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**Third River Basin Management Plans
Second Flood Hazard and Risk Maps and Second Flood Risk Management Plans
Member State: Slovenia**

Accompanying the document

**REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN
PARLIAMENT**

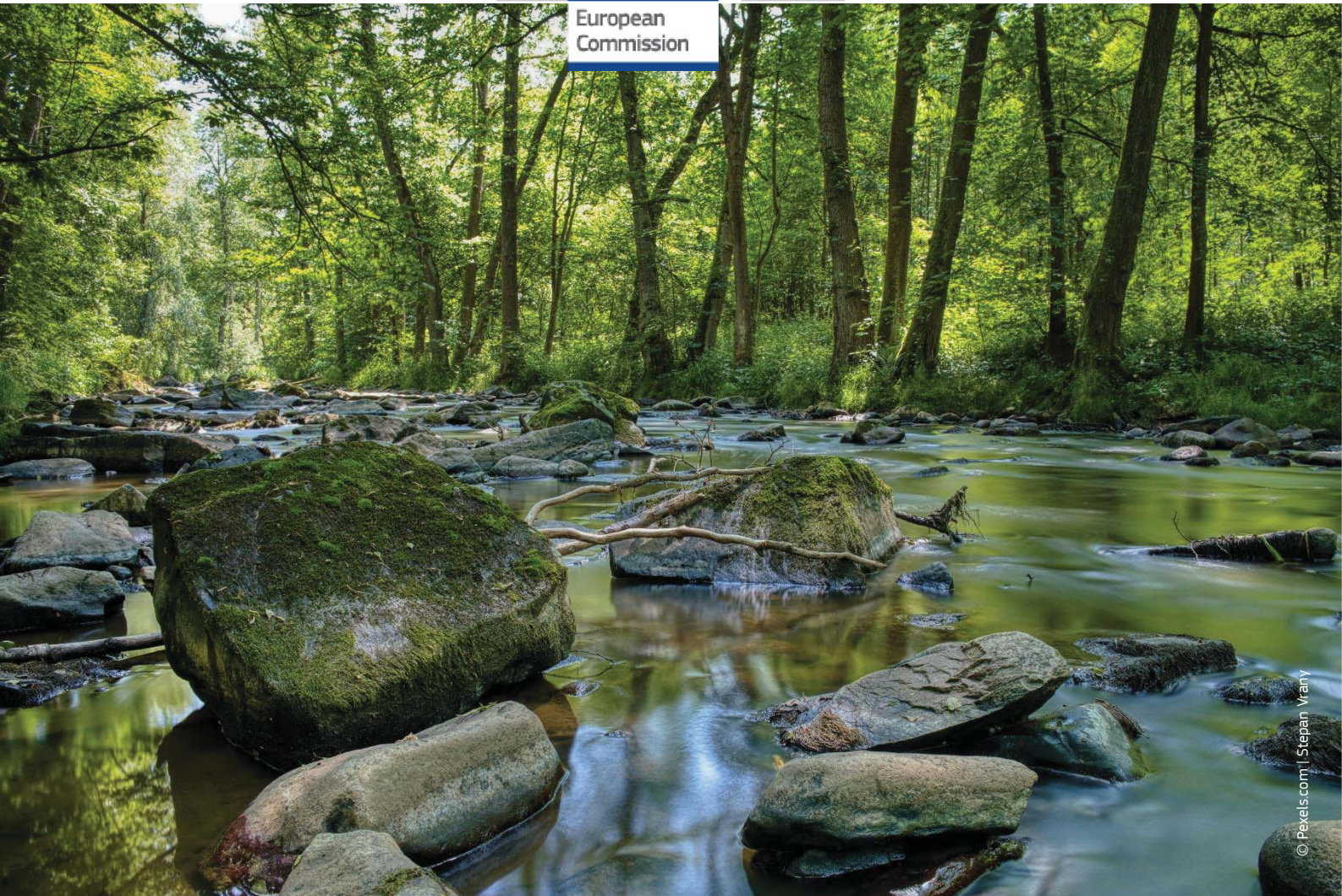
**on the implementation of the Water Framework Directive (2000/60/EC) and the Floods
Directive (2007/60/EC)**

**Third River Basin Management Plans
Second Flood Risk Management Plans**

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European
Commission



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Country specific staff working document

Slovenia



ENVIRONMENT
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SECTION A:

WATER FRAMEWORK DIRECTIVE

1. General info, Member State characterisation

Slovenia (Map A) has a total population of 2.1 million and a total surface area of 20 273 km². There are four major European geographic regions that meet in Slovenia: the Alps, the Dinaric area, the Pannonian plain and the Mediterranean. In the West, it is bounded by the Adriatic Sea. Slovenia has designated 155 surface water bodies and 21 groundwater bodies.

Slovenia is divided into two River Basin Districts (RBDs): Danube (SIRBD1) and Adriatic (SIRBD2). Both RBDs are international, as Slovenia shares catchments with other EU Member States.



Table A. Overview of Slovenia's River Basin Districts

RBD	RBD Name	Size (km ²)	% of SI territory	Countries sharing RBD
SIRBD1	Danube	16 440	81%	AT, HR, HU, IT
SIRBD2	Adriatic	3 941	19%	HR, IT

Source: 2nd RBMP e-reporting.

Notes: The RBD sizes may have changed since the 2nd RBMPs, but the 3rd RBMP e-data was not available at the time of this assessment to confirm this.

Table B. Transboundary River basins by category and percentage share in Slovenia

Name international river basin	National RBD	Countries sharing RBD	Coordination category*			
			1		2	
			km ²	%	km ²	%
Danube	SIRBD1	AT, HR, HU, IT	16 440	2.0		
Adriatic	SIRBD2	HR, IT			3 941	66.7

Source: 2nd RBMP e-reporting (Slovenia had not reported 3rd RBMP e-data at the time of this assessment).

*Coordination category

Category 1: International agreement, permanent cooperation body and international RBMP in place.

Category 2: International agreement and permanent cooperation body in place.

Category 3: International agreement in place.

Category 4: No cooperation formalised.

Reporting

The deadline for reporting the 3rd River Basin Management Plans (RBMPs) was in March 2022. The Commission and the European Environment Agency (EEA), together with Member States, developed an electronic reporting system in WISE (Water Information System for Europe). Its use was voluntary. Some Member States used it to fulfil their obligations; others reported their plans in pdf format.

Slovenia reported its RBMPs for the Danube (SIRBD1) and for the Adriatic (SIRBD2) in pdf format in November 2023, failing to meet the Water Framework Directive (WFD) deadline. Because of this, Slovenia was not part of the original Commission assessment that was published in February 2025¹. The assessment of the Slovenian RBMPs took place between March and September 2025 based on the datasets available, i.e. the information provided in the RBMPs reported in pdf format. Slovenia submitted full electronic reporting in August 2025, which means that the 3rd RBMP e-data was not available at the time of this assessment. In some instances, however, data included in this report has been taken from the WISE country profile on the WFD for Slovenia² and the WFD Expert Dashboards³, which display data that Slovenia submitted as part of the electronic reporting. This has been done where the information is in addition to or divergent from the RBMPs in pdf format, and it has been indicated in the text of the report. For the next reporting cycle, Slovenia should ensure that the data related to the same element provided in pdf format and through electronic reporting match or are at least comparable, to avoid ambiguity.

Documents are available from the EEA EIONET Central Data Repository <https://cdr.eionet.europa.eu/>.

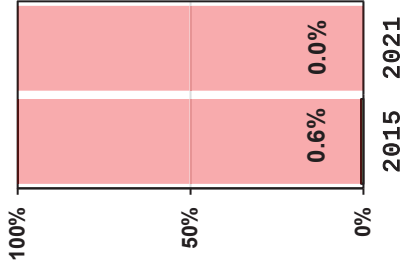
¹ The cut-off date for the Commission assessment was September 2023. The Member States were assessed on the basis of the datasets available by this date.

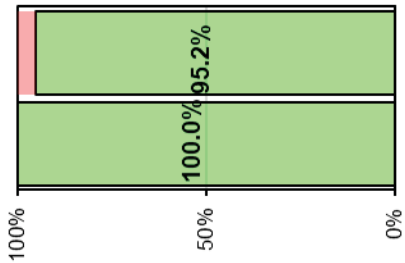
² <https://water.europa.eu/freshwater/countries/wfd/slovenia>.

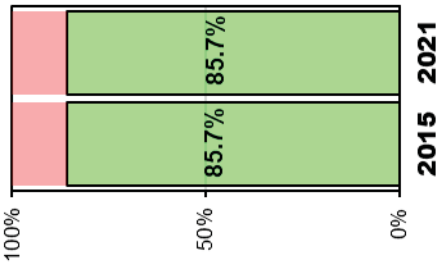
³ <https://water.europa.eu/freshwater/resources/metadata/wfd-dashboards>.

Changes in Status, Pressures, Exemptions & Measures

Surface Water Bodies (155)	Trend (% good status/potential)	Main Pressures & Changes & Exemptions						
ECOLOGICAL STATUS	<table><tr><th>Year</th><th>% good status/potential</th></tr><tr><td>2015</td><td>54.2%</td></tr><tr><td>2021</td><td>48.4%</td></tr></table>	Year	% good status/potential	2015	54.2%	2021	48.4%	Good ecological status/potential in Slovenia decreased slightly in the 3rd RBMPs compared with the 2nd RBMPs (from 54.2% to 48.4%). This decrease could be at least partly explained by an overall improvement in monitoring, since all quality elements are now covered, resulting in better classification and increased confidence levels of the status assessment. There is no data available on the number of water bodies expected to be in good ecological status/potential by 2027. The most significant pressures on surface water bodies are point-source pollution from urban wastewater (81%), longitudinal physical alterations (70%) and diffuse pollution from agriculture (40%). Other significant pressures include hydrological alteration (36%), pollution from industrial installations, i.e. non-Industrial Emissions Directive (IED) plants (27%) and IED plants (7%), and transversal barriers (14%). Virtually all surface waters (99%) are reported to be affected by unknown anthropogenic pressures, showing that there is scope to improve knowledge to better tailor action. The level of artificialisation remains relatively low (15%), with no increase in the number of heavily modified and artificial water bodies compared with the previous cycle. Hydropower (42%) and flood protection (42%) are the main reasons for the designation of surface water bodies as heavily modified or artificial. Exemptions under Article 4(4) are applied to 83 surface water bodies (53.5%) on the grounds of natural conditions or technical feasibility. Exemptions under Article 4(7) are applied to one surface water body, for the Mokrice Hydropower Plant.
Year	% good status/potential							
2015	54.2%							
2021	48.4%							

CHEMICAL STATUS	 The chemical status of surface water bodies in Slovenia deteriorated slightly in the 3rd RBMPs, with all water bodies failing to achieve good status (in the 2nd RBMPs, 0.6% of surface water bodies were in good chemical status). Two priority substances are causing failures in chemical status in all water bodies: mercury and PBDEs (polybrominated diphenyl ethers, a class of flame-retardant chemicals used in consumer products). Mercury and PBDEs are ubiquitous, persistent, bioaccumulative and toxic substances (uPBTs), which are difficult to address. Furthermore, in the Danube RBD, one water body is failing due to cadmium and lead, one due to nickel and two due to dioxins and dioxin-like compounds. If uPBTs were excluded, in the Danube RBD, 119 (98.3%) surface water bodies would be in good chemical status, and 2 (1.7%) would be in poor status. In the Adriatic RBD, all water bodies (100%) would achieve good chemical status. No water body is expected to be in good chemical status by 2027. Exemptions under Article 4(4) are applied to 155 surface water bodies (100%) on the grounds of natural conditions or technical feasibility.
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Ground Water Bodies (21)	Trend (% good status/potential)	Main Pressures & Changes & Exemptions
QUANTITATIVE STATUS	 The percentage of groundwater bodies in good quantitative status has decreased slightly since the 2nd RBMPs, with 95.2% of groundwater bodies in good status in the 3rd RBMPs (by comparison, all groundwater bodies were in good status in the 2nd RBMPs). It is unclear whether the deterioration of the one groundwater body in poor status is the result of increased abstraction pressures or the result of better knowledge thanks to improved monitoring. This groundwater body is expected to achieve good quantitative status by 2027 or earlier. All groundwater bodies are now subject to quantitative monitoring, representing a very positive increase from the 14 out of 21 groundwater bodies (66.7%) monitored in the 2nd RBMPs. In addition, there are currently 276 monitoring sites established for quantitative assessment, which is a significant improvement from the 136 sites documented in the 2nd RBMPs. The reason for failing to achieve good quantitative status for the one groundwater body in poor status is over-abstraction, leading to a negative water balance/lowering water table. No exemptions have been reported for groundwater bodies' quantitative status in the 3rd RBMPs.	

