Living Rivers Europe

THE FINAL SPRINT FOR EUROPE'S RIVERS

AN NGO ANALYSIS OF 2022-2027 DRAFT RIVER BASIN MANAGEMENT PLANS

UPDATED VERSION - OCTOBER 2021

Working together for healthy rivers in Europe

WWF | eaa European Anglers Alliance | EEB European Environmental Bureau | ERN European Rivers Network | The Nature Conservancy | Wetlands International

Living Rivers Europe is a coalition of six environmental and angling organisations: WWF's European network, the European Anglers Alliance, European Environmental Bureau, European Rivers Network, Wetlands International Europe and The Nature Conservancy. Living Rivers Europe puts forward a strong vision of healthy river ecosystems flourishing with wildlife to the benefit of society at large, the economy and sustainable development in Europe. To make this vision a reality, and give our water ecosystems a real future, we stress the importance of an ambitious implementation of the EU Water Framework Directive and related policies. Together with our members and supporters, representing a dedicated movement of over 40 million people across Europe, we aim to ensure that the loss of aquatic wildlife is halted and reversed and that European waters are managed more sustainably.

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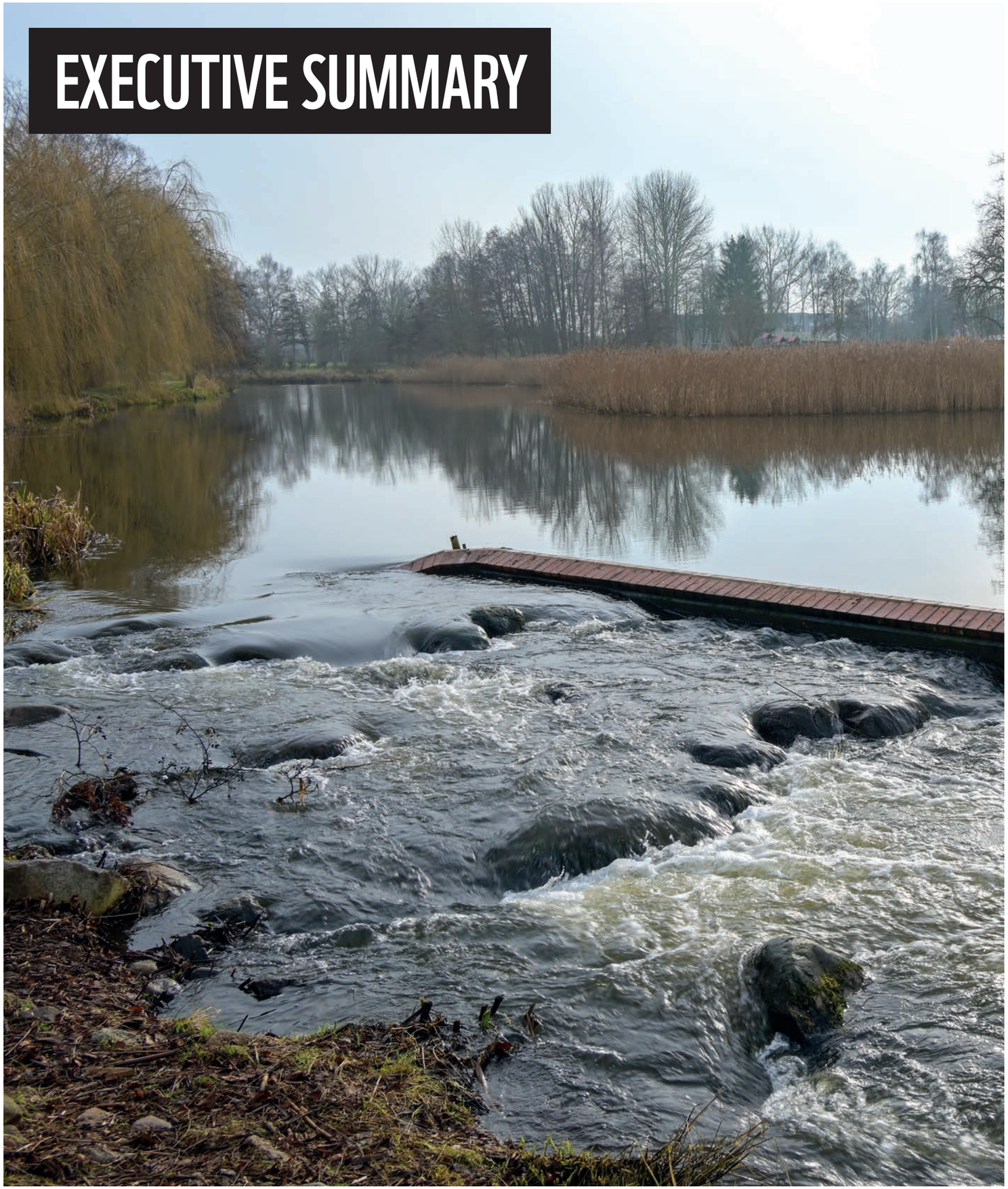
ABBREVIATIONS AND DEFINITIONS

- CAP: Common Agriculture Policy
- HMWB: Heavily Modified Water Bodies
- KTM: Key Type of Measures – groups of measures in the Programme of Measures which target the same area
- NBS (see also NWRM): Nature-based solutions, for example, the opening of river floodplains, restoration of wetlands and watercourses, re-meandering, increasing connectivity with oxbow lakes, removal of regulated riverbanks, restoration and conservation of riparian vegetation and riverbank erosion prevention, revitalization of urban vegetation, etc.
- NWRM (see also NBS): Natural Water Retention Measures, included under the WFD as Key Type Measure (KTM)23. For example, the restoration of floodplain meadows and floodplain forests but also reconstruction of drainage systems in agriculture and forestry or the removal of weirs in the context of river restoration, sustainable drainage systems
- PoM: Programme of Measures – a set of measures that the Water Framework Directive requires Member States to prepare as part of their River Basin Management Plans, outlining how they will achieve the WFD's environmental objectives
- RCP: Representative Concentration Pathway
- RBD: River Basin District
- RBMP: River Basin Management Plan
- SWMI: Significant Water Management Issue
- WFD: Water Framework Directive

EXECUTIVE SUMMARY



River Basin Management Plans (RBMPs) are required every six years under the Water Framework Directive (WFD) adopted 20 years ago, to outline how the environmental objectives for each river basin will be achieved. The 2022-2027 RBMPs are crucial, as they are the last ones before the WFD's 2027 good water health deadline.

This report, an update of the first edition released in June 2021, includes a new analysis by NGOs of the quality and level of commitment of eight draft RBMPs in three new countries, Poland, Romania and Spain, published before August 2021, in addition to the 13 draft RBMPs included in the previous version. It draws up conclusions and recommendations that will ensure that the final sprint towards the 2027 deadline is successful. The assessment is based on a set of 47 indicators, grouped into 11 topics, chosen to reflect the objectives and components of the WFD, as well as NGO priorities in implementing the WFD. Despite the inherent limitations of this exercise, this assessment indicates how the draft plans perform in addressing the main pressures on water bodies, including restoration measures, and in using the instruments provided by the WFD.

The RBMP drafting period has fallen entirely in the period of the Covid-19 pandemic when global and EU discourses and initiatives such as the European Green Deal have committed governments to "build back better", to prevent the upcoming biodiversity collapse, to reduce our exposure to the risks of pollution or water scarcity and to increase societal resilience. Additionally, the 2019 Fitness Check evaluation of the EU water policy indicated that slow implementation, insufficient funding, and insufficient integration of environmental objectives in sectoral policies were the key constraints in preserving and restoring water bodies, home to Europe's most biodiverse and most threatened ecosystems. Most of the draft RBMPs studied in this report, with a few exceptions, do not address these insufficiencies.

Although we assessed eight new draft RBMPs, this new analysis did not find more "good" RBMPs. Out of the 21 draft RBMPs assessed, only two - both from Finland - demonstrate an overall good performance. However, even these plans contain gaps, in particular in the level of funding. Six draft RBMPs rank poorly, including the two assessed Italian plans, two assessed German plans, the Dutch Rhine plan, and the International Odra plan.

The performance of the assessed draft RBMPs is good or high for less than a quarter of the assessed indicator values overall. Performance is poor for almost half of them.

In general, Member States have improved inventories, tools and criteria, but the level of ambition remains low, with numerous exemptions. In some cases, the draft RBMPs anticipate that objectives will not be achieved before 2050. One of the main constraints is the lack of budget allocation for the Programme of Measures. This is caused by the failure to recover environmental and resource costs from strong economic sectors including energy, mining, agriculture, and navigation. This reflects resistance to change from vested interests and a lack of political understanding of the importance of European waters for people and our planet.

The plans reveal a general failure of Member States to integrate water protection and the WFD's environmental objectives for Europe's waters with other policies, in particular energy, agriculture, and infrastructure policies. Twenty years after the adoption of the WFD, EU Member States continue to channel enormous amounts of public funds into environmentally harmful activities, which counteract and hinder the achievement of a good ecological, chemical and quantitative status for our waters. Mainstreaming sustainable water management in all EU and national policies must remain a key priority.

According to the occasionally ambiguous or incomplete information included in the assessed draft plans (except for Finland), most of the water bodies will not reach good status by 2027. Such a weak implementation of the WFD's latest RBMPs, if not significantly improved in the final version of the plans, would be counterproductive to the ambition of the European Green Deal.

According to the WFD, the draft plans must undergo a six-month public consultation phase and be finalised by the end of 2021. During this time, we recommend that EU Member States address the shortcomings identified in the draft plans and raise their commitments to achieve significant progress towards the Water Framework Directive's objectives. They must aim to halt freshwater biodiversity loss and put an end to Europe's unsustainable water management.

In several countries, consultations have started only in Summer 2021, and thus will not meet the WFD obligation to adopt the plans by end-2021. It is also extremely concerning that in September 2021, at least nine Member States (Bulgaria, Croatia, Cyprus, Greece, Ireland, Portugal, Slovenia, some river basins in Spain, and the UK[1]) had not yet presented their draft plans for all river basins. We recommend that the European Commission not tolerate long delays and ask water management authorities in the relevant countries to present and commit to a strict timetable, to ensure that consultations (which should not be shortened) start as soon as possible, and that they are taken seriously by the authorities to improve the plans.

1. As the Directive was signed by the UK government prior to the UK's split with Europe, it has been transposed in to UK law and therefore continues to apply.

METHODOLOGY AND GENERAL OVERVIEW

METHODOLOGY

SCOPE OF THE REPORT

This report assesses the following 21 draft RBMPs:

- Austrian Danube
- Belgian Scheldt and Meuse
- German parts of the international Rhine and Elbe
- Finnish Kemijoki and Vuoksi. In the Vuoksi RBMP, the focus is mostly on the transboundary Rakkolanjoki river
- French Loire-Bretagne
- Italian Eastern Alps and Southern Apennines
- Dutch Rhine
- Polish Odra and Vistula
- Romanian Danube River, Danube Delta, Dobrogea and Coastal Waters (DDDC) and Jiu sub-basins
- Slovakian Danube and Vistula
- Spanish Duero, Ebro, Guadiana and Guadalquivir
- International Odra (Poland, Germany, Czech Republic)

The draft RBMPs were chosen out of those available for public consultation in two batches at the beginning of April and July 2021, and according to resource availability in the organisations which contributed to the report. The choice of draft RBMPs was also guided by the will to provide some geographical balance.

ASSESSMENT

The assessment of the draft RBMPs has been undertaken with contributions from WWF national offices, organisations that are members of the European Environmental Bureau and Wetlands international, the European Rivers Network, and like-minded organisations. All draft RBMPs were assessed using the same template (see Annex) which provided a set of 47 indicators to be assessed for each of the 11 topics, and a definition of four performance classes. The topics were chosen to reflect the objectives and components of the WFD and NGO priorities for the implementation of the WFD, drawing from the analysis made in the European Commission's Fitness Check evaluation of EU water policy and in the last European Commission report on

the implementation of the WFD and the Floods Directive. The indicators were chosen to reflect key steps needed to develop plans and Programmes of Measures designed to achieve the WFD objectives. This includes developing inventories, setting criteria and priorities,

These indicators present obvious limitations:

- there is a limited number of topics (11) and indicators (47),
- the use of weighted averages which sometimes hide some problematic issues,
- not all topics or indicators have been assessed for all draft RBMPs, partly because of information gaps in the draft plans and partly because of capacity.

Despite the limitations, this assessment still shows the extent to which the draft plans address the main pressures on water bodies (hydropower, navigation, abstraction, agriculture, mining, drought and floods), include restoration measures (barrier removal, nature-based solutions) and make use of the instruments provided by the WFD (economic instruments, exemptions).

In addition to the performance score, the assessments provide more detailed texts, quotes and snapshots from the draft RBMP documents. The report has compiled the performance scores and the most important findings, following a weighting based on the relevance of the topics for the River Basin District assessed.

HOW TO READ THIS REPORT

Each of the indicators were assessed on the basis of two parameters: the level of performance of the draft plan on this indicator, and the relevance of the topic for the particular River Basin District. This combination of performance level and relevance is represented by a colour code described in table 1. The performance scores per topic have been calculated by the average performance score assigned to the assessed indicators. In addition, the relevance has been used to apply a weighting for the overall performance value of the draft RBMP. A normalised weighting of 1.25 (for the main problem or challenge in the RBD), 1 (for a Significant Water Management Issue, SWMI), 0.75 (for one of many problems) or 0.5 (the problem has already been solved) was applied to the performance score.

Table 1: Colours codes used in this report, showing both performance on a certain issue and that issue's relevance to the River Basin District in question

		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

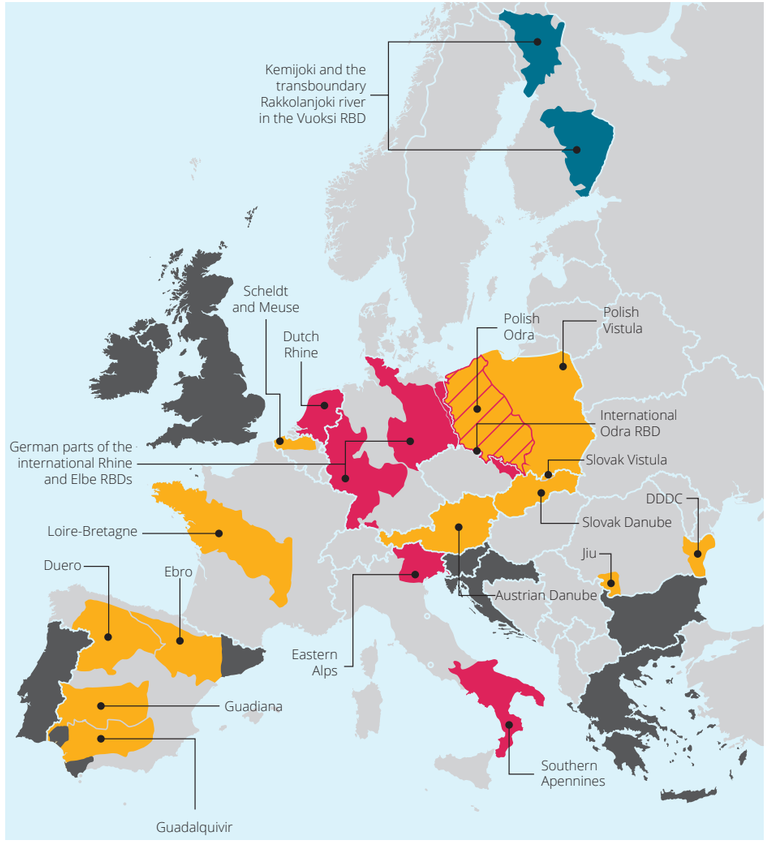
LITTLE HAS IMPROVED SINCE THE 2019 FITNESS CHECK WHICH FOUND MAJOR GAPS IN IMPLEMENTATION, LACK OF FUNDING AND LACK OF POLICY INTEGRATION.

GENERAL OVERVIEW OF THE QUALITY OF THE DRAFT RBMPS

Overall, the assessed draft RBMPs reveal that **commitments to achieving the WFD objectives by 2027 (20 years after the adoption of the Directive) have not increased, although there are some exceptions.** Notably, these commitments have not been ramped-up following the 2019 Fitness Check which found major gaps in implementation, lack of funding and lack of policy integration.

Two assessed draft RBMPs in Finland achieve high and good scores in several topics. This reflects efforts already made during the previous WFD RBMPs. They are followed by the draft RBMPs for the Loire-Bretagne RBD in France and the Guadiana in Spain which achieve a good performance in several topics and progress towards the WFD objectives. However, even these plans contain gaps, in particular regarding the level of funding, which prevent the river basin from being completely on track to achieve the WFD objectives by 2027. At the lower end of the scale, the assessed draft RBMPs for Germany, the Dutch section of the Rhine, the international Odra River Basin District, and the two Italian RBDs show multiple areas of poor performance, with information gaps, poor planning such as missing of criteria and prioritisation, and a lack of ambition for the implementation and the achievement of WFD objectives (figure 1).

Figure 1: Overview of draft 2022-2027 RBMPs in September 2021



Although most of the plans do not demonstrate the significant rise in commitment that would be necessary to achieve good water status in European water bodies, some improvements were noticed across the assessed RBMPs. These improvements include the removal and adaptation of barriers in line with the targets set by the EU 2030 Biodiversity Strategy [2], freshwater ecosystem protection and restoration, drought and flood management, and addressing pollution from agriculture, in particular nitrates. However, many assessed draft RBMPs fail to properly address water allocation and abstraction control, with poor inventories and missing details on permit reviews for water abstraction and on control mechanisms. This is particularly worrying as climate change will likely lead to greater water abstractions across the EU, exacerbated e.g. by the planned 30,000 hectares of irrigation area in the Spanish Ebro. Slovakia, the Spanish Guadiana and Guadalquivir include however some promising measures to control and reduce water use and consumption.

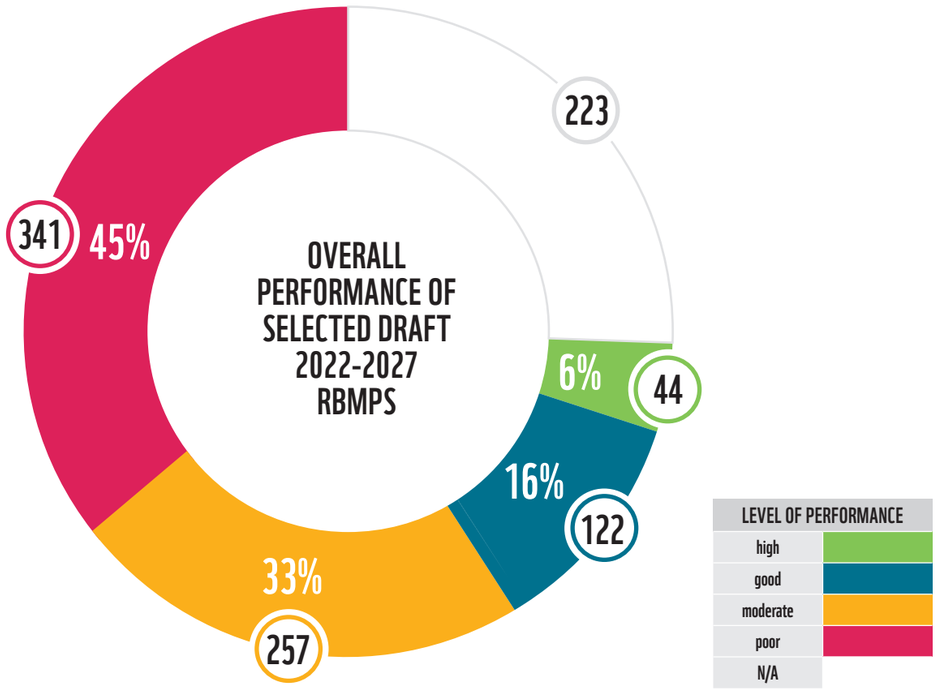
2. In particular, the commitment to restore at least 25,000 km of free-flowing rivers through barrier removal and wetland and floodplain restoration.

From the assessment, the two largest gaps in the draft RBMPs are cost recovery and the provision of an adequate budget on the one hand, and the application of exemptions on the other hand. Regarding the budget, several plans do not even present a gross figure for the implementation of the proposed measures. Regarding the exemptions, the majority of the draft RBMPs still heavily rely on poorly justified exemptions, despite the fact that they should be very rare after 20 years of WFD implementation. In the Spanish Ebro, 58 water bodies (6% of total) have deteriorated since the previous plan, whilst only 20% of its Programme of Measures had been executed, due to budget constraints. Deterioration has also affected 29% of the water bodies in the Polish Odra, where one third of the previous PoM has not been implemented because of lacking budget whilst cost recovery for water abstractions in agriculture is of only 2.7%. Most of the draft RBMPs do not provide a summary and explanation on shortcomings in the implementation of the previous RBMPs' Programme of Measures (table 1).

Table 2: Overview of the performance of selected draft RBMPs on indicators assessing key topics, weighted according to the topic's relevance. Draft RBMPs show far too little ambition, i.e. they do not contain enough measures that will help achieve the WFD objectives by 2027. The in-depth analysis of indicators aims to provide concrete recommendations to the relevant EU Member States' authorities and the European Commission.

						NEW													NEW		NEW			
		AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
1	Removal and adaptation of barriers																					
2	Hydropower																					
3	Inland navigation																					
4	Freshwater ecosystem protection and restoration and NBS																					
5	Water allocation and abstraction control																					
6a	Drought management																					
6b	Flood management																					
7	Agriculture																					
8	Coal mines (and combustion)																					
9	Economic instruments and adequacy of budget																					
10	Exemptions																					
11	Review and update on the implementation of the previous RBMP																					

Figure 2: Overall performance of selected draft 2022-2027 RBMPs on the 47 indicators (in number of indicator values and %).



For less than one fourth of the overall 732 assessed indicator values, the performance of the assessed draft RBMPs rates good or high: 6% ranked high, 16% good, 33% moderate and 45% poor – almost half of the assessed indicator values. The remaining indicator values have not been assessed, either because the topic is not relevant for the RBD or due to a lack of time and available expertise (figure 2).

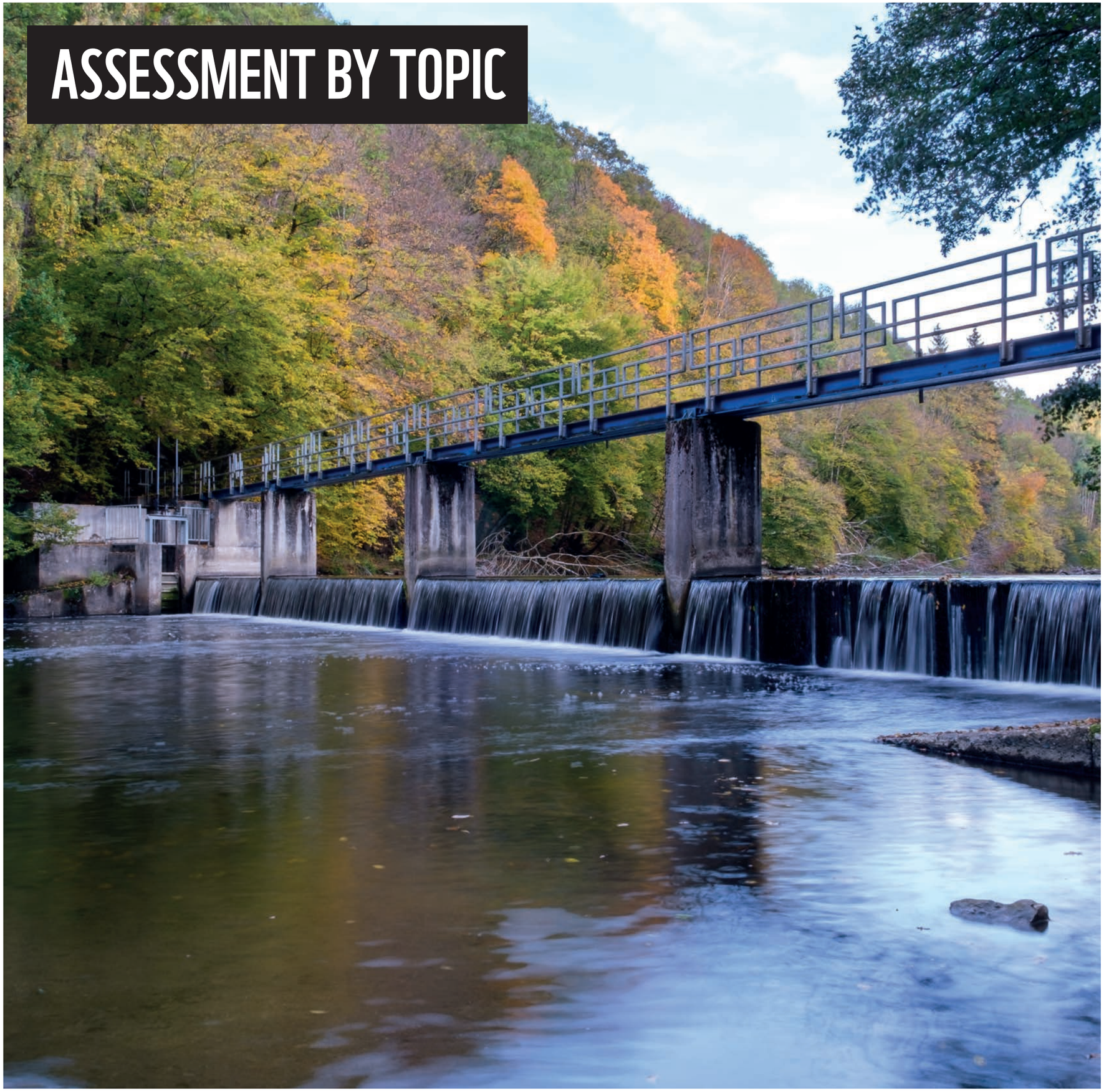
Almost all assessed draft RBMPs fail to properly address water allocation and abstraction control. Inventories and details on permit reviews for abstractions, and on controls are limited (although Slovakia and Spain are positive examples in this case) which is particularly worrying as climate change is likely to lead to larger water abstractions across the EU.

While carrying out this assessment, several irregularities in the RBMP elaboration process came to light.

Firstly, the assessed draft RBMPs contain major gaps in information, in particular on the summary of the implementation of the previous RBMPs' Programme of Measures, the number of exemptions, and the budget. In addition, in Poland, neither the Geographic Information System nor several important background documents were made available to the public. This hampers proper public participation and the ability of civil society to provide comments on the draft plans.

Secondly, at the time of writing this report (September 2021), significant delays in the publication of the draft plans were observed. In particular, in Bulgaria, Croatia, Cyprus, Greece, Ireland, Portugal, Slovenia, partly Spain, and the UK , the draft plans were still not publicly available. These countries will not be able to submit their final plans on time – by the end of 2021 – while respecting the minimum six-month public consultation obligation.

ASSESSMENT BY TOPIC



REMOVAL AND ADAPTATION OF BARRIERS

An initial estimate by the Adaptive Management of Barriers in European Rivers (AMBER) project shows the presence of at least one million barriers (including for irrigation etc.) blocking the flow of rivers, often affecting their hydromorphology and biology. The removal or adaptation of barriers is relatively simple and can effectively improve the health of a surface water ecosystem. The EU Biodiversity Strategy for 2030 has set a commitment to restore at least 25,000 km of free-flowing rivers through removal of barriers and restoration of floodplains – this goal relies on the 2022-2027 RBMPs.

The removal and adaptation of barriers is very relevant, either a main problem or a Significant Water Management Issue, for 15 out of the 21 assessed draft RBMPs. In most of these, inventories of river barriers exist and are ready for targeted action. However, prioritisation criteria for measures are only properly defined in eight RBMPs: Austrian Danube, German Elbe, Finnish Vuoksi, Finnish Kemijoki (a cost-benefit assessment will be undertaken for dam removals), Dutch Rhine, Polish Odra and Vistula and French Loire-Bretagne. The commitment to action is low: 15 draft RBMPs plan to remove less than 2.5% of obsolete barriers or do not even quantify the planned barrier removal. However, Finnish Kemijoki, Spanish Duero, French Loire-Bretagne and Dutch Rhine have committed to remove or adapt a larger number of barriers in their draft RBMPs (table 3).

