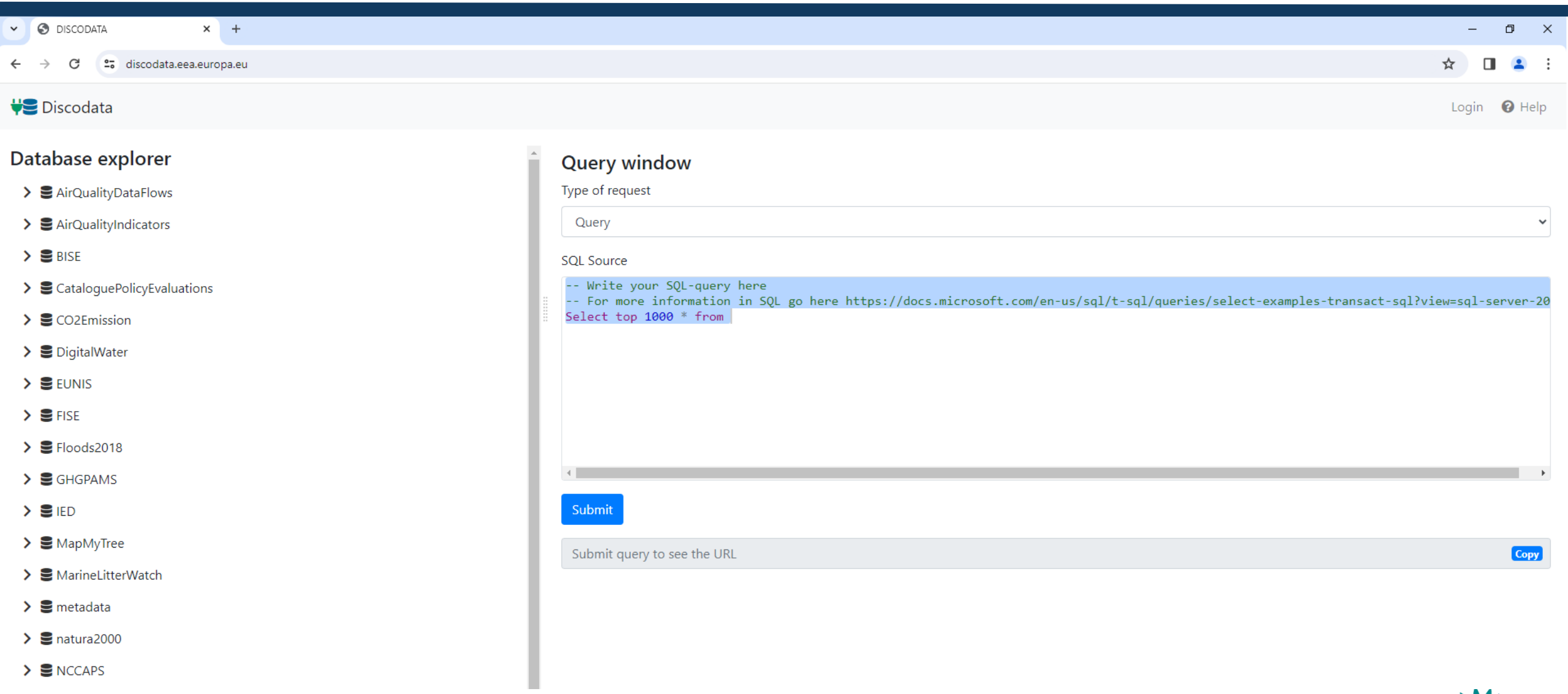
(*OK to calculate percentages based on number/size of waterbodies)

Some features of the tableau dashboards allow investigation eg

Ecological and chemical status

Next up: the EEA's Data Discovery platform (DISCODATA)