CHEMICAL STATUS	 <table border="1"> <thead> <tr> <th>Year</th> <th>Good Status (%)</th> <th>Poor Status (%)</th> </tr> </thead> <tbody> <tr> <td>2015</td> <td>85.7%</td> <td>14.3%</td> </tr> <tr> <td>2021</td> <td>85.7%</td> <td>14.3%</td> </tr> </tbody> </table>	Year	Good Status (%)	Poor Status (%)	2015	85.7%	14.3%	2021	85.7%	14.3%	Chemical status in groundwater bodies has remained the same as in the 2nd RBMPs, with 85.7% of groundwater bodies in good status. No data is available on the predicted chemical status in groundwater bodies for 2027. All groundwater bodies are subject to chemical monitoring, as in the 2nd RBMPs. All groundwater bodies are subject to surveillance monitoring and 14 (66.7%) are subject to operational monitoring, the same as in the 2nd RBMPs. Since the 2nd RBMPs, there has been a positive increase in the number of monitoring sites, with surveillance monitoring sites rising from 176 to 221 in the 3rd RBMPs, and operational monitoring sites up from 146 to 191. Only two pollutants are reported as causing the failure to achieve good chemical status in the three groundwater bodies in poor chemical status: nitrates (all three groundwater bodies) and atrazine (one groundwater body). Moreover, one groundwater body failed to achieve good chemical status due to regional saline or other intrusions resulting from anthropogenically induced sustained changes in flow direction. Exemptions under Article 4(4) are applied to three groundwater bodies (14.3%) on the grounds of natural conditions.
Year	Good Status (%)	Poor Status (%)									
2015	85.7%	14.3%									
2021	85.7%	14.3%									



2. Horizontal aspects

2.1 Governance

Slovenia's water management is overseen centrally by the Ministry of the Environment and Spatial Planning, with support from the Water Agency and Slovenian Environment Agency. Municipalities and public utilities handle specific measures, including water supply and wastewater management⁴.

The RBMPs list the authorities and institutions involved in the preparation of the RBMPs. Slovenia's RBMPs do not have sub-plans. The Strategic Environmental Assessment (SEA) was carried out for both RBMPs in a joint process, and a joint Environmental Report is published on the government website⁵.

A single, national Programme of Measures was also reported, covering both RBMPs.

As regards public participation, two consultation rounds were held: the first on 'Important Water Management Issues', and the second on the draft RBMPs. According to the Ministry, comments were reviewed and incorporated into the updated RBMPs and PoM where possible, but specific changes resulting from public feedback were not detailed, making their impact and the transparency of the process unclear. The public was also consulted on the joint Environmental Report.

Floods Directive

The RBMPs provide basic information on the alignment and coordination with the Floods Directive (FD). Each RBMP contains a section on the FD measures, and WFD and FD objectives have been included in the national PoM. Measures include flood risk reduction, infrastructure maintenance, research and awareness-raising. There is no information on joint public consultations for RBMPs and Flood Risk Management Plans (FRMPs).

Marine Strategy Framework Directive

Member States should coordinate with the Marine Strategy Framework Directive (MSFD). Slovenia's RBMPs do not reference the MSFD regarding public consultation, water delineation, monitoring or measures. However, the Adriatic RBMP does mention the Marine Environment Management Plan when assessing water service costs and includes a measure for developing a marine environment management plan (which was adopted on 23 December 2022). Slovenia also participates in the Barcelona Convention activities for Mediterranean marine protection.

International coordination

Both of Slovenia's RBDs are part of international river basin districts (IRBDs) and are covered by international and bilateral agreements. For the Danube IRBD, Slovenia is part of the International Commission for the Protection of the Danube River (ICPDR)⁶. For the management of the Sava river⁷, Slovenia participates in the International Sava River Basin Commission (ISRBC)⁸. In the Adriatic RBD, a Permanent Bilateral Commission for Water Management, established by the 1975 Osimo

⁴ The Ministry of Natural Resources and Spatial Planning is the successor of a part of the former Ministry of Environment and Spatial Planning and is responsible for policies in the field of water management, nature conservation and spatial planning.

⁵ <https://www.gov.si teme/nacrt-upravljanja-voda-na-vodnih-obmocjih/>.

⁶ <https://www.icpdr.org>.

⁷ The Sava is a tributary to the Danube. It flows from Slovenia, through Croatia, Bosnia and Herzegovina and Serbia into the Danube.

⁸ <https://www.savacommission.org>.

Agreement with Italy, oversees the Isonzo-Soča River Basin. Slovenia is also part of the Slovenian-Croatian-Italian-Montenegrin Commission for the Protection of the Adriatic Sea and Coastal Areas from Pollution. In addition, Slovenia has bilateral agreements with Austria, Hungary and Croatia.



2.2 Characterisation of River Basin District

Water bodies

Slovenia reported a total of 155 surface water bodies, comprising rivers, lakes, coastal and territorial waters. Slovenia reported a total of 21 groundwater bodies.

Table 1. Water bodies delineated in Slovenia

RBD	Rivers	Lakes	Transitional	Coastal	Territorial	Groundwater
Danube (SIRBD1)	112	9	0	0	0	18
Adriatic (SIRBD2)	25	3	0	5	1	3
Total	137	12	0	5	1	21

Source: 3rd RBMP pdf reporting.

To benchmark and determine the status of water bodies, boundary values are set for the high/good (establishment of reference conditions) and good/moderate status classes. Good ecological status of water bodies is established by comparing the monitoring data assessed with these two boundary values.

It is welcomed that Slovenia set type-specific reference conditions for each biological quality element in rivers and lakes, with the exception of fish in rivers. For coastal waters, the reference conditions for each biological quality element are the same for the two characterised coastal types. Type-specific conditions have been set for physico-chemical quality elements in rivers, lakes and coastal waters. The RBMPs do not specify whether type-specific conditions have been set for hydromorphological quality elements.

As required by the WFD, the environmental objectives were reported in both RBDs. Where necessary, additional objectives have also been set for water bodies associated with Protected Areas, where so needed to ensure compliance with the requirements of the Directives applicable to those Protected Areas.

Main pressures and impacts

Slovenia reported electronically the following information on significant pressures and impacts on surface and groundwater bodies.

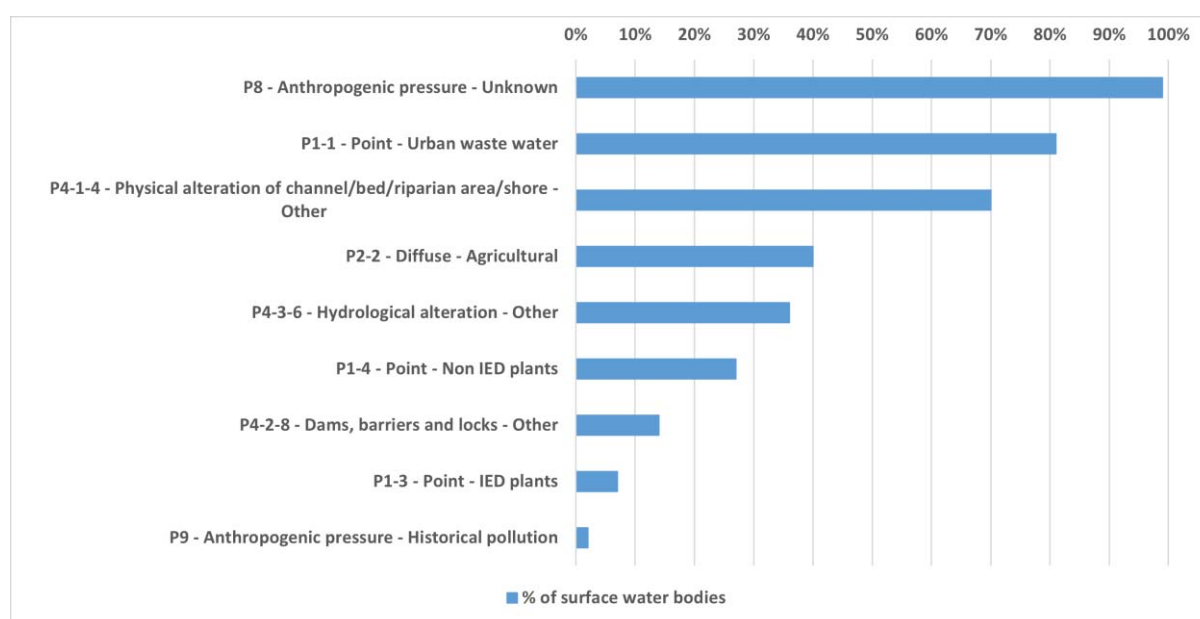
The main pressures on surface waters are point source pollution from urban wastewater (81%), longitudinal physical alteration (70%) and diffuse pollution from agriculture (40%). Other significant pressures include hydrological alteration (36%), pollution from industrial installations – including non-IED (27%) and IED plants (7%) – and transversal barriers (14%). This picture is similar to the one from the previous cycle. Virtually all surface waters (99%) are reported to be affected by unknown anthropogenic pressures. It is assumed that, similarly to the 2nd RBMPs, these unknown pressures are at least partly related to the role of atmospheric deposition as a channel for widespread contamination of substances such as mercury and PBDEs. Given how difficult it is to determine the

contribution of atmospheric deposition with precision, Slovenia continues to report these as unknown pressures. Efforts should be increased to identify and address all relevant sources of pollution in order to appropriately address them.

The significant impacts on surface water bodies are chemical pollution (affecting 100% of water bodies), nutrient pollution (79%), altered habitats due to morphological changes (72%), organic pollution (53%) and altered habitats due to hydrological changes (50%).

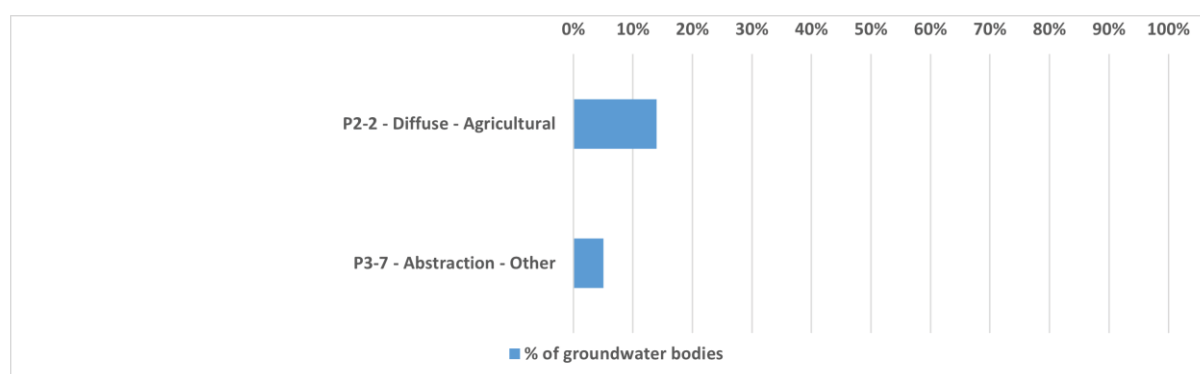
The significant pressures on groundwater are diffuse pollution from agriculture, affecting 14% of the total number of groundwater bodies, and abstraction (other), affecting 5% of groundwater bodies. The significant impacts are nutrient pollution, affecting 14% of all groundwater bodies, and organic pollution and other impacts, each affecting 5% of groundwater bodies. This picture is similar to the one from the previous cycle.

