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**European Overview -
Implementation of planned Programmes of Measures and New Priority Substances**

Accompanying the document

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

**on the implementation of the Water Framework Directive (2000/60/EC), the
Environmental Quality Standards Directive (2008/105/EC amended by Directive
2013/39/EU) and the Floods Directive (2007/60/EC)**

**Implementation of planned Programmes of Measures
New Priority Substances
Preliminary Flood Risk Assessments and Areas of Potential Significant Flood Risk**

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ACRONYMS AND DEFINITIONS

Acronym	Explanation
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CDR	Central Data Repository
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EQS Directive	Environmental Quality Standards Directive
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FD	Floods Directive
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GW	Groundwater
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KTM	Key Type of Measure
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MSFD	Marine Strategy Framework Directive
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NWRM	Natural Water Retention Measures
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PoM	Programme of Measures
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RBD	River Basin District
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RBMP	River Basin Management Plan
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SW	Surface Water
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WFD	Water Framework Directive
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POM TERMINOLOGY

Term	Description
KTMs reported	For each significant pressure type and chemical substance reported, predefined Key Types of Measure (KTMs) are reported that will be made operational to reduce the pressure or chemical substance.
Indicator/KTM	For each KTM a set of quantitative indicators are pre-defined. There may be more than one indicator for each KTM and vice versa. The same KTM and the same indicator can thus be introduced more than once.
KTM99	If the pre-defined KTMs are not appropriate, 'KTM99 – Other key type measure reported under PoM' may be selected by the Member State. Each Member State should report details of the other (new) KTMs developed by the Member State.
Indicator gap	For each significant pressure type or chemical substance reported, a pre-defined quantitative indicator is reported by the Member State. The indicator states the scale and extent of the pressure or chemical substance, that is to be reduced by measures to achieve the environmental objectives of the WFD. This is the gap to be filled to meet the objectives.
Indicator value 2021	For each pre-defined quantitative indicator, the Member State reports the expected value of that indicator at the start of the third cycle in 2021. The value for 2021 should give an indication of the expected situation in 2021 in terms of remaining measures needed to achieve environmental objectives (i.e., good ecological status or potential or good chemical status). The difference between the indicator value in 2015 and 2021 should provide an indication of the progress expected in the second cycle.
Indicator value = 0	If all measures needed to achieve the environmental objectives are expected to be fully operational, the value of the indicator should be 0.
Mapping indicators	Mapping indicators to a specific pressure means that Member State in their reporting link pre-defined quantitative indicators to relevant pressures or chemical substances, and report on the progress on these indicators over time.

1. FOREWORD

Directive 2000/60/EC also known as the Water Framework Directive (WFD)¹ requires Member States, under Article 11, to set up a Programme of Measures (PoM) as part of the River Basin Management Plan (RBMP) that must be submitted every six years. According to Article 15 (3) of the WFD, Member States must submit an interim report of the implementation of the planned PoM within three years of the publication of the RBMP or any update thereof. The Commission, under Article 18 of the WFD, should inform the European Parliament, the Council on the progress in the implementation of the WFD.

According to the WFD, the 2nd RBMP was due by December 2015 and therefore the interim reports on the implementation of PoM were due by December 2018. As with the previous interim reporting, the Commission carries out an assessment with the aim of having an implementation report to inform the European Parliament and the Council at the latest three years later.

The PoM assessments reflect the situation as reported electronically to the WISE database by each Member State to the Commission by end 2018.

The electronic reporting is based on the PoM reported within the 2nd RBMP. Wherever information is available in the Member States' reporting, a separate analysis has been done for basic measures, Article 11.3 of the WFD and supplementary and additional measures, Articles 11.4 and 11.5 of the WFD.

Since the publication of the Member States' 2nd RBMP and within the reporting period 2016–2018, the measures listed in the 2nd RBMP have been implemented in different manners in the Member States.

A direct comparison of indicator values given in 2016 in the RBMP and in 2018 is often not possible due to different KTM indicators and indicator values provided in the PoM reporting for KTMs and indicator gaps. However, the information provided for years 2016 and 2018 and projected for 2021, still provides quantitative data on the progress made on the implementation of PoM. This is as far as possible reflected in the document.

Some Member States have, since the 2nd RBMPs, introduced changes in their PoM, generally by adding measures that were not foreseen at the time of drafting the 2nd RBMP, or measures that were expected to be finished by the time of adoption of the 2nd RBMP but were delayed. When this reporting was not available in the WISE database, supplementary information from national reports has been extracted from the Central Data Repository (CDR) on EIONET², whenever available.

¹ Directive 2000/60/EC of the European and of the Parliament Council of 23 October 2000 establishing a framework for Community action in the field of water policy, 2000, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060>, Accessed 1 December 2020.

² EIONET Central Data Repository, 2020, <https://cdr.eionet.europa.eu/>. Access 2020.

2. EXECUTIVE SUMMARY

Whilst Member States have made progress in implementing the first programmes of measures (PoMs), these PoMs have not been fully implemented. A lack of adequate finance is likely to continue to present an obstacle also to implementing the 2nd PoMs (2015-2021) as no less than 64% of RBDs are yet to secure finance for all relevant sectors.

Most Member States have made some progress in identifying the gap to good status for each significant pressure, and the level of implementation of measures required to achieve good status. This significant improvement will allow for better identification and prioritisation of the measures. However, more work is needed to refine this for the 3rd PoMs (2021-2027).