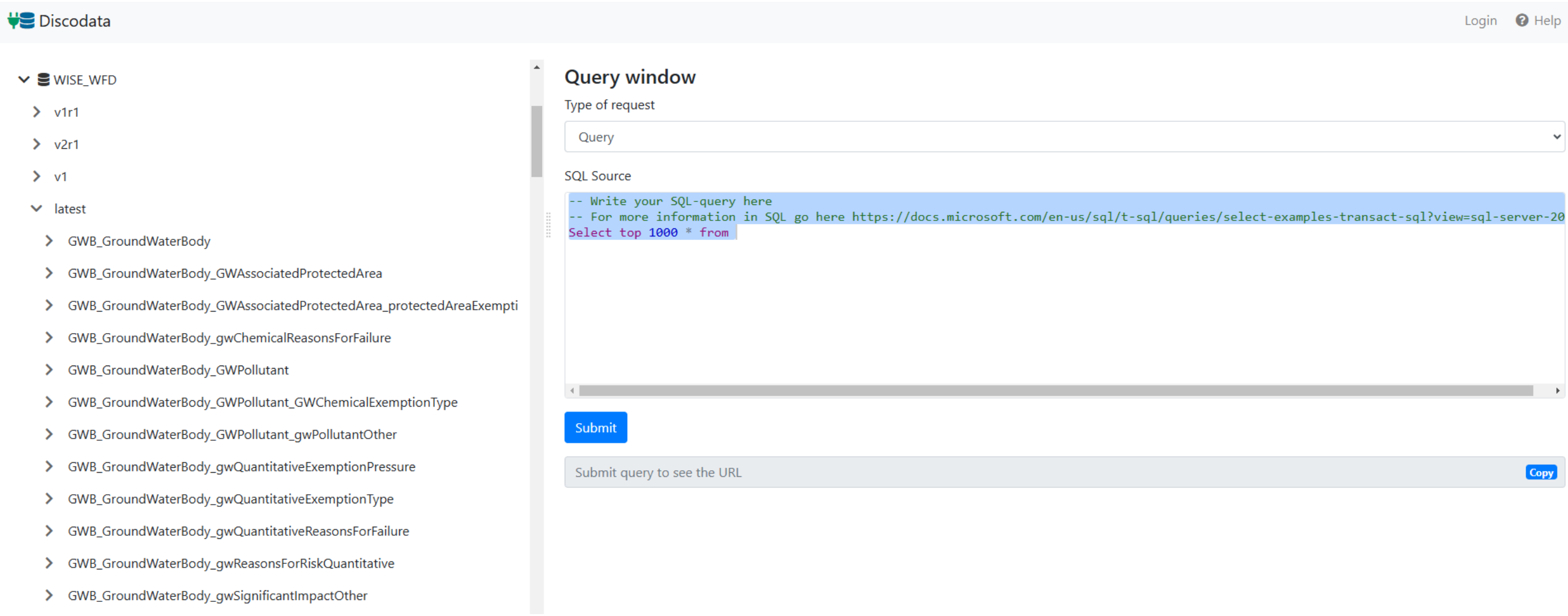
Discodata - discodata.eea.europa.eu



↓ Scroll down to WISE_WFD, expand to 'latest'

European Environment Agency

Discodata – Expand database to see tables



European Environment Agency

Discodata – options for accessing data

Discodata

Click the three dots on the right-hand side of a table to open options

Login Help

- v2r1
  - GWB_GroundWaterBody
  - GWB_GroundWaterBody_GWAssoci
  - GWB_GroundWaterBody_GWAssoci
  - GWB_GroundWaterBody_gwChemi
  - GWB_GroundWaterBody_GWPollut
  - GWB_GroundWaterBody_GWPollut
  - GWB_GroundWaterBody_GWPollut
  - GWB_GroundWaterBody_gwQuanti
  - GWB_GroundWaterBody_gwQuanti
  - GWB_GroundWaterBody_gwQuanti
  - GWB_GroundWaterBody_gwReasor
  - GWB_GroundWaterBody_gwSignifi
  - GWB_GroundWaterBody_gwSignifi
  - GWB_GroundWaterBody_gwSignifi
  - GWB_GroundWaterBody_gwSignifi
  - GWB_GroundWaterBody_linkSurfac
  - GWMET_GWExemptions
  - GWMET_GWExemptions_gwDispro
  - GWMET_GWExemptions_gwDispro
  - GWMET_GWExemptions_gwDispro

GWB_GroundWaterBody

table

External metadata

Information regarding the delineation and characterisation of groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the pressures and impacts on groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the quantitative status of groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the chemical status of groundwater bodies should be reported at groundwater body level using the schema GWB.