Figure 1. The most significant pressures on surface water bodies in Slovenia in the 3rd RBMPs (expressed as percentages of the total number of surface water bodies)



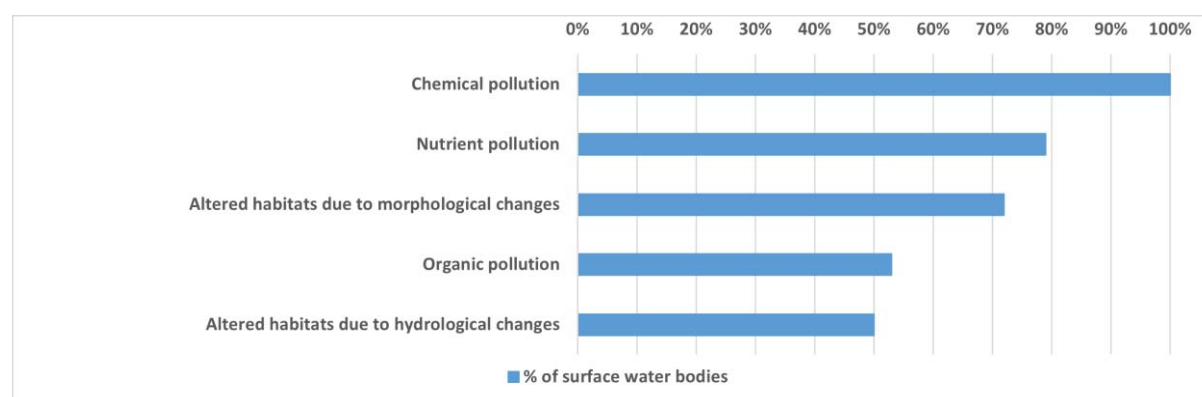
Source: 3rd RBMP electronic reporting data available on WISE.

Figure 2. The most significant pressures on groundwater bodies in Slovenia in the 3rd RBMPs (expressed as percentages of the total number of groundwater bodies)



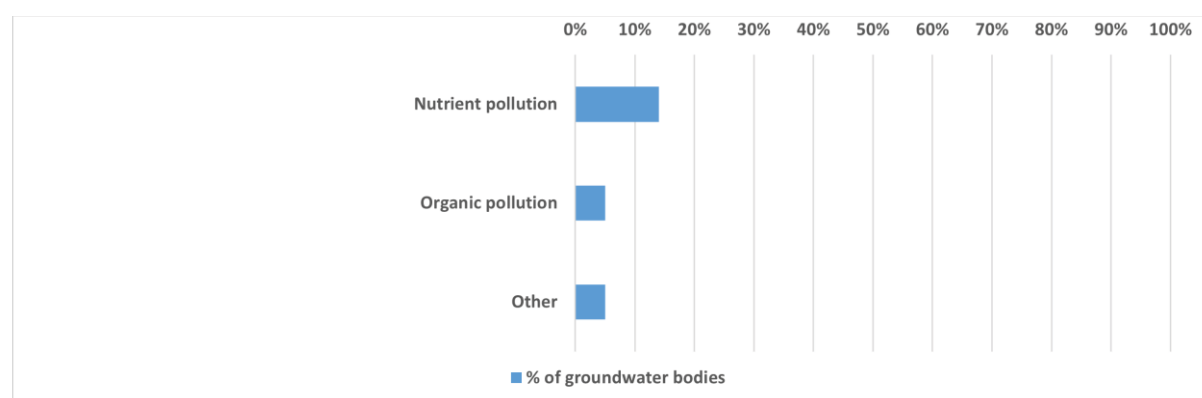
Source: 3rd RBMP electronic reporting data available on WISE.

Figure 3. The most significant impacts on surface water bodies in Slovenia in the 3rd RBMPs (expressed as percentages of the total number of surface water bodies)



Source: 3rd RBMP electronic reporting data available on WISE.

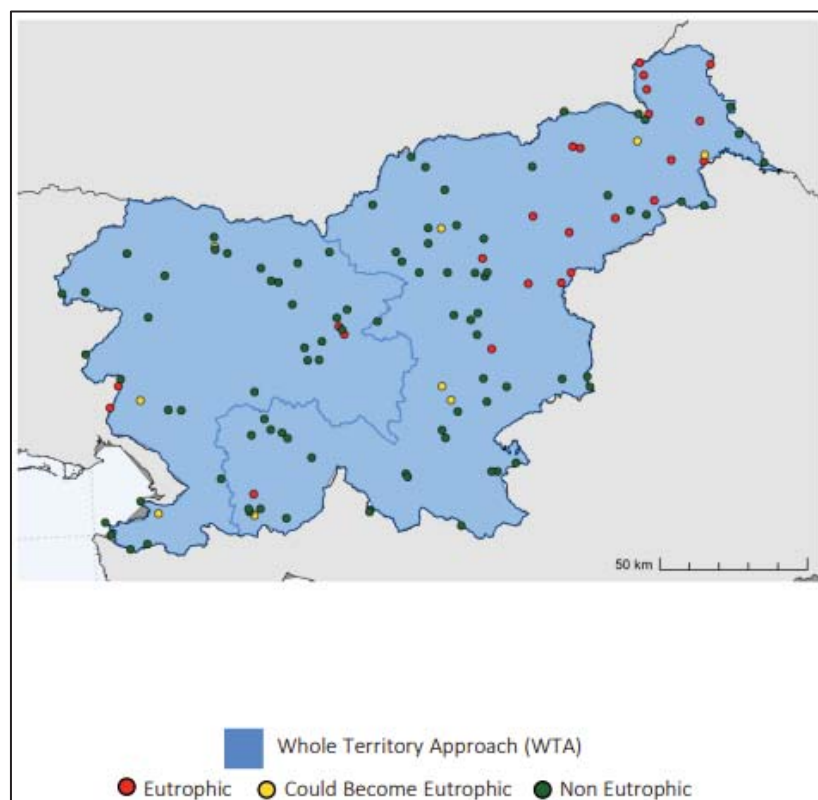
Figure 4. The most significant impacts on groundwater bodies in Slovenia in the 3rd RBMPs (expressed as percentages of the total number of groundwater bodies)



Source: 3rd RBMP electronic reporting data available on WISE.

The excess of nutrients discharged into surface waters leads to eutrophication, causing a proliferation of algal blooms and oxygen depletion. Under the Nitrates Directive reporting, Slovenia indicated that several monitoring points across the country show surface waters as eutrophic (Figure 5).

Figure 5. Map of the monitoring points showing eutrophication assessment in Slovenia, according to the reporting of the Nitrates Directive⁹



3. Policy elements contributing to biodiversity and climate change adaptation



3.1 Surface Water: what is their ecological status or potential

Monitoring

Monitoring programmes in Slovenia are well established and include the relevant quality elements for ecological status and ecological potential of surface waters. The network of points for monitoring the ecological and chemical status of surface waters consists of 204 monitoring points, of which 162 are in the Danube RBD and 42 are in the Adriatic RBD. Surveillance monitoring is carried out at 31 surface water measuring points. The 3rd RBMPs list 168 monitoring points (153 for operational monitoring and 31 for surveillance monitoring) for monitoring the ecological status/potential of surface water bodies (148 for rivers, 11 for lakes and 9 for coastal water bodies)¹⁰. This represents a considerable decrease from the 2nd RBMPs, where 284 monitoring sites were reported. Nevertheless, the decrease does not appear to have affected the representativeness of the

⁹ NITRATES DIRECTIVE (ND) - Reporting Period 7 (2016-2019) – eutrophic status: <https://water.jrc.ec.europa.eu/portal/apps/dashboards/cb6034c2a75e4df282f8a62f90c16caa>. See also the most recent 2020-2023 reports on the ND implementation: [Implementation of the Nitrates Directive: Country Reports - Environment](#).

¹⁰ Environmental Agency of the Republic of Slovenia (2017) 'Monitoring programme for the chemical and ecological status of waters. Programme 2016-2021', Ljubljana, June 2017. <https://www.gov.si/assets/organi-v-sestavi/ARSO/Vode/Stanje-voda/Program-monitoringa-kemijskega-in-ekoloskega-stanja-voda-za-obdobje-2016-do-2021.pdf>.

monitoring network. Generally, one monitoring site has been defined per water body for the monitoring of ecological status. Operational monitoring covers all river and coastal water bodies and 83.3% of lake water bodies (however, all lakes are monitored if both surveillance and operational monitoring are considered). Water bodies with more than one monitoring site are those where there are differences in status within the water body, those in areas with special requirements, or those subject to such specifications in bilateral agreements and international conventions.

Overall, the monitoring of biological quality elements includes all the elements to be monitored. This is an improvement from the 2nd RBMPs, in particular because monitoring now includes the quality element fish (used to monitor the impacts of general degradation of water bodies) in lakes.

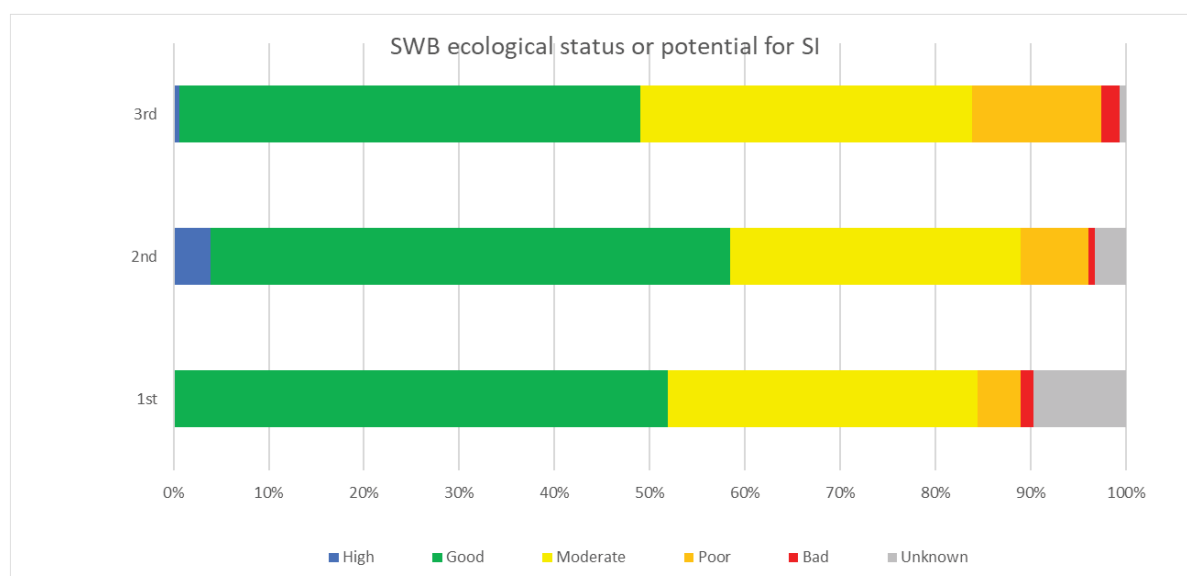
The monitoring includes all general physico-chemical quality elements, as well as 35 River Basin Specific Pollutants (RBSPs) identified by Slovenia. The main RBSP for which the nationally determined environmental quality standard (EQS) is not met is Metolachlor (5% of surface water bodies), followed by Sulphate (2%), Molybdenum and its compounds (2%), and Cobalt and its compounds (2%). As for hydromorphological quality elements, the only element which is not monitored is river continuity. The level of human intervention exerted on surface water bodies in Slovenia is relatively low (this is discussed in more detail in the next sub-chapter). As this human intervention has an impact on the hydromorphology of these surface water bodies, Slovenia should ensure that river continuity is monitored.

As regards monitoring frequencies, these are in line with WFD requirements.

Status assessment

In the 3rd RBMPs, 0.7% (1) of surface water bodies are at high ecological status or maximum ecological potential, 48.4% (75) are in good ecological status/potential, 34.8% (54) are in moderate ecological status/potential, 13.6% (21) are in poor ecological status/potential and 1.9% (3) are in bad ecological status/potential. Only one water body (0.7%) is in unknown ecological status, which is an improvement from the past cycle, where five surface water bodies (3.2%) had unknown ecological status.

Figure 6. Ecological status or potential of surface water bodies in Slovenia in the 1st, 2nd and 3rd RBMPs



Source: 3rd RBMP pdf reporting and 1st and 2nd RBMP e-reporting.

From the 2nd to the 3rd RBMPs, the share of surface water bodies with high or good ecological status decreased from 58.1% (90) to 49% (76). However, this reduction could be at least partly explained by improved monitoring covering a broader set of quality elements and improved assessment methodologies, which resulted in better classification and increased confidence levels of the status assessment.