For example, the Spanish Duero draft RBMP dedicates a large budget (€194 million) to up to 767 hydromorphological measures. On the contrary, in the Romanian DDDC draft RBMP, despite the fact that 307 potential significant hydromorphological pressures like dams, weirs for flood risk mitigation, etc. are identified, no clear indication is provided of whether any such measures will be implemented in the upcoming planning cycle.

Table 3: Performance of selected draft RBMPs on dam removal and adaptation of barriers, according to detailed indicators.

		AT	BE	DE		ES				FI		FR	INT	IT			NL	PL		RO			SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
1	**Removal and adaptation of barriers**																					
	1. Identification of the problem																					
	2. Prioritisation																					
	3. Cost-benefit analysis and monitoring plan																					
	4. Ambition																					

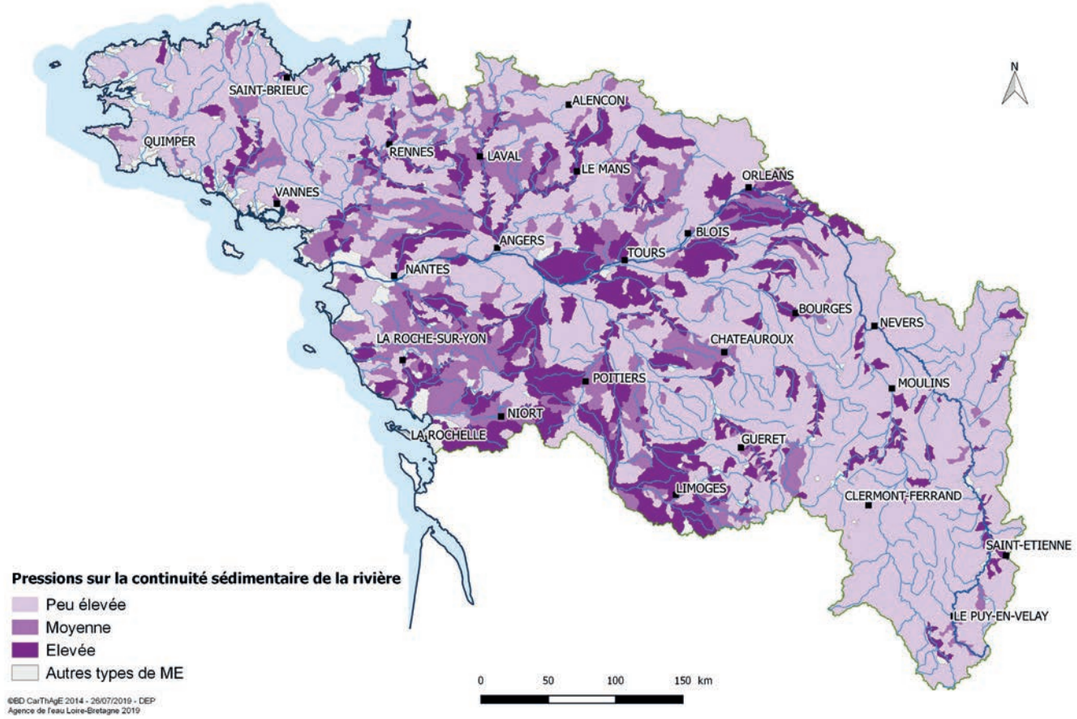
Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- Identification of the problem: The plans should take stock of all the barriers on surface water bodies. In addition, the plans should link the occurrence of dams to the negative impact they are having on the ecosystem, both at their location and downstream.
- Prioritisation: The plans should identify barriers that can be removed as a priority, such as obsolete or decommissioned barriers, barriers in protected areas, barriers that do not serve a significant purpose, or barriers whose removal can free the longest portion of rivers.
- Dam removal plans: The RBMPs should include dam removal plans which contain a cost analysis and a monitoring plan to assess the effects of dam removal on water status, biodiversity, and communities. The true cost of building new dams should also be assessed to balance the dam removal costs, and decommissioning costs of dams need to be included in the initial cost estimate.
- Ambition: The RBMPs should remove at least 2.5% of the obsolete or decommissioned barriers in the RBD.

Figure 3: Pressures on the sediment continuity of the river (from light purple – moderate, to dark purple – high, light grey indicates other types of water bodies).
Source: Loire-Bretagne draft RBMP.



The Loire-Bretagne draft RBMP is a positive example for the assessment of the effect of barriers on sediment flow, as shown by figure 3. Barriers are often sediment traps that change downstream river morphology; larger dams can have severe effects on the evolution of deltas and the coastline.

In Germany, the authorities have undertaken a prioritisation exercise for the removal and adaptation of barriers that will improve longitudinal connectivity, following primarily ecological criteria.

THE COMMITMENT TO ACTION IS LOW:

15 OUT OF 21

DRAFT RBMPS PLAN TO REMOVE LESS THAN 2.5% OF OBSOLETE BARRIERS OR DO NOT EVEN QUANTIFY THE PLANNED BARRIER REMOVAL.

BARRIERS ARE OFTEN SEDIMENT TRAPS THAT CHANGE DOWNSTREAM RIVER MORPHOLOGY; LARGER DAMS CAN HAVE SEVERE EFFECTS ON THE EVOLUTION OF DELTAS AND THE COASTLINE.

HYDROPOWER

Hydropower is a major pressure on many water bodies, with 5,734 new hydropower plants planned across the EU, in addition to the 19,268 existing ones [3]. However, in the previous RBMPs, only a fifth of Member States had linked the significant hydromorphological pressures caused by hydropower to the hydropower sector which is responsible for them [4] and many of the planned plants were not even included in Member States' RBMPs. Those issues seem to remain to some extent in the latest draft plans. The impact of hydropower on rivers and their ecological functions is mostly disregarded in the assessed draft RBMPs.

Hydropower is very relevant – either a main problem or a SWMI – in ten of the assessed River Basin Districts and it is addressed in another ten. Although most of the assessed draft plans identify the sectors responsible for hydro-morphological pressures to a certain extent (in Austrian Danube and Italian Eastern Alps hydromorphological alterations by the energy sector are explicitly recognised), **the majority do not include an exhaustive inventory of all the planned hydropower plants.** This results in an artificially low use of article 4(7) exemptions. **In almost all assessed plans, when exemptions are used for new hydropower plants, the justification is poor, lacking a clear statement on specific criteria, thresholds, and procedures to assess new hydropower plants, and there are almost no planned investments in refurbishment or decommissioning.** Only Finnish Kemijoki presents an approach requiring hydropower companies to install fish passages at each site and to ensure ecological flows (table 4).

3. WWF, Geota, RiverWatch, Euronatur (2019) Hydropower pressure on European rivers. The story in numbers.
4. European Commission (2019) Staff Working Document, European Overview – River Basin Management Plans, p. 239.

Table 4: Performance of selected draft RBMPs on hydropower according to detailed indicators.

		AT	BE	DE		ES			FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
2	**Hydropower**																					
	1. Pressures and sectors																					
	2. Inventory of planned projects																					
	3. Justification and exemptions																					
	4. Criteria and thresholds																					
	5. Plans for refurbishment and decommissioning																					

Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

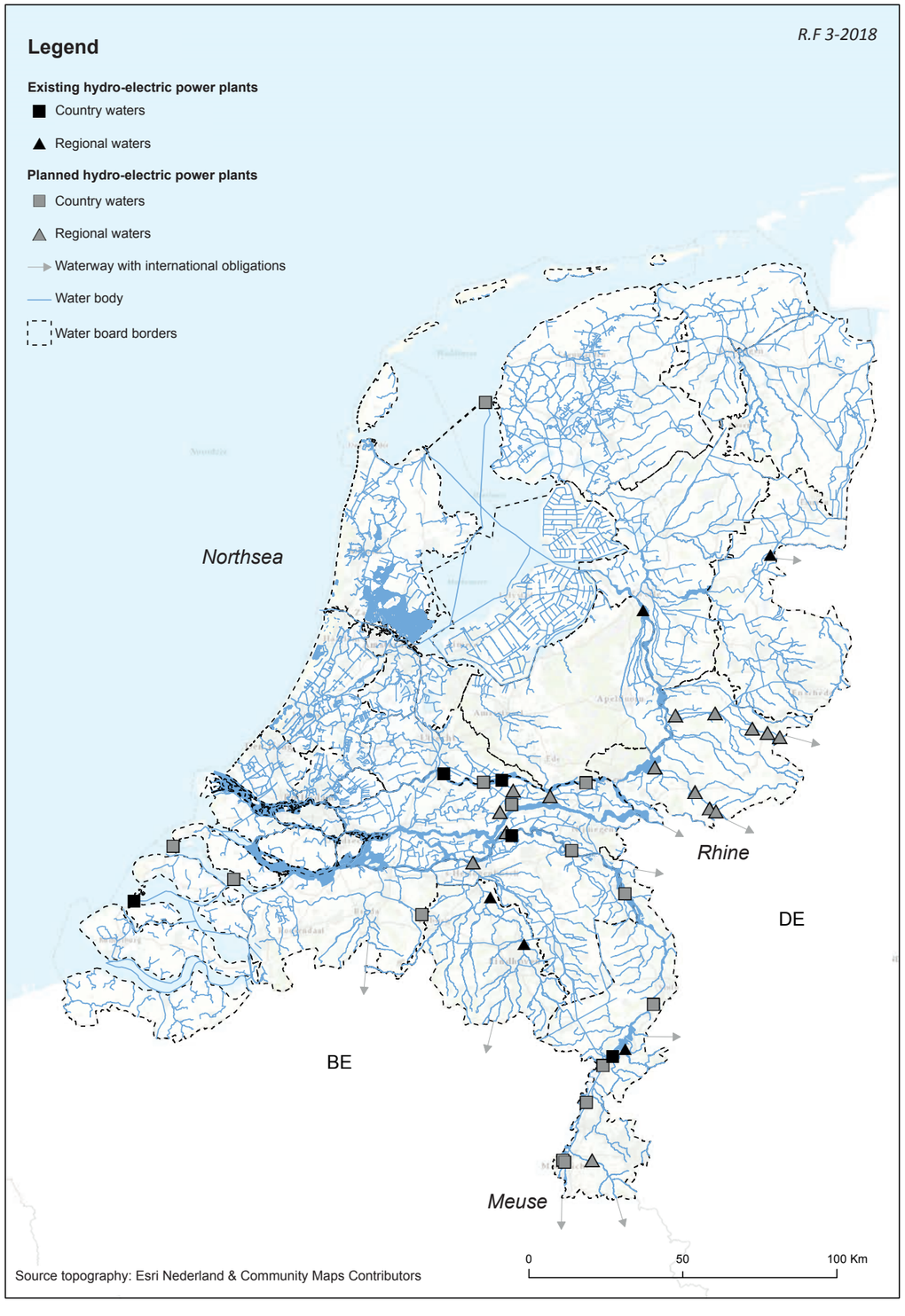
- The draft plan should identify the sectors responsible for each hydro-morphological pressure on a water body.
- The draft plan should include an exhaustive inventory of all the planned hydropower plants, including run-of-the-river and pumped storage plants which also have a detrimental impact on rivers.
- Justification and exemptions: proper justification should be given for the construction of newly planned hydropower plants.
- Criteria and thresholds: Stringent criteria should be provided for new hydropower plants, such as exclusion zones, mitigation measures or power generation thresholds.
- Plans for refurbishment and decommissioning: Older outdated plants should be either refurbished or decommissioned, with precedence over the construction of new plants, and ecological flows should be improved.

The Dutch Rhine draft RBMP mentions some, but not all planned hydropower plants. For the others, no corresponding article 4(7) exemptions are used, despite the pressures they have on water bodies and migratory fish (figure 4).

An infringement procedure has been open against Slovakia since 2014 due to the insufficient assessment of the effects of the Hydropower Potential Utilization[5] concept. Despite this open case, the cumulative effects of small hydropower plants are still not considered and assessed in the draft RBMPs.

5. Case (INFR(2014)4190).

Figure 4: Migratory fish in the Rhine and Meuse rivers under pressure from planned hydropower plants. Just a few planned hydropower plants are mentioned in the Dutch Rhine draft RBMP, for others no article 4(7) exemptions are being claimed. Source: WWF-Netherlands, Sportvisserij Nederland, ARK Natuurontwikkeling, World Fish Migration Day and Natuurmonumenten, "Migratory fish corridor Rhine and Meuse under pressure from planned hydroelectric power plants".



INLAND NAVIGATION

When inland navigation routes are restructured through deepening, embankments or straightening to facilitate the passage of vessels through the river, it exerts another major pressure on water bodies. Waterway development can affect groundwater levels, aquatic ecosystems, and all the services they provide. Works on inland navigation routes also have a high probability of destroying irreplaceable habitats and communities of species, adversely affecting biodiversity as a result.[6]

Inland navigation, including navigation in transitional water bodies like estuaries, is a relevant topic in 14 RBDs, a main topic or a SWMI in international Odra, the Polish Odra and Vistula, the Romanian DDDC and Dutch Rhine, as well as one of the main challenges for the German Elbe and the Spanish Guadalquivir and Guadiana estuaries (which are only a minor part of the RBDs). In a few of the draft RBMPs, such as Dutch Rhine, Austrian Danube and international Odra, navigation is mentioned as a sector causing hydromorphological pressures, even if in international Odra no further details are provided. In some RBDs – French Loire-Bretagne, Slovakian Danube and Slovakian Vistula, Spanish Guadalquivir and Guadiana – no new navigation is planned. This is significant progress for the Guadalquivir, which previous RBMP included expanded river dredging as a measure, followed by a court decision reclaiming to exclude the navigation projects from the plan.

In several plans, no clear criteria have been established to mitigate the impacts of new inland navigation projects, including maintenance works, and only one draft RBMP (Austrian Danube) refers to navigation based upon the 'working with nature' approach.

Likewise, the draft RBMPs Polish Odra and Vistula only include generic information on the inland navigation projects E-30, E-40,and E-70, although those projects pose serious threats to river ecosystems.

6. Leibniz Institute of Freshwater Ecology and Inland Fisheries, Feedback on the revision of the TEN-T regulations, 5 May 2021,

Table 5: Performance of selected draft 2022-2027 RBMPs on inland navigation according to detailed indicators.

	Topic	AT	BE		DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
		Danube	Scheldt and Meuse		Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S. Apenn.	E. Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
3	**Inland navigation**																						
	1. Pressures and sectors																						
	2. Inventory of planned projects																						
	3. Justification and exemptions																						
	4. Criteria and thresholds																						
	5. 'Working with nature'																						

Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- The draft RBMP should identify the sectors responsible for each hydromorphological pressure on a water body.
- The draft RBMP should include an exhaustive inventory of all the proposed inland navigation projects, including infrastructure for navigation, which also have a detrimental impact on rivers.
- Justification and exemptions: proper justification should be given for new inland navigation projects.
- Criteria: Stringent criteria should be provided for new inland navigation projects, such as exclusion zones, or power generation thresholds.
- Plans for inland navigation should be based upon a 'working with nature' approach, monitoring, adjusting and learning from the river through a step-by-step approach.

In the Austrian Danube, the ongoing waterway maintenance east of Vienna is subject to permission procedures. It must avoid causing any deterioration from the current good water status.

In the Elbe RBMP, the "holistic concept for the Elbe river (Gesamtkonzept Elbe)", provides a strategic approach to avoiding an increase in river bed erosion and an increase in the river's bed load deficit during the deconstruction of a small part of the river's 6,900 groynes and during wetland restoration. Even so, the approach remains voluntary, vague and contradictory and it does not define specific measurable indicators.

FRESHWATER ECOSYSTEM PROTECTION, RESTORATION AND NATURE-BASED SOLUTIONS

In parallel with the WFD, the EU's Birds and Habitats Directives ensure the protection of freshwater species and habitats. RBMPs need to align with the objectives of the Birds and Habitats Directives, in particular for species and habitats that are entirely dependent on specific ecological functions of rivers, lakes, transitional and coastal waters or groundwater. For example, alluvial forests are dependent on rivers periodically flooding.

Furthermore, in the EU Biodiversity Strategy for 2030, the Commission has committed to present binding EU nature restoration targets in 2021. As natural carbon sinks, healthy freshwater and coastal water ecosystems can help significantly reduce the impacts of climate change and are 'natural climate buffers' offering important climate adaptation services, often cheaper and more flexible than 'traditional grey' constructed measures. In addition, recreating and restoring wetlands is explicitly listed as a supplementary measure in the WFD, as well as a Member States commitment to conserve and use wetlands wisely under the Ramsar Convention. The conclusions of the 2019 Fitness Check also found that the benefits of restoring ecosystems greatly outweigh the costs[7].

Most of the assessed draft RBMPs demonstrate severe gaps in defining the specific water quantities and qualities required for achieving good conservation status of nature-protected areas. For example, the Dutch Rhine draft RBMP only presents data for groundwater-dependent ecosystems in Natura 2000 areas, and for surface waters, it only refers to Natura 2000 management plans without making clear what this means for WFD objectives and PoM.

Methods applied to assess the status of groundwater in the Elbe basin fail to implement the WFD's key indicator for good quantitative status, namely the status of groundwater dependent ecosystems. Contrary to the reality of the widespread degradation and drying out of wetlands, floodplains and forests, groundwater status is presented as good throughout the Elbe basin and exceptions to this rule are only found in lignite mining areas.

Several draft RBMPs – Austrian Danube, Loire-Bretagne, Finland, Slovakia – include a list of prioritised measures and sites for restoration, based on clear and transparent criteria. For example, in Finland, fish up- and downstream migration have been well considered; whilst in the French Loire-Bretagne protected areas and pressures have been considered within the prioritisation.

7. European Commission (2019) Commission staff working document: Fitness check of the Water Framework Directive, Groundwater Directive, Environmental Quality Standards Directive and Floods Directive, p. 60.

Table 6: Performance of selected draft RBMPs on freshwater ecosystem protection, restoration and nature-based solutions according to detailed indicators

	Topic	AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
		Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
4	**Freshwater ecosystem protection and restoration and NBS**																					
	1. Protected areas and their status																					
	2. Prioritisation																					
	3. Restoration targets																					
	4. Nature-based solutions (NBS)																					
	5. Natural Water Retention Measures (NWRM)																					
	6. Sound financial mechanism																					

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Overall, in the assessed draft RBMPs, nature-based solutions and natural water retention measures are largely absent and only referred to in a few of them explicitly in the Finnish, Spanish and Belgian RBMPs. This is certainly worrying given the expected higher intensity and frequency of flood events in Europe.

For example, the Polish Vistula does not refer to nature-based solutions at all. In the Romanian DDDC draft plan, only 2 out of the 103 measures to reduce the effects of significant pressures can be assessed as NBS, referring to flood risk mitigation by restoring the Danube floodplain and tributaries (Danube Floodplain Project) and the restoration and renaturation of the bifurcation area of the Bala branch to ensure navigation conditions and environmental protection of the Danube.

The Spanish Duero foresees several flood prevention measures , including some grey infrastructure and "cleaning" of riverine areas and significant investments in river restoration, with a total budget estimated for both types of €203 million.

The Spanish Guadalquivir includes several references to nature-based solutions, as well as to the 2030 EU Biodiversity Strategy. However, the budget of the PoM still prioritises channelization, levees and other "grey infrastructures" with €138 million when compared to the planned investment of €36.3 million in 25 measures to reduce hydromorphological pressures. Nevertheless, this is a significant step forward when compared to previous plans.

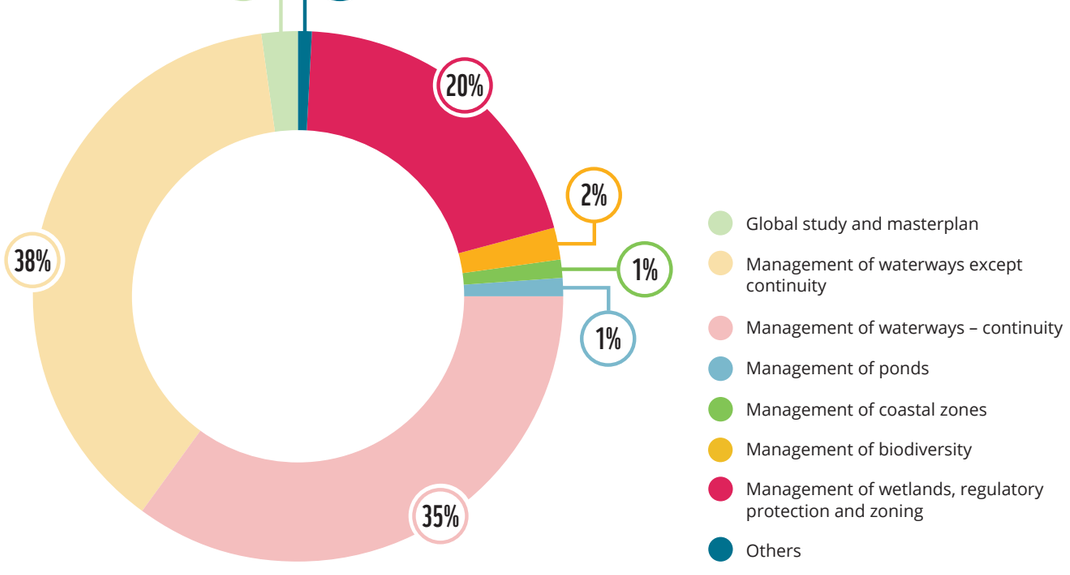
Sound financing mechanisms are another gap, and only the Loire-Bretagne RBMP states explicitly that 50% of the ecosystem restoration costs are covered by the water agencies.

The assessment has been made based on the following indicators:

- Protected areas and their status: Draft RBMPs should describe the status of protected freshwater ecosystems and define the specific water quantities and qualities required for achieving good status.
- Draft RBMPs should identify different freshwater ecosystems that would benefit from restoration.
- Draft RBMPs should indicate a number of km² to be restored consisting of different ecosystems. Indicators such as quantity and dynamics of water flow, structure and substrates of river beds should be defined.
- Draft RBMPs should use nature-based solutions instead of building grey infrastructure for flood management. For example, restoring the natural floodplains of a river can provide multiple benefits, just one of them being natural protection against floods. RBMPs should integrate the indicators laid out in their Flood Risk Management plans and assessments.
- NWRM such as the restoration of floodplain meadows and floodplain forests should be considered as an alternative or complementary option for all flood risk management infrastructure investments.
- Member States should apply the economic principles of cost recovery and polluter pays to fund these measures.

In the Loire-Bretagne draft RBMP, among the measures for the restoration and preservation of freshwater ecosystems, most actions concern river morphology (38% of measures), barriers (35%) and wetlands (20%) (figure 5). 16% of these measures target a protected area and the remaining 84% are aimed only at achieving a good status.

Figure 5: Distribution of measures for ecosystem management in the Loire-Bretagne PoM (overall number: 3,718 measures). Source: Reproduced from Loire-Bretagne PoM.



WATER ALLOCATION AND ABSTRACTION CONTROL

The EU Adaptation Strategy aims to ensure a climate-resilient, sustainable use and management of water across sectors and borders by improving the coordination of thematic plans and other mechanisms, such as water resource allocation and water permits. More than 7,600 (7%) European surface water bodies are affected by significant water abstraction pressures and 16% of the area of groundwater bodies is affected by over-abstraction.[8] In addition, the RBMPs usually do not account for illegal water abstraction, which is huge in some Member States, and they sometimes overestimate water return rates. Particular attention needs to be paid to agriculture. Whilst water abstraction in Europe decreased overall by 19 % between 1990 and 2015,[9] water demand from agriculture grew in 2010-2015 in Southern Europe – the area of Europe which is the most affected by water scarcity.[10]

Water allocation and abstraction control remain an insufficiently addressed pressure in most of the assessed draft RBMPs. Water abstraction data and the calculation of an exploitation index are only available in less than half of the assessed draft RBMPs: all Spanish, French Loire-Bretagne, Italian Eastern Alps, Slovakian Danube and Vistula. However, they usually exclude information on seasonal variation, water losses in distribution systems and/or return flows.

In some plans, for example international Odra, groundwater abstractions are not considered, in others, such as Austrian Danube, groundwater exploitation indexes are included. In general, the plans are poor regarding information about planned new water abstractions or specific budgeted abstraction control measures.

All assessed Spanish plans include for each of the sectors (urban, agriculture, industry, hydropower, and other uses) an estimation of the water demands in 2021, 2027 and under a Climate Change RCP 8.5 scenario in 2039 for all sub-basin exploitation systems; as well as an economic trend analysis.

The Spanish Guadalquivir PoM includes a list of measures to increase water resources availability, including building new dams, and increasing water use efficiency, especially in irrigation; nevertheless, there is no clear information on how new supply measures like dams, desalinisation or water reuse will revert into more water being assigned to nature.

Drinking water supply groundwater abstractions are made in the Berlin-Brandenburg border region – which is covered in the German Elbe RBMP – without permits or information about the groundwater balance, which hampers the achievement of conservation objectives in Natura 2000 sites.

The Slovak and Spanish draft RBMPs refer to the review of abstraction permits, estimating the amount of water which could be reallocated; and the Spanish Guadiana and Guadalquivir refer to the review of water rights, the control of illegal abstractions and the re-acquisition of rights to recover ecological flows and freshwater ecosystems. However, given the magnitude and dynamics of increased – and often illegal – water abstractions, the planned measures are far from being sufficient. In the Spanish Ebro, its delta continues deteriorating due to lacking flows and sediments, whilst additional 30,000 hectares of irrigation areas are planned upstream.

8. European Commission (2019) Staff Working Document, European Overview – River Basin Management Plans, p.225.
9. EEA (2020) The European environment —state and outlook 2020, p.106.
10. Eurostat (2018) Water abstraction by sector, EU.

Table 7: Performance of selected draft RBMPs on water allocation and abstraction control according to detailed indicators.