- Select top 100 rows
- Download
- Open table viewer

Query window

Type of request

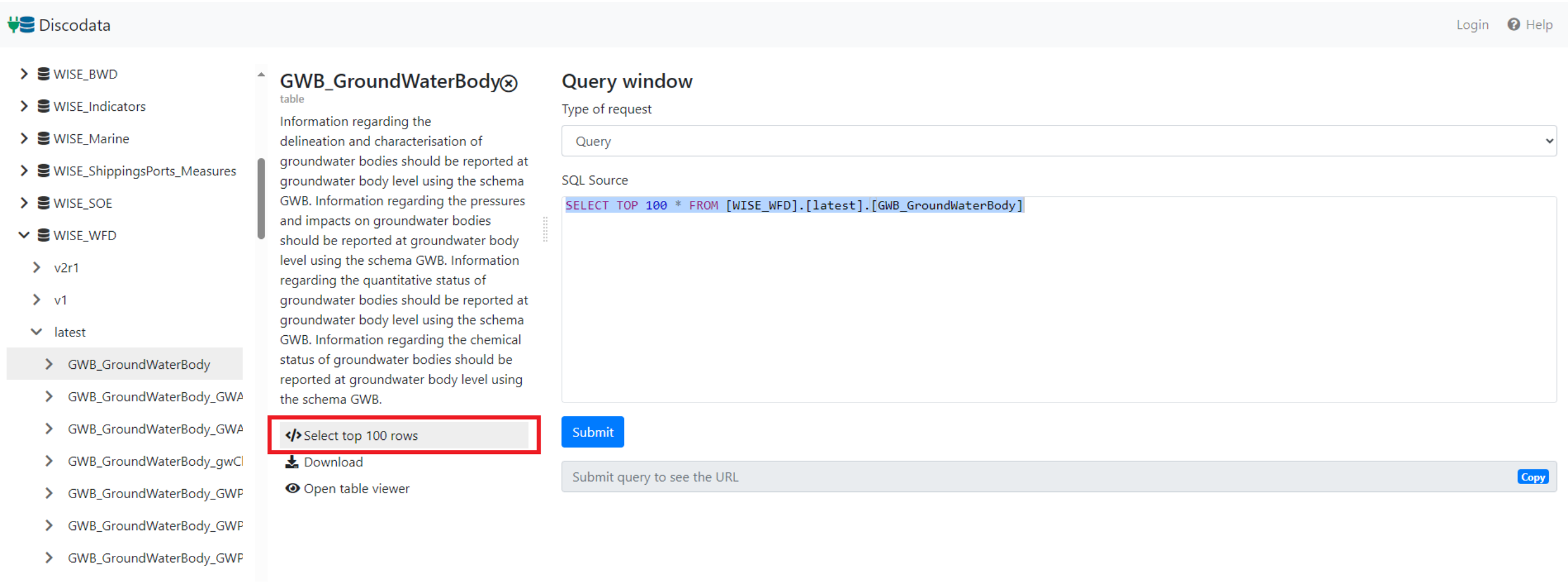
Query

SQL Source

Submit

Submit query to see the URL Copy

Discodata – use SQL query to examine data



European Environment Agency

Discodata – use SQL query, example

Discodata

Login Help

- WISE_BWD
- WISE_Indicators
- WISE_Marine
- WISE_ShippingsPorts_Measures
- WISE_SOE
- WISE_WFD
  - v2r1
  - v1
  - latest
    - GWB_GroundWaterBody
      - cArea decimal
      - countryCode nvarchar
      - countryGroup varchar
      - countryName nvarchar
      - cYear int
      - euGroundWaterBodyCode nvarchar
      - euRBDCode nvarchar
      - fileUrl nvarchar
      - geologicalFormation nvarchar
      - groundWaterBodyName nvarchar
      - groundwaterBodyTransboundary m
      - gwAtRiskChemical nvarchar
      - gwAtRiskQuantitative nvarchar

GWB_GroundWaterBody

table

Information regarding the delineation and characterisation of groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the pressures and impacts on groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the quantitative status of groundwater bodies should be reported at groundwater body level using the schema GWB. Information regarding the chemical status of groundwater bodies should be reported at groundwater body level using the schema GWB.