No detailed information has been provided in the 3rd RBMPs on the methods for assessing the ecological status of surface water bodies. However, further information on assessment methods is published on the government website on 'State of surface waters'¹¹ and is included in the 'Monitoring programme for the chemical and ecological status of waters. Programme 2016-2021'. On that basis, the quality of the methodologies used and the quality of data has improved since the 2nd RBMPs, which has increased the confidence in the classification of ecological status/potential of surface water bodies for the 3rd RBMPs.

According to electronic reporting, all water bodies are significantly impacted by chemical pollution, 79% are impacted by nutrient pollution, 72% by altered habitats due to morphological changes, 53% by organic pollution and 50% by altered habitats due to hydrological changes. Aquatic flora is the least impacted biological quality element, with 87% of water bodies with known status reaching good status for this quality element, compared with just 69% for benthic invertebrates and about 30% for fish.

There is no data available in the 3rd RBMPs on the number of water bodies expected to be in good ecological status/potential by 2027.

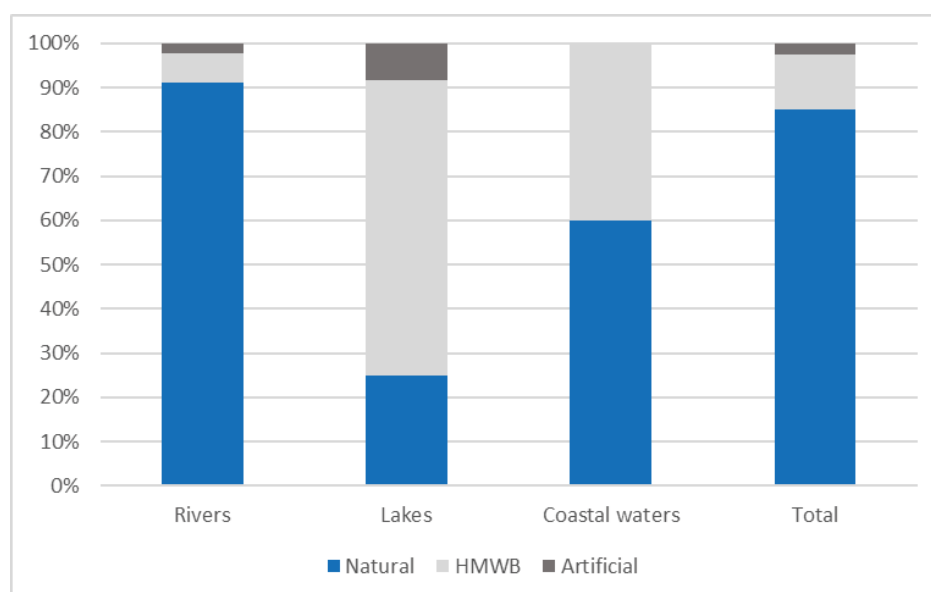


3.2 Hydromorphological changes and artificialisation (HMWBs and AWBs)

The level of human intervention in the Slovenian water bodies remains relatively low, with 15% of its water bodies being designated as heavily modified (HMWBs) or artificial (AWBs). The share and number of HMWBs and AWBs is the same as in the 2nd RBMPs. Slovenia has designated a total of 19 water bodies as HMWBs, comprising nine rivers, eight lakes and two coastal waters, and a total of four AWBs, comprising three rivers and one lake. The percentage of surface water bodies designated as heavily modified or artificial for each category is shown in Figure 7.

¹¹ <https://www.gov.si teme/stanje-povrsinskih-voda/>.

Figure 7. The proportion of natural, heavily modified, and artificial water bodies by category and total



Source: 3rd RBMP pdf reporting.

The most common physical alterations that resulted in the designation of HMWBs are weirs or dams and the creation of reservoirs. The main water use for which river water bodies are designated as HMWBs or AWBs is hydropower, while for lakes the main water uses that lead to the designation are flood protection and irrigation. The only lake designated as artificial has been created due to the subsidence of a former mine. The two coastal HMWBs have been designated due to transport and wider environment (nature protection and other ecological uses).

The methodology for the designation process for HMWBs and AWBs has not changed since the 2nd RBMPs. It is done on the basis of substantially changed hydrological and morphological characteristics compared with natural conditions, which are permanent and support certain types of human activity or water use and prevent the achievement of good ecological status. AWBs have been designated in cases where there were no pre-existing water bodies.

However, Slovenia's 3rd RBMPs do not provide information on the criteria and thresholds used to assess whether restoration measures required to achieve good ecological status would have significant adverse effects on the use and the wider environment (as per Article 4(3)(a) WFD). Similarly, the 3rd RBMPs do not provide information on how Slovenia has concluded that the beneficial objectives achieved by modifying the HMWBs could not have been achieved by other means that constitute a significantly better environmental option (Article 4(3)(b) WFD).

Similarly to the 2nd RBMPs, the 3rd RBMPs only mention that the last designation of all surface water bodies was done in 2016. They do not provide information on any analysis that formed the basis for these designations. This significant gap was already flagged in the Commission assessment of the 2nd RBMPs.

It is noted positively that 43.5% of Slovenia's HMWBs and AWBs are reported as being in good or higher ecological potential in the 3rd RBMPs, compared with 22.2% in the 2nd RBMPs, even though this may largely be the result of the progress made in classification, with a significant reduction in the number of water bodies in unknown status.

The assessment of the ecological potential of HMWBs and AWBs uses a methodology adapted from the assessment of the ecological status of natural water bodies for biological and physico-chemical quality elements. However, the 3rd RBMPs do not provide detailed information on this methodology.

The only detail provided is the use of the quality element benthic invertebrates, with the same assessment method as for natural water bodies, but with values increased by one class (e.g. a value of the indicator corresponding to moderate ecological status of a natural water body also corresponds to good ecological potential of a HMWB or AWB). It appears, therefore, that the assessment of ecological potential involves only a limited number of biological quality elements. Furthermore, this relatively simple methodology does not follow the best-practice recommendations of CIS guidance document 37¹², which involves basing the threshold for biological quality element assessment methods on an analysis of mitigation measures. While the PoM positively includes, for each HMWB, specific measures helping to achieve good ecological potential, these do not appear to be considered when setting these thresholds.



3.3 Groundwater bodies – have they sufficient water – quantitative status

Monitoring

In the 3rd RBMPs, Slovenia delineated 21 groundwater bodies, the same as in the 2nd RBMPs. The delineation process has not been revised, and the total area of groundwater bodies has remained unchanged since the previous cycle. Among these, one groundwater body is classified as transboundary¹³.

The 3rd RBMP documentation indicates that all 21 groundwater bodies (100%) are now subject to quantitative monitoring, representing a very positive increase from the 14 out of 21 groundwater bodies (66.7%) monitored in the 2nd RBMPs.

Currently, there are 276 monitoring sites established for quantitative assessment, which is a significant improvement from the 136 sites documented in the 2nd RBMPs. All 21 groundwater bodies continue to be designated as drinking water protected areas.

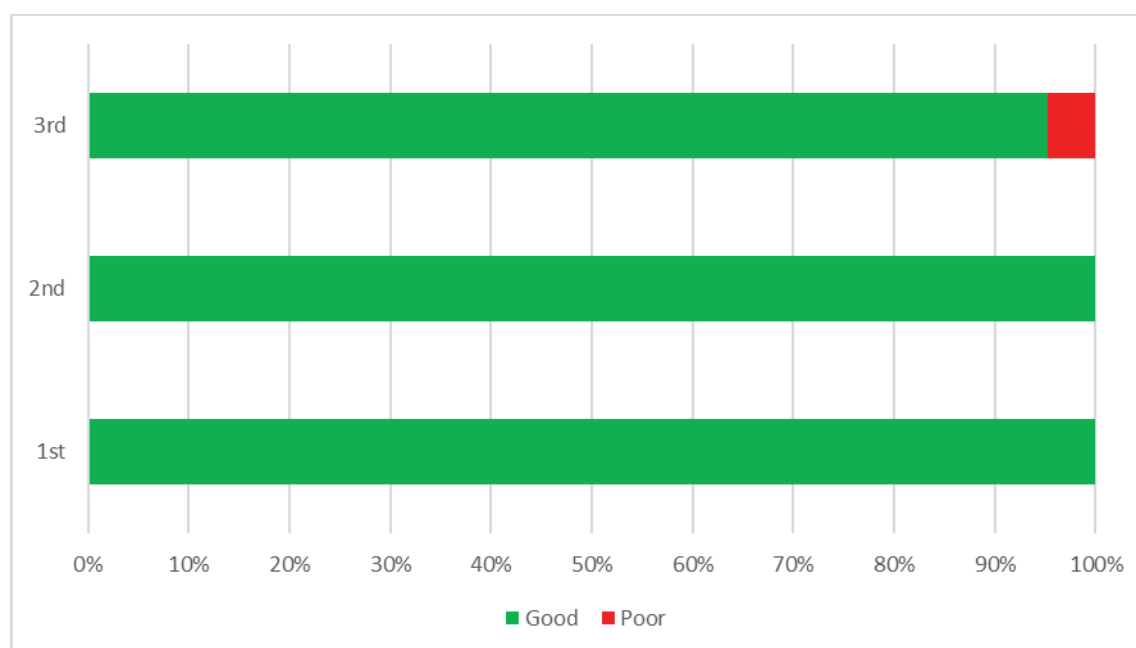
Status Assessment

The 3rd RBMPs show that by 2021, 95.2% (20) of groundwater bodies were in good quantitative status, while 4.8% (1) were in poor status. The reason for failing to achieve good quantitative status for the one groundwater body in poor status (the Dravska kotlina (Drava Basin) aquifer – SIGWB3012), according to the electronic data reported in WISE, is over-abstraction leading to a negative water balance / lowering water table. In the 2nd RBMPs, all groundwater bodies were in good status. It is unclear whether the change in the status of this groundwater body is the result of increased abstraction pressures or the result of better knowledge thanks to improved monitoring. This groundwater body is expected to achieve good quantitative status by 2027 or earlier.

¹² [CIS Guidance No 37 - Steps for defining and assessing ecological potential for improving comparability of Heavily Modified Water Bodies.](#)

¹³ Murska kotlina (Mura Basin), shared with Austria.

Figure 8. Quantitative status of groundwater bodies in Slovenia in the 1st, 2nd and 3rd RBMPs



Source: 3rd RBMP pdf reporting and 1st and 2nd RBMP e-reporting.

The methodology for assessing groundwater quantitative status is outlined in the 3rd RBMPs. It considers the assessment of: (i) water balance and long-term groundwater level trends; (ii) impacts on groundwater-associated aquatic ecosystems (GWAAEs); (iii) impacts on groundwater-dependent terrestrial ecosystems (GWDTEs); and (iv) saline or other intrusions. This assessment is in line with the requirements of the WFD. Strangely, the significant improvement in the monitoring network has not translated into increased confidence in assessing the quantitative status of groundwater bodies. This has worsened slightly since the 2nd RBMPs, with high-confidence classifications decreasing from 28.6% to 23.8% and medium-confidence classifications increasing from 71.4% to 76.2%.



3.4 Protected Areas (identification, monitoring, objectives and measures)

There are different reasons why certain water bodies are protected under the law, leading to various types of protected areas. Slovenia has designated six types of protected areas associated with surface and groundwater bodies. A total of 46 bathing water sites have been identified in Slovenia under the Bathing Waters Directive (e-reporting data). Fifty-four nutrient-sensitive areas have been designated in accordance with the Urban Waste Water Treatment Directive (UWWTD) (e-reporting data), and the whole country is designated as a Nitrates Vulnerable Zone under the Nitrates Directive. As regards areas designated for the protection of aquatic species of economic importance, there are three shellfish designated waters in Slovenia (e-reporting data). Four surface water bodies and all groundwater bodies are identified as drinking water protection areas (e-reporting data). There are 355 Natura 2000 areas designated under the Habitats and Birds Directives, showing a positive increase from the 255 areas identified in the 2nd RBMPs.

Additional objectives have been set for bathing waters (to maintain water quality and achieve at least sufficient water quality), Nitrate Vulnerable Zones (to achieve at least sufficient water quality), nutrient-sensitive areas (to ensure that the discharge and treatment of urban wastewater are in accordance with the relevant regulations), freshwater fish designated waters (to maintain water quality and achieve at least sufficient water quality) and Natura 2000 areas (to establish and maintain favourable status, in accordance with the Natura 2000 Management Programme).