	Topic	AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
		Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
5	**Water allocation and abstraction control**																					
	1. Identification of significant water abstractions																					
	2. Prospects of new water abstractions, related infrastructure and land uses																					
	3. Review of abstraction permits																					
	4. Abstraction control																					

Legend

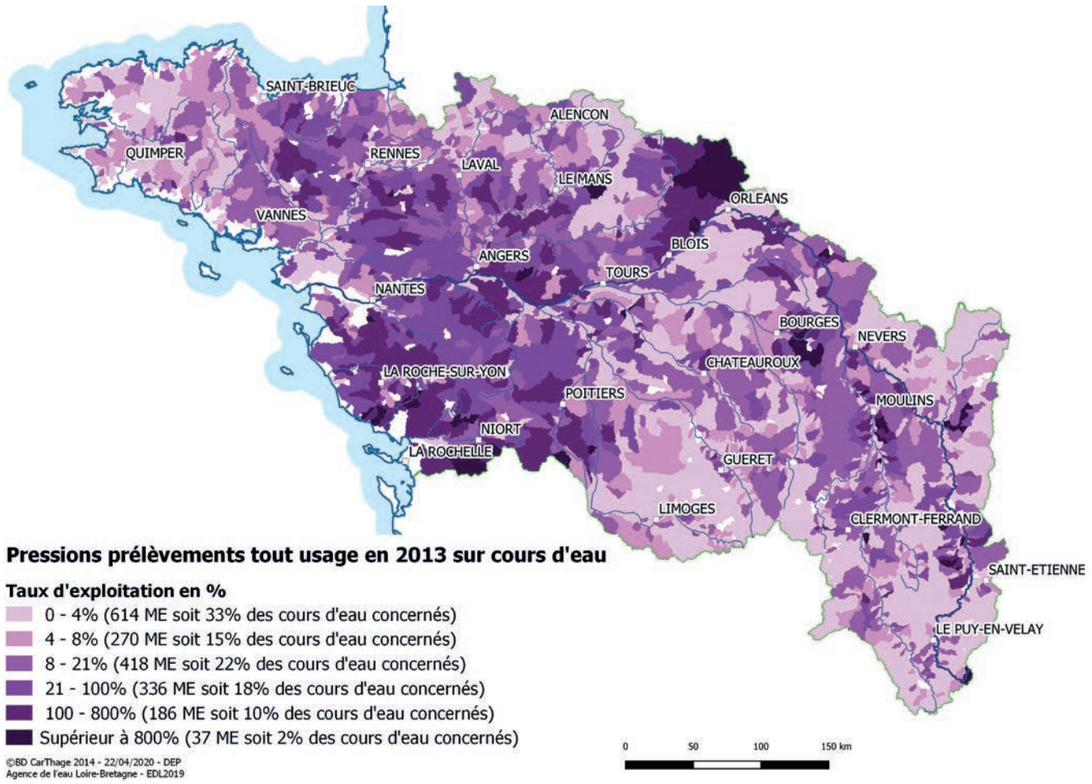
RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- The draft RBMP should identify significant water abstraction and include a calculation of an exploitation index.
- A list of all planned infrastructure that impacts ground or surface water flow regimes, including water transfers and reservoirs, and an assessment of how they impact overall flow characteristics and water balances, should be included. In particular, circular economy and water reuse infrastructures should go hand in hand with proper water allocation for nature, otherwise they will result in lower water levels in rivers.
- The draft RBMP should include a review of abstraction permits, as recommended by the EU Biodiversity Strategy and as per articles 11(3) and 11(5) of the WFD. The review should assess the efficiency and relevance of permits in light of foreseen water availability and of the economic analysis of water use which is required under article five of the WFD. Where controls have proved ineffective and where there are still significant abstraction pressures, permits have to be updated.
- The draft RBMP should include controls on the abstraction of fresh surface water and groundwater, impoundment of fresh surface water (article 11(3)(e)), and artificial recharge or augmentation of groundwater bodies (article 11(3)(f)) among basic measures. Such controls are made possible by the latest technology, such as the installation of flowmeters that transmit real-time information. Control of water abstraction is key for the environment but also for users to ensure water security, the guarantee of water permits, and the fight against illegal use.

Good practices seem to emerge in the monitoring of water abstraction pressures, but progress is still too slow. For instance, water abstraction pressures are indicated in the French Loire-Bretagne draft RBMP referring to the low-flow data of water bodies (figure 6). This provides a good insight into water abstraction hotspots, for example 30% of water bodies suffer an abstraction rate larger than 20%. However, the data is only from 2013.

Figure 6: Water abstraction pressures on waterways for all uses in 2013. Colour shades indicate the exploitation rate in %. Source: Loire-Bretagne draft RBMP.



Irrigation area (© Rafael Seiz, WWF Spain)

FLOOD AND DROUGHT MANAGEMENT AND CLIMATE PROOFING

Floods and droughts are a natural process that occur in many ecosystems and sustain important ecological functions. However, they can be exacerbated by inappropriate management of river basins, which can drastically impact natural ecosystems. They can also cause problems for local communities. Furthermore, the effects of climate change have never been so crucially felt, and they are primarily felt through water. In the WFD's previous RBMPs, "climate checks" on the Programme of Measures were reported to be done in all river basin districts except RBDs in six Member States. However, many Member States treated this exercise as purely administrative without carrying out proper checks. Drought and flood events are likely to increase in frequency and intensity and should be fully considered in the RBMPs

Only the draft RBMPs for French Loire-Bretagne, Spanish Guadiana and Finnish Kemijoki present a proper climate check, with a sensitivity analysis of vulnerable water use sectors to floods and droughts and forecasting of flow streams. In the Dutch Rhine RBMP, it covers just one-page with insufficient information.

When it comes to drought management, the indicators and methodologies used vary greatly from one RBD to another, but are rarely comprehensive. The Dutch national droughts policy prioritises surface water use in periods of water shortage as one of the 'general measures' of the PoM. However, groundwater use during droughts remains largely unregulated. The Italian draft RBMPs establish a "District Observatory for water uses" aiming to optimise reservoir management and water transfers between regions, but without outlining measures to prevent the deterioration of water body status during extreme events. The Spanish Guadiana includes one measure to update the existing drought management plan.

Only the Finnish Kemijoki and the Spanish draft RBMPs include evidence that the objectives and requirements of the EU Floods Directive (FD) have been considered and include the costs and benefits of flood mitigation; in the Spanish case with a larger number of measures being present in both types of plans. On the other hand, the Italian Eastern Alps draft RBMP only identifies those measures that can provide synergies between the FD and the WFD with a label but without any additional explanation. The Polish Vistula includes a reference to synergies between the types of plans, but the specific measures are not identified. Four draft RBMPs include measures to address land use and its impact on flood protection: the German Elbe with a good practice example, the Spanish Ebro with just one embankment removal measure in La Rioja, the Belgium Scheldt and Meuse and the Finnish Kemijoki. **However, this is not the case for the RBDs where flood risk is most relevant.**

The assessment has been made based on the following indicators:

- The draft RBMP should include thorough "climate checks" of the Programme of Measures to develop a preventive response to climate change impacts which is incorporated in the standard water management rules, and not only via reactive emergency measures. The checks can follow the Common Implementation Strategy (CIS) Guidance document number 24, "River Basin Management in a changing climate".
- Drought management plans: In the river basins most affected by drought, a drought management plan should complement the RBMP (as per article 13(5) of the WFD) and include indicators and thresholds, measures to be taken, and the organisational framework to deal with drought. Most importantly, drought management plans should separate drought from water scarcity.
- Recognition of the economic and social costs through flooding of poor land and water management from the Flood Risk Management Plans, especially in the assessment of disproportionate costs.
- Measures to address land use and its impact on flood protection. Currently, 40% of floodplains are occupied by farmland, so the RBMP should request that farming authorities take the pertinent measures to make farming compatible with floods.

A good example of drought management can be found in the Loire-Bretagne draft RBMP, where drought management indicators are based on flow thresholds quantified at each nodal point, with two types of thresholds established for monitoring (minimal flows) and crisis management. All areas are covered by drought management measures (nodal point, priority areas…), which enables proper action to be taken during droughts (figure 7).

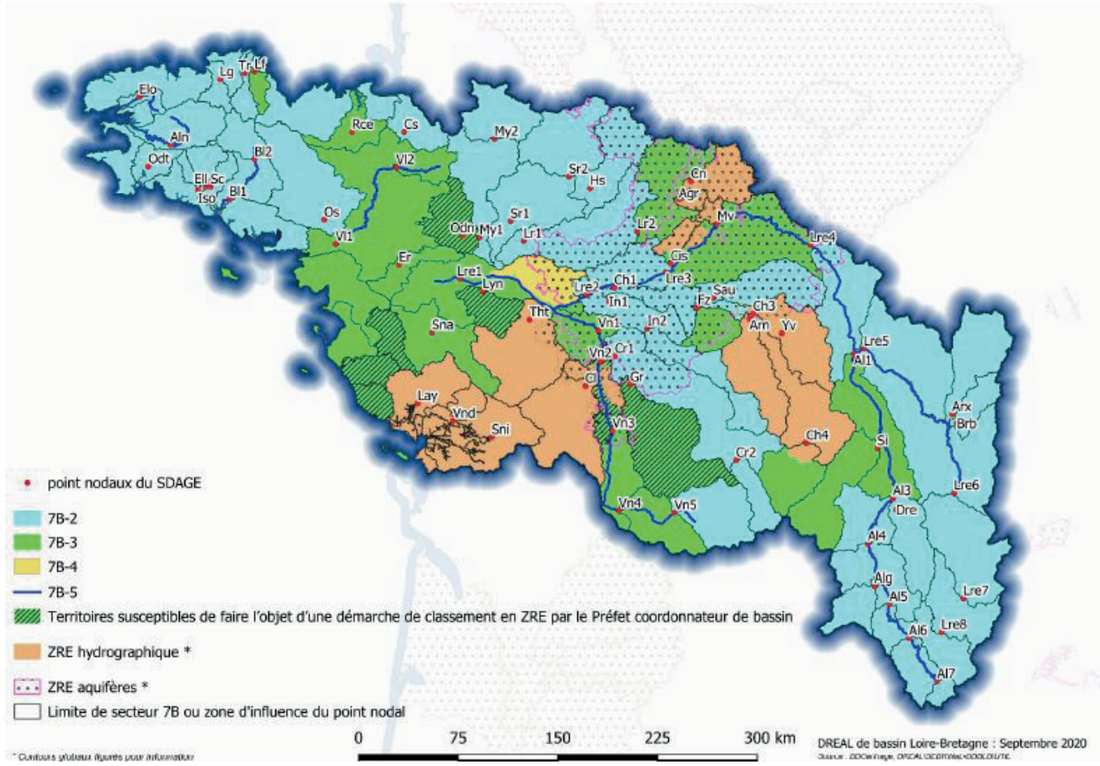
Table 8: Performance of selected draft 2022-2027 RBMPs on flood and drought management and climate proofing according to detailed indicators.

	Topic	AT	BE	DE		ES				FI		FR	INT	IT			NL	PL		RO		SK	
		Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
6a	**Drought management**																					
	1. PoM "climate checks"																					
	2. Drought management plans																					
6b	**Flood management**																					
	1. PoM "climate checks"																					
	2. Link with the Floods Directive																					
	3. Land use and flood management																					

Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

Figure 7: Map showing the territorialisation of basins and corridors where measures apply. Source: Loire-Bretagne draft RBMP, page 110. Legend indicates the following: 7B-2: Basins where local authorities can cap increases in abstractions during low water periods when studies show a risk of deficit. 7B-3: Basins with current capping of abstractions during low water periods. 7B-4: Re-supplied basin where it is necessary to prevent a quantitative deficit. 7B-5: rivers which are re-supplied during low water periods. ZRE: zones where the water resource does not meet needs, other than during exceptional periods. In these areas, there are some specific measures such as a precise assessment of deficits, the determination of the spatial distribution of abstractions, and a reinforcement of the thresholds for abstraction authorisations.



AGRICULTURE

Farming impacts all aspects of water status – quantitative, chemical, and ecological. Agriculture remains the sector using the largest share of water amounting to 40% of annual water use in Europe, especially in Southern Europe,[11] preventing the achievement of good quantitative status. Agriculture is also the first source of diffuse water pollution, mainly due to manure and fertilisers, negatively affecting the chemical status of surface and groundwater.[12] Finally, farming also causes physical and hydrological alterations of watercourses, mainly because of dams, barriers and locks for irrigation, drainage and flood protection.

No sufficient basic and supplementary measures on agriculture have been taken in the first and second cycles of RBMPs, and where they have been taken, there has been no proper analysis of their expected or measured impact. The Common Agriculture Policy (CAP) framework does not effectively address water quality and sometimes can even aggravate water quantity issues. All in all, the extent to which CAP funding contributes to WFD objectives is largely dependent on Member States' implementation choices, with insufficient EU oversight and governance mechanisms to ensure sufficient progress is achieved in agriculture towards the WFD objectives.

Only one third of the assessed draft RBMPs include an assessment of the main pressures from agriculture at the water body level; the other plans only include a summary at the basin level. The international Odra draft RBMP does not even consider water abstraction from agriculture as a significant pressure. **Gaps in achieving the objectives of the Nitrates Directive are recognised in three draft RBMPs, although not for each water body, and in Finnish Vuoksi, no data is available on the results of nutrient reduction measures.** In French Loire-Bretagne, the reduction of diffuse pollution is one of the main priorities of the draft RBMP, which has been allocated 30% of its budget (€1bn), with €0.4 bn targeting priority catchments that provide drinking water, including voluntary measures such as organic farming, and mandatory measures. The Spanish Guadiana allocates €146 million to 15 measures addressing diffuse pollution, but no water body specific gap assessment is carried out. **Most of the assessed draft RBMPs state that mandatory and voluntary measures will be taken but do neither quantify them nor define priority application areas.**

11. EEA (2020) The European environment —state and outlook 2020, p.108.
12. EEA (2020) The European environment —state and outlook 2020, p.106

Table 9: Performance of selected draft 2022-2027 RBMPs on agriculture, according to detailed indicators.

	Topic	AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
		Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
7	**Agriculture**																					
	1. Assessment of pressures																					
	2. Gap analysis and measures																					
	3. Diffuse pollution																					

Legend

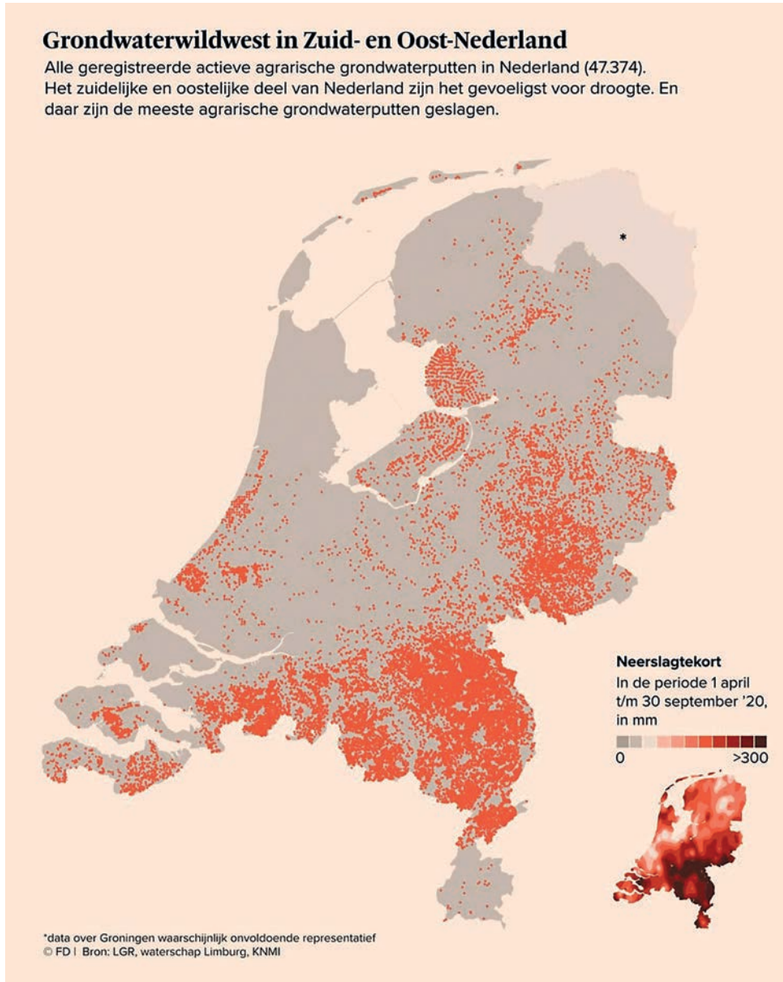
RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- The draft RBMP should include a robust assessment of the main pressures from agriculture on freshwater bodies, and of the effectiveness of past and ongoing measures.
- The draft RBMP should include an ex-ante gap assessment of whether the basic measures will be enough to achieve the environmental objectives of the WFD. If they are not sufficient, then the RBMP must contain supplementary measures.
- Diffuse pollution: The draft RBMP should include mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages in all water bodies where this constitutes a significant pressure.

On 25 November 2020, Dutch newspaper the Financieel Dagblad published information about approximately 50,000 officially registered water abstraction points in the Netherlands for agricultural purposes (figure 8), considering it the "Groundwater Wild West", especially in areas where droughts hit hardest (see small map). The Dutch Rhine draft RBMP refers to the source behind this figure and presumes that the number and volume of abstractions will be significantly larger than officially registered and will continue to increase in the coming years.

Figure 8: Groundwater Wild West in South and East Netherlands. Source: Financieel Dagblad, 25 November 2020.



COAL MINING AND COMBUSTION

The EU must phase out coal by 2030 at the latest to achieve its commitments under the Paris Agreement. Fossil fuel combustion is a driver of climate change which is affecting the water cycle, but coal operations also have other direct and indirect negative effects on water bodies. Lignite mines require groundwater levels to be lowered by drainage, which can affect large areas around the mine, including effects on surface waters. Coal power plants are the largest emitter of mercury into the environment in Europe[13] and they contribute to the widespread failure of the chemical status of surface water bodies.

Lignite mining is recognised as a Significant Water Management Issue (SWMI) in the Polish basins, the international Odra and German Elbe basins, and it is also relevant for the German Rhine. The draft RBMPs include some information on the related pressures for example, in international Odra, the location, impacts and previously taken measures regarding lignite mines are described in detail for the German and Czech part of the international RBD.

13. https://www.eea.europa.eu/publications/chemicals-in-european-waters

However, in international Odra, this information is lacking for Poland, even though most of the mining is located there, and there is also no information about water abstractions. In the Polish Odra and Vistula, all groundwater bodies under pressures from mining are detailed, including information on water abstraction, but in the Odra RBMP this information is scarce and limited to groundwater bodies in which abstraction due to mining exceeds abstraction due to all other purposes. The draft RBMPs German Elbe and international Odra mention the current and future removal of contaminants and pollutants from mines but do not provide related measures.

In the international Odra draft RBMP, the description of planned measures is very general with tick-boxes for types of measures per sub-basin except for the German part referring to the "reduction of dispersed pollution from lignite mining" in the Lusatian Neisse area. Lignite mine drainage is largely exempt from fees and cost recovery in the international Odra river basin, and cost recovery for mining abstraction and pollution is not implemented in any of the assessed draft RBMPs.

The assessment has been made based on the following indicators:

- The draft RBMP should include an assessment of the problem, taking stock of all coal mines and their effects on water bodies.
- The draft RBMP should include an inventory of priority hazardous substances, measures to phase out hazardous substances, measures to improve industrial emissions and measures to prevent pollution of priority hazardous substances in all water bodies where this constitutes a significant pressure.
- The draft RBMP should recognise climate change as a significant water management issue including measures for climate change adaptation and mitigation, such as regulating groundwater use and cooling water discharge.
- No WFD article 4(7) exemptions should be granted to proposed new coal mines.
- The draft RBMP should include a calculation of the financial, environmental and resource costs of the coal sector's water use.
- The RBMPs should include elements about liability, taking stock of future remediation of mining sites and include measures to enforce the polluter pays principle.

The screenshot shown in figure 9 from the publicly accessible EEB Industrial Plant Data Viewer provides geographic information about coal combustion activities in the Odra basin. It includes plants that do not comply with mercury emission limits. This information is missing in the international Odra draft RBMP.

Figure 9: Industrial Plant Data Viewer. Source: http://eipie.eu/projects/ipdv

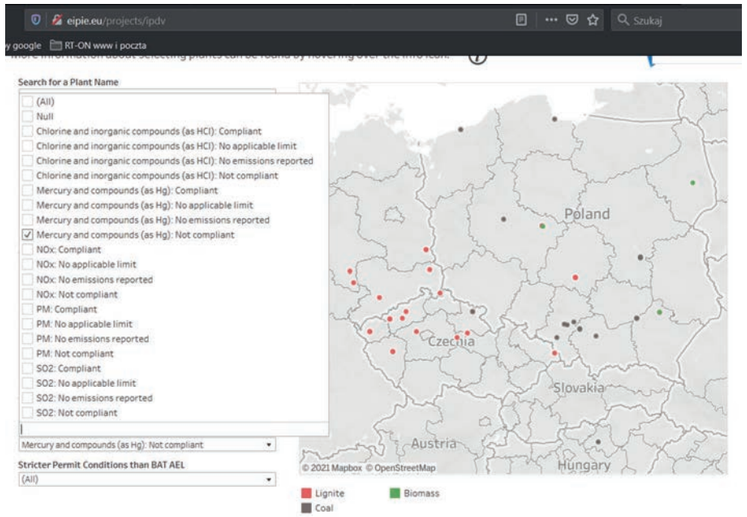


Table 10: Performance of selected draft 2022-2027 RBMPs on coal mining and combustion according to detailed indicators.

		AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S. Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
8	**Coal mines (and combustion)**																					
	1. Assessment of the problem																					
	2. Priority hazardous substances																					
	3. Climate change																					
	4. Justification and exemptions																					
	5. Cost recovery																					
	6. Liabilities																					

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

ECONOMIC INSTRUMENTS AND BUDGET ADEQUACY

According to article 9 of the WFD, competent authorities should ensure that the costs of water management measures, including environmental and resource costs, are estimated, and water policies established to recover them, taking into account the polluter pays principle. Environmental and resource costs should include the sectoral impact on ecosystems and their ecological functions.

With the WFD Fitness Check highlighting a lack of funding as a significant obstacle to WFD implementation,[14] it is clear that by not properly implementing cost recovery, Member States are depriving themselves of a source of revenue. The drinking water supply and sanitation sector applies financial cost recovery the most, while other sectors such as energy (hydropower, coal and lignite mining and power generation), agriculture, industry and navigation remain largely exempt. There is no solid grounds for such disparities to persist and certainly not a serious economic one, considering that water as an input to water-dependent sectors only represents around 5% of gross value added in these sectors.[15]

Budgets for the Programme of Measures should be significantly increased. This can be achieved partly through aligning WFD objectives with other environmental objectives, such as managing freshwater protected areas and the commitments made by Member States in the Prioritised Action Frameworks under the Nature Directives.

The assessed draft RBMPs are weak in their commitment to cost recovery and providing appropriate budgets for the PoMs. Most of the draft RBMPs provide cost recovery information for urban, industry and agriculture, but do not explicitly include other sectors and water users. Moreover, not all costs are addressed. For example, in Belgian Scheldt and Meuse only some remediation infrastructure is considered and in German Rhine, fees concerning water abstraction are not applied in the states of Bavaria, Hesse and Thuringia. Furthermore, for each of the sectors, financial costs are calculated, but neither environmental nor resource costs, such as in German Rhine, or their calculation criteria are unclear; the same applies to exemptions under WFD article 9(4). The Spanish Ebro includes also detailed calculations for hydropower, but the environmental costs due to over abstraction are only considered for one groundwater body, as for surface water bodies ecological flows have been established. However, these do not seem to be appropriate at least for the Ebro Delta, and thus, the consideration of environmental damage should have been considered in the calculations.

Cost recovery is low, often below 50% at least for one of the sectors, and often higher for urban water services. In some cases, including international Odra, Italian Eastern Alps, Romanian Danube and Austrian Danube, the cost recovery calculation is completely missing or only the resulting figures are shown without further justifying details. As an example, the State of Brandenburg (average annual precipitation <600mm) continues to de facto subsidise water abstractions for agricultural irrigation by exempting it from the state's water abstraction fee. Groundwater abstraction is charged at less than 1 cent per cubic meter, equalling only 7% of the regular fee, resulting in a fee of €0.00805/m³. Most strikingly in times of continued drought, surface water abstraction was entirely exempt from the fee in 2018, eliminating the last economic incentive for its rational use.

The Polish Odra draft plan presents a cost recovery rate of only 2.7% for agricultural water abstraction, and 100% for industry, omitting to mention that the mining and energy sectors are exempted.

Several draft RBMPs do not yet present an overall budget, for example Austrian Danube, or show an overall budget without details or proper justifications or explanations of the funding sources. Budgetary constraints appear a key driver to limit the ambition of the PoM and the achievement of WFD objectives. The Italian Southern Apennines draft RBMP only includes budgeted measures to improve water supply performance, without an estimated contribution to achieving WFD objectives. In other draft RBMPs, for example international Odra, the budget strongly supports infrastructure projects which will cause the deterioration of water body status, such as dams and navigation infrastructure, instead of allocating budget to achieve good water status.

COST RECOVERY IS LOW, OFTEN BELOW 50% AT LEAST FOR ONE OF THE SECTORS, AND OFTEN HIGHER FOR URBAN WATER SERVICES.

14. European Commission (2019) Commission staff working document: Fitness check of the Water Framework Directive, Groundwater Directive, Environmental Quality Standards Directive and Floods Directive, p.23: Only 46% of RBDs reported that funding was secured to implement measures in all relevant sectors, while 17% reported having no financing secured at all.
15. Idem, p.63.

Table 11: Performance of selected draft RBMPs on economic instruments and budget adequacy according to detailed indicators

		AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
9	Economic instruments and adequacy of budget																					
	1. Cost recovery calculation for sectors																					
	2. Cost recovery rates and exemptions																					
	3. Budget																					

Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- For each of the sectors, proper calculation of all financial, environmental and resource costs, in terms of externalities that the society bears due to the use of water resources for economic development, should be estimated. They should reflect the value of improved water status including water security and the provision of other water-related ecosystem services, but they should also take into account the non-financial benefits of good water status for example improving aquatic biodiversity, and form the basis for the definition of recovery rates.
- The draft RBMP should include a limited number and proper justification for the exemptions to the implementation of cost-recovery provided under article 9(4). Agriculture is the sector where article 9(4) exemptions are applied the most. It is important to make sure that all the activities where cost recovery does not apply are covered by an exemption. For instance, most of the time cost recovery is not applied to the hydropower, power, navigation or mining sectors and yet no exemptions are mentioned in the RBMPs. Exemptions must be properly justified.
- A detailed budget should be allocated to all measures, justifying its adequacy to achieve the WFD objectives and explaining the source of the funds. Budget constraints should not be considered as a restriction to the Programme of Measures.

A DETAILED BUDGET SHOULD BE ALLOCATED TO ALL MEASURES, JUSTIFYING ITS ADEQUACY TO ACHIEVE THE WFD OBJECTIVES AND EXPLAINING THE SOURCE OF THE FUNDS.

EXEMPTIONS

Article 4 of the WFD foresees different types of exemptions allowing Member States to derogate from the environmental objectives set by the directive. Article 4(4) allows for time extensions, article 4(5) for less stringent objectives, article 4(6) for temporary deterioration and article 4(7) for sustainable development. Currently, around 53% of water bodies fall under at least one article 4(4) or 4(5) exemption, and in some Member States, this number is higher than 95%.[16] While the ability to use exemptions is an important part of the legislation, the excessive use of exemptions is counterproductive and goes against the objectives of the WFD.

Most of the assessed draft RBMPs largely rely on exemptions – for over 30% of their water bodies, or even more than 70% as in the Polish plans – even if this is not obvious in all plans. For instance, in several plans including the Dutch Rhine and Austrian Danube, planned infrastructure projects are not always reflected in article 4(7) exemptions. In the Austrian Danube draft RBMP, planned projects are "hidden" by the claim in the plan's water body overview tables[17] that all water bodies will achieve good ecological status in 2027 – this is unrealistic and not supported by corresponding measures. In the case of Italy, no detailed information on exemptions is yet included in the documents.

For some RBDs, a significant increase has been identified for article 4(4) time extensions due to "natural conditions", for example Dutch Rhine, as well as for article 4(5) exemptions, for example French Loire-Bretagne. The Polish draft RBMPs apply both exemption types to a large number of water bodies.

For article 4(6) exemptions, in Belgian Scheldt and Meuse, the majority of the 48 measurements of "deterioration" are included in the plan as a "temporary deterioration" due to drought, which seems quite doubtful because drought will recur annually due to climate change. Meanwhile, the German Elbe draft RBMP lacks a justification for article 4(6) exemptions, and in the Romanian DDDC the justification is poor.

Article 4(7) "sustainable development" exemptions are unevenly presented across the draft RBMPs. Their number has significantly decreased in Spain, which is a positive signal, but remains very high in the Polish Odra, affecting 158 surface water bodies and 52 groundwater bodies due to inland navigation, flood control and mine drainage. In some plans, lists of new projects are presented with a varying number of justification details. In others, no ex-ante applicability assessment has been presented, for example in the Austrian Danube, even when new hydropower developments are already either at the permitting phase, planned or being publicly debated[18]. Very often, the new infrastructure projects are not included in the draft RBMP so they are not subject to the assessment under article 4.7.

Finally, it shall be noted that 58 water bodies in the Spanish Ebro (8%) and 502 (29%) in the Polish Odra have suffered deterioration since the previous plan, partly because of improved monitoring or status assessment.