- Select top 100 rows
- Download
- Open table viewer

Query window

Type of request

Query

SQL Source

```
SELECT countryCode, COUNT(DISTINCT euGroundWaterBodyCode) nGWB
FROM [WISE_WFD].[latest].[GWB_GroundWaterBody]
WHERE cYear = '2022'
AND hasDescriptiveData = '1'
GROUP BY countryCode
ORDER BY countryCode
```

Submit

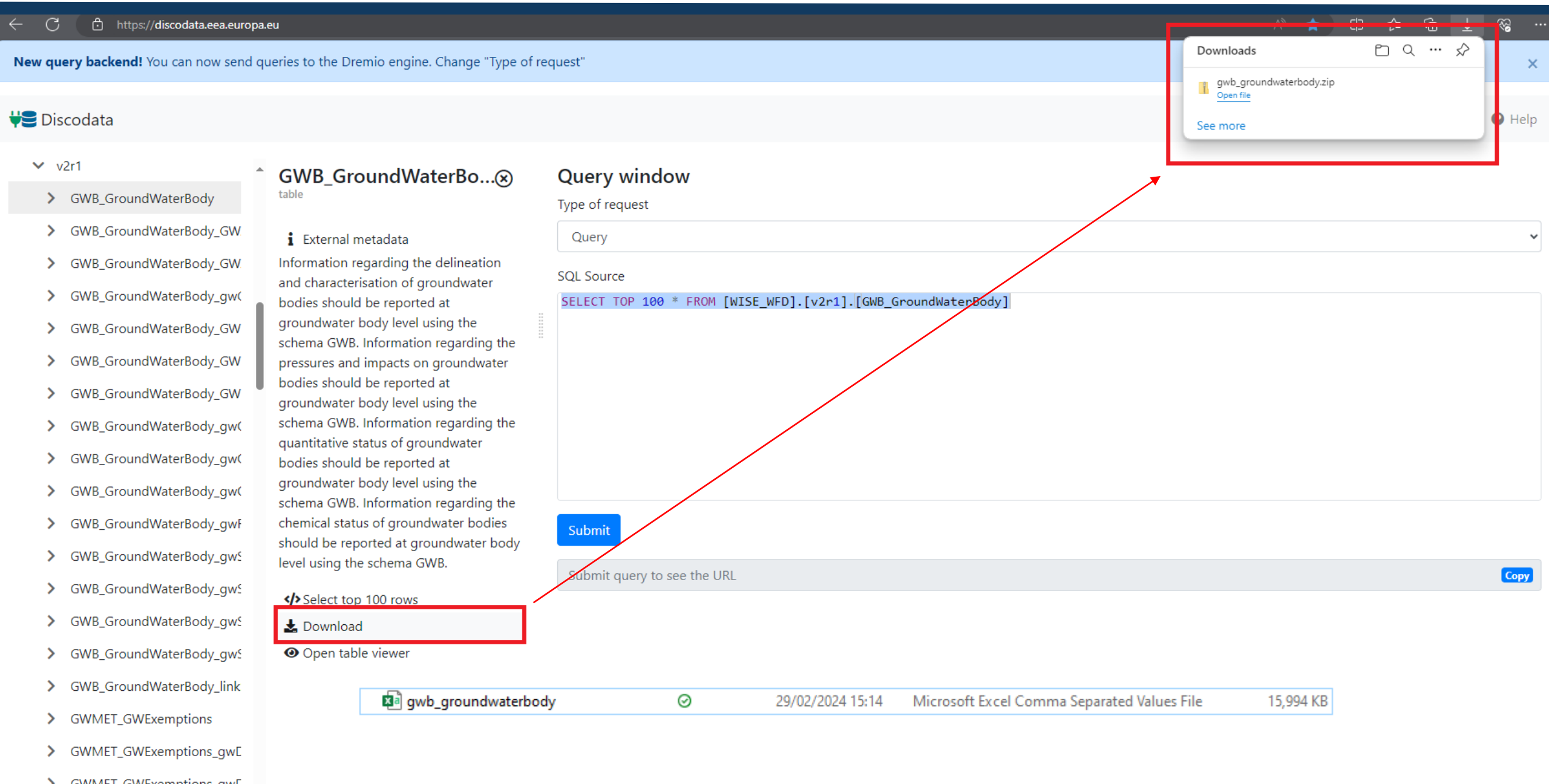
https://discodata.eea.europa.eu/sql?query=SELECT%20countryCode%2C%20COUNT(DISTINCT%20euGroundWaterBodyCode)%20nGWB%0AFROM%20%5BWI Copy