The PoM specifies that basic measures for protected areas arise from the regulations governing such areas. For bathing waters, the RBMPs state that realistic and proportionate measures must be taken to ensure that the number of bathing waters in good or excellent quality increases, and the PoM sets out several measures related to monitoring, management and public information. The RBMPs indicate that the objectives for Nitrate Vulnerable Zones are met by reducing water pollution caused by nitrates from agricultural sources and preventing further pollution. For Natura 2000 areas, the RBMPs set out the ways in which activities and interventions are planned to protect them. The PoM includes a measure to ensure the favourable status of species and habitat types dependent on water in Natura 2000 areas.

The monitoring of protected areas associated with surface waters has been established for bathing waters and drinking water abstraction areas. The monitoring of bathing water is based on the recommendations of the National Institute of Public Health. The monitoring of drinking water abstraction areas consists of a network of measuring points across all the drinking water abstraction sites.

There is no detailed information on the status of water bodies associated with protected areas in the RBMP pdf submitted to the Commission, even though Slovenia announced that this would be reported electronically in WISE. Only a general description and maps are included in the RBMP pdf.



3.5 What is being done to prevent/reduce hydromorphological pressures

In the national PoM, there are five measures related to hydromorphological pressures, in addition to five related administrative or research measures. These measures started during the 2nd RBMPs and have been updated for the 3rd RBMPs. They include measures related to achieving good ecological status or potential in water bodies with large hydropower plants, which are applied to 10 surface water bodies. The PoM also includes measures for the achievement of good ecological status or potential in water bodies with river training works and flood retention basins, which are applied to nine surface water bodies. There are also measures related to ensuring good water status in water bodies with small hydropower plants (which are aimed at achieving ecological flows) and measures to ensure fish passage through transversal barriers. The latter are applied to all surface water bodies, except for the Adriatic Sea. Lastly, there are measures related to the permitting system, requiring the prior authorisation for abstraction, which are applied to all surface water bodies except for the Adriatic Sea, and to all groundwater bodies.

The 3rd RBMPs have clearly mapped out the hydromorphological pressures and measures to tackle them. The measures all include indicators to monitor their success and are described as ongoing, but the RBMPs provide limited information about the gaps to good status.

As regards ecological flows, although information in the 3rd RBMPs is not clearly presented, there seems to have been little or no progress compared with the previous cycle. Ecological flows appear to have been partially derived and implemented only for some relevant water bodies, according to the Decree on the criteria for determining and the method of monitoring and reporting ecologically acceptable flow (Official Gazette of the Republic of Slovenia No 97/09). In the 3rd RBMPs, a measure related to permitting regimes (which includes consideration of e-flows) has been reviewed and updated, but it is not clear to what extent it includes the steps required to achieve progress on e-flow definition and enforcement. It appears that e-flows are defined separately for each water permit and concession and not at water body level. Positively, compliance with e-flow is one of the conditions for receiving support for investments in energy projects (e.g. hydropower).



Nature-based solutions are referred to in two measures. These refer to several water retention systems (storage of water on floodplains, wetlands, riparian forests), river restoration in general and the preparation of guidelines for the retention of rainwater from urban areas.

3.6 What Slovenia is doing for abstractions and water scarcity

Slovenia is generally a water-rich country with freshwater resources per inhabitant well above the EU average¹⁴ and total gross freshwater abstractions that represent a small percentage of total renewable resources¹⁵. However, the resources are not evenly distributed and there are marked differences in precipitation between the West and the East of the country. The impacts of climate change (reduced precipitation in spring and summer, reduced amounts of snow, more frequent and severe droughts), coupled with growing demand, have led to more frequent instances of seasonal water scarcity in more vulnerable areas.

According to Slovenia's 3rd RBMPs, abstraction was a significant pressure only for groundwater bodies, leading in 2021 to failure to achieve good quantitative status in 1 out of 21 groundwater bodies (4.8%) (while all groundwater bodies were previously assessed as being in good quantitative status). This groundwater body is located in the Danube RBD.

Slovenia's Water Exploitation Index Plus (WEI+) data from 2002 to 2017 reported in the 3rd RBMPs shows an average value of 3.3%, fluctuating yearly without any significant trend. However, the value varies significantly between the two RBDs, with the Danube RBD having an average WEI+ of 4.3%, and the Adriatic RBD having an average WEI+ of only 0.4%¹⁶.

Based on Eurostat statistics¹⁷, major water users in Slovenia, excluding hydropower, are electricity generation for cooling (77.4%), households and services (18.0%), industry (4.2%) and agriculture (0.3%). Total water abstraction has risen slightly since 2016 (+5.1%). No information is provided in Slovenia's 3rd RBMPs on future demand forecasts.

Basic measures are in place for the control and management of water abstraction and impoundments (controls, efficient water use, improvement or establishment of ecological flow regime).

There is a concession, authorisation and/or permitting regime in place in both RBDs to control surface and groundwater abstractions and impoundments. Furthermore, there are a register of abstractions from surface water and groundwater and a register of impoundments for both RBDs. Some abstractions below certain thresholds are exempted from permitting, but they must be registered (it should be noted that the WFD allows abstractions that have no significant impact on water status to be exempted). Permits are issued by the competent water management authority for a maximum duration of 30 years, whereas concessions may be issued for a maximum of 50 years, in accordance with national law. The national law does not stipulate a periodic review of the permits and concessions. However, permits can be refused or revised under specific conditions, in order to maintain or achieve the environmental objectives in the RBMPs. No information is provided in Slovenia's 3rd RBMPs on unauthorised abstractions, but national authorities may conduct relevant sample checks after authorisation, or targeted checks after complaints, to prevent cases of unauthorised abstractions or violation of permit conditions. Due to the lack of rules mandating the

¹⁴ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Water_statistics.

¹⁵ https://www.oecd.org/en/publications/environment-at-a-glance-country-notes_59ce6fe6-en/slovenia_bddabcae-en.html#section-d1e264.

¹⁶ WEI+ values above 20% indicate that water resources are under stress and therefore water scarcity conditions prevail; values above 40% indicate that stress is severe.

¹⁷ https://ec.europa.eu/eurostat/databrowser/view/env_wat_abs_custom_8401102/default/table.

periodic review of permits and concessions for water abstractions, in 2024 the Commission opened an infringement procedure against Slovenia for non-conform transposition of Article 11(3) WFD¹⁸. At the time of this assessment, the infringement is still ongoing.

The 3rd RBMPs also include measures to improve flow regime and establish ecological flows, and to promote water efficiency, protection of drinking water, water pricing and cost recovery. The 3rd RBMPs include natural water retention measures, which are presented as solutions for addressing floods, although they also enhance groundwater recharge.

Slovenia also engages in international cooperation on issues relevant to water abstraction and scarcity. The international RBMP for the Danube includes hydrological, hydrogeological and climate change adaptation assessments. Under the Framework Agreement on the Sava River Basin, an Expert Group for Hydrological and Meteorological Issues has been established¹⁹. Furthermore, issues related to broader quantitative management (e.g. exchange of information relevant to downstream flows) are included in the scope of the bilateral agreements with Austria, Croatia, Hungary and Italy.



3.7 Adaptation to climate change

Slovenia's RBMPs and PoM include a range of climate adaptation measures to address the impacts of climate change on water resources. These measures encompass sustainable water management practices aimed at ensuring the protection, improvement and restoration of groundwater bodies, as well as balancing water use to maintain water quality and availability. The RBMPs prioritise flood protection measures, which require environmental impact assessments, and underline the significance of including hydropower and geothermal energy as renewable sources, while ensuring their sustainable and efficient utilisation and mitigating potential environmental impacts.

Slovenia uses hydrological studies, sea-level rise projections and land-use adjustments based on climate data to ensure climate-proofing. No maladaptation measures have been identified in Slovenia's 3rd RBMPs. However, the RBMPs do highlight the need for studies and projections on climate impacts, to ensure that climate adaptation measures do not inadvertently increase vulnerability in the long term.

These measures align with the national guiding frameworks for climate resilience planning. In 2021, Slovenia adopted its national climate strategy, the Long-Term Climate Strategy of Slovenia 2050, aiming for net zero emissions by 2050. Specific actions are guided by the Comprehensive National Energy and Climate Plan, which sets out policies and objectives until 2030. In December 2024, the timeline for achieving climate-neutrality was advanced to 2045 in the draft proposal for a climate law. If adopted, the climate law would set the legal framework for implementing the EU climate acquis, as amended under the 'fit for 55' package. The Spatial Development Strategy 2050, which is currently in preparation, is expected to further refine adaptation efforts, particularly regarding land-use policies, flood protection and sustainable water management.

¹⁸ INFR(2024)2170.

¹⁹ <https://www.savacommission.org/en/parties-to-the-fasrb/236>.

Flood management

The Floods Directive requires the impacts of climate change on the occurrence of floods to be taken into account, including in the preparation of Flood Hazard and Risk Maps (FHRMs) and Flood Risk Management Plans (FRMPs).

Climate change has been taken into account in the production of the second FHRMs. In the second national FRMP, the topic of climate change is well covered, with a description of how climate projections were considered in the second preliminary flood risk assessments. However, the link between climate projections and measures in the FRMP is not clear. The second national FRMP refers to Slovenia's policy framework for adaptation to climate change.

More information on the consideration of climate change to manage flood risks can be found in the Commission Staff Working Document 'Third River Basin Management Plans – Second Flood Hazard and Risk Maps and Second Flood Risk Management Plans – Member State: Slovenia' (SWD(2025) 30 final)²⁰.

Drought management

Although Slovenia does not currently face severe water stress, climate projections highlight increasing drought risks. Since 1980, river flows have been declining, impacting sectors such as energy, industry and agriculture. A decline in groundwater availability and worsening soil dryness have been observed in recent years, especially in regions like Primorska, Prekmurje and Štajerska. Climate projections indicate more frequent drought days, higher evapotranspiration rates and rising water temperatures, putting ecosystems under further stress.

Slovenia has not reported separate Drought Management Plans or sub-plans for water scarcity and droughts as part of its 3rd RBMPs. However, the RBMPs do address drought risks within the broader framework of climate adaptation policies. Measures to address drought risks through groundwater restoration, water conservation, artificial recharge of water bodies, and sustainable abstraction limits, are included in the PoM within the RBMPs for the Danube and Adriatic RBDs. These measures are integrated with national energy and environmental strategies and regional land-use planning and water conservation policies, aiming to ensure long-term water sustainability amid changing climate conditions.

Slovenia plays an important regional role by hosting the Drought Management Centre for Southeastern Europe (DMCSEE)²¹, a UN and World Meteorological Organization (WMO) initiative to coordinate drought monitoring and response in the region. Slovenia also provides its own national drought information through platforms like 'drought meter'²². The European Drought Observatory (EDO), part of the Copernicus Emergency Management Service, also provides data relevant to Slovenia's drought situation by monitoring conditions across the continent, including precipitation and soil moisture levels. Slovenia's approach to drought monitoring is comprehensive, applying several indicators at the same time, considering moisture in the surface layer of soils, precipitation trends and groundwater status. An easy-to-use web portal allows the public (and local/regional administrations) to browse the status of soil moisture, surface waters, groundwater bodies and precipitation for the last seven and 30 days. Slovenia's comprehensive web interface provides a

²⁰ SWD(2025) 30 final, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD%3A2025%3A30%3AFIN&qid=1738746144581>.

²¹ [Drought Management Centre for Southeastern Europe \(DMCSEE\)](#).

²² [Drought meter](#).

thorough insight into the impact and risk of droughts, which can be considered a best practice in this region.

4. Policy elements contributing to zero pollution



4.1 Surface Water: what is their chemical status

Monitoring

As mentioned in sub-chapter 3.1, the network for monitoring the ecological and chemical status of surface waters in Slovenia consists of 204 monitoring points, and surveillance monitoring is carried out at 31 monitoring sites. The 3rd RBMPs indicate that surveillance monitoring for chemical status was completed over the 2014-2019 period, with a selection of monitoring sites based on the significance of key rivers (e.g. where the rate of water flow was important for the whole RBD), anthropogenic pressures and potential transboundary issues. In turn, surveillance monitoring was used to identify the location and need for operational monitoring to determine the risk of exceeding EQS. According to the 3rd RBMPs, typically one monitoring site is used for each water body, with all water bodies covered. Regrettably, no further information is included in the RBMPs.