16. EEA (2018) WISE WFD Data Viewer.
17. Water body tables as part of RBMPs in AT contain information on watercourses, lakes and groundwater at water body level. See table "FG-stufenweise Zielerreichung": Running waters – planned target achievement for ecological and chemical status and reason for deadline extension: https://team.ikt-portal.at/index.php/s/LAawa6GD4bmRcPD
18. Such as the more than 35 concrete structures listed as planned hydropower plants by Austria Energy (Österreichs Energie) on its public list of current power plant projects in Austria. This includes the Stegenwald, Gratkorn, Stübing, Tittmoninger Becken, Tauernbach and Meng projects. Many of these will only be able to be approved with an article 4(7) exemption.

Table 12: Performance of selected draft 2022-2027 RBMPs on exemptions according to detailed indicators

		AT	BE	DE		ES				FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S.Apenn.	E.Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
10	**Exemptions**																					
	1. Number of exemptions																					
	2. Gap analysis																					
	3. Art. 4(4) and 4(5) exemption justifications																					
	4. Article 4(6) exemption justifications																					
	5. Article 4(7) exemption justifications																					

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

The assessment has been made based on the following indicators:

- The number of exemptions should be low for water bodies across all water categories or significantly lower when compared to the second cycle RBMP.
- A gap analysis should be included in the draft RBMP to show the scale of action that is necessary to achieve WFD objectives. This should specifically include:
  - a summary of the measures required under article 11 which are envisaged as necessary to bring the waterbodies progressively to the required status by an extended deadline.
  - the reasons for any significant delay in making these measures operational.
  - the expected timetable for their implementation set out in the river basin management plan.
  - A review of the implementation of these measures and a summary of any additional measures should be included in updates of the RBMP.
- Articles 4(4) and 4(5) exemption justifications should include a description of the gaps to achieving good status by the deadline. Reasons for natural conditions should be explained and justified in detail and made transparent in the draft RBMP for each water body. Reasons for natural conditions and disproportionate costs should not be used to justify an extension of the deadline beyond 2027.
- Article 4(6) exemptions should justify in detail the past effects of exceptional floods, prolonged droughts, and accidents that could not reasonably have been foreseen.
- Article 4(7): The draft RBMP should include a full inventory of all current and planned developments, including new hydropower, navigation, flood protection, drainage and water abstraction projects. The draft RBMP should ensure a thorough assessment of the expected effects of projects under development on water body status or potential on each element used to assess water quality. For the application of exemptions, the policy recommendations and best practice guidance in the CIS Guidance Document No. 36 (Exemptions to the Environmental Objectives according to Article 4(7)) should be followed. Draft RBMPs must show how the objectives can still be achieved despite the negative environmental effects of these projects.

The considerable use of exemptions in the assessed draft RBMPs casts a doubt on the political will to achieve the objectives of the WFD. According to the German Elbe draft RBMP, less than 4% of river water bodies will reach good ecological status or potential by 2027, and 16% not even by 2045. According to the plan, the time extension is not because of "natural conditions" but because of existing pressures, such as diffuse agricultural pollution (>60%), agricultural hydromorphological pressures (>50%) and other pressures.[19] In Belgium, only 10% of the water bodies in the Scheldt and Meuse basins are expected to reach good status by 2027.

19. Draft RBMP for Elbe river basin district, pages 239 and 189.

REVIEW AND UPDATE ON THE IMPLEMENTATION OF THE PREVIOUS RBMPs

WFD implementation is based on River Basin Management Plans and their corresponding learning processes. This requires reviewing the implementation of previous plans, and is explicitly recognised in WFD Annex VII which states that the draft RBMP should include:

- A summary of any changes or updates since the publication of the previous version of the river basin management plan, including a summary of the reviews to be carried out of Articles 4(4), (5), (6) and (7).
- An assessment of the progress made towards the achievement of the environmental objectives, including the results of monitoring for the period of the previous plan in map form, and an explanation for any environmental objectives which have not been reached.
- A summary of, and an explanation for, any measures foreseen in the earlier version of the river basin management plan which have not been undertaken.
- A summary of any additional interim measures adopted under Article 11(5) since the publication of the previous version of the river basin management plan.

Only some of the assessed draft RBMPs – Belgian Scheldt and Meuse and Dutch Rhine – provide a summary of the implementation of the previous RBMP's PoMs, stating that most of the measures have been implemented or are still in progress. Some examples of the poor implementation performance of Member States are reflected by only 4% of the measures finalized in the Spanish Guadalquivir, 18% and 20% implemented respectively in the Romanian DDDC and Spanish Ebro, and 29% and 78% not started in the Polish Odra and Spanish Guadiana. **The majority of the assessed draft RBMPs do not include a summary about the implementation of measures during the previous RBMPs, or an explanation on any failures or changes. If any information is included, it is from the 2018 reporting period. A lack of funding has been highlighted in several draft RBMPs.**

Despite partial or anecdotal assessments of the effectiveness of measures during the previous RBMPs, the draft RBMPs do not contain the relevant information that would ensure that lessons are learnt. For example, more than half of the planned measures in the draft Polish Vistula RBMP 2022-2027 for surface waters are assessed as having only medium to low effectiveness, and more than 75% of the planned measures for groundwaters as low effectiveness.

Table 13: Performance of selected draft RBMPs on the review and update on the implementation of the previous RBMP, according to detailed indicators.

		AT	BE	DE			ES				FI		FR	INT	IT		NL	PL		RO		SK	
	Topic	Danube	Scheldt and Meuse	Elbe	Rhine	Duero	Ebro	Guadalquivir	Guadiana	Kemijoki	Vuoksi	Loire	Odra	S. Apenn.	E. Alps	Rhine	Odra	Vistula	DDDC	Jiu	Danube	Vistula
11	**Review and update on the implementation of the previous RBMP**																					
	1. Implementation of measures																					
	2. Effectiveness of measures																					

Legend

		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

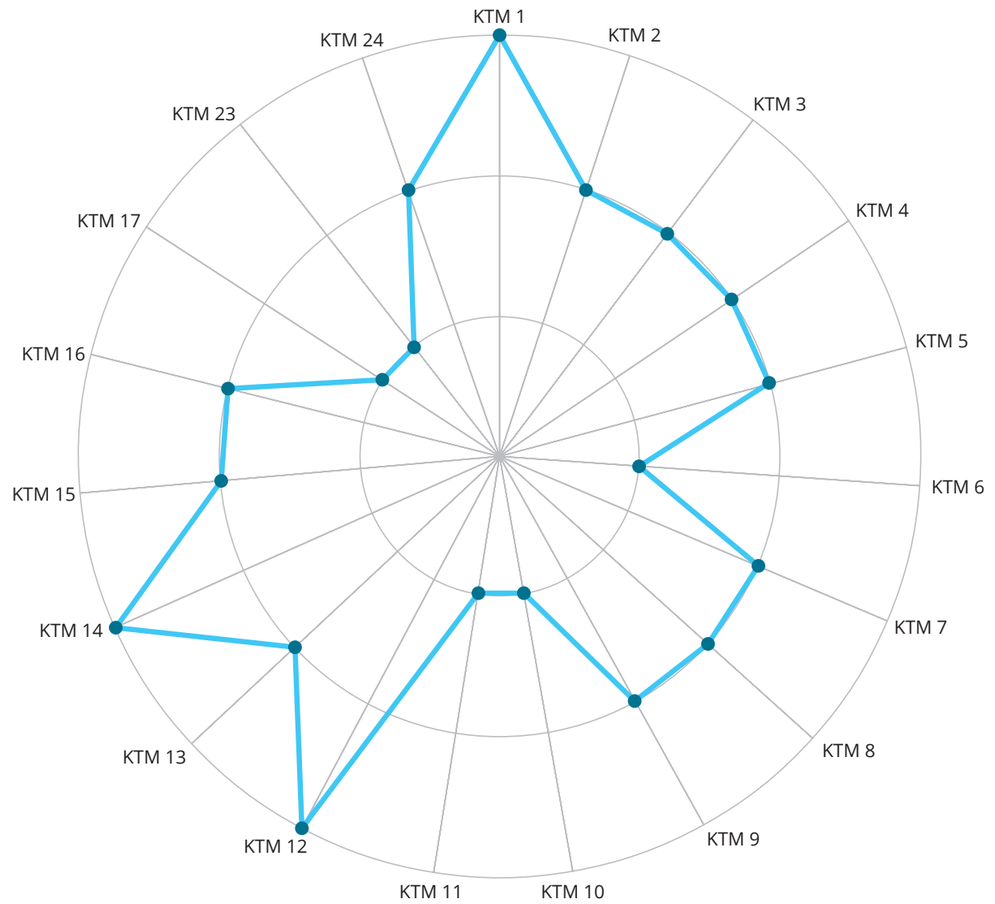
The assessment has been made based on the following indicators:

- The draft RBMP should include precise information about the status of the implementation of the measures under the previous RBMPs, and the constraints for implementation, if relevant.
- The draft RBMP should include an assessment of the effectiveness of past and ongoing measures, especially regarding the main pressures in the RBD, and a comparison of the effectiveness of different measures. The RBMP should include recommendations for the design of the third cycle Programme of Measures.

The information in the Loire-Bretagne draft RBMP on the levels of implementation is limited to each thematic of the 2016 – 2021 PoM for 2016 and 2017. It is only based on the mid-term review of the Loire-Bretagne RBMP 2016-2021 (page 9), in 2018. No updated information for 2020 is provided in the draft RBMP, and given the large number of reported foreseen measures, the draft RBMP does not transmit a clear idea about progress and implementation.

The Italian Southern Apennines draft RBMP provides poor information on the status of implementation of the previous RBMP's PoM – it is limited to a basic graph showing the level of implementation of measures in the second RBMP (figure 10) The evaluation is only at district scale.

Figure 10: Degree of achievement of Key Type of Measures.
Source: Italian Southern Apennines draft RBMP, page 182.



Grado di adeguatezza della risposta fornita dalle KTM.

ASSESSMENT BY COUNTRY

Donau StopfenreutherAu © Egger

AUSTRIA

The draft RBMP for the Danube RBD (AT1000) was assessed in April 2021. Despite having improved inventories and assessments compared to the previous RBMPs, the draft RBMP fails to commit to improve the status of water bodies. Although the draft plan does not include explicit exemptions, the true number of water bodies estimated to fail good status in 2027 is "hidden" by the claim in the overview tables that all water bodies will achieve good ecological status in 2027[20]. That is totally unrealistic and not supported by the Programme of Measures.

Article 4(5) exemptions are only applied to a few water bodies with appropriate justification. For the exemptions under article 4(7), only the exemptions from the previous two RBMPs are listed (22 exemptions), and essential information on these exemptions is missing. Although many hydropower plants are currently in the approval process or are listed in other planning documents, no reference is made in the draft RBMP to upcoming exemptions under article 4(7)[21]. Regarding the status of implementation of the second RBMP's PoM, no comprehensive summary is included in the draft RBMP. However, on effectiveness, information is provided for the individual pressures in the respective chapters.

Five topics are considered as main challenges in the RBDs or included as SWMIs in the draft RBMP, and the main findings of the assessment are detailed below:

Removal and adaptation of barriers:
The draft RBMP provides a comprehensive inventory of 28,593 impassable barriers including information about causes, technical details and location, although not about permits and technical options. Connectivity measures are based on a prioritisation methodology, but there is no cost-benefit assessment and fish-ladders providing only limited connectivity improvement are the preferred option before removal. According to the PoM, 300 barriers shall be removed in the 2022-2027 RBMP, in addition to a backlog of another 850 barriers, which were not removed in the

20. Water body tables as part of the draft RBMP in AT contain information on watercourses, lakes and groundwater at water body level. In the table "FG-stufenweise Zielerreichung": Running waters – planned target achievement for ecological and chemical status and reason for deadline extension: https://team.ikt-portal.at/index.php/s/LAawa6GD4bmRcPD

21. Such as the more than 35 concrete structures listed as planned hydropower plants by Austria Energy (Österreichs Energie) on its public list of current power plant projects in Austria. This includes the Stegenwald, Gratkorn, Stübing, Tittmoninger Becken, Tauernbach and Meng projects. Many of these will only be able to be approved with an article 4(7) exemption.

previous RBMP due to a lack of funds. The overall level of past and current ambition is very low.

Hydropower: Although there are over 5,200 hydropower plants in Austria, the chapter on energy only mentions the 3,036 plants that feed electricity into the public grid. The draft RBMP includes information on the major pressures from hydropower plants, such as water withdrawals affecting 3,066 residual water stretches (4,530 km, 82% caused by hydropower), impounded stretches (1,480 dammed sections of a total length of 1,339 km, 4.2% of the total river length, 73% caused by hydropower), hydropeaking (affecting 875 km or 10.4% of the larger rivers greater than 100 km²), morphological changes and obstacles to migration (more than 3,100 obstacles related to hydropower that do not allow fish to pass).

An increase in residual flow is planned in approximately 900 stretches (700 water bodies) out of 1,700 residual water stretches. However, these improvements fail to reach the environmental flows necessary to reach good status. Approximately 130 hydropower plants are to be made passable for fish.

Hydropeaking mitigation feasibility studies were due in the previous RBMP but have only been carried out for three out of 67 significant hydropeaking affected river stretches. These three are not yet published (as of May 2021). According to the draft RBMP, mitigation measures "shall" be implemented, but concrete measures on hydropeaking stretches and timetables are missing.

Plans for new hydropower plants are addressed in general but not on the water body or project level. Hydropower is considered a "significant renewable energy source" and, given renewable energy targets, further expansion is planned for up to 5 TWh by 2030. An average of 40 TWh/year are already produced by hydropower and more than 80% of hydropower's technical-economic potential has already been built. The corresponding WFD article 4(7) exemptions are listed retrospectively and a reference is made to a regulatory process, including limitations due to regional programmes for the protection of watercourses, but no article 4(7) exemption details are provided for upcoming projects in the draft RBMP.

River and wetland restoration: The draft RBMP includes links to conservation targets, ecosystems and protected areas but it remains unclear how the plan will contribute to achieving biodiversity conservation objectives. Criteria for prioritising restoration efforts are explicit in the draft RBMP, and targets are set, but they cannot be considered as ambitious. Nature-based solutions are not explicitly mentioned, but some of them are considered in the PoM. Natural water retention measures are referred to in the Flood Risk Management Plan, but it remains unclear how many of them will be implemented instead of or in addition to technical measures. Restoration measures are not equally financed: While hydropower-related measures get subsidies from public budgets covering up to 50% of the total costs, restoration measures targeting diffuse pollution are 100% financed by public budgets.

Water allocation and abstraction control: In general, water abstractions are identified in the draft RBMP and are subject to permissions. Several studies addressed sustainable thresholds, and exploitation indices are calculated for groundwater bodies, and projections are available. The draft RBMP refers to the review of abstraction permits as a measure to be carried out during the implementation of the PoM, but without specifying the expected number of permits, or the criteria. No information is provided on abstraction control.

Economic instruments and budget adequacy: In the draft RBMP, there are no proper calculations of all financial, environmental and resource costs; and cost-recovery applies only to drinking water. No overall budget figure is provided in the draft RBMP.

Hydropeaking from hydropower: Austria is defaulting on the remediation of the negative impacts of hydropeaking. Used mostly in storage power plants during peak electricity production, it has one of the most negative ecological impacts on alpine watercourses. Water is collected in large reservoirs and electricity production is usually started up to several times a day "at the push of a button". Water from the reservoir rushes through pipes to the turbine, and then into a river. This creates sudden surge waves with immense discharge peaks, which are quickly over. These artificial flood waves run through the affected rivers – not like the floods that happen once or twice a year, but usually several times a day.

On alpine rivers, hundreds of thousands of living creatures die every year due to sinking and surging. Among them are countless aquatic insects, young fish and fish larvae, but also adult fish. In Austrian waters, this negative impact, which has persisted for decades, has led to the extinction of entire fish populations and the systematic thinning of water biomass.

The pressures caused by hydropeaking in Austria are well documented and presented in the draft RBMP, which is a strength of the current draft. A total of 875 km (119 water bodies) of the Austrian water network are affected by hydropeaking, 725 km of which are significantly affected and require urgent restoration[22]. Hydropeaking occurs almost exclusively in larger rivers (with a catchment area >100km²), more than 10% of all larger rivers are affected by hydropeaking. The most common fish species in these waters, such as the Enns, Mur, Inn or Drau, are brown trout and grayling.

22. Water bodies with significant hydropeaking pollution are so heavily polluted that they must be rehabilitated. Several criteria are used for the definition, among others that the hydropeaking ratio is >1:5.

	Topic	AT Danube
1	**Removal and adaptation of barriers**	
	1. Identification of the problem	
	2. Prioritisation	
	3. Cost-benefit analysis and monitoring plan	
	4. Ambition	
2	**Hydropower**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. Plans for refurbishment and decommissioning	
3	**Inland navigation**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. 'Working with nature'	
4	**Freshwater ecosystem protection and restoration and NBS**	
	1. Protected areas and their status	
	2. Prioritisation	
	3. Restoration targets	
	4. Nature-based solutions (NBS)	
	5. Natural Water Retention Measures (NWRM)	
	6. Sound financial mechanism	
5	**Water allocation and abstraction control**	
	1. Identification of significant water abstractions	
	2. Prospects of new water abstractions, related infrastructure and land uses	
	3. Review of abstraction permits	
	4. Abstraction control	
6a	**Drought management**	
	1. PoM "climate checks"	
	2. Drought management plans	
6b	**Flood management**	
	1. PoM "climate checks"	
	3. Link with the Floods Directive	
	4. Land use and flood management	
7	**Agriculture**	
	1. Assessment of pressures	
	2. Gap analysis and measures	
	3. Diffuse pollution	
8	**Coal mines (and combustion)**	
	1. Assessment of the problem	
	2. Priority hazardous substances	
	3. Climate change	
	4. Justification and exemptions	
	5. Cost recovery	
	6. Liabilities	
9	**Economic instruments and adequacy of budget**	
	1. Cost recovery calculation for sectors	
	2. Cost recovery rates and exemptions	
	3. Budget	
10	**Exemptions**	
	1. Number of exemptions	
	2. Gap analysis	
	3. Art. 4(4) and 4(5) exemption justifications	
	4. Article 4(6) exemption justifications	
	5. Article 4(7) exemption justifications	
11	**Review and update on the implementation of the previous RBMP**	
	1. Implementation of measures	
	2. Effectiveness of measures	

A major weakness of the draft is that the environmental objectives for the rehabilitation of the hydropeaking sections have not yet been defined and no concrete measures are included. Therefore, a clear failure to achieve the objectives of the Water Framework Directive is highly likely in 2027 on all rivers affected by hydropeaking in Austria.

Measures for hydropeaking mitigation have long been postponed with the justification that there is a lack of knowledge about remediation options. However, following more than 10 years of research, extensive material and knowledge on damage and remediation options is available in three major studies. Based on this, feasibility studies and measures should have been available for all hydropeaking stretches by 2021, according to the RBMP. Of 67 significantly polluted hydropeaking stretches, feasibility studies have been prepared for three stretches, but they had not been published as of April 2021. There are several ways to reduce the problems associated with flow fluctuations: modifying the power plant operation mode, diverting the water into a side channel or tunnel, or adapting the river morphology.

To mitigate the negative effects of hydropeaking by 2027, the transparent development of ambitious environmental targets for all rivers affected by hydropeaking is needed. This is in addition to a definition of all necessary concrete measures for achieving the environmental objectives in all stretches and a timetable for their implementation. Until the morphological or technical measures to improve hydropeaking take effect, mandatory transitional measures are needed in all hydropeaking rivers during the most sensitive weeks of larvae and juvenile fish development to protect fish ecology.

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 14: Overview of the performance of the draft 2022-2027 RBMP Danube (Austria) on key topics by indicator.

BELGIUM

The joint draft RBMP for the Flemish part of the Scheldt (BE-Schelde_VL) and the Meuse (BE-Maas_VL) was assessed in March 2021. Only 15 out of 195 water bodies (<10%) are planned to have reached good status by 2027, and the number of exemptions has increased since the previous RBMP. 48 cases of "temporary deterioration" due to article 4(6) are reported, but poorly justified, plus 16 cases of "misclassification". None of the 17 water bodies which were due to achieve good status by 2021 have reached the objective. However, the draft RBMP states that the implementation of the previous RBMP's measures is well on track. The plan's rather unrealistic outlook for 2033 is that all except 43 water bodies will achieve good status in 2033. Three assessment topics are included as SWMIs in the draft RBMP, and the main findings of the assessment are detailed below:

River and wetland restoration: The draft RBMP provides an overall description of the status of protected freshwater ecosystems but does not define the water quantity and quality required to achieve good status. Approximately 150 specific measures of the PoM aim to restore surface water bodies in Special Conservation Areas, but overall criteria and priorities for restoration will only be developed at a later stage. While natural water retention measures should be considered as an alternative or complementary option for all flood risk management infrastructure investment, this does not happen in practice and nature-based solutions are not used to help address the lack of

IN THE DRAFT RBMP FOR THE FLEMISH PART OF THE SCHELDT AND THE MEUSE, ONLY 15 OUT OF 195 WATER BODIES (<10%) ARE PLANNED TO HAVE REACHED GOOD STATUS BY 2027.

	Topic	BE Scheldt and Meuse
1	**Removal and adaptation of barriers**	
	1. Identification of the problem	
	2. Prioritisation	
	3. Cost-benefit analysis and monitoring plan	
	4. Ambition	
2	**Hydropower**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. Plans for refurbishment and decommissioning	
3	**Inland navigation**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. 'Working with nature'	
4	**Freshwater ecosystem protection and restoration and NBS**	
	1. Protected areas and their status	
	2. Prioritisation	
	3. Restoration targets	
	4. Nature-based solutions (NBS)	
	5. Natural Water Retention Measures (NWRM)	
	6. Sound financial mechanism	
5	**Water allocation and abstraction control**	
	1. Identification of significant water abstractions	
	2. Prospects of new water abstractions, related infrastructure and land uses	
	3. Review of abstraction permits	
	4. Abstraction control	
6a	**Drought management**	
	1. PoM "climate checks"	
	2. Drought management plans	
6b	**Flood management**	
	1. PoM "climate checks"	
	3. Link with the Floods Directive	
	4. Land use and flood management	
7	**Agriculture**	
	1. Assessment of pressures	
	2. Gap analysis and measures	
	3. Diffuse pollution	
8	**Coal mines (and combustion)**	
	1. Assessment of the problem	
	2. Priority hazardous substances	
	3. Climate change	
	4. Justification and exemptions	
	5. Cost recovery	
	6. Liabilities	
9	**Economic instruments and adequacy of budget**	
	1. Cost recovery calculation for sectors	
	2. Cost recovery rates and exemptions	
	3. Budget	
10	**Exemptions**	
	1. Number of exemptions	
	2. Gap analysis	
	3. Art. 4(4) and 4(5) exemption justifications	
	4. Article 4(6) exemption justifications	
	5. Article 4(7) exemption justifications	
11	**Review and update on the implementation of the previous RBMP**	
	1. Implementation of measures	
	2. Effectiveness of measures	

Legend		LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 15: Overview of the performance of the draft 2022-2027 RBMP for the Scheldt and the Meuse (Belgium) on key topics by indicator.

wastewater treatment in individual housing. It also remains unclear how the cost recovery and polluter pays principles will financially contribute to these initiatives.

Drought management and climate proofing: The draft RBMP includes a sensitivity analysis of the proposed measures, based on a non-transparent methodology, to evaluate long-term effectiveness and cost-efficiency under changing climatic conditions. A drought management plan is included, but its components are not comprehensively related to ensuring proper action, and it mixes natural factors with human activity-induced water scarcity and overexploitation.

Agriculture: The draft RBMP includes a robust assessment of the main pressures from agriculture and the remaining gaps (e.g. nitrates and phosphorus) but it is only shown at the RBD level and not for each water body. Concrete measures will only be part of the new manure action plan ("MAP 7") from 2022 onwards.

Economic instruments and budget adequacy: The RBMP provides cost recovery information, but only for remediation infrastructure (sewerage and water treatment). Cost recovery of erosion control and manure processing (agriculture) or additional individual treatment (industry) is not addressed. The PoM contains 12 cost recovery measures, but these are all research assignments that in part were already included in the previous RBMP's PoM and not carried out. Exemptions, such as for agricultural water abstraction from unnavigable waterways, are not justified. The total budget remains unclear: In addition to the €2.7 bn PoM, political decisions for add-ons of €3.9 bn for wastewater treatment and €0.5 bn for drought management have not yet been taken.

FINLAND

Two draft RBMPs were assessed in April 2021 for Kemijoki RBD[23] and the Vuoksi RBD[24] focussing on the transboundary Rakkolanjoki river. Overall, the draft RBMPs apply a very limited number of exemptions and none under article 4(7). Regarding the status of implementation of the second RBMP PoMs, less than 80% of the measures have been implemented, due to a lack of funding, insufficient or poorly directed measures as well as forestry and agriculture management practices. No relevant assessment of the effectiveness of the previous RBMP's measures is provided. Three topics are considered as main challenges in the RBDs, and the main findings of the assessment are detailed below:

Removal and adaptation of barriers: The Kemijoki draft RBMP identifies 377 dams with 160 of them hampering fish migration, and 130 dams whose impacts still need to be assessed. Under the previous RBMP, the removal of small obstacles was the priority and is set to continue into the third round, but there are no explicit numbers or allocations in the draft RBMP. These actions will support the Finnish national fisheries strategy, and the priority has now moved to major hydropower dams and their bypass solutions. Implementation is yet unclear and relies on upcoming funding opportunities. The level of ambition remains disputed and depends heavily on construction. The original rapid riverbeds (with environmental flow), which have been bypassed for damming, are needed to achieve a high level of success. Beyond the dammed area, there is a 300 km Ounasjoki tributary which is strictly protected. Putting four dam crossings with down passages in place to reach these pristine breeding areas holds high ecological potential. In the Rakkolanjoki river, all the dams and barriers have been removed during the previous implementation periods on both sides of the Finnish/Russian border.

Hydropower: In the Kemijoki and Vuoksi draft RBMPs, hydropower is recognised as a major pressure especially for hydromorphology and fish. The Kemijoki river's hydropower heavily modified water bodies (HMWBs) have updated status assessments: for the first time they are recognised as currently not achieving good ecological potential and in need of measures including fish by-passes and ecological flows during the 2022-2027 RBMPs.

River and wetland restoration: The Kemijoki and Vuoksi draft RBMPs provide an overall description of the status of protected freshwater ecosystems and define the specific water qualities required for achieving good status. Fish migration is the key criteria used to establish restoration

23. Reference: FIVHA5
24. Reference: FIVHA1

	Topic	FI Kemijoki	FI Vuoksi
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

priorities and it also addresses nature-based solutions, agricultural and, more recently, forestry management practices. The Natura 2000 sites, the Upper Rakkolanjoki tributary and Lake Haapajärvi, are the Vuoksi draft RBMP's priorities for 2022-2027, including removing wastewater treatment plants runoff water outlets from the river and improving agricultural practices to reduce the nutrient load, as well as re-meandering and the establishment of gravel beds. However, restoration measures beyond the removal of wastewater treatment discharge are based on voluntary action, and their impact remains unclear.

Economic instruments and budget adequacy: In the Kemijoki and Vuoksi draft RBMPs, the cost recovery rate (including environmental and resource costs) for the different sectors is generally 50-70% of the full costs of water services. Cost recovery exemptions are not considered in the draft RBMP. The Kemijoki draft RBMP budget is €36 million, with €30 million for the improvement of urban wastewater treatment and €6 million for voluntary measures. Out of the €242 million budget allocated to the Vuoksi draft RBMP, €77.5 million is for voluntary measures. It is unclear to what extent the budgets will be implemented by the government.

Legend		LEVEL OF PERFORMANCE high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 16: Overview of the performance of the draft 2022-2027 RBMPs Vuoksi and Kemijoki (Finland) on key topics by indicator.