Table view | Raw response

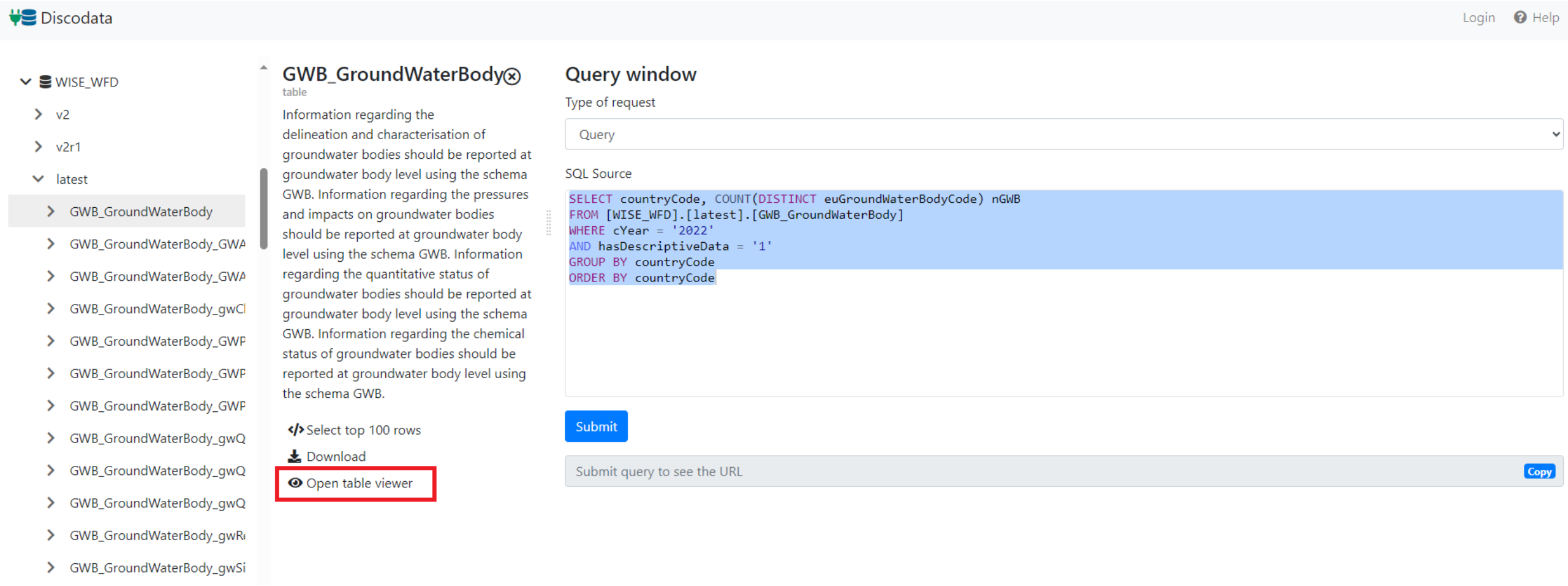
Previous 1 ... Next

countryCode	nGWB
AT	142
BE	81
CZ	174
DE	1291
DK	2050

Discodata – download (full table)