For those Member States that have identified other pressures, measures are in place to address them, the gap to good status has generally been identified, and indicators developed to identify the level of implementation required to achieve good status.

2.1. Overall progress in the implementation of PoM

Each Member State have provided a status and progress of the PoM established to address the significant issues identified and to allow the achievement of the objectives established under Article 4. The Directive further specifies that the POMs shall include as a minimum 'basic measures' and where necessary to achieve objectives, also 'supplementary measures'. An overview of the reported status can be seen in Table 1.

Table 1: Status and progress achieved since the adoption of the second RBMP for RBDs in each Member State. Numbers indicate number of RBDs in each country, where measures were fully, partly or not completed.

Member State	RBD	All (2015) measures completed	All planned (until 2021) measures completed	Some measures completed	Some planned measures completed	No measures completed
AT	3			3		
BE	8	1		5	1	1
BG	4			1	3	
CY	1			1		
CZ	3			3		
DE	10			10		
DK	4				4	
EE	3			3		
EL	14			14		
ES	25			25		
FI	8		8			
FR	14			7	7	
HR	2			2		
HU	1		1			
IE	3			3		
IT	8		1	3	4	
LT	4				4	
LU	2			2		
LV	4				4	
MT	1			1		
NL	4			4		
PL	10				10	
PT	10			9	1	
RO	1			1		
SE	5				5	
SI	2			2		
SK	2			2		

According to Table 1, all planned measures have been reported as completed in all RBDs only in Finland (FI) in 8 RBDs and in Hungary (HU) in one RBD. Five Member States (DK, LT, LV, PL, SE) report some planned measures completed for all RBDs and 15 Member States (AT, CY, CZ, DE, EE, EL, ES, HR, IE, LU, MT, NL, RO, SI, SK) report some measures have been completed in all RBDs. The BE Rhine RBD report all measures completed, whilst the BE Seine RBD report no measures completed.

2.2. Obstacles to the implementation of the PoM

In the POM reporting, Member States were asked to report on the obstacles to the implementation of the POM. Table 2 shows the reported obstacles by Member State.

Table 2: Obstacles to the implementation of the POM. Member States report the number of RBDs where obstacles are relevant.

Member State	RBD	Obstacles							
		Governance	Delays	Lack of finance	Lack of mechanism	Lack of measures	Not cost effective	Extreme events	Other
AT	3								
BE	8		3	3	2				2
BG	4		4		1	1			
CY	1								
CZ	3	3	3	3	3		3	3	
DE	10		10	4	10	9	7	4	10
DK	4		4						4
EE	3		3	3	3				
EL	14		14						
ES	25	25	25	25	25				
FI	8			8	8				
FR	14	14	14	14	14				14
HR	2		2	2	2				
HU	1	1	1	1	1	1		1	1
IE	3	3		3			3		3
IT	8	5	5	8	7	1	2	6	
LT	4								
LU	2							1	2
LV	4			4				4	
MT	1		1						
NL	4		4	4			4		4
PL	10	3	3	3	3	4	4	2	5
PT	10		8	9			8	8	
RO	1		1	1	1		1		1
SE	5				5				
SI	2			2					
SK	2		2	2			2		2

According to Table 2, AT, CY and LT have reported no obstacles to the implementation of the POM. The Member States with the most reported obstacles were HU, CZ and PL.

The remaining Member States have reported different obstacles to the implementation of the POM:

In five Member States (CZ, ES, FR, HU and IE) governance issues were reported for all RBDs. Two Member States (IT and PL) reported governance related issues in some RBDs. The remaining 20 Member States did not report any governance issues presenting obstacles to the implementation of the POM.

Two thirds of the Member States reported unexpected planning delays as an obstacle to the implementation of the POM. Fourteen Member States reported delays in all

RBDs, four Member States reported delays in some RBDs, and the remaining nine Member States reported no delays in the planning process.

Two thirds of the Member States reported lack of finance as an obstacle to the implementation of the POM. Fourteen Member States reported lack of finance in all RBDs, four Member States reported lack of finance in some RBDs, and the remaining nine Member States reported no lack of finance.

Half of the Member States reported lack of a mechanism for implementing measures as an obstacle to the implementation of the POM. Ten Member States reported lack of a mechanism as an obstacle to implementing measures in all RBDs, four Member States reported lack of a mechanism for implementing measures in some RBDs, and the remaining 13 Member States reported no lack of a mechanism for implementing measures.

Only five Member States (BG, DE, HU, IT, PL) reported lack of effective measures as an obstacle to the implementation of the POM. In HU this was the case in all RBDs. The remaining 22 Member States reported no lack of effective measures as an obstacle to the implementation of the POM.

Only five Member States (CZ, IE, NL, RO and SK) reported planned measures no longer being cost effective in all RBDs, therefore presenting an obstacle to the implementation of the PoM. Another four Member States reported this obstacle in some RBDs. The remaining 18 Member States reported no planned measures no longer being cost effective, therefore a changed cost- effectiveness of the measures did not present an obstacle to the implementation of the PoM in most Member States.

Few Member States reported that unexpected extreme events presented an obstacle to the implementation of the PoM. Only three Member States (CZ, HU, and LV) presented this for all RBDs, whereas DE, IT, LU, PL, and PT presented this obstacle for some RBDs. The remaining 19 Member States did not report unforeseen extreme events as an obstacle.

Nine Member States reported other obstacles to the implementation of the PoM in all RBDs. Two Member States reported other obstacles in some RBDs. The remaining 16 Member States did not report other obstacles to the implementation of the PoM. Example of other obstacles were e.g., for DE: Acceptance of the measure by the public, staff resources for the planning process and land availability.