FRANCE

The draft French Loire-Bretagne RBMP was assessed in April 2021. Overall, the draft RBMP relies largely on article 4(5) exemptions and it sets out lower objectives for 39.5% of the water bodies. Moreover, its budget is far too low to achieve good status, which is also due to the non-consideration of environmental costs in cost recovery. In some technical areas, for example hydromorphological pressures and climate adaptation, the RBMP has significantly improved compared to the previous plan. The draft RBMP does not provide information on the status of implementation and effectiveness of the second RBMP's PoM. This assessment is currently being finalised at a local scale, and will only be included in the draft RBMP at a later stage. Five of the selected topics are considered in the draft RBMP as Significant Water Management Issues, and the main findings of the assessment are detailed below:

Removal and adaptation of barriers: Compared to the previous RBMP, more data has been collected from three databases which find 24,877 barriers. Meanwhile, more pressures relating to barriers have been identified – a rise of 13% of water bodies classified as under pressure from barriers. These pressures are determined by examining sediments, longitudinal and lateral connectivity. The draft RBMP does not include a list of barriers for which the usage permits will expire and must be revised during the 2021-2027 period. The draft RBMP identifies barriers that should be removed as a priority, including priority zones for the European eel. The draft RBMP states that a cost analysis and a monitoring plan should be undertaken. The PoM addresses 1,064 (4%) of all barriers included in the inventory. 34% of the PoM budget (€1.287bn) is allocated to measures for freshwater ecosystem restoration, among which a majority concern actions on barriers or actions on water bodies that have a significant hydrological impact during low-water periods. Still, the budget specifically dedicated to the removal and adaptation of barriers is not yet known.

River and wetland restoration: The draft RBMP provides an overall description of the status of protected freshwater ecosystems and defines the specific water quantities and qualities required for achieving good status. The criteria used to establish restoration priorities are clearly explained – for water bodies with protected areas and species, the main pressures and remedial actions are detailed. 16% of the measures in the PoM concern a protected area however, no references are made to nature-based solutions and only very generically to natural water retention measures. The funds from the Water Agency represent on average 50% of the cost of freshwater ecosystem restoration.

Water allocation and abstraction control: All significant water abstractions are identified – urban, irrigation, industry, energy production, livestock, feeding of navigation channels – and an exploitation index is determined for each water body, even if some data is missing on seasonal variations of water abstractions. A national database for water abstraction is already implemented but should be further developed. 18 new reservoirs are planned, and there are no assessments of their impact on river flows, even if seven conditions are included to minimise their impact on hydrology. The draft RBMP recommends reviewing new water abstraction permits every 10 or 15 years. No detailed information is available on the intensity of abstraction controls.

Drought management and climate proofing: The draft RBMP incorporates the findings of the climate change plan (PACC Loire-Bretagne), including a sensitivity analysis of vulnerable water-use sectors and forecasting, including ecological flows. It selects robust adaptation measures which maximise cross-sectoral benefits. 47% of the changes in the draft RBMP have been made to adapt to climate change. However, the draft RBMP does not include a forecast of the economics of water supply and demand. Regarding drought management, indicators are based on flow thresholds quantified at each nodal point, with two types of thresholds established for monitoring minimal flows and crisis management. The draft RBMP focuses on saving water, limiting waste, reusing wastewater and developing winter storage – which must include a preliminary study on water availability under climate change conditions.

Agriculture: The draft RBMP includes an assessment of the main pressures from agriculture at the water body level. Gaps in achieving the objectives of the Nitrates Directive are recognised. The reduction of diffuse pollution is one of the main priorities of the draft RBMP and it has been allocated 30% of the budget (€1 bn), with €0.4 bn targeting priority catchments that provide drinking water, including voluntary – such as organic farming – and mandatory measures.

Economic instruments and budget adequacy: Financial cost recovery figures are only provided for agriculture (92%), industry (94%) and individuals (98%). Environmental and resource costs are not considered, which is justified by uncertainties in allocating costs. The overall PoM budget (€3.6 bn) is far too low to achieve the objectives of the WFD, with the Water Agency providing 50% of it. Not all budget details are yet available in the draft RBMP.

47%

OF THE CHANGES IN THE DRAFT LOIRE-BRETAGNE RBMP HAVE BEEN MADE TO ADAPT TO CLIMATE CHANGE.

Loire river. © SOS Loire vivante, ERN.

	Topic	FR Loire
1	**Removal and adaptation of barriers**	
	1. Identification of the problem	
	2. Prioritisation	
	3. Cost-benefit analysis and monitoring plan	
	4. Ambition	
2	**Hydropower**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. Plans for refurbishment and decommissioning	
3	**Inland navigation**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. 'Working with nature'	
4	**Freshwater ecosystem protection and restoration and NBS**	
	1. Protected areas and their status	
	2. Prioritisation	
	3. Restoration targets	
	4. Nature-based solutions (NBS)	
	5. Natural Water Retention Measures (NWRM)	
	6. Sound financial mechanism	
5	**Water allocation and abstraction control**	
	1. Identification of significant water abstractions	
	2. Prospects of new water abstractions, related infrastructure and land uses	
	3. Review of abstraction permits	
	4. Abstraction control	
6a	**Drought management**	
	1. PoM "climate checks"	
	2. Drought management plans	
6b	**Flood management**	
	1. PoM "climate checks"	
	3. Link with the Floods Directive	
	4. Land use and flood management	
7	**Agriculture**	
	1. Assessment of pressures	
	2. Gap analysis and measures	
	3. Diffuse pollution	
8	**Coal mines (and combustion)**	
	1. Assessment of the problem	
	2. Priority hazardous substances	
	3. Climate change	
	4. Justification and exemptions	
	5. Cost recovery	
	6. Liabilities	
9	**Economic instruments and adequacy of budget**	
	1. Cost recovery calculation for sectors	
	2. Cost recovery rates and exemptions	
	3. Budget	
10	**Exemptions**	
	1. Number of exemptions	
	2. Gap analysis	
	3. Art. 4(4) and 4(5) exemption justifications	
	4. Article 4(6) exemption justifications	
	5. Article 4(7) exemption justifications	
11	**Review and update on the implementation of the previous RBMP**	
	1. Implementation of measures	
	2. Effectiveness of measures	

THE REDUCTION OF DIFFUSE POLLUTION IS ONE OF THE MAIN PRIORITIES OF THE DRAFT LOIRE-BRETAGNE RBMP AND IT HAS BEEN ALLOCATED 30% OF THE BUDGET (€1 BN).

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 17: Overview of the performance of the draft 2022-2027 RBMP Loire-Bretagne (France) on key topics by indicator.

GERMANY

The draft RBMP for the Elbe[25] was assessed in April 2021 as well as an 86-page overview report as a summary of the individual regional plans for the Rhine[26]. The Rhine draft RBMP foresees article 4(4) time extensions for 20-30% of the groundwater bodies and more than 38% of the surface water bodies. In the Elbe, article 4(4) will be applied to more than 80% of rivers, 70% of lakes, all transitional water bodies, and 36% of groundwater bodies (qualitative status). No article 4(7) exemptions are planned in the draft RBMPs.

Despite their long-lasting cooperation, the eight relevant federal states and the federal environmental ministry did not publish a joint draft RBMP for the entire German part of the Rhine basin. They have only released an overview report and a link to the regional draft RBMPs suggesting that this approach is sufficient. However, neither the overview report nor the federal states' draft RBMPs specify relevant figures for the German section of the international draft RBMP. This is particularly true for the implementation of the masterplan for migrating fish. The overview report and more than 15 regional consultation documents do not clearly address the existence of more than 290 barriers to the Atlantic salmon. The overview report does not clarify the plans of the national water and shipping authorities in order to implement WFD-requirements. They are responsible for the Rhine itself and for all tributaries designated as national waterways.

The main findings of the assessment are:

Removal and adaptation of barriers: The Elbe RBMP refers to 86 out of the 417 existing barriers to be addressed during the 2022-2027 RBMP and aims to identify solutions for the downstream Geesthacht weir, which was equipped with a fish passage in 2010 that is no longer operational. The Rhine report makes a general statement on dam removal but is not clear about the criteria for removal, the development of cost-benefit assessments or the number of planned removals. It does not refer clearly to the Masterplan for Fish Migration which addresses species including. the Atlantic salmon, and is therefore not up to date.

25. Reference: DE5000
26. Reference: DE2000

Hydropower: The Rhine report does not refer to planned hydropower plants even if these are foreseen, and it does not include a justification or criteria for their instalment. No reference is made to the refurbishment or decommissioning of older outdated hydropower plants. In the context of a pilot project at the Unkelmühle (Sieg) hydropower station, researchers found that the total extra loss of salmon was up to 25.1 % of the relevant population investigated at this station[27]. A significant share of the loss occurred in the backwater area of the weir where salmon can be easily killed by predators. The draft RBMP of North Rhine – Westphalia does not highlight or address this problem.

Inland navigation: The draft RBMP recognises major impacts caused by navigation: the Elbe estuary has been deepened for navigation and is currently an "oxygen valley" bottleneck for migrating fish; river bed erosion in the rest of the river seriously affects Natura 2000 wetlands. However, the planned upscaling projects are not considered in the plan, and no justification is provided for estuary dredging despite declining ship traffic. The "holistic concept for the Elbe river (Gesamtkonzept Elbe)" provides a strategic approach to tackle river bed erosion and the river's bed load deficit, by deconstructing a very minor part of the 6,900 groynes, and restoring wetlands. However, this remains voluntary, vague and contradictory and it does not define specific measurable indicators. In addition, the draft RBMP does not clearly include this measure in its PoM.

River and wetland restoration: In both RBDs, the descriptions of the protected freshwater ecosystems do not refer to the specific water quantities and qualities required for achieving good status. Nature-based solutions and natural water retention measures are not explicitly mentioned in the plans. It remains unclear how many restoration actions will be undertaken. For example, in North-Rhine – Westphalia, despite the existence of the 2012 local development concepts, the implementation for the 2022-2027 period is imprecise with no transparency about planned measures and their location.

Methods applied to assess the status of groundwater in the Elbe basin fail to implement the WFD's key indicator for good quantitative status – the status of groundwater dependent ecosystems. Contrary to the reality of widespread degradation and drying out of wetlands, floodplains and forests, groundwater status is presented as good throughout the Elbe basin. Exceptions to this rule are only found in lignite mining areas.

27. North Rhine-Westphalia, Final Report Project Fish Protection and Fish Descent at the Unkelmühle Pilot Plant, 8 January 2019, pages 57,63 and 66.

The Geesthacht fish passage was a 2010 milestone for the recovery of fish migration in the Elbe, and funded as a measure to compensate for other environmental impacts of a power company. However, the passage is no longer operational and reflects the fact that the responsible authorities have neglected the operationalisation of restoration measures.
(Source: Th. Gaumert)

Water allocation and abstraction control: Even in Natura 2000 sites, it remains uncertain whether effective abstraction controls will be established. For example, abstractions for drinking water from groundwater are made in the Berlin-Brandenburg border region without permits or information about the groundwater balance, which hampers the achievement of conservation objectives.

Flood and drought management and climate proofing: The Elbe draft RBMP briefly summarizes the challenges posed by climate change to water management. However, this has not clearly been reflected in river basin management. The draft RBMP includes a good practice example from Saxony on improved land use to reduce flood risk.

Agriculture: The Elbe draft RBMP includes a thorough assessment of the main pressures from agriculture but it is presented only at the RBD level and not for each water body. Regarding diffuse pollution, the draft RBMP states that mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages will be applied in all water bodies where this constitutes a significant pressure, but locations are not clear. In the Rhine RBD, the ambition and measures of the draft RBMP are vague and unclear on minimising nitrogen pollution, eutrophication, creating buffer zones along watercourses, especially in North Rhine Westphalia, and the lack of measures to protect small water bodies with groundwater-dependent habitats.

	Topic	DE Elbe	DE Rhine
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

Legend

RELEVANCE	LEVEL OF PERFORMANCE: high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

Table 18: Overview of the performance of the draft 2022-2027 RBMPs Rhine and Elbe (Germany) on key topics by indicator.

Economic instruments and budget adequacy: The Elbe draft RBMP only refers to public water supply and waste water treatment as water services relevant for cost recovery, and includes a general reference to water extraction and wastewater fees. For example, the State of Brandenburg (average annual precipitation <600mm) continues to de facto subsidize water abstractions for agricultural irrigation by exempting it from the state's water abstraction fee. Groundwater abstraction is charged at less than 1 Euro cent per cubic meter, equalling only 7% of the regular fee (0.00805 Euro/m³). Most strikingly, in times of continued drought, surface water abstraction was entirely exempt from the fee in 2018, eliminating the last economic incentive for its rational use. Environmental and resource costs are not quantified. The draft RBMP includes a budget estimation of almost €7 bn, with €4.4 bn assigned to the PoM and the rest for RBMPs after 2027. 50% of the budget is assigned to improve hydromorphology, 30% to waste water treatment and €0.7 bn to diffuse pollution. The estimated overall Rhine budget is €9.1 bn, but it lacks detail.

Country specific concerns also include:

Public participation: In the Rhine, active public involvement does not take place in the vast majority of the river basin. The planning procedure lacks transparency and does not encourage citizens to take part in consultations, e.g. in North-Rhine–Westphalia, roundtables for active involvement at the local/regional level were announced but did not take place. Furthermore, the summary does not allow for a full understanding of the challenges and measures in the Rhine. And, all 15 regional plans have to be checked to assess whether fish migration is properly considered within the whole basin. The current river basin management approach is far from adequate, resulting in the non-acceptance of measures.

Pollutants including mercury, biocides and pesticides

- The high level of pollution in the Elbe RBD is one of the main problems for the implementation of the quality requirements of the WFD. Despite the ban on deterioration, there are still direct and indirect discharges of heavy metals, industrial chemicals and other pollutants into the Elbe, its tributaries and groundwater bodies. In particular, the high loads of mercury and brominated diphenyl ethers (BDEs) are alarming. Less than 1% of rivers will therefore achieve good chemical status by 2027 (draft RBMP, p239). Annex A5-2 of the draft RBMP indicates that most water bodies are expected to achieve good chemical status by 2033 and others after 2045. This differing annual information on deadline extensions is incomprehensible, especially since according to the German coordination body of the relevant federal and states' water authorities[28], good chemical status is not achievable until about 2100 due to atmospheric inputs of mercury.
- Deadline extensions are largely justified by "natural conditions." But, several conditions for claiming these time extensions are not met since reasons are not documented transparently. There is no further information in the documents on measures concerning hazardous substances planned for 2024-2027, on the expected duration of the deadline extension after 2027, and methodological information on the effectiveness of the measures. In general, according to article 4(4) WFD, the deadlines specified in article 4(1) WFD can only be extended if the status of the impaired water body does not deteriorate further. In order to claim deadline extensions due to natural conditions, active emission sources should have ceased at least within the deadlines applicable without extensions – by 2020 (article 4(1)a in connection with the OSPAR convention). By only referring to international agreements, the German states shirk their responsibility to implement the targets. It is not clear how the water authorities contribute to the achievement of these targets. For mercury, the reference to the coal phase-out law (draft RBMP, p.24) is not sufficient, since a complete phase-out is not planned before 2038.
- For pesticides and biocides, more transparent information is required on how the water authorities contribute to their reduction. Here, it is surprisingly stated that it is "of fundamental importance whether the use of a pesticide or biocide is already prohibited or whether an authorization still exists" (draft RBMP, p.171f.). Reference is also made to the Plant Protection Act and the national Action Plan for the sustainable use of pesticides, but it is not apparent how the implementation of the requirements will be achieved. The Elbe draft RBMP does not clarify which of the 260 biocides and 270 pesticides, that are in more than 40,000 products on the German market, are sold, applied and released. Water body information is not provided. Even for the few river specific or priority biocides like Cypermethrin, a public inventory or gap analysis is still outstanding. The draft RBMP contains no comprehensive measures to minimise pesticide input at source, especially for small water bodies (<10 km² basin size).

There are polluted water bodies for which specific measures are not established, for example within the Tide Elbe sub-basin, while for all others measures will not be implemented before 2027. Furthermore, there is no transparent management plan to protect Natura 2000 sites and groundwater ecosystems from biocides since there is no monitoring of vulnerable habitats close to piers (which are often at risk from contamination from biocides from motor boats) and a lack of criteria. Monitoring is also inadequate. No effective surface water environmental quality standards (EQS) and monitoring standards have been established for over 70% of approved pesticides and biocides. It remains unclear which substances and metabolites are considered for the relevant total groundwater quality standards. For almost 25% of substances EQS cannot be applied because the analytical methods are not sufficient.

FOR PESTICIDES AND BIOCIDES, MORE TRANSPARENT INFORMATION IS REQUIRED ON HOW THE WATER AUTHORITIES CONTRIBUTE TO THEIR REDUCTION.

28. Bund-Länder-Arbeitsgemeinschaft Wasser (LAWA), 2017.

ITALY

Two draft RBMPs were assessed in April 2021: Eastern Alps (ITA) and Southern Apennines (ITF). The Southern Apennines draft RBMP is unclear about exemptions that will be applied, except those applied to groundwater bodies affected by saline intrusion. No exemptions are planned under article 4(7), while in the Eastern Alps, this will be postponed to the next version of the RBMP after the consultation phase. The draft RBMP budget is not yet published for the Eastern Alps while €200 million has provisionally been allocated to the Southern Apennines. However, none of the measures appear to address the WFD environmental objectives. The draft RBMPs do not provide summary information on the implementation of the second RBMPs. No assessment of the effectiveness of the previous RBMP measures is provided. Three of the selected topics are considered as main challenges, and the findings of the assessment are detailed below. Most of the topics assessed are also considered as Significant Water Management Issues:

Hydropower: Hydromorphological pressures are well described in the Eastern Alps draft RBMP, both at water body level, and connected to the energy sector. However, the inventory of planned new hydropower plants is largely incomplete. The draft RBMP only refers to the implementation of national and district regulations on ecological flows for hydropower plants. No measures are included for the refurbishment or decommissioning of older outdated hydropower plants.

River and wetland restoration: Both draft RBMPs include a complete list of nature-protected areas, but no reference to their conservation status or to the necessary measures to be implemented in corresponding water bodies. However, this is planned for the end of 2021 for the Eastern Alps. No quantitative targets are set for ecosystem restoration, or clear prioritisation criteria fixed. No references are made to nature-based solutions or natural water retention measures, although in both plans, opportunities exist for win-win measures named in the Flood Risk Management Plan, and within the planned sediment management programme. However, the plan for the Eastern Alps also foresees numerous traditional flood protection measures in the Veneto region, which will deteriorate water bodies.

Flood management and climate proofing: The draft RBMPs do not include a sensitivity analysis of the proposed measures under changing climatic conditions and they provide very little evidence for synergies with the Floods Directive. Considerations have not been made on how land-use changes can mitigate flood risks. Conventional grey flood protection measures are included as measures to fulfil WFD goals, despite their potential negative effects on the ecological status of concerned water bodies.

Economic instruments and budget adequacy: In the Eastern Alps draft RBMP, no clear information is provided regarding cost recovery, whether it covers environmental and resource costs, or exemptions. No budget has yet been provided for the PoM in the draft RBMP.

		IT	
	Topic	S.Apenn.	E.Alps
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

Legend	LEVEL OF PERFORMANCE				
RELEVANCE	high	good	moderate	poor	N/A
Not applicable or relevant for the RBD					
This problem/ challenge has already been solved in the second RBMP					
One of the many problems/challenges in this RBD					
One of the Significant Water Management Issues (SWMI)					
The main problem/challenge in this RBD					

Table 19: Overview of the performance of the draft 2022-2027 RBMPs Eastern Alps and Southern Apennines (Italy) on key topics by indicator.

THE NETHERLANDS

The draft RBMP for the Rhine[29] was assessed in April 2021. The Netherlands is one of the EU countries that makes most extensive use of exemptions. Overall, only about 25% of all water bodies were in good chemical condition in 2020. For ecological condition, (including 'river basin specific' chemical substances), the figure is less than 1% (figure 14). Nearly all 515 water bodies are subject to article 4(4) exemptions, with many of them referring briefly to 'disproportionality of costs' and 'technical infeasibility'. Exemptions due to 'natural circumstances' have vastly increased from 297 to 396 between the previous and draft RBMPs. No exemptions are claimed under article 4(5) less stringent objectives or 4(7) new sustainable developments, but article 4(6) exemptions have increased alarmingly and are used in an abusive way. This is based on the improper use of 'drought' as a 'natural circumstance' while the main pressure lies in water scarcity caused by insufficient water retention measures and excessive discharges and abstractions which aggravate the effects of droughts. In the water body factsheets which are part of the draft RBMP, information is provided on measures from the previous PoM which are not yet implemented. The text of the draft RBMP summarizes this (p. 56 of the draft RBMP), showing that 28% of the PoM has not been carried out by 2021 (unweighted average). The main challenges in the RBD are detailed below:

River and wetland restoration: The draft RBMP only contains very short summarizing phrases about protected areas. Brief references and "tick boxes" in factsheets are provided in Nature 2000 Management Plans but without explaining the relationship with the RBMP. In the factsheets, the relationship between groundwater bodies and protected terrestrial ecosystems is much better and explicitly outlined. 208 assessments and research projects are planned to provide further evidence of the benefits of ecosystem restoration in surface water bodies including outside protected nature reserves. Quantitative targets are set for restoration and explained in factsheets, but for major rivers – the Rhine, Waal, Maas, Haringvliet, Volkerkak, Oosterschelde, etc. –, the Natura 2000 plans still contain gaps for example on hydromorphological conditions and dynamics, resulting in a poor uptake in the draft RBMP. Despite the vast experience and case studies (e.g. the Room for the River programme) in the Netherlands, nature-based solutions and natural water retention measures are not promoted by the plan, which only contains a generic statement on "climate buffers".

29. Reference: NLRN

Water allocation and abstraction control: The national droughts policy allocates surface water use to different users in periods of water shortage (with drinking water and 'vulnerable' nature of highest priority) and it is one of the 'general measures' of the PoM. Permits are required for significant water abstractions and they are recorded, however they are heavily underestimated for groundwater, and no quantified information at all is available about surface water abstractions for agriculture. A national effort for better abstraction registration and control has recently been announced, but its implementation, beyond the policy roundtable on droughts, remains unclear. At present, agricultural (ground and surface) water abstractions are free from tax or levies in all river basin districts, one of the reasons why farmers massively installed irrigation pumps in the dry years 2018-2020.

Flood and drought management and climate proofing: Strictly speaking the draft RBMP does not include a sensitivity analysis of the proposed measures under changing climatic conditions. One page in chapter 4.4 on 'climate change' briefly refers to the possible impact of climate change on water quality and water supply and demand. It disregards the impact climate change could have on achieving good status by 2027 and beyond. The draft Flood Risk Management Plan, published in parallel to the RBMP, refers to the risk analyses and sensitivity analyses of the Delta Programme concerning sea level rise and changes in precipitation patterns. The draft RBMP states that the implementation of the WFD and Floods Directive should align, and the PoM explicitly take into account flood-protection measures that can positively impact the ecological potential of HMWBs. The draft RBMP does not refer clearly to measures to address land use and its impact on flood protection.

Agriculture: The draft RBMP includes a robust assessment of the main pressures from agriculture but it is presented at RBD level. Water body factsheets are limited to "tick boxes" and they contain a general ex-ante assessment of whether supplementary measures are needed to achieve the environmental objectives. Diffuse pollution from nutrients and pesticides and the poor groundwater balance is primarily addressed by voluntary measures, involving just a few farmers with an uncertain and likely insufficient impact.

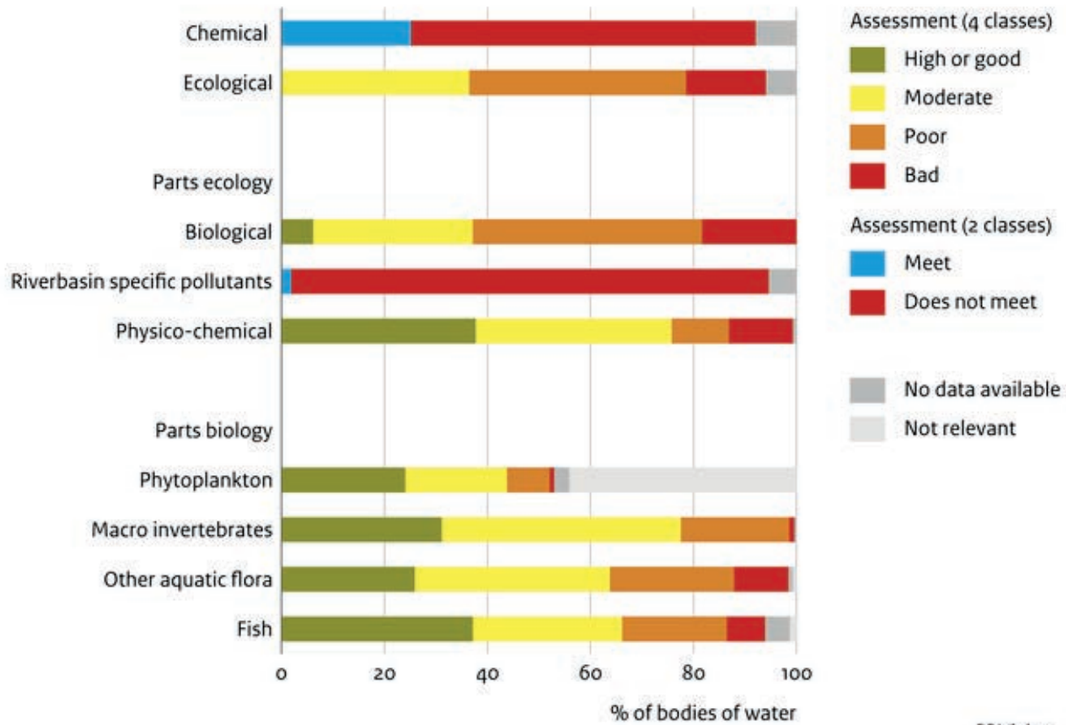
Economic instruments and budget adequacy: Overall data for the Netherlands indicate that the PoM for 2022-2027 will cost €1.2 bn, with 73% recovered from water users. However, it does not contain further details on the sector contributions, and inland professional and recreational shipping is exempt. Investments in the purchase and reconstruction of land towards ecological restoration are likely not included in the figures. Such investments are mostly covered from general taxes and subsidies so not recovered from users or polluters. Environmental costs are considered, although there are gaps such as excessive groundwater abstractions and pesticides. The distribution of the budget is unclear.

Assessment of water quality in 2027: The PoM will not allow the 2027 target to be reached. The draft RBMP does not present assessments per water body for all objectives and criteria at the same time ('one-out-all-out' principle). The draft RBMP and the referred National Quality Assessment[30] are not able to assess the percentage of water bodies in bad chemical status in 2027, but both state that this still will be the case concerning several substances in many water bodies. For individual biological groups (algae, macrofauna, aquatic plants, fish) and nutrients, it has been calculated that with the proposed PoM, 35-60% of the water bodies will score 'good' by 2027. With additional measures in the agricultural sector, this can increase to 40-70% for biology and 85% for nutrients. However, the Netherlands has not committed to this in the draft RBMP.

30. PBL Netherlands Environmental Assessment Agency, Quality Surface Water 2019, 2020.

OVERALL, ONLY 25% OF ALL WATER BODIES WERE IN GOOD CHEMICAL CONDITION IN 2020.

Figure 11: All quality elements for Dutch surface water bodies, judged with 2019 data.
Source: PBL Netherlands Environmental Assessment Agency, Quality Surface Water 2019, 2020.