The 3rd RBMPs indicate that all 45 priority substances were included in the monitoring programme, including within both water and biota where relevant for the specific substance. However, it is unclear whether all 45 priority substances are monitored at all sites. For operational monitoring, the frequency is monthly in water and annually in biota, in line with the WFD requirements. Monitoring of long-term trends in priority substances was carried out in sediments. A total of 20 (out of the 20 priority substances that tend to accumulate in sediment and/or biota that Member States are required to monitor under the Environmental Quality Standards Directive (EQSD) for the purpose of long-term trend assessment) substances are included within this monitoring program. Biota monitoring also takes place, and it includes PBDEs, mercury, hexachlorobenzene and hexachlorobutadiene. The frequency of monitoring for long-term trends is once every three years, which means that it is compliant with the WFD.

Status assessment - Evolution of chemical status of surface water bodies since the first RBMPs

In the 3rd RBMPs, no surface water body has achieved good chemical status. This represents a slight decrease from the 2nd RBMPs, where 0.6% of surface water bodies were reported to be in good chemical status.

Failure to achieve good chemical status is primarily due to mercury and PBDEs (polybrominated diphenyl ethers, a class of flame-retardant chemicals used in consumer products), which exceed quality standards in all surface water bodies. In addition, in the Danube RBD one water body is reported to be failing for cadmium and lead, one for nickel and two for dioxins and dioxin-like compounds. This is a deterioration from the previous cycle, where no water body failed to reach good status due to these substances.

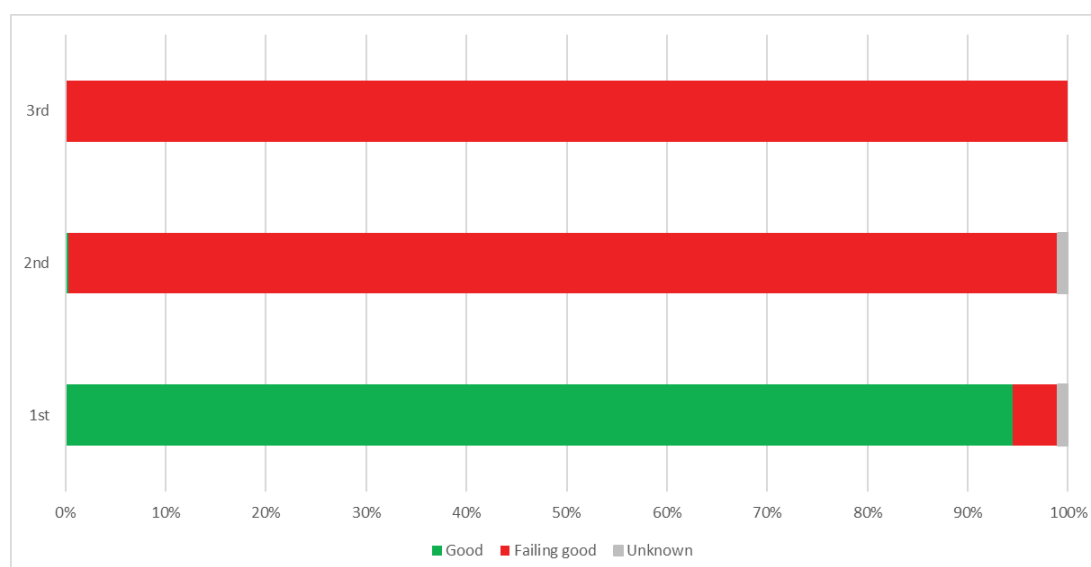
Mercury and PBDEs are ubiquitous, persistent, bioaccumulative and toxic substances (uPBTs), which are difficult to address. If uPBTs were excluded, in the Danube RBD, 119 (98.3%) surface water bodies would be in good chemical status, and 2 (1.7%) would be in poor status. In the Adriatic RBD, all water bodies (100%) would achieve good chemical status. This would be an improvement from the 2nd RBMP, where five surface water bodies were reported to be in poor chemical status due to tributyltin

(TBT), whereas the concentrations of TBT are reported in the 3rd RBMP to be below the environmental quality standard for all five water bodies.

Regrettably, the 3rd RBMPs provide limited information on the method used to classify water bodies, including no clear presentation of the confidence ratings.

22% of water bodies are expected to be in good chemical status by 2027, while for 78% of water bodies the date is unknown.

Figure 9. Chemical status of surface water bodies in Slovenia in the 1st, 2nd and 3rd RBMPs



Source: 3rd RBMP pdf reporting.



4.2 Groundwater Bodies: what is their chemical status

Monitoring

All 21 groundwater bodies (100%) are subject to chemical monitoring, as in the 2nd RBMPs. All 21 groundwater bodies (100%) are subject to surveillance monitoring, and 14 (66.7%) are subject to operational monitoring, the same as in the 2nd RBMPs. Since the 2nd RBMPs, there has been a positive increase in the number of monitoring sites, with surveillance monitoring sites rising from 176 to 221 in the 3rd RBMPs, and operational monitoring sites up from 146 to 191.

According to the 3rd RBMPs, all substances causing a risk of deterioration in chemical status are subject to monitoring, similarly to the 2nd RBMPs. All GWD (Groundwater Directive) Annex I and Annex II (Part B) substances are reported to be monitored. All WFD core parameters (nitrate, ammonium, pH, electrical conductivity and dissolved oxygen) are reported to be monitored, similarly to the 2nd RBMPs.

The methodology for assessing groundwater chemical status is described in the 3rd RBMPs. In addition to considering the assessment of general quality, Slovenia has carried out an assessment of environmentally significant, sustained upward trends in pollutants or indicators of pollution in (groups of) groundwater bodies identified as being at risk, as required under the GWD. Furthermore, since good groundwater chemical status also depends on the potential impact of pollutants in groundwater on the status of associated surface waters (Groundwater Associated Aquatic Systems or GWAAEs) or on the status of terrestrial ecosystems that depend directly on groundwater (Groundwater Dependent Terrestrial Ecosystems or GWDTEs), these have been considered for the assessment of groundwater

body chemical status, in accordance with the law. The assessment of saline or other intrusions and the assessment of impacts on drinking water protected areas are also considered.

Status assessment

The 3rd RBMPs report that 18 groundwater bodies (85.7%) are in good chemical status. There are only three groundwater bodies (14.3%) in poor chemical status.

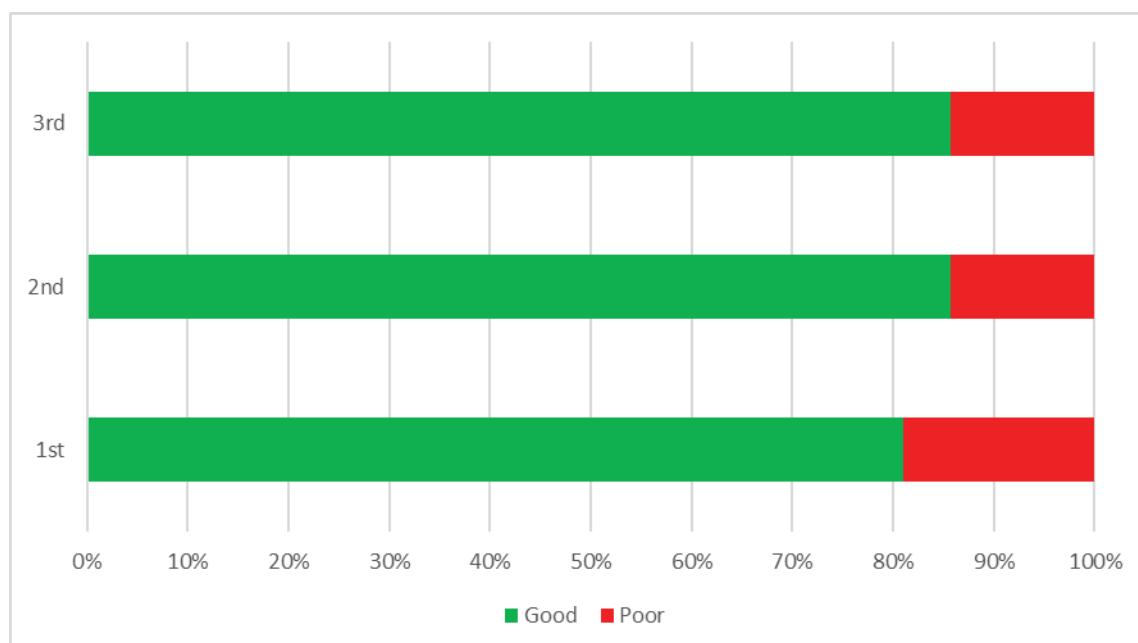
Failure to achieve good chemical status in the three groundwater bodies in poor chemical status is due to general water quality assessment resulting from significant environmental risk from pollutants across the groundwater bodies. Moreover, one groundwater body has failed to achieve good chemical status also due to the quantitative pressure resulting in saline or other intrusions resulting from anthropogenically induced sustained changes in flow direction.

Only two pollutants are reported to cause the failure to achieve good chemical status in the three groundwater bodies in poor chemical status: nitrates (all three groundwater bodies) and atrazine (one groundwater body). No sustained upward trends have been detected in any groundwater body.

The overall confidence in the assessment of the chemical status of groundwater bodies has remained the same since the 2nd RBMPs. Classification with high confidence is estimated at 42.9% of assessments, and classification with medium confidence is estimated at 57.1% of assessments. No classification with low confidence has been reported in the 3rd RBMPs.

There is no information in the 3rd RBMPs about the number of groundwater bodies that are expected to fail to achieve good chemical status or that are at risk of failing to achieve good chemical status by 2027.

Figure 10. Chemical status of groundwater bodies in Slovenia in the 1st, 2nd and 3rd RBMPs



Source: 3rd RBMP pdf reporting and 1st and 2nd RBMPs e-reporting.



4.3 What Slovenia is doing to combat pollution from agriculture

In Slovenia, around 34.3% of the land is used for agricultural purposes, with 62.7% of land being forest and semi-natural areas²³. Of the land that is farmed, around 12% is organic farming²⁴. The Slovenian Common Agricultural Policy (CAP) Strategic Plan provides for an organic farming target of 17% of utilised agricultural land (UAA) by 2027²⁵. According to the data provided through electronic reporting, pollution from agriculture has a considerable impact on the status of water bodies in Slovenia, with diffuse agricultural pollution being reported as a significant pressure on 40% of surface water bodies and on 14% of the total number of groundwater bodies. The Slovenian CAP Strategic Plan supports commitments for sustainable and reduced use of pesticides on 40% UAA and to protect water quality on 43% of UAA by 2027²⁶.

The RBMPs and the national PoM include basic and supplementary measures to address pollution from agriculture. Most of the supplementary measures appear to be voluntary in nature, relying on incentives provided through CAP funding. These include the protection of waters against pollution by nitrates from agricultural sources, including the implementation of the Nitrate Regulation under the Nitrates Directive and entailing various limitations on methods and areas of use of fertilisers (e.g. in water protection zones, under certain soil conditions), their storage, and the application of Good Agricultural Practice. Measures for the protection of waters against pollution caused by plant protection products are also laid down. They include activities for implementation of the Directive on the Sustainable Use of Pesticides and related national legislation, such as approval and registration of active substances (i.e. pesticides), and rules and limitations on their use. Pollution caused by nutrients and phytopharmaceuticals from agricultural and other sources along surface waters is also tackled through the use of buffer zones. The RBMPs and the PoM also include measures within direct payments of the agricultural policy, including the specific interventions that implement 'green' requirements under the CAP strategic plan for Slovenia, and compensation for a reduction in income from agricultural activity due to adaptation to water supply protection regime measures.

The measures are described in terms of general activities and implementation approach. For each measure, the set of water bodies to which it applies, relevant indicators, the responsible body and the implementing body are defined. The PoM includes a list of indicators for each measure. There is, however, no data on what the values of the indicators are, and some of the indicators are poorly described in the PoM. All measures are a continuation of those included in the 2nd RBMPs.

The funding of measures has been clearly set out in the 3rd RBMPs, with agricultural measures being funded through the CAP from the European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development. The national PoM further specifies the budget allocated for interventions under the strategic plan that have been developed to reduce the burden of agriculture.