2.3. Progress on reducing pressures to achieve Environmental objectives

Member States have been asked to report the progress in reducing pressures to achieve the Environmental objectives. According to the PoM terminology, for each significant pressure type or chemical substance reported, a pre-defined quantitative indicator is reported by the Member State. The indicator states the scale and extent of the pressure or chemical substance, that is to be reduced by measures to achieve the environmental objectives of the WFD. This is the indicator gap to be filled to meet the objectives. Member States have reported on the indicator gaps remaining in 2021 on the identified pressures reported in the RBMPs in 2015.

The main challenges in comparing reported indicator gaps, and thereby describing the progress in reducing pressures, can be summarised as follows:

Some Member States do not provide indicator gaps in their WFD 2016 reporting.

Some Member States do not provide indicator gaps in their POM 2018 reporting.

Member States report using annex 0 (meaning objectives are already met).

Data reported on indicators in 2015 do not match indicators reported for the POM reporting in 2018.

Nineteen Member States (AT, CY, CZ, DE, DK, EE, EL, ES, FR, HR, HU, LT, LV, MT, PL, PT, SI, SK) have reported comparable indicator gaps in the 2nd RMBP reporting in 2016 and the POM reporting in 2018 for the period 2015- 2021 (Figure 1).

In three out of the 18 Member States (EE, LV, MT), 70-100% of the objectives have been met for their RBDs. For ES, 16 out of their 25 RBDs also report that objectives have been met.

A large decreasing trend is particularly observed for four Member States (AT, CZ, FR, PT). In most of the RBDs, 30-80% of the indicators have a decreasing gap.

No change in indicator gaps is also observed. This is particularly relevant for 9 out of 10 RBDs in PT, in 6 out 14 RBDs in EL, almost half of the RBDs in PL and DE, and both RBDs in SI and SK.

An increasing indicator gap is observed in ES, DK, DE, HU, HR, and SE. For these Member States it is only for some RBDs with increasing indicator gaps varying between 3-30%.

In CY (not shown in the figure), there has been no updates to the 2021 values provided in 2015 but all measures (except one) have met their objective by 2021. The only pressure remaining is diffuse pressure from agriculture. It is reported to be reduced by 4 tonnes of nitrogen load per year between 2015 and 2021.