Source: IHW (Waterboards, RWS); adapted by PBL

	Topic	NL Rhine
1	**Removal and adaptation of barriers**	
	1. Identification of the problem	
	2. Prioritisation	
	3. Cost-benefit analysis and monitoring plan	
	4. Ambition	
2	**Hydropower**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. Plans for refurbishment and decommissioning	
3	**Inland navigation**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. 'Working with nature'	
4	**Freshwater ecosystem protection and restoration and NBS**	
	1. Protected areas and their status	
	2. Prioritisation	
	3. Restoration targets	
	4. Nature-based solutions (NBS)	
	5. Natural Water Retention Measures (NWRM)	
	6. Sound financial mechanism	
5	**Water allocation and abstraction control**	
	1. Identification of significant water abstractions	
	2. Prospects of new water abstractions, related infrastructure and land uses	
	3. Review of abstraction permits	
	4. Abstraction control	
6a	**Drought management**	
	1. PoM "climate checks"	
	2. Drought management plans	
6b	**Flood management**	
	1. PoM "climate checks"	
	3. Link with the Floods Directive	
	4. Land use and flood management	
7	**Agriculture**	
	1. Assessment of pressures	
	2. Gap analysis and measures	
	3. Diffuse pollution	
8	**Coal mines (and combustion)**	
	1. Assessment of the problem	
	2. Priority hazardous substances	
	3. Climate change	
	4. Justification and exemptions	
	5. Cost recovery	
	6. Liabilities	
9	**Economic instruments and adequacy of budget**	
	1. Cost recovery calculation for sectors	
	2. Cost recovery rates and exemptions	
	3. Budget	
10	**Exemptions**	
	1. Number of exemptions	
	2. Gap analysis	
	3. Art. 4(4) and 4(5) exemption justifications	
	4. Article 4(6) exemption justifications	
	5. Article 4(7) exemption justifications	
11	**Review and update on the implementation of the previous RBMP**	
	1. Implementation of measures	
	2. Effectiveness of measures	

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 20: Overview of the performance of the draft 2022-2027 RBMP Rhine (Netherlands) on key topics by indicator.

Oxbow lake, Jeziorzany, in the Vistula basin © Justyna Choroś

POLAND NEW

The draft RBMPs for the Odra[31] and Vistula[32] were assessed in July 2021. The consultation was hampered by lack of access to background documents (see below), the fact that the Geographical Information System was not available, and that the new investments listed in the Programme of Measures were not assigned to specific water bodies.

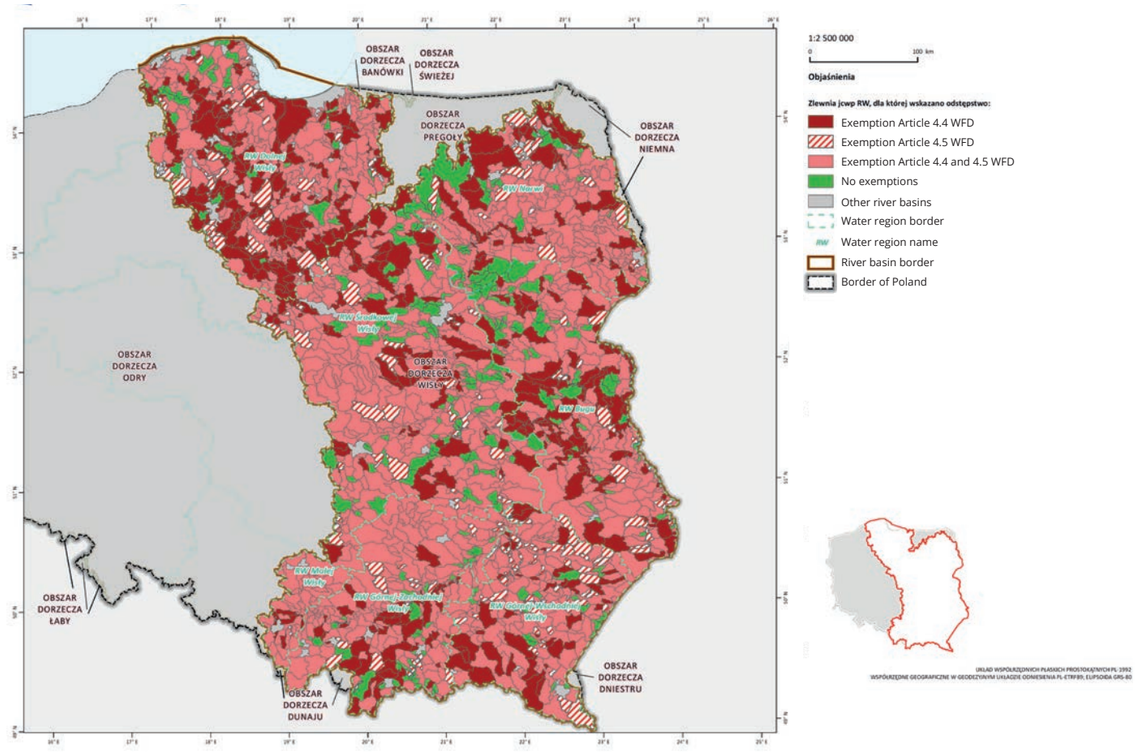
In the Odra RBD, in 2021, 93% of the river water bodies have not yet achieved good status, with 502 water bodies (29%) having deteriorated since 2015. Only 33 river water bodies (1.9%) have improved to good status, and 49 have retained such status. According to the plan, the causes are legislative changes in the thresholds or typology, improved monitoring, the lack of implementation and effectiveness of measures, and other changes in the river basin. In the Vistula RBD, the effectiveness of the measures of the previous plan (2016-2021) is assessed on a five-point scale, with five being the most effective. Most of the measures for surface waters are of level three, and for groundwater, of level two; the effectiveness of the measures is compared, but no conclusions are drawn for the draft RBMP (2022-2027). **Out of the previous PoM (2016-2021), 44% of the measures have been completed, and 29% not commenced yet.**

31. Reference: PL6000
32. Reference: PL2000

The draft RBMPs reflect a massive resort to exemptions to the Water Framework Directive's environmental objectives as visible on figure 12: 69% (Odra)/70% (Vistula) of water bodies are covered by exemptions, under Art.4(4) (50%/70%), Art.4(5) (a large number of water bodies apply both types) - and Art.4(7). Article 4(7) exemptions affect a significant total of 210 water bodies in the Odra and 270 in the Vistula (approximately 10%), mostly by new hydromorphological changes due to flood management, farming, land melioration, mining, inland navigation, and occasionally, water retention. The quality of justifications is very different, with some of them not updated since the last RBMP, many being generic for a type of intervention, and others being water-body-specific and with recent data; a word count for Art.4(7) exemptions provides an average of 400 words/water body in the Vistula draft RBMP, which prevents proper justification.

IN THE ODRA RBD, 93% OF THE RIVER WATER BODIES HAVE NOT ACHIEVED GOOD STATUS IN 2021. 502 WATER BODIES (29%) HAVE DETERIORATED SINCE 2015.

Figure 12: Location of river surface water bodies for which derogations from art. 4.4 and 4.5 of the WFD were granted in the Vistula and Odra RBMPs. Source: Odra draft RBMP, Annex 38 and Vistula draft RBMP, Annex 38.




The Odra River border meanders © Ewa Leś

Regarding cost recovery, the Vistula and Odra draft RBMPs include urban, industry, and agriculture in the economic analysis of water use but not hydropower, although several dams, including the large Włocławek and Żarnowiec dams, are located in the Vistula basin. In the sectors covered, costs are underestimated. They are based on the charges for water use combined with environmental costs, which are estimated through a flat rate of willingness to pay for improving water status (€33/person/year) and some additions (including land reclamation for agriculture and water conservation costs for industry). There are several gaps in the explanation of the applied methodology, e.g. regarding the application of the flat rate. The cost recovery rate for the agricultural sector is only 19.5%, and water drainages by coal mines are exempt from water use charges. **No funding source is identified for two-thirds of the proposed measures.**

The main challenges in the RBDs are detailed below:

Removal and adaptation of barriers: Though Odra and Vistula draft RBMPs take stock of the barriers on the surface water bodies, the barriers are not explicitly identified in the plans. There is no clear indication that all barriers have been identified including their overall number and individual details. Both draft RBMPs define mainly actions related to the adaptation of barriers. Out of the 807 planned actions in the Odra draft RBMP, only 30 relate to barrier removal, and this ratio is even lower in the Vistula draft RBMP, with just five barrier removal actions out of 886. According to the environmental objectives, 969 river water bodies in the Odra and 1383 in the Vistula river basin district may require an improvement of longitudinal connectivity. However, draft RBMPs envisage actions only in 221 river water bodies in the Odra and 263 in the Vistula river basin district. For some, these actions consist of analyses of the possibility of change, rather than the implementation of corrective actions.

Inland navigation: The Odra draft RBMP makes an explicit reference to shipping as a water-user and to the transport and waterway development strategies, including the prioritisation of routes such as the E-30 (Odra) or ES-70 (Odra-Vistula). The information so far is rather generic, and not water-body specific; however, impact mitigation measures and a partial Art.4(7) exemption justification is included. It is announced that further specific assessments and documents would be developed. Regarding the possible pressures due to shipping activities and waterways, pollution is mentioned in the plan, but hydromorphological changes are not, which is a significant omission.

As part of the E-40 waterway, the Government of Poland is planning several dams for inland navigation and hydropower, along the main course of the Vistula. However, the Vistula draft RBMP refers to inland navigation only indirectly and does not refer to new hydropower at all.

Freshwater ecosystem protection and restoration and NBS: The status of the protected areas is included in the Vistula draft RBMP, and there is a reference to the requirements from the Natura 2000 management plans, complemented by quantitative or qualitative targets for each of the major types of water bodies (rivers, lakes, etc.). However, the plan does not establish clear restoration targets for freshwater ecosystems. The planned restoration measures do not fully comply with the identified need to reduce and eliminate hydromorphological pressures. The scale of restoration needs includes 1119 river water bodies in the Odra and 1601 in the Vistula river basin district.

However, actions are planned for only 57% of the river water bodies which need them in the Odra and for 59% in the Vistula. Out of these, we believe that only technical measures (planned in 398 river water bodies of the Odra - 31%, and 431 river water bodies in the Vistula - 25%) are likely to improve the condition of rivers. Conversely, non-technical measures (relating to 280 river water bodies of the Odra and 544 of the Vistula) are not expected to improve the hydromorphological status of waters in the future planning period. Plans do not include the implementation of nature-based solutions or natural water retention measures.

Drought management: The Vistula draft RBMP states that the climate will not differ significantly in the next planning cycle (2021-2027), and a generic climate-proofing check is included in the assessment of the effectiveness of the measures.

The climate proofing of the measures is assessed in the effectiveness of the measures (part of the cost-effectiveness): see 11.2 in table 21. The measures are scored on a scale of 1-3. There is a separate drought management plan, including measures at the river basin level. There are no indicators of the severity levels of droughts, either in the draft RBMP or in the drought management plan, and no link to the water body status. However, the plan includes some measures that could prevent the deterioration of water body status during droughts such as promoting water reuse and temporary restrictions thereon. The other measures, such as the construction of retention reservoirs, the construction, and reconstruction of wells and pipelines to transfer water to areas affected by hydrological drought, ensure additional water supply to users.

Transparency and public consultation: The Vistula draft RBMP includes in Chapter 19 a review of key documents (programmes, management plans) which are relevant to the plan. There is however very limited information on how exactly the measures from these documents have been included in the Programme of Measures.

Based on the experience of the Polish Society for the Protection of Birds, one of the key documents, the Wisła River Waterway Development Program (Program Rozwoju Drogi Wodnej Rzeki Wisły), cited in Chapter 19 is still not available to the general public (according to the schedule, it should be completed in the first quarter of 2021). Second, the National Shipping Program 2030 (Krajowy Program Żeglugowy 2030) has not yet been subject to public consultations. Additionally, the analyses of anthropogenic pressures (Analiza znaczących oddziaływań antropogenicznych) are publicly available, but they have to be requested under national law, which makes their access difficult.

The result is untransparent decision-making. The public consultation of the draft RBMP relies on documents which are not easily available to the general public. It is not clear how conflicting objectives and measures were dealt with.

	Topic	PL Odra	PL Vistula
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

Legend		LEVEL OF PERFORMANCE high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 21: Overview of the performance of the draft 2022-2027 RBMPs Odra and Vistula (Poland) on key topics by indicator.

Jiu River in the Jiu gorge, (c)Calin Dejeu

ROMANIA NEW

The draft RBMPs for the Danube River, Danube Delta, Dobrogea, and Coastal Waters (DDDC) and Jiu sub-basins of the Danube were assessed in July 2021. **Out of the previous RBMP (2016-2021) of the DDDC sub-basin, only 19% of the measures have been implemented**, and 70% of the water bodies are in good status; slow progress towards environmental objectives is justified due to natural causes and technical issues, without analysing the effectiveness of the different measures proposed under the previous plans. Of the water bodies, 28.57% are covered by exemptions, primarily under Art.4(4); and to one water body, an Art.4(6) exemption is applied because of the severe drought in 2020, without a proper justification. Justification is also considered poor for the two water bodies under Art.4(7). In the Jiu draft RBMP, more than half the water bodies are covered by exemptions.

The main challenges in the RBDs are detailed below:

Removal and adaptation of barriers: In the DDDC draft RBMP, 307 potentially significant hydromorphological pressures like dams, weirs for flood risk mitigation, etc. are identified, without providing detailed information, and a catalogue of mitigation measures is presented, though without a clear indication of whether any such measure will be implemented in the upcoming planning cycle. In the Jiu draft RBMP, 19 water bodies are significantly affected by pressures from barriers, and three measures (e.g., fish by-passes) are envisaged to improve the longitudinal connectivity, though without clear criteria or cost-benefit assessments.
The implementation of measures to ensure ecological flows in hydropower facilities is delayed, due to the pending finalisation of technical studies by Hidroelectrica S.A. The Jiu draft RBMPs refer to the modernisation of dams, but it is unclear what this modernisation means and how it will contribute to integrated water management. Projects like the Acumularea Valea de Pesti, presented as modernisation projects, involve regulation of the Western Jiu, with significant impacts on hydromorphology and ecosystems.

Hydropower: In the DDDC draft RBMP, hydromorphological pressures are identified for each water body, including those from hydropower (Iron Gate), which has diminished its production potential by one-third since 1990, due to the new environmental protection legislation. The draft plan states explicitly that new micro-hydropower plants will not benefit from state subsidies until 2030; no new plants are envisaged in the area. The draft plan does not refer to the refurbishment of old hydropower installations. In the Jiu draft RBMP, two hydropower developments (AHE Jiu-Valea Sadului and Cerna Motru Tismana

	Topic	RO DDDC	RO Jiu
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

Hydrotechnical Energy Complex) are mentioned, without providing proper justifications for the Art.4(7) exemptions. Further, the case of the Jiu Bumbesti-Livezeni hydropower construction is mentioned as a project to be implemented, although this case is *sub judice*, due to the non-fulfillment of legal environmental obligations, *inter alia*.

Inland navigation: As waterways, the navigable Danube and Bega canal are identified, and their effects on the stability of the riverbed, fauna and flora referred to, with a general statement of mitigation measures being applied. The inland navigation projects FAST Danube and the restoration of the bifurcation area of the Bala arm to improve navigation conditions and environmental protection along the 200 km between Călărași and Brăila are mentioned, with both projects currently being assessed under the EIA procedure. A 'working with nature' approach to navigation is not mentioned in the draft RBMP, except as mitigation measures.

Freshwater ecosystem protection and restoration, and NBS: Chapter 5 of the DDDC draft RBMP lists the 18 protected areas for habitats and species where water is an important factor and an Annex presents the interdependence of groundwater bodies with terrestrial and aquatic ecosystems, including Natura 2000 sites; however, no water requirements or additional objectives of the protected areas have been identified. Only two out of the 103 measures to reduce the effects of significant pressures can be assessed as NBS, referring to the flood risk mitigation by restoring the Danube floodplain and tributaries (Danube Floodplain Project) and the restoration and renaturation of the bifurcation area of the Bala branch to ensure navigation conditions and environmental protection of the Danube. Natural Water Retention Measures are not properly included in the draft RBMP; in the Jiu draft RBMP, a major focus on grey flood defense measures remains.

Legend		LEVEL OF PERFORMANCE high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 22: Overview of the performance of the draft 2022-2027 RBMPs DDDC and Jiu on key topics by indicator.

Obsolete SHPP on Handlovka River with non-functional fish pass. © Miroslav Ocadlik

SLOVAKIA

The draft RBMPs for the Danube[33] and the Vistula[34] (Dunajec & Poprad sub-basins) were assessed in April 2021. Their contents and approaches are very similar, allowing the findings to be presented together. Overall, the draft RBMPs are poor and unambitious on achieving the good status objective, as 24% of water bodies in the Danube and 19% in the Vistula are exempt. The draft RBMPs do not include an inventory of planned development projects relevant to article 4(7) exemptions; and the pre-assessments included in the plans do not address cumulative effect or impacts on biological quality elements. Since 2018, no update has been provided regarding the implementation of measures or their effectiveness under the previous RBMP's PoM. Five of the selected topics are considered in the draft RBMP as Significant Water Management Issues, and the main findings of the assessment are detailed below:

Removal and adaptation of barriers: The draft RBMPs include a map and a list with location information of river barriers. However, the total listed number of barriers is underestimated. A prioritisation for barrier removal, developed by the State Nature Conservancy of the Slovak Republic, was considered insufficient and a re-elaboration will be the task of the Revitalisation and Fishery Expert Groups. Current monitoring focuses only on fish populations and excludes sediment flows. Partly based on the lack of cost-benefit assessments, the majority of measures target the installation of fish ladders (although some are missing or not operational, as shown by figure 15), and only very small barriers are planned to be removed.

33. Reference: SK40000
34. Reference: SK30000

PROTECTED FRESHWATER ECOSYSTEMS ARE LISTED IN THE DRAFT RBMPS FOR THE DANUBE AND THE VISTULA IN SLOVAKIA, BUT THERE IS NO DEFINITION OF THE WATER QUANTITY AND QUALITY REQUIREMENTS NEEDED TO ACHIEVE GOOD STATUS.

Figure 13: Small hydropower plant Hronska Dubrava built in 2011 on the Hron river. Although the fish pass was part of the construction, it is not operational. The operation of environmental measures is insufficiently dealt with.

River and wetland restoration: Protected freshwater ecosystems are listed in the draft RBMP, but there is no definition of the water quantity and quality requirements needed to achieve good status. A restoration priority list is established based on clear criteria, but not sufficiently incorporated into the PoM, and there is no clear statement in the draft RBMP on the area or number of ecosystems which will be restored. Only very generic references are made to nature-based solutions and natural water retention measures in the context of flood mitigation; their uptake remains unclear. The budget for freshwater ecosystem restoration is not specified.

Water allocation and abstraction control: All significant water abstractions are identified in the draft RBMP, as well as a list of all planned infrastructure impacting ground or surface water flow regimes. However, impact assessments are missing. The information about abstraction control measures is unclear and not specific.

Drought and flood management and climate proofing: The draft RBMP addresses drought management; however, there is only a recommendation for further assessment of ecological flows. On flood management, the description of objectives and requirements, and possible synergies between the RBMP and the Flood Risk Management Plan, are vague.

Economic instruments and budget adequacy: Cost recovery information does not follow a clear methodology and is only provided for sewerage and water treatment, water supply and hydropower. It does not address flood protection, navigation, irrigation and other water abstractions. The figures provided in the draft RBMP refer to remediation infrastructure (98% of costs recovered), water management services (84%) and hydropower (77%). Exemptions to cost recovery are unclear, and not properly justified. The total PoM budget is €1.7 bn, with little detail provided.

		SK	
	Topic	Danube	Vistula
1	**Removal and adaptation of barriers**		
	1. Identification of the problem		
	2. Prioritisation		
	3. Cost-benefit analysis and monitoring plan		
	4. Ambition		
2	**Hydropower**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. Plans for refurbishment and decommissioning		
3	**Inland navigation**		
	1. Pressures and sectors		
	2. Inventory of planned projects		
	3. Justification and exemptions		
	4. Criteria and thresholds		
	5. 'Working with nature'		
4	**Freshwater ecosystem protection and restoration and NBS**		
	1. Protected areas and their status		
	2. Prioritisation		
	3. Restoration targets		
	4. Nature-based solutions (NBS)		
	5. Natural Water Retention Measures (NWRM)		
	6. Sound financial mechanism		
5	**Water allocation and abstraction control**		
	1. Identification of significant water abstractions		
	2. Prospects of new water abstractions, related infrastructure and land uses		
	3. Review of abstraction permits		
	4. Abstraction control		
6a	**Drought management**		
	1. PoM "climate checks"		
	2. Drought management plans		
6b	**Flood management**		
	1. PoM "climate checks"		
	3. Link with the Floods Directive		
	4. Land use and flood management		
7	**Agriculture**		
	1. Assessment of pressures		
	2. Gap analysis and measures		
	3. Diffuse pollution		
8	**Coal mines (and combustion)**		
	1. Assessment of the problem		
	2. Priority hazardous substances		
	3. Climate change		
	4. Justification and exemptions		
	5. Cost recovery		
	6. Liabilities		
9	**Economic instruments and adequacy of budget**		
	1. Cost recovery calculation for sectors		
	2. Cost recovery rates and exemptions		
	3. Budget		
10	**Exemptions**		
	1. Number of exemptions		
	2. Gap analysis		
	3. Art. 4(4) and 4(5) exemption justifications		
	4. Article 4(6) exemption justifications		
	5. Article 4(7) exemption justifications		
11	**Review and update on the implementation of the previous RBMP**		
	1. Implementation of measures		
	2. Effectiveness of measures		

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 23: Overview of the performance of the draft 2022-2027 RBMPs Danube and Vistula (Slovakia) on key topics by indicator.

SPAIN NEW

Area of the Guadalquivir estuary © Rafael Seiz, /WWF Spain

The draft RBMPs for the Duero[35], Ebro[36], Guadiana[37], and Guadalquivir[38] were assessed in July 2021, whilst the plan for the Tinto-Odiel-Piedras RBD[39] was not yet published and therefore could not be assessed.

Regarding exemptions, a large number is sought under Art.4(4) and Art.4(5), with lack of investment as the main cause, and presenting water body fiches, which list measures, but do not undertake a gap analysis; at least in the Ebro draft RBMP, the fiches are not always fully consistent. **In the Guadiana RBD, 85% of the groundwater bodies are subject to Art.4(4) and Art.4(5) exemptions, and in the Duero RBD 85% of the surface water bodies.** Art.4(6) exemptions have not been applied, and – compared to the previous plans –the number of Art.4(7) exemptions has been reduced significantly and affects fewer water bodies (Guadalquivir: 5; Duero: 5; Ebro: 2) than in the previous cycle, with a justification which is however insufficient in the case of Duero and Guadalquivir. The status of 58 water bodies (6%) in the Ebro RBD has deteriorated between 2015 and 2021, and the draft RBMP informs briefly about the causes but not about measures thereagainst and their effectiveness.

Overall, the level of implementation of the previous PoM (2016-2021) is low, with 4% finalised (Guadalquivir; 46% started); 20% implemented (Ebro), 78% not initiated (Guadiana), and 58% executed (Duero); summary information is provided, but no detailed assessment of the impact of the non-execution of measures on the status of individual water bodies. Detailed cost recovery calculations (65% of costs recovered in the Duero, 92% in the Guadalquivir, and 60-90% according to the sectors in the Ebro) are provided, and it is recognised that the resource costs need to be further studied. Exemptions to cost recovery are presented in the Guadalquivir draft plan, but not properly justified as required by WFD Art. 9 (4); none are applied to the Guadiana. The Duero draft RBMP argues that no exemptions are applied, but the plan includes an overview table listing the costs (approx. 400 million €/year) which have not been recovered from the urban and agricultural sectors.

35. Reference: ES020
36. Reference: ES091
37. Reference: ES040
38. Reference: ES050
39. Reference: ES064

The main challenges in the RBDs are detailed below:

Water allocation and abstraction control: The draft RBMPs describe the water abstractions including summary tables of the water demands for all sectors and management systems for 2021, 2027, and 2033 (Guadiana, Duero) and/or under an RCP 8.5 scenario for 2039 (Guadalquivir, Duero), including the likely reduction in water recharge, run-offs and thus, demands assumed. Some measures address over-allocation of water: The Guadalquivir draft RBMP refers to a climate adaptation plan to incentivise low consumption crops, low irrigation techniques, and review of water permits; since 2016, 225 water permits have been reviewed, and 1178 eliminated. Very positively, the Guadalquivir and the Duero River Basin Authorities have put in place an online information tool providing transparent information about all water permits, including abstraction points and volume, and associated irrigation areas. The Guadiana PoM includes the investment of 62 M€ for the re-acquisition of water rights, and schedules water rights control with earth observation data; the topic is also mentioned in the Duero draft RBMP but without detail. In the Ebro RBD, 4 new dams are under construction and new irrigation areas of 30,000 hectares are planned; however, the draft RBMP forecasts a minor decrease in the irrigation water demand by 2033 due to the efficiency of investments. Only 1.2 M€ are foreseen in the PoM to control water use permits, and it remains unclear how the water and sediment requirements of the Ebro delta will be met.

Agriculture: The main pressures are assessed for all water bodies individually, and supplementary measures included in the PoM, but the plan omits a gap analysis. The information in the Guadalquivir draft RBMP to tackle diffuse pollution is ambiguous and unspecific, whilst in Guadiana, specific mandatory and voluntary measures are listed; however, the budget remains aggregated and does not clarify the impact of the proposed measures. A very positive improvement in the Spanish plans is the more stringent status threshold for considering nitrate pollution of groundwater bodies adopted in 2020, which enables more proactive management, even if the uptake of the corresponding measures by the competent regional authorities remains uncertain.

Management and governance of the Guadalquivir estuary: Due to a lack of administrative coordination, the draft RBMP includes very few references to the lower part of the Guadalquivir. WWF considers the estuary to be profoundly altered by human activities and needs to recover good status to ensure the provision of ecosystem services, for biodiversity conservation and management of sea-level rise impacts. Integrated management is required, as also coordination of the actions of the different authorities and stakeholders of the lower Guadalquivir towards a resilient future, with the RBMP being a crucial tool to improve water quantity and quality, and hydromorphology of the estuary.

Nature-based solutions: A major challenge remains in incorporating nature-based solutions in water management, though important and positive steps are included in the draft RBMPs, primarily to address flood risks. For example, the Guadalquivir draft RBMP states, "… the actions incorporated in the PoM to address the hydromorphological pressures are oriented to nature-based solutions, to give surface water bodies their own natural space. The PoM also includes the decommissioning of grey infrastructure, as obsolete weirs and small dams that are interrupting river connectivity" and "… the land use of flood-prone areas, the recovery of meanders and natural river areas as well as the renaturalization of rivers are key elements". However, the budget of the PoM still prioritises channelisation, levees and other "grey infrastructures" with an allocation of €138 million, compared to the planned investment of €36.3 million in 25 measures to reduce hydromorphological pressures.