The 3rd RBMPs do not provide any quantified gap analysis on the need to reduce nutrient loads from agriculture or pesticides. Information on nitrogen loads from agriculture to surface and groundwater bodies is provided for both RBDs, but without clarifying the reduction needed to reach the WFD targets. There is an assessment of the number of water bodies where pesticides have been identified as a significant pressure, but the 3rd RBMPs report that it is not possible to estimate the specific emissions of pesticides and provide no assessment of the extent to which the use needs to be reduced. Given the impact of nutrients and pesticides on water bodies, Slovenia should ensure that a

²³ <https://www.eea.europa.eu/en/analysis/maps-and-charts/land-cover-and-change-statistics-dashboards>.

²⁴ [Developments in organic farming - Statistics Explained - Eurostat](#).

²⁵ <https://organictargets.eu/wp-content/uploads/2025/03/Slovenia-Digital-country-Factsheet.pdf>.

²⁶ [Mapping and analysis of CAP strategic plans - Publications Office of the EU](#).

gap assessment is performed, in order to understand the load reduction needed to reach the WFD objectives, to evaluate the effectiveness of the measures in place, and to devise and implement any additional measures.

On a positive note, despite the lack of a gap assessment, the implementation of the measures to reduce nutrient and pesticide pollution from agriculture in the 2nd RBMPs has been evaluated and has had measurable effects. Consumption of mineral fertilisers in Slovenia decreased by 31% by 2017 and by 5% between 2019 and 2020. Moreover, the consumption of plant fertilisers (N, P₂O₅, K₂O) per hectare of utilised agricultural area also decreased by 3% between 2019 and 2020. Both reductions are attributed to the requirements of the Nitrates Directive and the principles of good agricultural practice in fertilisation.

In the Danube and Adriatic RBDs, there is no mention of transboundary cooperation for nutrient management upstream or downstream, which is not a good sign for the nutrient management needed for extra nutrient-sensitive transitional and coastal water bodies.



4.4 What Slovenia is doing to combat pollution from other sectors

Pollution in this context involves nutrients, organic matter, sediment, saline discharges and chemicals (Priority Substances, River Basin Specific Pollutants, groundwater pollutants and other physico-chemical parameters) arising from all sectors and sources other than agriculture. This includes urban wastewater treatment plants, industries with own discharges, urban areas, forestry, transport, aquaculture and energy production. As pathways of pollution are very different, many different types of measures are needed to address them.

As regards point source pollution, Slovenia suffers from some deficits in the necessary water treatment infrastructure and lags behind the EU average in implementing the Urban Wastewater Treatment Directive (UWWTD). Only 65% of urban wastewater is treated in accordance with the EU requirements²⁷. In the national PoM, measures are in place to reduce pollution from wastewater treatment plants, addressing the discharge and treatment of municipal wastewater from agglomerations with a total load equal to or greater than 2 000 p.e. (population equivalent), from agglomerations with a total load smaller than 2 000 p.e., and outside of agglomerations. The Commission is addressing the problem of non-compliance with the UWWTD through one infringement case focusing on the implementation of the necessary measures to ensure compliance with the judgment delivered in case C-328/22 on 30 November 2023²⁸. In that judgment, the Court of Justice of the European Union found that Slovenia is not in compliance with the UWWTD because of the insufficient collection, treatment and monitoring of wastewater in the agglomeration of Ljubljana. The infringement is related to the construction of the CO sewage system in the Ljubljana agglomeration, which is supposed to connect the sewage system with the Zalog urban wastewater treatment plant, so as to ensure tertiary treatment of urban wastewater.

The PoM also includes measures dealing with wastewater from industrial sources, including both IED sites and other industrial sources.

The measures that tackle diffuse pollution deal with different sectors, such as the transport of dangerous goods by road, rail, air and sea; the use and/or content of specific substances, such as chemicals, phosphates and other phosphorus compounds; fishing and aquaculture; and waste management.

²⁷ <https://water.europa.eu/freshwater/countries/uwwt/slovenia>.

²⁸ INFR(2016)2188.

Supplementary measures include the preparation of:

- additional action for surface water bodies in poor chemical status due to water pollution, entailing additional analyses of pressures on selected water bodies from chemical substances, including mercury and BDE;
- measures to solve water quality problems due to elevated sulphate concentrations, entailing the analysis of pressures and mechanisms on a water body where the identified source is the production of titan dioxide; and
- an action plan to improve the status of water bodies for which a trend of deterioration of status has been detected, entailing the analysis of monitoring data and various studies, the examination and potential revision of issued permits and concessions, and the preparation of action plans for individual water bodies.

There is limited information in the national PoM about measures to reduce chemical substances causing failure to achieve objectives, including RBSPs, with the exception of one measure related to the use of chemicals and biocides. Similarly, there is not enough information to assess whether all drivers causing chemical pollution are subject to relevant measures.

All measures are a continuation of the measures from the 2nd RBMPs. The measures are described, and the responsible entities, goals and indicators of the measures are listed. However, no information is provided about the values for the listed indicators. For example, for the measure on the treatment of urban wastewater from agglomerations above 2 000 p.e., the indicators are the reduction of pollution loads and the number of p.e. provided with collection and treatment services. However, the current and target values for these two indicators are not presented.

Regrettably, there is no detailed assessment of the gap in terms of loads that are not sufficiently treated at present, or of the current status of implementation and what is expected to be achieved by the end of the 3rd RBMPs cycle. The funding of measures is described at an aggregated level by listing the funding sources, which include EU and national funding. However, no information is provided about whether funding has been achieved.



4.5 What Slovenia is doing to combat significant pressures – overall assessment of the Programmes of Measures

In the national Programme of Measures, Slovenia has clearly mapped its measures as either basic or supplementary measures. For each measure, the number of groundwater or surface water bodies concerned in both the Adriatic and Danube RBDs is specified. Due to the lack of electronic reporting, measures are not classified on the basis of the Key Type Measures (KTMs) predefined in the reporting guidance, which makes comparison and analysis more difficult. Basic measures cover the following areas: economic instruments, hydromorphological pressures, biological pressures, water pollution, protected areas, water governance, water use and water management. Supplementary measures are laid down in the areas of water pollution and hydromorphological pressures. Responsible entities have been assigned to each measure. However, overall, it is unclear whether the measures set out in the national PoM for Slovenia are sufficient to tackle the significant pressures. The lack of gap indicators for measures means that it is unclear how the success of the measures will be measured.

As regards coordination with the FD, the national PoM contains several flood control measures, including determining and considering flood zones, the identification, establishment and preservation of floods plains, and land-use adaptation in river basins. With respect to the Marine Strategy Framework Directive (MSFD), measure 'OS3.1a – Development of a marine environmental

management plan' is reported to be underway for the 2016-2023 period (the plan was adopted on 23 December 2022).

A critical factor in the successful implementation of the PoM is the availability of funding to support the investments required. The RBMPs provide a clear overview of the costs of measures. These include EUR 2.3 billion for basic measures implemented on the basis of the applicable legislation (2021-2027), of which EUR 998 million will come from the Operational Programme for the Discharge and Treatment of Municipal Wastewater and EUR 620 million from the Operational Programme for Drinking Water Supply. There is also EUR 6.5 million for basic measures that have not been fully implemented yet according to the requirements of the applicable legislation (2023-2027). These include measures to identify legal, regulatory, administrative and development gaps. Lastly, there is EUR 398 million for supplementary measures. The link between funding and measures is made in the national PoM. Sources of funding for these measures come from the Cohesion Fund (Cohesion Policy 2021-2027), the Recovery and Resilience Facility (based on Slovenia's Recovery and Resilience Plan), the EU Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development, as well as from the state budget, municipal budget and the newly established Water Fund.

The RBMPs provide an overview of the cost-effectiveness analysis that has been carried out only for supplementary measures, more specifically for measures to reduce diffuse nutrient pollution of water in agriculture and to reduce the impact of hydromorphological pressures. For the measures related to diffuse nutrient pollution, those with the lowest cost/benefit ratio were selected as the most effective, and for the hydromorphological measures, restoration was found to be the most cost-effective. These are the only two cost-effectiveness analyses for measures reported in the RBMPs. Regrettably, the details of the assessment – and whether the assessment has been carried out for other measures – remain unclear.

Apart from this limited overview of the cost-effectiveness analysis, the RBMPs and the national PoM do not provide information on the prioritisation of measures. It is unclear if there has been a process to formulate the final list of national measures.

There is limited information about cooperation with other countries, despite several agreements in place. However, the International Sava River Basin Commission contains joint Significant Water Management Issues (SWMIs) and a joint vision of management of objectives, but it does not have a shared PoM. The International Commission for the Protection of the Danube River has joint SWMIs and a joint vision for the management of objectives. It has also produced a joint PoM.

When designing and implementing research-related measures, Slovenia should make better and more systematic use of results from EU-funded research and innovation projects. This research can support better action on water management including future water demand as well as climate change impacts, and pollution from substances such as pesticides, pharmaceuticals, PFAS and microplastics.

5. Exemptions and economics



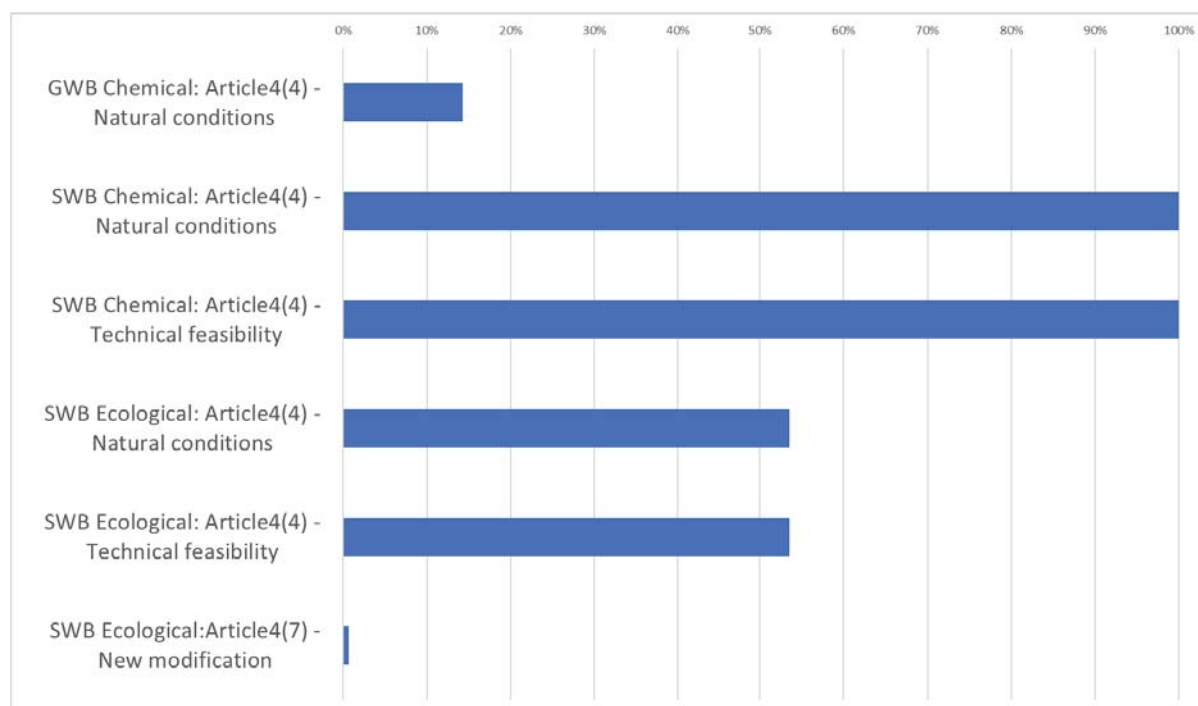
5.1 To what extent are exemptions applied in Slovenia

According to the WFD, where the objective of good status is not yet achieved, exemptions can be applied in accordance with Article 4(, paragraphs 4, 5, 6 and 7. In the 3rd RBMPs, Slovenia still applies

a significant number of exemptions under Article 4(4) and (7). No exemptions under Article 4(5) and (6) have been applied, similarly to the 2nd RBMPs.

Figure 11 shows the use of exemptions according to Article 4(4) and (7) in Slovenia.

Figure 11. The use of exemptions for the WFD in surface water bodies (SWBs) and groundwater bodies (GWBs) in Slovenia. The figure shows the proportion of water bodies for each type of exemption.



Source: Data mining of the 3rd RBMPs.