Indicator gap trend, 2015-2021

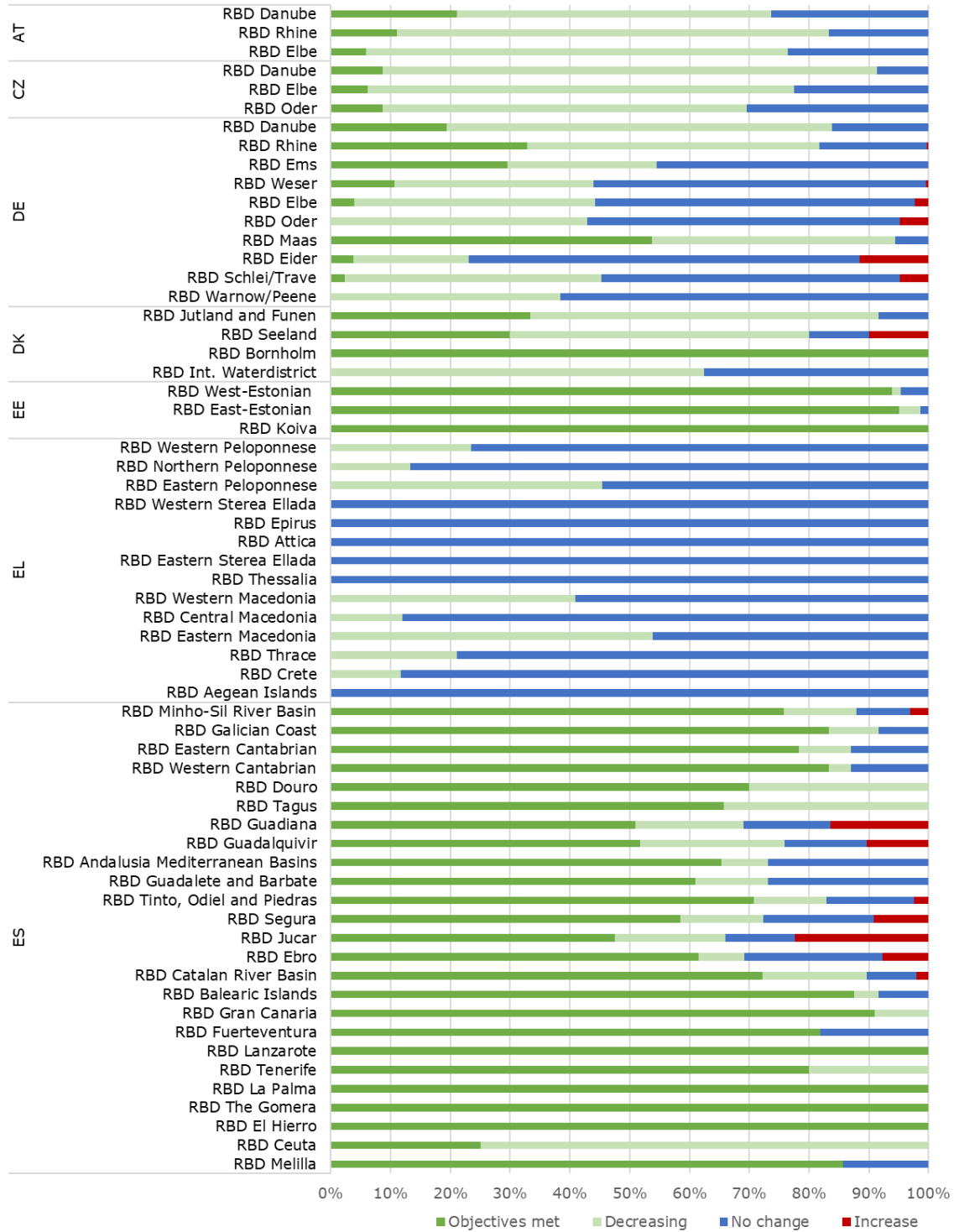


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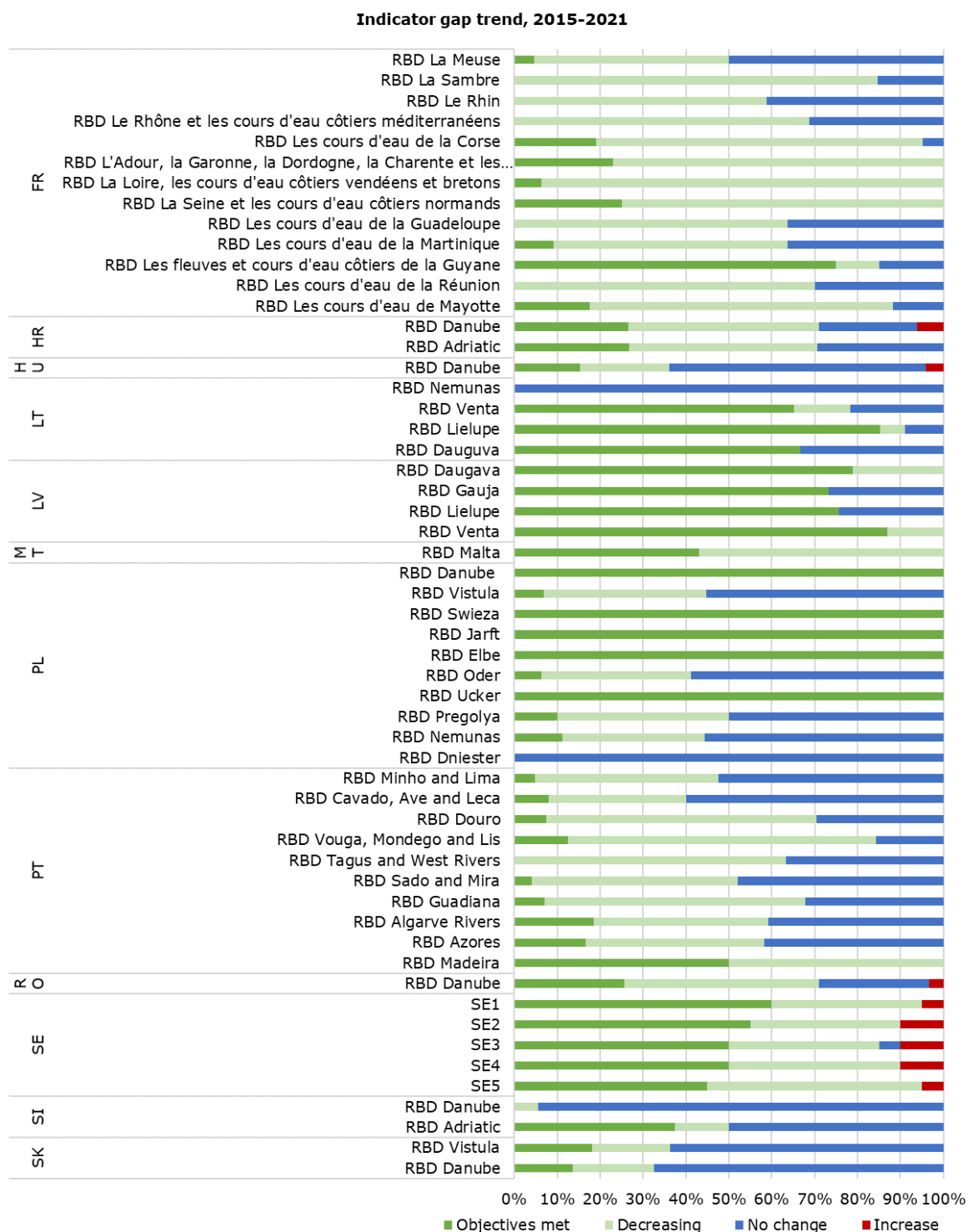


Figure 1: Trend in indicator gap 2015-2021 reported for the implementation of planned Programme of Measures (2018). “Objectives met” equals all measures needed to achieve the environmental objectives are fully operational.³

³ Figure illustrates only 18 out of 27 Member States, because those Member States have reported comparable indicator gaps in the WFD 2016 reporting and POM 2018 reporting. CY and EL are missing in figure

In three Member States (BE, BG, and LU) did not provide indicator gaps in the WFD 2016 reporting. It is therefore not possible to describe progress in reducing pressures.

In BE, the Scheldt RBD is the only RBD reporting indicator gaps. The reporting from WFD 2016 and PoM 2018 show no updates to the indicator gaps.

In FI all indicator gaps for 2021 in both the WFD 2016 and PoM 2018 reporting are reported included in annex 0, i.e., indicating that all objectives will be met by 2021.