Legend		LEVEL OF PERFORMANCE				
		high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

		ES			
	Topic	Duero	Ebro	Guadalquivir	Guadiana
1	**Removal and adaptation of barriers**				
	1. Identification of the problem				
	2. Prioritisation				
	3. Cost-benefit analysis and monitoring plan				
	4. Ambition				
2	**Hydropower**				
	1. Pressures and sectors				
	2. Inventory of planned projects				
	3. Justification and exemptions				
	4. Criteria and thresholds				
	5. Plans for refurbishment and decommissioning				
3	**Inland navigation**				
	1. Pressures and sectors				
	2. Inventory of planned projects				
	3. Justification and exemptions				
	4. Criteria and thresholds				
	5. 'Working with nature'				
4	**Freshwater ecosystem protection and restoration and NBS**				
	1. Protected areas and their status				
	2. Prioritisation				
	3. Restoration targets				
	4. Nature-based solutions (NBS)				
	5. Natural Water Retention Measures (NWRM)				
	6. Sound financial mechanism				
5	**Water allocation and abstraction control**				
	1. Identification of significant water abstractions				
	2. Prospects of new water abstractions, related infrastructure and land uses				
	3. Review of abstraction permits				
	4. Abstraction control				
6a	**Drought management**				
	1. PoM "climate checks"				
	2. Drought management plans				
6b	**Flood management**				
	1. PoM "climate checks"				
	3. Link with the Floods Directive				
	4. Land use and flood management				
7	**Agriculture**				
	1. Assessment of pressures				
	2. Gap analysis and measures				
	3. Diffuse pollution				
8	**Coal mines (and combustion)**				
	1. Assessment of the problem				
	2. Priority hazardous substances				
	3. Climate change				
	4. Justification and exemptions				
	5. Cost recovery				
	6. Liabilities				
9	**Economic instruments and adequacy of budget**				
	1. Cost recovery calculation for sectors				
	2. Cost recovery rates and exemptions				
	3. Budget				
10	**Exemptions**				
	1. Number of exemptions				
	2. Gap analysis				
	3. Art. 4(4) and 4(5) exemption justifications				
	4. Article 4(6) exemption justifications				
	5. Article 4(7) exemption justifications				
11	**Review and update on the implementation of the previous RBMP**				
	1. Implementation of measures				
	2. Effectiveness of measures				

Table 24: Overview of the performance of the draft 2022-2027 RBMPs Duero, Ebro, Guadalquivir, Guadiana (Spain) on key topics by indicator.

INTERNATIONAL ODRA RIVER BASIN DISTRICT (GERMANY, POLAND, CZECH REPUBLIC)

The draft RBMP for the International Odra RBD[40] was assessed in April 2021. The plan includes numerous exemptions, especially article 4(4) time extensions, without detailed justification, and article 4(7) sustainable development referring to flood prevention, in areas where inland navigation infrastructure is also planned but not referred to in the draft RBMP. The draft RBMP does not provide clear and updated information on the implementation of the previous RBMP's PoM. The international Odra draft RBMP was released on time, and frequently refers to the Polish Odra draft RBMP which had not been published at the time of this assessment.

Removal and adaptation of barriers: The draft RBMP provides the number of barriers per country, without further detail. Morphological changes are described as a Significant Water Management Issue, but the solution presented to this problem is the expansion and maintenance of waterways, instead of the removal or adaptation of barriers. No criteria are presented to prioritize measures, neither are cost-benefit assessments suggested. The only option considered in the plan is to install fish ladders, with good practice examples such as the Malczyce barrage fish ladder in Poland (figure 16), which show clear limitations. No dam removal is planned.

Inland navigation: Large-scale inland navigation investments are planned for the Odra basin. However, the draft RBMP does not include any references to the authorization of inland navigation infrastructure projects, and article 4(7) exemptions only refer to flood prevention measures. Even more worrying, the draft RBMP refers to the construction and improvement of waterways as a measure to facilitate the connectivity of aquatic organisms. In the PoM no measures are planned to reduce inland navigation impacts.

River and wetland restoration: The draft RBMP includes a list and map of Natura 2000 protected areas, but does not consider the nature-protected areas according to national legislation. It also fails to provide details on the ecological

40. Reference: CZ_6000; DE6000; PL6000.

requirements of the areas. Nature-based solutions are not explicitly mentioned, and water retention is referred to in terms of construction investments, but not for natural water retention measures. The budget for any restoration measures is unclear, despite Poland's National Program for Surface Water Renaturation developed in 2020.

Drought management and climate proofing: References to climate change and planned research activities are included in the draft RBMP, as well as a mention of the Polish drought plan, based primarily on new reservoir construction and upgrades.

Coal mining: Lignite mines are recognised as an SWMI. However, the draft RBMP lacks data on how much water the sector abstracts. Location, impacts and previously taken measures regarding lignite mines are described in detail for the German and Czech part of the international RBD, but they are missing for Poland, even though most of the mining is located there. The draft RBMP mentions the current and future remediation of mines but does not provide related measures. The description of planned measures is very general and without specific categories (although they may be included in the upcoming national draft RBMPs), except for Germany which includes the "reduction of dispersed pollution from lignite mining" in the Lusatian Neisse area. Lignite mine drainage is largely exempt from fees and cost recovery in the Odra river basin.

Economic instruments and budget adequacy: The draft RBMP only addresses water abstraction and supply, and sewage treatment and discharge, as services. It does not present calculations of all financial, environmental and resource costs, and it does not detail cost recovery, even though it states that the costs for urban and industrial water services are fully recovered. It mentions the exemptions from fees for agriculture and fish farms but omits the fact that coal mining and the energy sector are largely exempted from fees for water services. In the draft RBMP, there is no information about the budget allocated to the measures.

Figure 14: Fish ladder at the Malczyce barrage presented as a good example. However, this is not an action taken to achieve good water status. It is a measure to mitigate the negative impact of new hydro-technical investment – the obligation to implement it results from article 4.7 of the Directive ("all practical steps have been taken to limit the adverse effects on the status of the water body"), not from article 11. No other mitigating measures in the environmental decision enabling the implementation of this construction have been implemented. Source: International Odra draft RBMP, page 100.

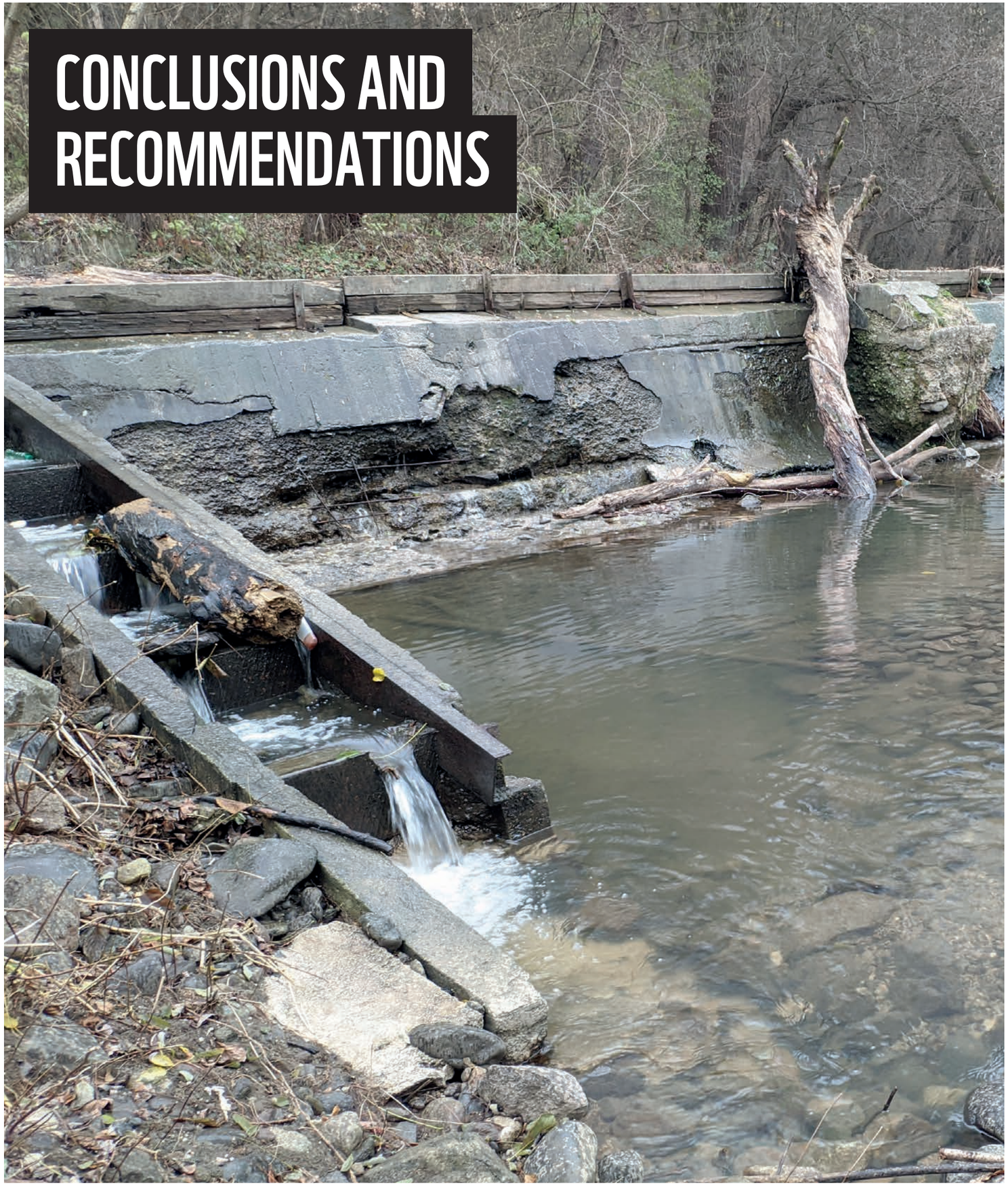
	Topic	INT Odra
1	**Removal and adaptation of barriers**	
	1. Identification of the problem	
	2. Prioritisation	
	3. Cost-benefit analysis and monitoring plan	
	4. Ambition	
2	**Hydropower**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. Plans for refurbishment and decommissioning	
3	**Inland navigation**	
	1. Pressures and sectors	
	2. Inventory of planned projects	
	3. Justification and exemptions	
	4. Criteria and thresholds	
	5. 'Working with nature'	
4	**Freshwater ecosystem protection and restoration and NBS**	
	1. Protected areas and their status	
	2. Prioritisation	
	3. Restoration targets	
	4. Nature-based solutions (NBS)	
	5. Natural Water Retention Measures (NWRM)	
	6. Sound financial mechanism	
5	**Water allocation and abstraction control**	
	1. Identification of significant water abstractions	
	2. Prospects of new water abstractions, related infrastructure and land uses	
	3. Review of abstraction permits	
	4. Abstraction control	
6a	**Drought management**	
	1. PoM "climate checks"	
	2. Drought management plans	
6b	**Flood management**	
	1. PoM "climate checks"	
	3. Link with the Floods Directive	
	4. Land use and flood management	
7	**Agriculture**	
	1. Assessment of pressures	
	2. Gap analysis and measures	
	3. Diffuse pollution	
8	**Coal mines (and combustion)**	
	1. Assessment of the problem	
	2. Priority hazardous substances	
	3. Climate change	
	4. Justification and exemptions	
	5. Cost recovery	
	6. Liabilities	
9	**Economic instruments and adequacy of budget**	
	1. Cost recovery calculation for sectors	
	2. Cost recovery rates and exemptions	
	3. Budget	
10	**Exemptions**	
	1. Number of exemptions	
	2. Gap analysis	
	3. Art. 4(4) and 4(5) exemption justifications	
	4. Article 4(6) exemption justifications	
	5. Article 4(7) exemption justifications	
11	**Review and update on the implementation of the previous RBMP**	
	1. Implementation of measures	
	2. Effectiveness of measures	

NO TARGETS ARE SET FOR RESTORING ECOSYSTEMS BY 2027, AND THE MEASURES ARE DESCRIBED AS "VERY EXPENSIVE AND COMPLICATED IN TERMS OF TECHNICAL APPROACH AND OWNERSHIP".

Legend		LEVEL OF PERFORMANCE high	good	moderate	poor	N/A
RELEVANCE	Not applicable or relevant for the RBD					
	This problem/ challenge has already been solved in the second RBMP					
	One of the many problems/challenges in this RBD					
	One of the Significant Water Management Issues (SWMI)					
	The main problem/challenge in this RBD					

Table 25: Overview of the performance of the draft 2022-2027 RBMP Odra (Germany, Poland, Czech Republic) on key topics by indicator.

CONCLUSIONS AND RECOMMENDATIONS



This report presents an assessment of 21 draft River Basin Management Plans (RBMPs) in eleven EU Member States (Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Poland, Romania, Slovakia and Spain) and one international River Basin District (Odra), covering 11 topics with 47 indicators.

Public consultations on many of the plans are still ongoing and by using the information included in this assessment, Member States can ensure that this is not just a "paper exercise", but a strategic effort to secure a resource which is vital to nature and people, and yet highly endangered. The RBMPs should raise their commitments to make significant progress towards the Water Framework Directive's objectives and halt freshwater biodiversity loss, putting an end to Europe's unsustainable water management.

However, **20 years after the adoption of the Directive, the assessed draft RBMPs reveal that the commitments to achieving the WFD objectives by 2027 have not notably increased, with a few exceptions**. This is despite the 2019 Fitness Check's conclusion that implementation, lack of funding and lack of policy integration were the major gaps in reaching the WFD's goals. For only less than one-fourth of the overall assessed indicator values, the performance of the assessed draft RBMPs is good or high, while it is poor for almost half of them.

The draft RBMPs display a general failure of EU Member States to integrate water protection and the WFD's environmental objectives for Europe's waters into agriculture, energy and infrastructure policies. These sectors are among the main drivers of environmental degradation and aquatic biodiversity loss affecting Europe's rivers, lakes and groundwater resources. Twenty years after the adoption of the WFD, EU Member States continue to direct enormous amounts of public funds in environmentally harmful directions. These adverse subsidies effectively counteract and prohibit the achievement of a good ecological, chemical and quantitative status of our waters.

Two of the assessed RBMPs – both in Finland – have been awarded 'high' or 'good' results in several topics. This reflects the efforts that were made during the previous WFD RBMPs. The Finnish RBMPs are followed by the draft RBMP for French Loire-Bretagne and Spanish Guadalquivir, which have achieved 'good' results in several topics and progress towards WFD objectives has been made. On the lower end, the assessed draft RBMPs for the German section of the Elbe, he Dutch section of the Rhine, the international Odra River Basin District (RBD), the two Italian RBDs and the German part of the international plan for the Rhine show multiple areas of moderate and poor performance. The main failings include information gaps, poor planning, and a lack of ambition for achieving WFD objectives.

Some improvements were found in the assessed RBMPs, including measures for dam removal and the adaption of barriers (which is also in line with the targets set by the EU 2030 Biodiversity Strategy), freshwater ecosystem protection and restoration, drought and flood management and addressing diffuse pollution from agriculture, in particular nitrates.

A major gap in the draft RBMPs is cost recovery and sufficient budget; several plans do not even have a gross budget. Deterioration of water body status is significant in the Polish Odra and the Spanish Ebro. The majority of the draft RBMPs still heavily relies on poorly justified exemptions, despite the fact that they should be exceptional given that the WFD came into force 20 years ago. Most of the draft RBMPs do not provide a summary and explanation of the shortcomings in the implementation of the previous RBMPs.

Almost all assessed draft RBMPs fail to properly address water allocation and abstraction control. Inventories and details on permit reviews for abstractions, and on controls are limited (although Slovakia and Spain are positive examples in this case) which is particularly worrying as climate change is likely to lead to larger water abstractions across the EU.

River basin authorities and EU Member States are currently finalising their RBMPs for 2022-2027 as required by theWater Framework Directive but major delays are observed.

Our recommendations to the relevant national and river basin authorities are:

1. **Dedicate a substantial budget to the Programme of Measures.** Protecting and restoring freshwater and the ecosystems it relies on must become an investment priority, and various financial streams, including EU and national funding, must be mobilised. Prioritising investments that are beneficial to water bodies will result in more sustainable and integrated measures that not only meet water needs in different sectors, but also improve sustainability and biodiversity in the aquatic environment. Programmes of Measures should be aligned with other financial plans for supporting biodiversity such as the Prioritised Action Frameworks under the Nature Directives as well as CAP Strategic Plans and National Resilience and Recovery Plans.

2. **Apply a cost recovery approach to all sectors** and ensure that the financial resources recovered are available for adequate water management services and for eliminating the related environmental and resource costs through all measures. Substantial measures should be taken to apply the cost recovery principle to the sectors responsible for the highest pressures on water bodies: agriculture, energy (hydropower, coal mining and combustion) and shipping.

3. **Phase out harmful national and European subsidies** including certain agricultural subsidies, state aid to the hydropower sector and energy taxation exemptions for hydropower. Consider increasing the use of mandatory measures and binding criteria to adapt other sectors' activities so that they contribute to water quality and biodiversity.

4. **Limit exemptions to exceptional cases**, and ensure that the evaluation of overriding public interest is done in a transparent and science-based manner, and assessed against the public interest of preserving or restoring freshwater ecosystems and their ecological functions. Make sure all planned infrastructure projects are included in the RBMP with an assessment of their possible effect on water body status and accompanied by measures to minimise or compensate for these effects.

5. **Align the RBMPs with national biodiversity ambitions** by using the RBMPs to plan for measures that restore free-flowing rivers (as required by the EU Biodiversity Strategy for 2030) and by dismantling obsolete weirs, dams and other structures in the river. This should be prioritised over fish ladders which are insufficient. Improve knowledge and measures that ensure that water management contributes to proper water and sediment flows, the conservation of high-quality surface waters and the protection of groundwater-dependent ecosystems and nature protection areas.

6. **Actively promote the uptake of nature-based solutions, natural water retention measures and nature climate buffers**, as alternatives and complements to traditional engineering solutions. Each RBMP should include a strategy for piloting and upscaling NBS projects so they become the preferential option in planning infrastructural measures.

Our recommendations to the European Commission:

1. **Actively encourage Member States** to make sure that the commitments made in the RBMPs are aligned with the ambition of the European Green Deal. It is crucial that the third RBMPs are aligned with the targets set by the EU Biodiversity Strategy for 2030, the Zero Pollution Action Plan, and the EU Climate Adaptation Strategy, and that opportunities are fully used in the National Recovery and Resilience Plans.

2. **Make use of enforcement powers** to ensure that more cases of non-compliance with the Water Framework Directive are open and investigated, and delays are shortened.

3. **Do not tolerate delays** or poor public participation processes in the finalisation of the RBMPs; with special attention to those Member States which have not yet started the 6-month consultation process of the draft RBMPs, such as Bulgaria, Croatia, Cyprus, Greece, Ireland, Portugal and Slovenia, some parts of Spain, and the UK.

4. **Phase-out harmful EU subsidies** to sectors and activities which counteract and prohibit the achievement of a good ecological, chemical and quantitative status of our waters through: the revision of the EU State Aid Guidelines, the CAP Strategic Plans, the National Recovery and Resiliency Plans, the revision of the Energy Taxation Directive and the EU Structural and Cohesion Fund Programmes.

5. **Mainstream the protection of freshwater ecosystems in sectoral policies** under the European Green Deal to complement and reinforce the Water Framework Directive. The upcoming EU Restoration Law should contain a legally-binding, ambitious free-flowing river restoration target.[41] Particular efforts are also needed to align transport (revision of the TEN-T guidelines, NAIADES III action plan), agriculture (CAP strategic plans) and energy (revision of the Renewable Energy Directive) policies with the objectives of the WFD.

41. We recommend increasing the current target for free-flowing rivers of at least 25,000 km to 15% of all rivers to be restored to a free-flowing state by 2030 through inter alia barrier removal and floodplain restoration. See Living Rivers Europe, Protecting and restoring river ecosystems to support biodiversity, March 2021.

ANNEX: ASSESSMENT TABLE TEMPLATE

REMOVAL AND ADAPTATION OF BARRIERS

Removal and adaptation of barriers	Classification. *Please select one option*			
Indicator 1. Identification of the problem	The draft RBMP takes stock of all the barriers on the surface water bodies and describes their negative impacts (e.g. flood increase) on the ecosystem, including downstream. The draft RBMP includes a list of barriers for which the usage permits expire and will be revised during the 2021-2027 period.	The draft RBMP takes stock of all the barriers on the surface water bodies including overall numbers, and details (locations, relation to status of water bodies) for each of them (maybe in an annex or complementary document to the draft RBMP).	The draft RBMP makes a general statement that there are barriers on the surface water bodies, but does not provide detailed information on their number and location and their effects on the status of water bodies. Maybe some (but not all) of the barriers are illustrated with information and maps/ pictures.	The draft RBMP does not refer to barriers on the surface water bodies as a problem in the RBD, though it should have been included in the draft RBMP.
2.Prioritisation	The draft RBMP identifies barriers that are a priority for removal, such as obsolete or decommissioned barriers, barriers in protected areas, barriers that do not serve a significant purpose, or barriers whose removal can free the longest portion of river.	The draft RBMP states that an assessment and prioritisation will be undertaken later, e.g., as part of the PoM, and mentions the criteria which will be used.	The draft RBMP states that an assessment and prioritisation will be undertaken later, e.g., as part of the PoM, but does not mention the criteria which will be used.	The draft RBMP does not refer to prioritising barriers for removal nor to criteria which will be applied to it.
3. Cost benefit analysis and monitoring plan	The draft RBMP includes a cost benefit analysis and a monitoring plan of dam removal, to assess the effects of dam removal on water status, biodiversity, and communities.	The draft RBMP includes a detailed measure clarifying that a cost analysis and a monitoring plan to assess the effects of dam removal on water status, biodiversity, and communities, will be undertaken during the implementation of the draft RBMP.	The draft RBMP states vaguely that a cost analysis and an (unspecified) monitoring plan of dam removal will be undertaken at a later stage.	The draft RBMP does not include references to a cost analysis and a monitoring plan of dam removal.
4. Ambition	The PoM includes the removal of at least 20% of the obsolete or decommissioned barriers in the RBD.	The PoM includes the removal of 2.5%-20% of the obsolete or decommissioned barriers in the RBD.	The PoM includes the removal of barriers, but less than 2.5% of them.	The PoM is unclear if the removal of barriers will be implemented or not: it may include the removal of barriers but does not specify which ones or how many.

HYDROPOWER

Hydropower	Classification. *Please select one option*			
Indicator 1. Pressures and sectors	The draft RBMP identifies the sectors responsible for each hydromorphological pressure on a water body, including, explicitly, the energy sector. Regarding multi-purpose dams, the pressures are qualitatively and quantitatively split between the sectors. Environmental and resource costs (e.g. evaporation losses) are calculated for the energy sector, including hydropower.	The draft RBMP identifies the sectors responsible for each significant hydro-morphological pressure on a water body, including, explicitly, the energy sector.	The draft RBMP refers only generically to the sectors responsible for hydromorphological pressures, including the energy sector.	The draft RBMP does not refer to the sectors responsible for hydro-morphological pressure on water bodies or does not refer to the energy sector.
2. Inventory	The draft RBMP includes an inventory of all the planned hydropower plants, including run-of-the-river and pumped storage plants and describes their expected impacts on the status of water bodies. OR, the draft RBMP mentions that no new hydropower plants are planned in the river basin, and the data/information held by NGOs corroborates this statement.	The draft RBMP includes an inventory of all the planned hydropower plants, but no information on their expected impacts.	The draft RBMP includes an overview of information on planned hydropower plants, but without specific data.	The draft RBMP does not refer to planned hydropower plants, although your organisation is aware of planned projects in the pipeline.
3. Justification and exemptions	No new hydropower plants are planned in the RBD.	Proper justification is given (ex-ante) for the construction of new planned hydropower plants, including pumped storage, in accordance with article 4(7).	No proper justification in accordance with article 4(7) is given for the construction of new planned hydropower plants, including pumped storage.	No justification at all is given for the new planned hydropower plants (i.e. blanket exemption for all small hydropower plants).
4. Criteria and thresholds	The draft RBMP completely excludes new hydropower plants in the RBD.	The draft RBMP provides stringent criteria for new hydropower plants, such as exclusion zones, or power generation thresholds.	The draft RBMP does not make a clear statement on specific criteria, thresholds, and procedures to assess new hydropower plants.	The draft RBMP does not refer to the process of new hydropower plants being authorised.
5. Plans for refurbishment and decommissioning	The draft RBMP gives priority to the refurbishment or decommissioning of older outdated plants over the construction of new hydropower plants, including pumped storage plants. The PoM includes such measures, associated with reviews of established ecological flows.	The draft RBMP refers to the refurbishment or decommissioning of older outdated plants but not as a priority over the construction of new hydropower plants. Specific measures are included in the PoM which will lead to improvements of water body status, e.g., associated with reviews of established ecological flows.	The draft RBMP refers to the refurbishment or decommissioning of older outdated plants but not as a priority over the construction of new hydropower plants. No specific measures are included in the PoM, or if so, no references are made to improvements of water body status.	The draft RBMP does not refer to the refurbishment or decommissioning of older outdated hydropower plants.

INLAND NAVIGATION

Navigation	Classification. *Please select one option*			
Indicator 1. Pressures and sectors	The draft RBMP identifies the sectors responsible for each hydromorphological pressure on a water body, including, explicitly, inland navigation. Environmental and resource costs are calculated for the navigation sector.	The draft RBMP identifies the sectors responsible for each significant hydromorphological pressure on a water body, including, explicitly, the inland navigation sector.	The draft RBMP refers only generically to the sectors responsible for hydromorphological pressures, including the inland navigation sector.	The draft RBMP does not refer to the sectors responsible for hydro-morphological pressure on water bodies or does not refer to the inland navigation sector.
2. Inventory	The draft RBMP includes an inventory of all the planned inland navigation projects and describes their expected impacts on the status of water bodies.	The draft RBMP includes an inventory of all the planned inland navigation projects, but no information on their expected impacts.	The draft RBMP includes an overview of information on planned inland navigation projects, but without specific data.	The draft RBMP does not refer to planned inland navigation projects while your organisation is aware of planned projects in the pipeline.
3. Justification and exemptions	No new inland navigation projects are planned in the RBD.	Proper justification is given for the construction of new inland navigation infrastructure projects in accordance with article 4(7).	No proper justification in accordance with article 4(7) is given for the construction of new inland navigation projects.	No justification at all is given for the new planned inland navigation infrastructure projects.
4. Criteria and thresholds	The draft RBMP completely excludes inland navigation infrastructure projects in the RBD	The PoM includes the removal of 2.5%-20% of the obsolete or decommissioned barriers in the RBD.	The PoM includes the removal of barriers, but less than 2.5% of them.	The PoM is unclear if the removal of barriers will be implemented or not: it may include the removal of barriers but does not specify which ones or how many.
5. Plans for inland navigation based upon a 'working with nature' approach, monitoring, adjusting and learning from the river through a step-by-step approach.	The draft RBMP gives priority to no new infrastructure for inland navigation and to removing older infrastructure. The PoM includes such measures, e.g., associated with reviews of established ecological flows or a 'working with nature' approach.	The draft RBMP refers to the removal of older infrastructure but not as a priority over the construction of new infrastructure for inland navigation. Specific measures are included in the PoM which will lead to improvements of water body status, e.g. associated with reviews of established ecological flows or a working with nature approach.	The draft RBMP refers to the removal of older infrastructure but not as a priority over the construction of new infrastructure for inland navigation. There are no measures in the PoM which will lead to improvements of water body status, e.g. associated with reviews of established ecological flows or a working with nature approach.	The draft RBMP does not refer to the removal of older outdated infrastructure for inland navigation and does not include measures to minimise impacts.