Article 4(4) exemptions (time-related exemptions)

Article 4(4) exemptions have been applied on the grounds of natural conditions or technical feasibility to 83 surface water bodies (53.5%) for ecological status/potential (representing an increase from the 59 surface water bodies exempted in the 2nd RBMPs) and to 155 surface water bodies (100%) for chemical status (the same as in the 2nd RBMPs). Three groundwater bodies (14.3%) have been exempted for chemical status (the same as in the 2nd RBMPs) on the grounds of natural conditions. No Article 4(4) exemptions have been reported for quantitative groundwater status. No exemptions have been applied under Article 4(4) due to disproportionate costs.

The 3rd RBMPs provide a general overview of the process of using exemptions and criteria in relation to (lack of) technical feasibility, natural conditions or disproportionate cost. They do not provide any detailed technical methodologies, however. The process of determining the exemptions is described, including diagrams, and the list of exemptions is provided. However, there is no explanation for the reason behind the new exemptions in the pdf RBMPs submitted to the Commission, even though Slovenia announced that this would be reported electronically in WISE.

The 3rd RBMPs report that exemptions to extend the deadline for achieving environmental objectives are considered in the context of:

- earlier exemptions applied in previous RBMPs;
- status assessments and failure to achieve the set environmental objectives in 2015;
- an assessment of the likelihood of achieving the environmental objectives.

The 3rd RBMPs do not provide any detailed water body-specific justification for the use of exemptions.

Article 4(7) exemptions (exemption to the obligation of non-deterioration in the case of new modifications or sustainable human development activities)

The 3rd RBMPs describe in detail the process of considering and granting exemptions under Article 4(7). This process is set out in Article 56 of the Water Act. All new developments are subject to the assessment process as part of environmental permitting and associated Environmental Impact Assessment (EIA). Exemptions must be determined in the Strategic Environmental Assessment (SEA) process, the EIA process and the process of obtaining water rights, water opinions and water permits. Methodology documents set out the technical specifications on how this assessment can be undertaken²⁹. The 3rd RBMPs also describe the set of questions included in the expert assessment supporting the Article 4(7) decision.

There is only one exemption under Article 4(7) reported in the Danube RBD, for the Mokrice Hydropower Plant. The RBMP explains that the negative impacts of the project were determined in the EIA process and that adequate mitigation measures are defined in the State Spatial Plan. However, no further details of these measures are provided.

No exemptions under Article 4(7) were reported in the 2nd RBMPs.



5.2 Use of economic analysis and water pricing – cost recovery

Extent of reporting of the (summary of the) underlying economic analysis (Annex III WFD)

The 3rd RBMPs provide limited information on the updates to the economic analysis and cost recovery assessment compared with their 2nd RBMP counterpart, in terms of both methodology and data. The summary of the economic analysis is incomplete: it includes some volume estimates associated with abstraction destined for drinking water and irrigation. It also reports on a cost-effectiveness assessment used to select the measures to reduce nutrient emissions from agriculture and to reduce hydromorphological pressures. Notably, the long-term perspective appears lacking, as there are no long-term forecasts of water demand and water supply, which would be the link to climate change adaptation scenarios, and no long-term forecasts of relevant investments either.

Cost recovery and adequate contribution of water use sectors

Slovenia has identified an extensive list of 31 water uses, but it does not include water reuse, and it does not clearly articulate the difference between water services and other water uses. However, the cost recovery assessment mentions water supply and wastewater collection and treatment, which are therefore effectively considered as water services. Three broad water user sectors are recognised: the business sector (broken down further into the sub-sectors industry, energy, transport and tourism), households / communal services, and agriculture. The 3rd RBMPs state that the basis for the definition of an individual water use is whether or not a water-related charge is levied on it, although it is not clear if the 'charge' refers to water and sanitation tariffs or water-related environmental charges.

The 3rd RBMPs provide scant information on the recovery of water service costs and the application of the polluter pays principle. The 3rd RBMPs state that cost recovery has been estimated taking into account financial, environmental and resource costs, but they do not report any actual cost recovery rates or quantitative information on the underlying financial, environmental and resource costs.

²⁹ The assessment of new modifications on the status of water body is carried out on the basis of instructions contained in Annex 3 to the General Guidelines for Water Management, which are published on the website of the Water Directorate of the Republic of Slovenia, <https://www.gov.si/zbirke/storitve/presoja-prostorske-in-okoljske-dokumentacije/>.

Slovenia states that it cannot provide financial cost estimates due to a lack of data from private water service providers, but it remains unclear how this claim relates to the presumably cost-based price regulation, because of a lack of reporting on the latter. In contrast, the 3rd RBMPs provide an overview of the sum of collected water service fees in the years 2016-2020, split over water user sectors and sub-sectors.

The 3rd RBMPs do not discuss mitigation factors to cost recovery, despite the discussion of direct and indirect subsidies suggesting less than full cost recovery. Article 9(4) exemptions are not mentioned in the 3rd RBMPs either.

The financial costs of water services are covered mostly by their customers, with the remaining part subsidised by municipalities, state budget and EU funds. The RBMPs mention that there is financial support for public utilities' investments in new water infrastructure, coming from municipal and state funds alongside EU funds. In addition, there appear to be some subsidies to keep some prices below cost level. The 3rd RBMPs also mention financial support for agriculture and hydropower producers, apparently to cope better with water-related costs. According to the 3rd RBMPs, subsidies for activities carried out by water service users have not been included in the assessment of financial and environmental costs.

Water prices and price incentives to use water efficiently

The 3rd RBMPs do not provide any account of whether pricing policies offer an 'adequate incentive' for more efficient water use. Rather, they provide only general assurances – without much substantiation – that 'cost recovery is key to promoting the sustainable use of natural resources' and that 'water pricing policy in Slovenia encourages users to use water resources economically and thus contribute to achieving environmental goals'.

The 3rd RBMPs' brief overview of pricing policy does not specify the structure and rates for water service tariffs, apart from a reference to a surcharge on drinking water consumption over an unspecified threshold. While it explains that tariffs can vary across the country, there is no information on the regulatory oversight of price setting. The overview gives some information on water use charges, including a volumetric water abstraction charge over a certain volume threshold and a volumetric environmental charge on wastewater discharges. This broad sketch suggests that there are some clear incentives for more efficient water use in Slovenia, but the lack of further information and widespread use of subsidies make it impossible to conclude whether these incentives can be considered adequate overall.

The methodology for estimating environmental costs follows a cost-based approach, while the methodology for appraising resource costs follows the opportunity costs approach. However, the 3rd RBMPs do not provide any details of the environmental cost estimates and the underlying calculations. Instead, they state that the resource cost appraisal did not identify any foreseeable significant water supply constraints at individual water body level. However, it remains unclear whether this outcome has been 'climate-proofed' – specifically, whether it has taken into account the RBMPs' descriptions of the expected impact of climate change on water availability in the next 50 years – or how it relates to the reported shares of surface and groundwater bodies currently failing good status.

Polluter Pays Principle

The 3rd RBMPs give only a general assurance that water pollution costs are paid by polluters in accordance with the polluter pays principle. This may hold for wastewater services (as the charge is levied on users who are indeed polluters) and for the reported water pollution charges on water uses with a pollution pressure. However, it remains much less clear for water pollution raising the cost of

treating abstracted water destined for drinking water. The revenues collected from water pollution charges are not earmarked to cover (a part of) these pollution-related costs, but they can be used for all municipal public utility services. Revenues from abstraction charges, and from the charges on other significant water uses, are transferred to the (national) Water Fund, which is used for financing the RBMP and FRMP measures.

Hence, the available information suggests limited application of the polluter pays principle. In combination with a lack of sectoral specification of cost recovery efforts more generally, the 3rd RBMPs do not make the case that the various water user sectors' contributions to water service costs can be considered adequate.



6. WFD recommendations

Recommendations - Slovenia should:

1. Further raise the level of ambition and accelerate action to reduce the compliance gap as much as possible by 2027. This implies:
 - a. further improving governance by ensuring that the consultation, adoption and reporting of the 4th RBMPs is carried out in accordance with the WFD timetable;
 - b. developing a more ambitious Programme of Measures, which should provide a methodology for how the prioritisation and cost-effectiveness analysis for all measures has been carried out, include a gap assessment to achieve the objectives of measures and link the measures to the relevant KTMs;
 - c. ensuring full compliance with WFD provisions on the mandatory periodic review of permits/controls for all relevant activities impacting water bodies, in particular abstractions. Furthermore, Slovenia should closely monitor and clearly report on illegal water abstractions in agriculture or other sectors, with a view to effectively addressing them.
2. Identify and put in place, as appropriate, additional measures to reduce existing persistent environmental challenges (pressures) preventing the achievement of good status based on robust gap analyses. This implies, among other things:
 - a. stepping up efforts to identify and address all relevant sources of pollution, in particular with respect to the sources of anthropogenic pressures that are still unknown and affect almost all surface water bodies, so as to enable identification of the required additional measures;
 - b. stepping up action to drastically reduce nutrient and pesticide pollution from agriculture, including providing a comprehensive gap assessment for diffuse pollutant loads and presenting what the planned measures will achieve in terms of closing the gaps;
 - c. ensuring that all individual chemical substances causing status failures are addressed by appropriate measures, and providing a gap analysis to ensure that the measures planned will be sufficient to reach the objectives;
 - d. keeping up efforts to address persistent challenges linked to nutrient and chemical pollution from urban and industrial sources, including by closing the gaps in implementation of the UWWTD. Furthermore, Slovenia should provide more exhaustive

- information on the measures planned and the gaps to target so as to improve wastewater management throughout its territory;
- e. enhancing efforts involving nature-based solutions, including re-naturalisation and ecosystem restoration, which will reduce hydromorphological pressures on water bodies;
 - f. providing more clarity on the establishment and use of ecological flows and establishing for all relevant water bodies an explicit link between the implementation of e-flows and the authorisation process and/or review of permits to control water abstractions and impoundments;
 - g. reviewing the application of the Polluter Pays Principle and providing sectoral detail of cost recovery efforts more generally, with a view to ensuring that the contributions of the various water user sectors to water service costs are adequate;
 - h. providing a clear account of whether pricing policies offer an 'adequate incentive' for more efficient water use.
3. Where the objectives of the WFD for a specific water body cannot be met and exemptions are invoked, this should be done in line with ECJ case-law on the restrictive interpretation of exemptions, providing detailed justification at water body level and ensuring that their application is regularly reviewed. This implies, for Slovenia:
 - a. recognising that possibilities for time extensions (Article 4(4)) are extremely limited and will no longer be allowed after 2027 (except if duly justified for natural conditions) and taking appropriate action;
 - b. providing a clear and sound definition of the methodology to apply the various clauses under Article 4(4) and detailed information on the application of exemptions, including detailed justification at water body level;
 - c. providing more detailed justification for applying Article 4(7) exemptions to new projects, including by determining overriding public interest, assessing better environmental options and the measures taken to mitigate the adverse impacts of new developments.
 4. As regards monitoring, assessment, data management and reporting, Slovenia should:
 - a. further strengthen monitoring systems to close gaps in terms of both geographic coverage and parameters covered, including the hydromorphological quality element 'river continuity';
 - b. ensure monitoring for chemical status in all surface water bodies in which priority substances are discharged;
 - c. ensure that all biological quality elements (BQEs) are considered for the assessment of good ecological potential (GEP) and that the threshold for GEP depends on ecologically relevant measures without any significant adverse effect on use;
 - d. provide clear information on the geographic coverage of monitoring in surface water bodies and on the methods used for status assessment, including a clear presentation of the confidence ratings;
 - e. continue working towards improving the level of confidence in the classification of groundwater quantitative and chemical status;

- f. provide clear information on the number of water bodies that are expected to achieve the objectives of the WFD or that are at risk of failing to achieve those objectives by the end of the RBMP cycle.

SECTION B:

FLOODS DIRECTIVE

For the assessment of flood risk management in Slovenia under the Floods Directive (FD) and related recommendations, please refer to Commission Staff Working Document 'Third River Basin Management Plans – Second Flood Hazard and Risk Maps and Second Flood Risk Management Plans – Member State: Slovenia' (SWD(2025) 30 final), published on 4 February 2025³⁰.

³⁰ SWD(2025) 30 final, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD%3A2025%3A30%3AFIN&qid=1738746144581>.