In the remaining three Member States (IE, IT, and NL), due to the data structure of the 2nd RBMP in 2016 and the PoM 2018 reporting, it was not possible to make a 1:1 comparison between pressures or substances failing and the corresponding indicator gap. Therefore, an analysis of the trend in indicator gaps between 2015 and 2021 is not possible.

2.4. Progress on KTMs to achieve Environmental objectives

Similar to the reported difficulties in comparing the indicator gaps, the reported KTM indicator values are only comparable between 2016 and 2018 in 17 Member States (Figure 2).

In 22 out of 25 RBDs in ES, more than 50% of the objectives have been met. A similar trend is seen for half the RBDs in PT.

In FR, PT, and SE most RBDs have met their objectives and/or indicator values have a decreasing trend, i.e., indicator gaps are closing over time with the PoM.

In eleven Member States (DE, DK, EL, HR, HU, LT, LV, PL, RO, SI, SK), many of the indicator value trends have shown no progress.

Increasing indicator gaps are seen in CZ (all RBDs), DE (all RBDs), EE (two RBDs), EL (ten RBDs), ES (eight RBDs), HR (all RBDs), LV (one RBD), RO (all RBDs), SE (two RBDs), SI (one RBD) and SK (all RBDs).

KTM indicator value trend, 2016-2018

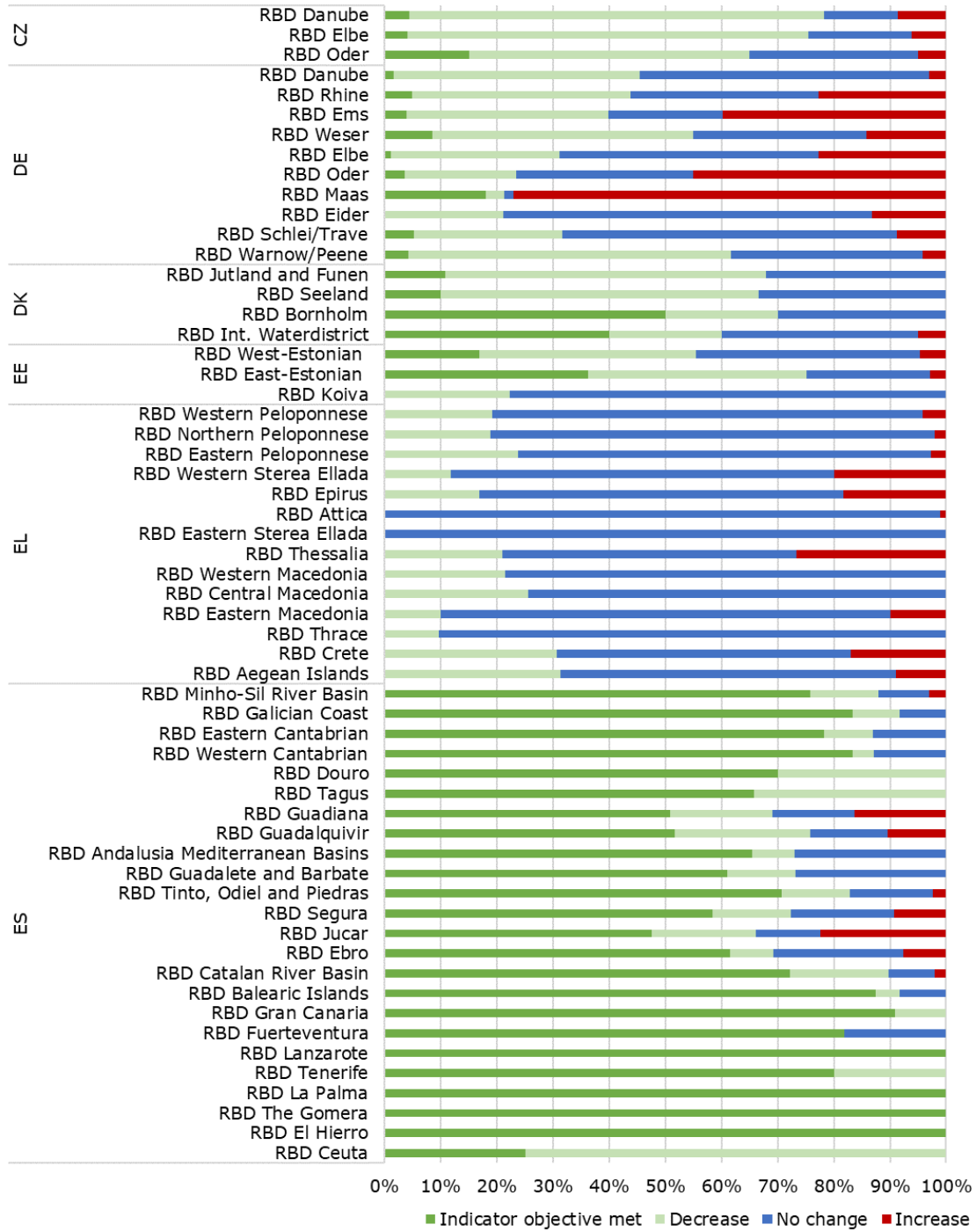