FRESHWATER ECOSYSTEM PROTECTION AND RESTORATION AND NATURE-BASED SOLUTIONS

Freshwater ecosystem	Classification. *Please select one option*			
Indicator 1. Protected areas and their status	The draft RBMP describes the status of each protected freshwater ecosystem including explicit references to the favourable conservation status of habitats or species and defines the water quantity and quality required for achieving good status (in coordination with competent authorities for biodiversity), identifying gaps with current management.	The draft RBMP provides an overall description of the status of protected freshwater ecosystems and defines the specific water quantities and qualities required for achieving good status (in coordination with competent authorities for biodiversity).	The draft RBMP provides an overall description of the status of protected freshwater ecosystems but does not define the water quantity and quality required for achieving good status.	The draft RBMP only includes a list of the protected areas, without referring to their status or requirements.
2. Prioritisation	The draft RBMP identifies freshwater ecosystems that would benefit from restoration, and establishes a priority list, based on clear criteria and reflected in the PoM.	The draft RBMP identifies freshwater ecosystems that would benefit from restoration and establishes a priority list for action.	The draft RBMP states that freshwater ecosystems would benefit from restoration and includes in the PoM a measure to further assess such actions, and to develop criteria and priorities.	The draft RBMP only generically refers to the restoration of freshwater ecosystems, without specific relevant measures.
3. Restoration targets	The draft RBMP indicates a target for 2027 (number of km or km^2) of freshwater ecosystems to be restored, addressing different ecosystem types (rivers, floodplains, lakes, estuaries…). Indicators such as quantity and dynamics of water flow, structure and substrates of riverbeds are defined in the monitoring of the draft RBMP.	The draft RBMP indicates a quantitative target for 2027 (number of km or km^2) of freshwater ecosystems to be restored but does not refer to the quality of the restoration.	The draft RBMP states that by 2027 freshwater ecosystems will be restored but does not include a quantitative target.	The draft RBMP does not refer to any restoration of freshwater ecosystems by 2027.
4. Nature-based solutions (NBS)	NBS are prioritised in infrastructure investments (>30% of infrastructure budget) in the PoM, in particular for (inland and coastal) flood risk management, and urban wastewater treatment.	The draft RBMP or PoM requests NBS to be considered as an alternative or complementary option for all relevant infrastructure investments, especially regarding flood risk protection. However, it remains unclear if NBS will be implemented in practice.	The building of grey infrastructure (dams, levees) for flood risk management and urban wastewater treatment remains the priority (>90%) for infrastructure investments. NBS are a "greenwashing" add-on in the draft RBMP, but not used as a relevant infrastructure investment.	The draft RBMP does not refer to NBS, or if so, it is only at a generic level without specifying the planned investments in NBS.
5. Natural Water Retention Measures (NWRM)	The draft RBMP makes clear statements that NWRM will be prioritised in flood risk management infrastructure investments (accounting for >30% of flood management infrastructure budget).	The draft RBMP requests NWRM to be considered as alternative or complementary options for all flood risk management infrastructure investments. However, it remains unclear if NWRM will be implemented in practice.	The building of grey infrastructure (dams, levees) for flood risk management remains the priority (>90%) for infrastructure investments. NWRM are a "greenwashing" add-on in the draft RBMP, but not used as a relevant infrastructure investment.	The draft RBMP does not refer to NWRM, or if so, it is only at a generic level without specifying the planned investments in NWRM.
6. Sound financial mechanisms	The draft RBMP applies the economic principles of cost recovery and polluter-pays to fund freshwater ecosystem restoration; thus, a significant part of the investments (>50%) is borne by water and land users.	The draft RBMP states that the economic principles of cost recovery and polluter-pays will be applied to fund freshwater ecosystem restoration; but only a minority of the investments (<50%). is borne by water and land users	The draft RBMP states that the economic principles of cost recovery and polluter-pays will be applied to fund freshwater ecosystem restoration; but the share of the cost of the investments by water and land users is unclear.	The draft RBMP does not refer to the economic principles of cost recovery and polluter-pays applied to fund river and wetland restoration.

WATER ALLOCATION AND ABSTRACTION CONTROL

Water allocation and abstraction control	Classification. *Please select one option*			
Indicator 1. Identification of significant water abstractions	All significant water abstractions are identified, including from surface and groundwater for urban, agriculture, industry and energy production, and other uses, including seasonal variation, total annual demand, consumption, return and loss of water in distribution systems. Illegal abstractions are also estimated, when these are relevant. Sufficient data to calculate the long-term annual average rate of groundwater recharge are available.	The draft RBMP identifies the sectors responsible for each significant hydromorphological pressure on a water body, including, explicitly, the inland navigation sector.	The draft RBMP refers only generically to the sectors responsible for hydromorphological pressures, including the inland navigation sector.	The draft RBMP does not refer to the sectors responsible for hydro-morphological pressure on water bodies or does not refer to the inland navigation sector.
2. Prospects of new water abstractions, related infrastructure and land uses	The draft RBMP includes a list of all planned water-consuming land-use changes (e.g. new irrigation developments) and infrastructure impacting ground or surface water flow regimes, including water transfers and reservoirs, and an assessment of how they impact on overall flow characteristics and water balances. In particular, the draft RBMP clarifies how circular economy and water reuse infrastructures will foster water allocation for nature.	The draft RBMP includes a list of all planned infrastructure impacting ground or surface water flow regimes, including water transfers and reservoirs, and an assessment of how they impact on overall flow characteristics and water balances.	The draft RBMP includes a list of all planned infrastructure impacting ground or surface water flow regimes, including water transfers and reservoirs, but no assessment of how they impact on overall flow characteristics and water balances. There is no clear information how new supply measures like desalinisation or water reuse will revert into water allocation for nature.	The draft RBMP does not include information on planned infrastructure impacting ground or surface water flow regimes; and if so, only refers to the additional water available for uses, and not to nature.
3. Review of abstraction permits	The draft RBMP is explicit about the review of abstraction permits, to assess the efficiency and relevance of permits considering foreseen water availability and the economic analysis of water use, including by water users abstracting beyond the permitted amounts. The draft RBMP includes a list or number of permits which will undergo the review process, with a described set of criteria. It explicitly includes all water permits which have benefitted in the previous years from EU-supported investments for irrigation modernization and water savings, when these affect water bodies in worse than good status.	The draft RBMP is explicit about the review of abstraction permits, to assess the efficiency and relevance of permits considering foreseen water availability and the economic analysis of water use. The draft RBMP includes an estimation about the water amount which could be reallocated but does not provide further information.	The draft RBMP refers to the review of abstraction permits as a measure to be carried out during the implementation of the PoM, but without specifying the expected number of permits, or the criteria which will be applied in the review.	The draft RBMP does not refer to the review of abstraction permits, or just lists it as one of the WFD measures without further references.
4. Abstraction control	The draft RBMP establishes a full regime of abstraction controls (surface and groundwater, impoundment and artificial recharge) with (user-paid) flow meters that transmit information in real-time to the competent authority. In addition, and where necessary, the PoM includes on-site controls and other methods (earth observation, drones) to detect and stop illegal water use.	The draft RBMP establishes a system of abstraction controls (surface and groundwater, impoundment and artificial recharge) which cover the majority (>90%) of water abstractions. It includes flow meters that transmit information in real-time to the competent authority. An ambitious performance target is set to control illegal water use (e.g. inspection within 5 days of any complaint).	The draft RBMP refers to a progressive system of ensuring abstraction controls, with the information being available only off-line or limited quality controls. The information contained in the draft RBMP is unclear about which performance targets (if any) will be reached by 2027.	The draft RBMP is not explicit about abstraction controls and lists them just as one of the basic measures to be implemented, without a specific budget allocation or target.

FLOOD AND DROUGHT MANAGEMENT AND CLIMATE PROOFING

Drought management	Classification. *Please select one option*			
Indicator 1. PoM "climate checks"	The draft RBMP includes a sensitivity analysis of the proposed measures based on a fully transparent methodology to evaluate long-term effectiveness and cost-efficiency under changing climatic conditions. The draft RBMP explicitly forecasts the economics of water supply and demand, checks the effectiveness of measures, selects preferably robust adaptation measures and maximises cross-sectoral benefits and minimises negative effects across sectors.	The draft RBMP includes a sensitivity analysis of the proposed measures based on a fully transparent methodology to evaluate long-term effectiveness and cost-efficiency under changing climatic conditions. The draft RBMP explicitly includes some but not all of the following: a forecast of the economics of water supply and demand, a check of the effectiveness of measures, the selection of preferably robust adaptation measures and the maximisation of cross-sectoral benefits minimising negative effects across sectors.	The draft RBMP includes a sensitivity analysis of the proposed measures based on a rather untransparent methodology to evaluate long-term effectiveness and cost-efficiency under changing climatic conditions. The draft RBMP is ambiguous about or includes several data and knowledge gaps regarding the forecast of the economics of water supply and demand, a check of the effectiveness of measures, the selection of robust adaptation measures and the maximisation of cross-sectoral benefits minimising negative effects across sectors.	The draft RBMP does not include a sensitivity analysis of the proposed measures under changing climatic conditions.
2. Drought management plans	In RBDs most affected by droughts over the past years, the draft RBMP includes: • indicators for the severity levels of droughts, • measures to be taken in each drought phase including to prevent deterioration of water status, • and an organisational framework to deal with drought. Preventive measures such as climate-proof water allocation are at the core of the plan. The draft RBMP clearly separates drought from man-made water scarcity (overexploitation).	In RBDs most affected by droughts over the past years, the draft RBMP includes: • indicators for the severity levels of droughts, • measures to be taken in each drought phase including to prevent deterioration of water status, • and an organisational framework to deal with drought. The plan includes a variety of measures, but climate-proof water allocation is not the most important. The draft RBMP clearly separates drought from man-made water scarcity (overexploitation).	In RBDs most affected by droughts over the past years, the draft RBMP includes: • indicators for the severity levels of droughts, • measures to be taken in each drought phase including to prevent deterioration of water status, • And/or an organisational framework to deal with drought, but the three components are not clearly linked to each other. The draft RBMP is unclear about the differences between droughts and man-made water scarcity (overexploitation), and so are the measures.	The draft RBMP does not refer to drought management; or only includes measures to ensure (additional) water supply to users, without measures to prevent deterioration of water status.
3. Link with the Floods Directive	The draft RBMP includes evidence that the objectives and requirements of the Floods Directive have been considered, and includes the costs and benefits of flood mitigation. The PoM contributes to mitigating the effects of floods.	The draft RBMP includes evidence that the objectives and requirements of the Floods Directive have been considered. The PoM only contributes to a limited extent to mitigating the effects of floods.	The draft RBMP provides little evidence that the objectives and requirements of the Floods Directive have been considered. The PoM only contributes to a limited extent to mitigating the effects of floods.	The draft RBMP provides no evidence that the objectives and requirements of the Floods Directive have been considered. The PoM does not contribute to mitigating the effects of floods.
4. Land use and flood management	The draft RBMP includes a clear and ambitious list of measures to address land-use and its impact on flood protection, e.g., to make farming compatible with floods or to remove other uses and infrastructure. It also includes clear indications e.g., from agricultural competent authorities on the funding of such measures (e.g., duration, amount, area which could be addressed).	The draft RBMP includes some measures to address land-use and its impact on flood protection, e.g. to make farming compatible with floods or to remove other uses and infrastructure.	The draft RBMP includes statements that land-use and its impact on flood protection will be addressed in the implementation, but either no specific measures are included in the PoM yet, or they only cover research and knowledge about the topic.	The draft RBMP does not refer clearly to measures to address land-use and its impact on flood protection.

AGRICULTURE

Agriculture	Classification. *Please select one option*			
Indicator 1. Assessment of pressures	The draft RBMP includes a robust assessment of the main pressures from agriculture on each water body, specifying the sector's activities contributions to the overall pressures.	The draft RBMP includes a robust assessment of the main pressures from agriculture on each water body.	The draft RBMP includes a robust assessment of the main pressures from agriculture but it is presented only at the RBD or other higher levels than for each water body.	The draft RBMP does not include an assessment of the main pressures from agriculture on water bodies.
2. Gap analysis and measures	The draft RBMP includes an ex-ante assessment of whether the basic measures will be enough to achieve the environmental objectives of the WFD for each water body. If they are not sufficient, the draft RBMP contains adequate supplementary measures.	The draft RBMP includes an ex-ante assessment of whether the basic measures will be enough to achieve the environmental objectives of the WFD, but this is not necessarily presented for each water body. If they are not sufficient, the draft RBMP contains adequate supplementary measures.	The draft RBMP includes a general ex-ante assessment of whether the basic measures will be enough to achieve the environmental objectives of the WFD.	The draft RBMP does not include an ex-ante assessment of whether the basic measures will be enough to achieve the environmental objectives of the WFD.
3. Diffuse pollution	The draft RBMP includes detailed mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages in all water bodies where this constitutes a significant pressure. This includes mandatory basic measures to control discharges from fields and protect water bodies, measures to limit fertiliser use in nitrate vulnerable zones (e.g. fees), the reduction in the use of fertilisers and in the phosphate content of animal feed, and agreements and contracts with farmers. The measures are aligned and where applicable funded by the CAP.	The draft RBMP includes detailed mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages in all water bodies where this constitutes a significant pressure. This includes some but not all of the following measures: mandatory basic measures to control discharges from fields and protect water bodies, measures to limit fertiliser use in nitrates vulnerable zones (e.g., fees), the reduction in the use of fertilisers and in the phosphate content of animal feed, and agreements and contracts with farmers.	The draft RBMP states that mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages will be applied in all water bodies where this constitutes a significant pressure but is not clear about the specific application area of effort of such measures.	The draft RBMP does not include a clear list of mandatory and voluntary measures to improve farming practices and prevent nitrogen pollution and other nutrient leakages.

COAL MINING AND COMBUSTION

Coal mining	Classification. *Please select one option*			
Indicator 1. Assessment of the problem	The draft RBMP mentions past, current and planned coal mines in the RBD and describes their negative impact (e.g., lowered groundwater levels, volumes of water used and discharged, sulphate pollution, redesignation of surface water bodies as Artificial or Heavily Modified) including the wider impacts associated with coal combustion (e.g. climate change, mercury emissions from stacks and impacts of cooling water abstraction and discharge on surface water ecological status).	The draft RBMP takes stock of all the coal mines, including numbers and details (location, relation to status of water bodies, water abstraction data) for each of them (maybe in an annex of complementary document to the draft RBMP).	The draft RBMP makes a general statement that coal mines present pressure on water bodies in the RBD but does not provide detailed information on their number and location and their effects on the status of water bodies.	The draft RBMP does not refer to coal mines and combustion as a problem in the RBD despite the fact that there are pressures from mining on water bodies in the RBD.
2. Priority hazardous substances	The draft RBMP includes detailed emission pathway inventories tracing back priority hazardous substances to the source (i.e. not stopping at diffuse pollution or atmospheric deposition) in all water bodies where this constitutes a significant pressure. The PoM includes measures to phase-out hazardous substances including strict implementation of Best Available Techniques (BAT) for mercury emission to air from coal combustion plants.	The draft RBMP includes detailed mandatory and voluntary measures to improve industrial emissions and prevent pollution of priority hazardous substances in all water bodies where this constitutes a significant pressure. The PoM includes measures to phase-out hazardous substances.	The draft RBMP states that mandatory and voluntary measures to improve industrial practices and prevent emissions of priority hazardous substances will be applied in all water bodies where this constitutes a significant pressure but is not clear about the specific application area of effort of such measures.	The draft RBMP does not include any emission pathway inventory for priority hazardous substances for water bodies where this constitutes a significant pressure.The PoM does not include any detailed measures to phase-out priority hazardous substances.
3. Climate change	The draft RBMP recognises climate change as a water management issue and recognises the impact (e.g. changed precipitation patterns, disturbed water balances, increased risk of drought). The draft RBMP includes a strategy for climate change mitigation and adaptation, including an assessment of the impacts of climate change and water scarcity, and a hydrological evaluation of water scarcity. Mitigation includes NBS, measures to limit excessive groundwater abstraction. No plans for new coal mines or extension of existing coal mines are proposed for the RBD.	The draft RBMP recognises climate change as a significant water management issue and includes measures for climate change adaptation and mitigation. No plans for new coal mines or extension of existing coal mines are proposed for the RBD.	The draft RBMP identifies changes in precipitation patterns, risk for drought, low water levels etc. as problems, but does not link them to climate change. Measures to address the issues of water balances and water retention do not include measures for climate change adaptation and mitigation. No clear statement about the future development of coal mines in the RBD are included in the draft RBMP.	The draft RBMP does not take stock of climate change as a water management issue despite considering that the RBDwill to be affected. There are plans for new coal/lignite mines and/or extension of existing mines in the RBD.

4. Justification and exemptions	No article 4.7 exemptions are granted to proposed new coal mines. Exemptions for water bodies impacted by closed and/or existing mines include detailed justifications for each water body.	No article 4.7 exemptions are granted to proposed new coal mines. The draft RBMP justifies exemptions using aricle.4(4) or 4(5). The draft RBMP continues to provide exemptions to water bodies affected by coal mines but does not provide any new exemptions under article 4(7) for new coal mines.	Proper justification is given in accordance with article 4(7) for new coal mine projects. Article.4(4) or 4(5) exemptions linked to coal mines and combustion are justified with limited detail or at a general RBD level, with measures to close the gap to achieving good status being described at general level only.	The draft RBMP grants article 4(7) exemptions for new coal mining projects. None or poor justification given for article.4(4) and 4(5) exemptions linked to coal mining and combustion. Disproportionate cost is given as justification while mine drainage is exempt from fees.
5. Cost recovery	The draft RBMP applies the economic principles of cost recovery and polluter-pays to the coal sector. Fees for mine drainage in line with other industrial water abstraction are imposed in the RBD, as well as fees for the full volume of water used by combustion plants.	The draft RBMP recognises the coal sector among the sectors that assert the biggest pressures on fresh water, if relevant for the RBD. A proper calculation of the financial, environmental and resource costs, in terms of externalities that society bears due to the use of water resources by the coal sector, is made.	The draft RBMP does not include the coal sector among the sectors covered by cost recovery despite the sector being a major water user in the RBD.	The draft RBMP does not take stock of the cost recovery and the polluter pays principle in regard to the coal sector. The sector can largely abstract water for free.
6. Liabilities	The draft RBMP takes stock of the future remediation of mining sites (e.g. restoration of groundwater levels) and includes estimates of impacts and costs as well as ensures the polluter pays principle (i.e. that adequate financial securities are set aside by operators). If data is lacking, the draft RBMP recommends national authorities to commission a study to analyse the cost of remediation/ restoration of decommissioned coal mines.	The draft RBMP takes stock of future remediation of mining sites and includes measures enforcing the polluter pays principle but lacks details (e.g. robust estimates on costs).	The draft RBMP acknowledges future remediation of mining sites (e.g. restoration of groundwater levels) but does not include any measures to address the problem).	The draft RBMP does not address remediation of post-mining landscapes (e.g. restoration of groundwater levels).

ECONOMIC INSTRUMENTS AND BUDGET ADEQUACY

Economic instruments and adequacy of budget	Classification. *Please select one option*			
Indicator 1. Cost recovery calculation for sectors	The draft RBMP includes a comprehensive list of the sectors contributing to the largest pressures on freshwater, which cost recovery should apply to, addressing at least urban, industry, agriculture, hydropower and navigation, if relevant. For each of the sectors, proper calculation of all financial, environmental and resource costs, in terms of externalities that society bears due to the use of water resources for economic development, is made. The calculation reflects the value of improved water status, water security and the provision of other water-related ecosystem services, and the non-financial benefits of good water status (e.g., bending the curve on aquatic biodiversity), and forms the basis for the definition of recovery rates.	The draft RBMP includes a comprehensive list of the sectors contributing to the largest pressures on freshwater, which cost recovery should apply to, addressing at least urban, industry, agriculture, hydropower and navigation, if relevant. For each of the sectors, proper calculation of all financial, environmental and resource costs, in terms of externalities that society bears due to the use of water resources for economic development, is made.	The draft RBMP includes a comprehensive list of the sectors contributing to the largest pressures on freshwater, which cost recovery should apply to, addressing at least urban, industry, agriculture, but does not explicitly include others such as hydropower and navigation, if relevant. For each of the sectors, a proper calculation of all financial, environmental and resource costs is made, but it remains unclear which specific aspects are covered by the calculations.	The draft RBMP provides cost recovery information for urban, industry and agriculture, but does not explicitly include others. For each of the sectors, financial costs are calculated, but neither environmental nor resource costs,nor their calculation criteria arenclear.
2. Cost recovery rates and exemptions	Cost recovery is above 85% for all sectors, including environmental and resource costs. There are only a few exemptions for specific uses (and not whole sectors), and these are properly justified, as established under article 9(4) WFD.	Cost recovery is above 70% for all sectors, including environmental and resource costs. All exemptions are properly justified, as established under article 9 (4) WFD.	Cost recovery is between 50 and 70% for all sectors, including environmental and resource costs. All exemptions are properly justified, as established under article 9 (4) WFD.	Cost recovery is varied for the sectors and includes one or more sectors which only recover less than 50%, including environmental and resource costs; or no information on the recovery of environmental and resource costs are provided. Exemptions to cost recovery are unclear, and not properly justified.
3. Budget	The draft RBMP allocates a detailed budget to all measures, justifies its adequacy to achieve the WFD objectives and explains the source of the funds. Budget constraints are not considered as a restriction to the PoM.	The draft RBMP allocates a detailed budget to all measures, justifying its adequacy to achieve the WFD objectives.	The draft RBMP allocates a detailed budget to all measures, without proper justification or explanation about the funding sources.	The draft RBMP does not include a budget OR only includes a generic budget, without proper justification or explanation about the funding sources.

EXEMPTIONS

Exemptions	Classification. *Please select one option*			
Indicator 1. Number of exemptions	The draft RBMP includes exemptions for less than 10% of the water bodies; consistently applied through all water categories. No or only a few exemptions are planned under article 4(7), affecting not more than 5 water bodies.	The draft RBMP includes exemptions for 10-20% of the water bodies across all water categories OR reduces the number of water bodies subject to exemptions by more than 50% compared to the second cycle RBMP. A limited number of exemptions are planned under article 4(7), affecting only 5-20 water bodies.	The draft RBMP includes exemptions for 20-30% of the water bodies or water bodies from one water category OR reduces the number of water bodies subject to exemptions by 30-50% compared to the previous RBMP. The draft RBMP relies significantly on article .4(7) exemptions, affecting more than 20 water bodies.	The draft RBMP includes exemptions for more than 30% of the water bodies OR reduces the number of water bodies subject to exemptions by less than 30% compared to the previous RBMP. The draft RBMP relies significantly on article 4(7) exemptions, affecting more than 50 water bodies.
2. Gap analysis	The draft RBMP includes a proper gap analysis for each water body to quantify action necessary to achieve WFD objectives. This includes extensive and documented information as a summary of the measures required to bring the bodies of water progressively to the required status by the extended deadline, the reasons for any significant delay in making these measures operational, and the expected timetable for their implementation.	The draft RBMP includes a gap analysis for each water body to quantify action necessary to achieve WFD objectives. This includes brief information as a summary of the measures required to bring the bodies of water progressively to the required status by the extended deadline, the reasons for any significant delay in making these measures operational, and the expected timetable for their implementation.	The draft RBMP includes a gap analysis only at a higher scale than for each water body to quantify action necessary to achieve WFD objectives. Some, but not all of the following elements are necessarily included: a summary of the measures required to bring the bodies of water progressively to the required status by the extended deadline, the reasons for any significant delay in making these measures operational, the expected timetable for their implementation.	The draft RBMP does not include a gap analysis to quantify action necessary to achieve WFD objectives.
3. Article 4(4) and 4(5) exemption justifications	The draft RBMP justifies the extension of the deadline in detail for each water body, with a concrete Programme of Measures drawn up analysing the gaps to achieving good status by the deadline. Reasons of natural conditions will be explained and justified in detail and made transparent in the draft RBMP for each water body. Reasons of technical feasibility and disproportionate costs are not used to justify an extension of the deadline beyond 2027.	The draft RBMP justifies the extension of the deadline or less stringent objectives in detail for each water body or groups of water bodies, with a concrete Programme of Measures drawn up analysing the gaps to achieving good status by the deadline or the less stringent objectives. Reasons of natural conditions, technical feasibility and disproportionate costs will be explained and justified in detail and made transparent in the draft RBMP for each water body or groups of water bodies.	The draft RBMP justifies the extension of the deadline or less stringent objectives either with limited detail or at a general RBD level, with measures to close the gap to achieving good status or the less stringent objectives being described at a general level only. Reasons of natural conditions, technical feasibility and disproportionate costs are generically described as arguments or at the RBD level, without specific water body references.	The draft RBMP includes no or only a poor justification of the exemptions, with a lack of detail.
4. Article 4(6) exemption justifications	The draft RBMP explicitly justifies the backwards-looking exemptions due to exceptional floods, prolonged droughts, and accidents which could not reasonably have been foreseen. Any justification does not refer to problems with overabstraction due to improper water allocation. Flood, drought or accident management plans are in place and include all practicable steps are taken to prevent further deterioration in status, as well as with the aim of restoring the body of water to its status prior to the effects.	The draft RBMP explicitly justifies the backwards-looking exemptions due to exceptional floods, prolonged droughts, and accidents which could not reasonably have been foreseen. Any justification does not refer to problems with overabstraction due to improper water allocation. Flood, drought or accident management plans are not in place.	The draft RBMP explicitly justifies the backwards-looking exemptions due to exceptional floods, prolonged droughts, and accidents which could not reasonably have been foreseen. However, the justification is ambiguous and includes aspects which should have been dealt with in the draft RBMP as management, such as the control of overabstraction.	The draft RBMP does not include a justification of exemptions due to exceptional floods, prolonged droughts, and accidents which could not reasonably have been foreseen. Alternatively, the draft RBMP might plan for such exemptions into the future.
5. Article 4(7) exemption justifications	If any exemption is applied, the draft RBMP includes an inventory of projects under development, including part, in particular, new hydropower, navigation, and flood protection, drainage and water abstraction projects. The article 4(7) test is applied to the exemptions and its justifications, including: • all steps taken to mitigate adverse impacts. • beneficial objectives cannot be achieved by other means. • overriding public interest or the benefits to human health, public safety or sustainable development outweighing negative effects, • consistency with other EU environmental regulation • (See CIS Guidance Document 36). The draft RBMP must still show how the objectives can be achieved despite the negative environmental effects of these projects.	The draft RBMP includes an inventory of projects under development, including, in particular, new hydropower, navigation, and flood protection, drainage and water abstraction projects. All conditions of the article.4(7) test are well applied, • The article 4(7) test is applied to the exemptions and its justifications, including all steps taken to mitigate adverse impact. • beneficial objectives cannot be achieved by other means. • overriding public interest or the benefits to human health, public safety or sustainable development outweighing negative effects, • consistency with other EU environmental regulation • (See CIS Guidance Document 36).	The draft RBMP includes a justification of the exemptions, but only some of the conditions of the article 4(7) test are fulfilled on the following aspects: • The article 4(7) test is applied to the exemptions and its justifications, including all steps taken to mitigate adverse impact • beneficial objectives cannot be achieved by other means. • overriding public interest or the benefits to human health, public safety or sustainable development outweighing negative effects, • consistency with other EU environmental regulation • (see CIS Guidance Document 36).	The draft RBMP includes no, or only a poor justification, of the exemptions, with a lack of detail and without following the good practice guidance.

REVIEW AND UPDATE ON THE IMPLEMENTATION OF THE PREVIOUS RBMPS

Review and update on the implementation of the previous RBMP	Classification. *Please select one option*			
Indicator 1. Implementation of measures	The draft RBMP states that at least 90% of the previous PoM dedicated to achieving the environmental objectives has been implemented so far. OR, that at least 95% of these measures have started, with more than 50% of these measures being finalised.	The draft RBMP states that at least 80% of the previous PoM dedicated to achieving the environmental objectives has been implemented so far. OR, that at least 85% of these measures have started, with more than 50% of these measures being finalised.	The draft RBMP states that less than 80% of the previous PoM dedicated to achieving the environmental objectives has been implemented so far. OR, that less than 85% of these measures have started. OR, less than 50% of these measures have been finalised.	The draft RBMP does not provide clear and updated information about the level of implementation of the previous PoM or its information is not clear for those measures only targeting the environmental objectives.
2. Effectiveness of measures	The draft RBMP includes an assessment of the effectiveness of past and ongoing measures, especially regarding the main pressures in the RBD. The assessment includes a comparison of voluntary and compulsory measures and of infrastructural and governance measures, if these are relevant. The draft RBMP includes recommendations for the design of the next PoM based on the lessons learnt and describes how these have been taken into consideration in the draft RBMP.	The draft RBMP includes an assessment of the effectiveness of past and ongoing measures, especially regarding the main pressures in the RBD, and comparing the effectiveness of different measures. The draft RBMP includes recommendations for the design of the next PoM.	The draft RBMP includes an assessment of the effectiveness of past and ongoing measures. The assessment does not compare the effectiveness of different measures.	The draft RBMP does not include an assessment of the effectiveness of past and ongoing measures.

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