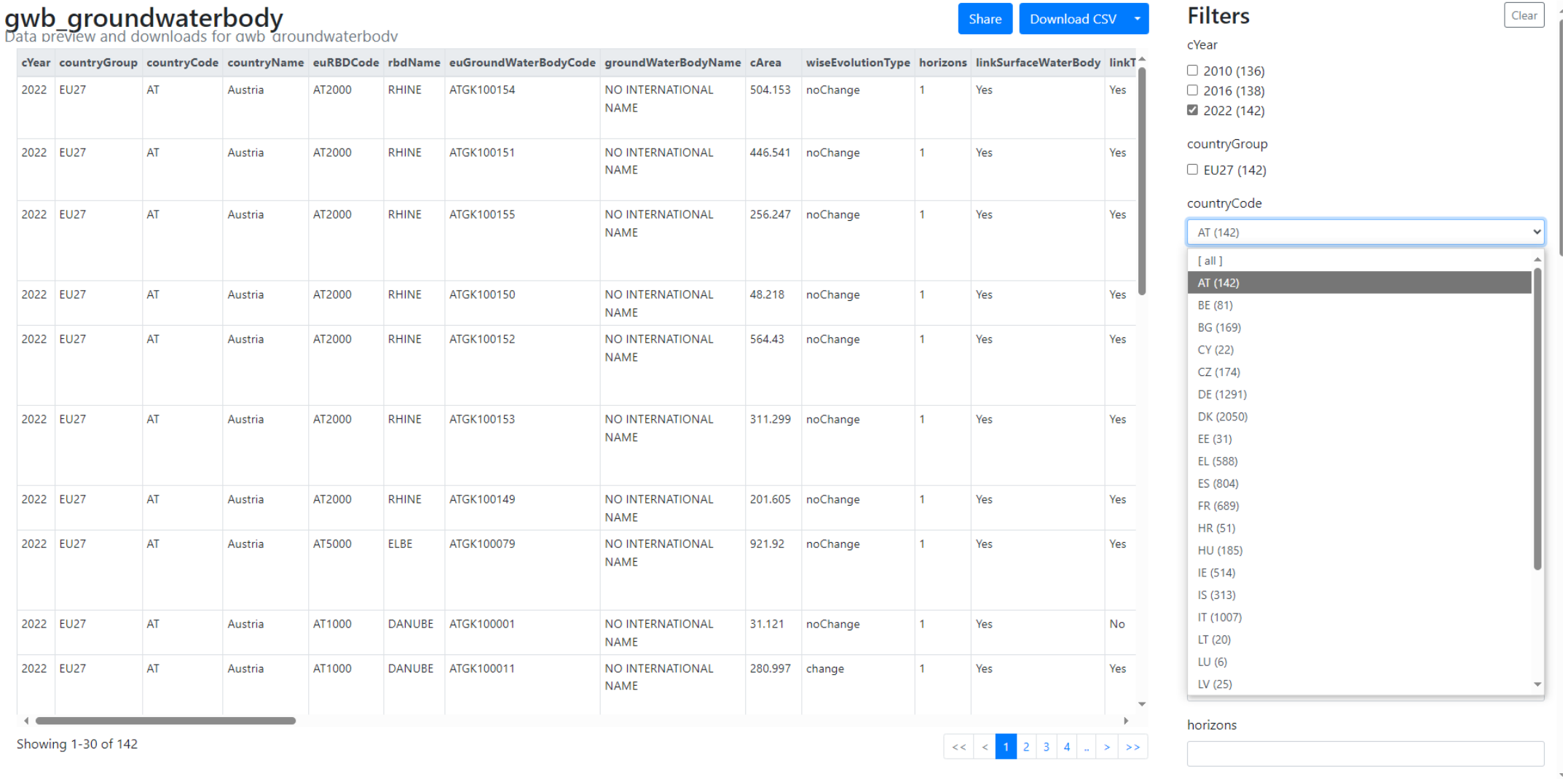


Discodata – Open table viewer to browse and filter



European Environment Agency

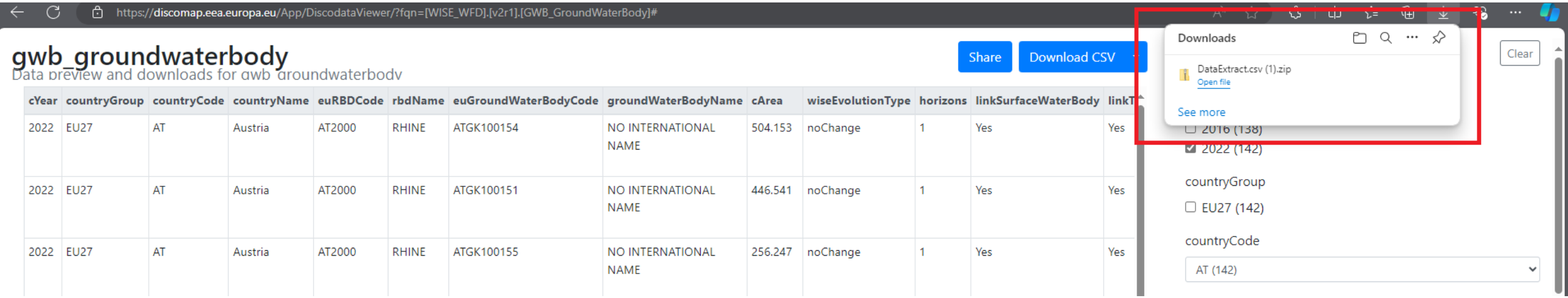
Discodata – Open table viewer to browse and filter



Example: Filtering to GWBs from AT in WFD2022

European Environment Agency

Discodata – Open table viewer to browse and filter



cYear	countryGroup	countryCode	countryName	euRBDCode	rbdName	euGroundWaterBodyCode	groundWaterBodyName	cArea	wiseEvolutionType	horizons	linkSurfaceWaterBody	linkT
2022	EU27	AT	Austria	AT2000	RHINE	ATGK100154	NO INTERNATIONAL NAME	504.153	noChange	1	Yes	Yes
2022	EU27	AT	Austria	AT2000	RHINE	ATGK100151	NO INTERNATIONAL NAME	446.541	noChange	1	Yes	Yes
2022	EU27	AT	Austria	AT2000	RHINE	ATGK100155	NO INTERNATIONAL NAME	256.247	noChange	1	Yes	Yes

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	cYear	countryGroup	countryCode	countryName	euRBDCode	rbdName	euGroundWaterBodyCode	groundWaterBodyName	cArea	wiseEvolu	horizons	linkSurfac	linkTerres	geologicalFormation	groundwa	hasDescri	fileUrl	gwSignific	gwSignific
2	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100154	NO INTERNATIONAL NAME	504.153	noChange	1	Yes	Yes	Fissured aquifers including karst - highly productive	No	1	https://cdr.eionet.europa.eu/a		
3	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100151	NO INTERNATIONAL NAME	446.541	noChange	1	Yes	Yes	Fissured aquifers including karst - highly productive	No	1	https://cdr.eionet.europa.eu/a		