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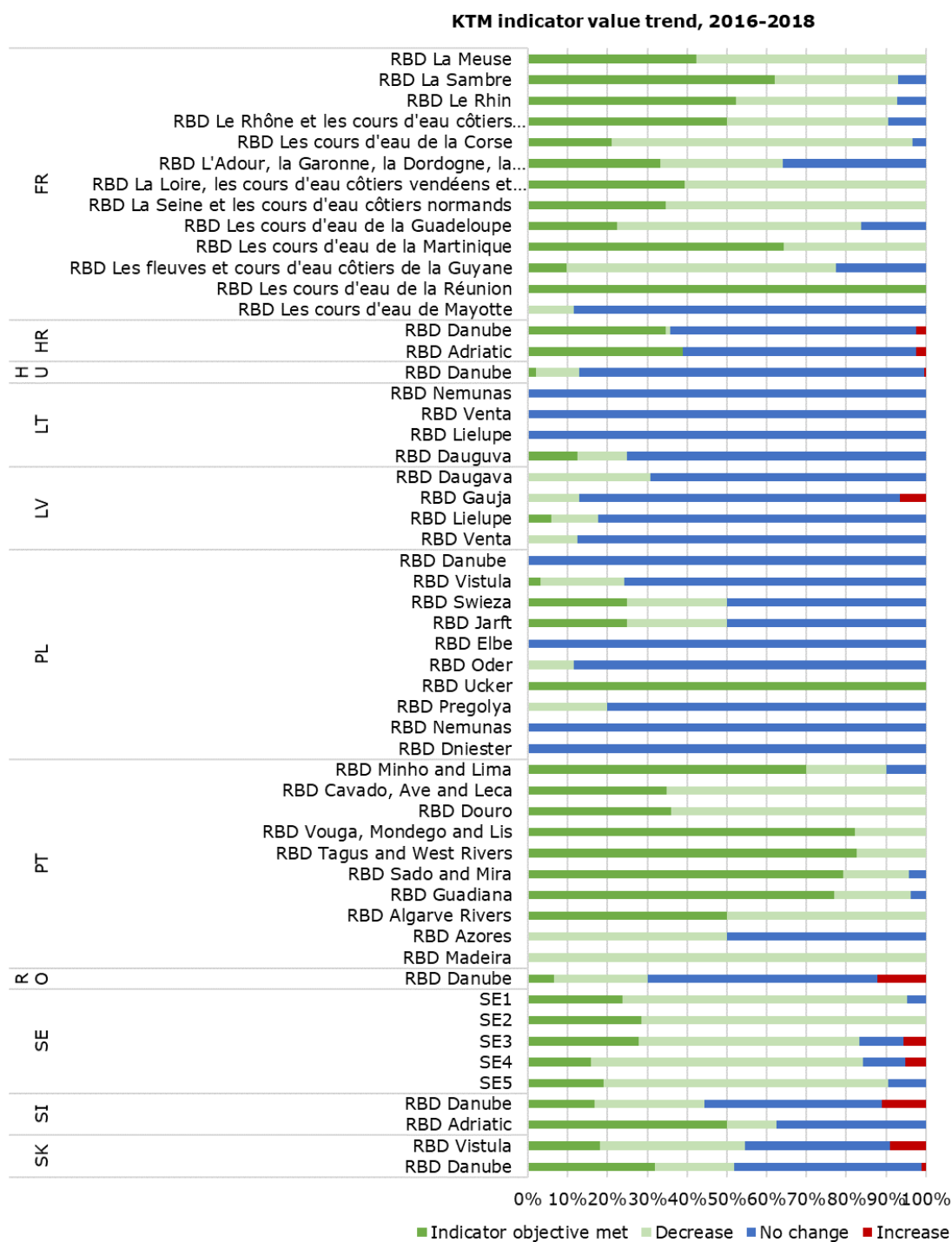


Figure 2: Trend in Key Type Measure indicator gap from the 2nd RBMP to the PoM progress reporting (2016-2018) reported for the implementation of planned Programme of Measures (2018). “Indicator objectives met” equals measure is fully operational to achieve the environmental objectives.

2.5. Measures to tackle main pressures on water bodies

Table 3 presents an overall qualitative assessment of the planned trends in achieving objectives for different pressures and relevant KTMs based on the information reported

for years 2018-2021 by each Member State. Please note that due to lack of data from the reporting, it was not possible to assess for all Member States progress on the implementation of measures between 2016 and 2018. Instead this table shows information on progress expected between 2018 and 2021 based on planned measures. Please find a description below of the assessment methodology used. Later chapters will elaborate on the reported progress for each KTM.

Table 3: Reported expected progress on KTM by Member State, 2018-2021

Legend

 Upward trend	 Objectives met in 2021	 Trend cannot be reported
 Mixed trend	 No progress/Stagnant	
 Downward trend	 Not mapped	