4	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100155	NO INTERNATIONAL NAME	256.247	noChange	1	Yes	Yes	Fissured aquifers including karst - moderately productive	No	1	https://cdr.eionet.europa.eu/a		
5	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100150	NO INTERNATIONAL NAME	48.218	noChange	1	Yes	Yes	Porous aquifers - highly productive	No	1	https://cdr.eionet.europa.eu/a		
6	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100152	NO INTERNATIONAL NAME	564.430	noChange	1	Yes	Yes	Fissured aquifers including karst - moderately productive	No	1	https://cdr.eionet.europa.eu/a		
7	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100153	NO INTERNATIONAL NAME	311.299	noChange	1	Yes	Yes	Fissured aquifers including karst - moderately productive	No	1	https://cdr.eionet.europa.eu/a		
8	2022	EU27	AT	Austria	AT2000	RHINE	ATGK100149	NO INTERNATIONAL NAME	201.605	noChange	1	Yes	Yes	Porous aquifers - highly productive	No	1	https://cdr.eionet.europa.eu/a		
9	2022	EU27	AT	Austria	AT5000	ELBE	ATGK100079	NO INTERNATIONAL NAME	921.920	noChange	1	Yes	Yes	Fissured aquifers including karst - moderately productive	No	1	https://cdr.eionet.europa.eu/a		
10	2022	EU27	AT	Austria	AT1000	DANUBE	ATGK100001	NO INTERNATIONAL NAME	31.121	noChange	1	Yes	No	Porous aquifers - highly productive	No	1	https://cdr.eionet.europa.eu/a		

Download filtered result as CSV, unzip and open in Excel

European Environment Agency

Thanks for listening

Questions, Comments?


Thanks to:
Country Reporters
DG ENV
EEA Data and Water Teams
ETC BE
Tracasa
© Piotr Krześlak, WaterPIX EEA