Pressure	KTM	Member States																										
		AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK
Agriculture	2	Green	Blue	Blue	Grey	Green	Green	Blue	Blue	Green	Green	Blue	Blue	Grey	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Red	Grey	Yellow
	3	Grey	Blue	Blue	Blue	Green	Green	Blue	Blue	Green	Green	Blue	Blue	Grey	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Grey	Grey
	12	Green	Blue	Blue	Blue	Green	Green	Blue	Blue	Green	Green	Blue	Blue	Grey	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Grey	Grey
Wastewater treatment and chemicals	1	Green	Blue	Green	Green	Yellow	Green	Blue	Blue	Green	Green	Blue	Blue	Red	Green	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Green	Green
	15	Grey	Blue	Grey	Blue	Blue	Green	Blue	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Green	Red
	16	Green	Blue	Grey	Blue	Blue	Yellow	Blue	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Red	Green
Water abstraction	7	Green	Blue	Grey	Green	Yellow	Blue	Blue	Green	Green	Blue	Blue	Green	Green	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Red	Blue	
	8	Blue	Blue	Grey	Blue	Blue	Green	Blue	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Green	
Hydromorphological alterations	5	Green	Blue	Grey	Green	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Green	Yellow
	6	Green	Blue	Grey	Green	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Red	Green
Drinking water protection	4	Grey	Blue	Grey	Blue	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Blue	Green	Grey	Green	Green	Green	Grey
	13	Green	Blue	Blue	Blue	Blue	Yellow	Blue	Blue	Red	Blue	Blue	Blue	Grey	Green	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Yellow	Green
Water pricing policy	9	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	10	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	11	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Research	14	Green	Blue	Grey	Green	Grey	Yellow	Green	Blue	Green	Green	Blue	Blue	Green	Grey	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Grey	
Urban*	21	Green	Blue	Blue	Green	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Green	Green	Green	Blue	Green	Green	Blue	Green	Grey	Green	Green	Green	
Other	17	Green	Blue	Blue	Blue	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	
	18	Blue	Blue	Blue	Blue	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red	Red	
	19	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Blue	Green	Blue	Green	Blue	Green	Green	Green	
	20	Blue	Blue	Blue	Blue	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	22	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	23	Blue	Blue	Blue	Blue	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	24	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green
	25	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
99	Grey	Blue	Blue	Blue	Red	Yellow	Blue	Blue	Blue	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	

*Pollution from urban areas, transport and built infrastructure

Box 1 Assessment Methodology for Table 3

The expected progress of KTM implementation is assessed qualitatively based on the information provided in the PoM 2018. Progress is interpreted from the text, and/or numbers whenever available, for each KTM in each Member State, based on information reported for 2018-2021. The progress is overall and looks across several indicators for both surface water and groundwater, and across all RBDs.

Table 3 should therefore be interpreted with caution. Implementation progress is labelled the following way:

Upward trend: Most indicators show upward trend, i.e., moving away from the objective of closing the gap. Some indicators may be stagnant, but no indicators show downward trend.

Mixed trend: Different indicators show both upward and downward trends.

Downward trend: Most indicators show downward trend, i.e., moving towards the objective of closing the gap. Some indicators may be stagnant, but no indicators show upward trend.

Objectives planned to be met in 2021: All indicators must be met by 2021 according to planned information reported by Member States. If this is not the case, and some are downward, then the progress is assigned “downward trend”.

No progress/stagnant: Most indicators show stagnant trend/no progress, i.e., no changes have occurred or are expected for the respective period.

Not mapped: The KTM has not been mapped by the Member State.

Trend cannot be reported: For some Member States and KTMs the trend cannot be reported. There are several reasons for this, some being:

A - Indicator values have not been reported within the considered period

B - Indicators within periods are not comparable, e.g., because original indicators are changed with new indicators, so there is not 1:1 link between respective years

C- Indicator values are not mentioned in the PoM.

D- Some Member States do not report any trends, and it cannot be interpreted from the text or numbers (e.g., values only reported for one year).

E- Issues related to the “labelling approach”:

Objectives met: In general, indicators receive a value of zero if objectives are met. This is however not always the case for all Member States, and in some cases a reported zero may mean “no indicator value”. For example, PL report that objectives have been met for KTM3 as values in 2018 and 2021 are zero.

Assigning trends: For some Member States, very little information is provided in the PoM, which makes the progress assessment more uncertain. For example, BG formulated for KTM1 “Values of the indicators are provided for most of the indicators but mostly for year 2018. Values for year 2021 are provided only for the East Aegean RBD for KS01. The indicator decreases for point pollution (urban wastewater) and remains the same for diffuse pollution.” The latter part of the formulation reflects the issue relating to assigning trends of progress, whereas the first part clearly illustrates the very limited data the assigned trends can be based on. This is important to have in mind when interpreting the results.

The following paragraphs provide a brief overview of the reported progress on tackling the main pressures across the Member State. Trends are based on Table 3 and the underlying Member State reporting.

2.5.1. Agricultural measures

On the measures tackling the main pressures from agriculture, e.g., nutrient and pesticides pollution from agriculture, twelve Member States are reporting to progress well towards closing their gaps and achieving good ecological status and reporting positive trends: AT, CZ, DE, EL, ES, IE, IT, LT, LV, PL, RO, and SK. Six Member States do not report progress towards closing their gaps: CY, HR, HU, PT, SE and SI. Finally, in nine Member States it was not possible to comment on the state of progress: BE, BG, DK, EE, FI, FR, LU, MT, NL.

2.5.2. Wastewater treatment and chemical pollution

The progress with the planned implementation of measures to reduce pressures from urban and industrial wastewater treatment and chemicals is showing a positive trend towards closing gaps, when it comes to reducing pressures from wastewater treatment plants. Eighteen Member States are reporting to progress well towards closing their gaps and achieving good ecological status and reporting positive trends: AT, BG, CY, CZ, DE, DK, EL, ES, HR, HU, IE, IT, LT, LV, PL, RO, SE, and SK. One Member State, PT, does not report progress towards closing their gaps. Finally, in 8 Member States it was not possible to comment on their expected progress, due to missing values, difficult interpretation or no mapping: BE, EE, FI, FR, LU, MT, NL, and SI.

2.5.3. Water abstraction

The progress with the planned implementation of measures to reduce pressures from point hydrological alterations, water abstraction and flow diversion is showing a positive trend for 7 Member States, including AT, EL, ES, HU, IE, IT and RO report with indicator gaps closing over time with the PoM and 6 Member States, including CY, HR, LT, LV, MT and PL reporting achieving the objective by 2021. Two Member States BG and PT reported no change in the trend towards closing the gaps. In DE, a mixed trend across the 10 RBDs was reported. For one Member State, SE, indicators are projected to increase from 2018 to 2021. Finally, in 10 Member States it was not possible to comment on the state of progress due to missing values, difficult interpretation, or no mapping: BE, CZ, DK, EE, FI, FR, LU, NL, SI, and SK.

2.5.4. Hydromorphological alterations

The progress with the planned implementation of measures to reduce pressures from hydromorphological alterations other than longitudinal continuity, is showing a positive trend for 10 Member States including AT, EL, ES, HU, IE, IT, PL, RO, SE, and SI report with indicator gaps closing over time with the implementation of the PoM, and 3 Member States including CY, LT and LV reporting achieving the objective by 2021. Two Member States BG and PT reported no change in the trend towards closing the gaps. In DE and SK, a mixed trend across the RBDs was reported. For one Member State, SE, indicators for hydromorphological alterations (KTM6) are projected to increase from 2018 to 2021. Finally, in 10 Member States it was not possible to comment on the state of progress due to missing values, difficult interpretation, or no mapping: BE, CZ, DK, EE, FI, FR, HR, LU, MT, and NL.

2.5.5. Drinking water protection

The progress with the planned implementation of measures to reduce pressures affecting drinking water resources, is showing a positive trend for 9 Member States including AT, DE, HU, IE, IT, LV, PL, RO and SE reporting indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time, achieving the objective of improving drinking water protection, by establishing safeguard zones, buffer zones etc. LV and PL report achieving the objective already by 2021. In DE and SE, a mixed trend across the RBDs was reported. For one Member State, EL, indicator values are projected to increase from 2018 to 2021 (negative trend). Five Member States BG, CZ, ES, HR, and SK reported indicator values indicating no change in the trend. In 12 Member States it was not possible to comment on the state of progress due to missing values, difficult interpretation, or no mapping: BE, CY, DK, EE, FI, FR, LT, LU, MT, NL, PT and SI.

2.5.6. Water pricing policy

The progress with the planned implementation of measures to reduce pressures by introducing water pricing policies and cost recovery in households, industry and agriculture is showing a positive trend for 3 Member States including EL, ES and IT reporting indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time, achieving the objectives of introducing water pricing policies and cost recovery. One Member State ES reports achieving the objectives for households and agriculture already by 2021. Two Member States, BE and HR, reported indicator values indicating no change in the trend. In the remaining 22 Member States it was not possible to comment on the state of progress due to missing values, difficult interpretation, or no mapping.

2.5.7. Research

The progress with the planned implementation of measures to reduce pressures by introducing research and knowledge development is showing a positive trend for 7 Member States including AT, EL, HR, IE, IT, PL and RO reporting indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time. Five Member States CY, DK, ES, LT and MT reports achieving the objectives already by 2021. In DE a mixed trend across the RBDs was reported. Six Member States BG, CZ, HU, PT, SI and SK reported indicator values indicating no change in the trend. In eight Member States, BE, EE, FI, FR, LU, LV, NL, and SE it was not possible to comment on the state of progress due to missing values, difficult interpretation or no mapping.

2.5.8. Pollution from urban areas, transport and infrastructure

The progress with the planned implementation of measures to reduce pressures from pollution from urban areas, transport and infrastructure, is showing a positive trend for 8 Member States including CY, HU, IT, LV, PL, RO, SE and SK reporting indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time. Three Member States ES, IE and LT reports achieving the objectives already by 2021. In DE a mixed trend across the RBDs was reported. Two Member States AT and PT reported indicator values indicating no change in the trend. In 13 Member States, BE, BG, CZ, DK, EE, EL, FI, FR, HR, LU, MT, NL, and SI it was not possible to comment on the state of progress due to missing values, difficult interpretation, or no mapping.

2.5.9. Other pressures

The progress with the planned implementation of measures to reduce pressures from other sources, e.g., invasive alien species and introduced diseases, recreation including angling, fishing and other exploitation/removal of animal and plants and pollution from forestry, as well as additional measures, e.g. Natural water retention measures, Adaptation to climate change, Measures to counteract acidification, and the progress on “Other key type measure reported under PoM” (KTM99) are described in section 6.11 Progress with implementation of other Key Type of Measures.

2.6. Costs and financing of POMs

2.6.1. Investments

Member State have reported the total investment expenditure (in millions of Euros) of measures under Article 11.3.a, Articles 11.3.b-1 and Articles 11.4 and 11.5 that were effectively implemented between 2015 and 2018 (Table 4).

The second column present the level of reporting, i.e., River Basin District level or Member State (national) level.

The third column presents the total investment expenditure under **Article 11.3.a**. These include, for example, expenditure on construction of waste water treatment plants (third column)

The fourth column presents the total investment expenditure under **Articles 11.3.b-1 and Articles 11.4 and 11.5**. These include, for example, expenditure on infrastructure to control over-abstraction.

Table 4: Total investment expenditure (in millions of Euros) by Member State in the period 2015-2018. (NA= Not applicable)

Country	Level (cost of measures scale)	Article 11.3.a. Investments in Basic Measures 2015-2018	Articles 11.3.b-1 and Articles 11.4 and 11.5. Investments in Basic Measures 2015-2018	Articles 11.3.a-1 and Articles 11.4 and 11.5. Investments in Basic Measures 2015-2018 (aggregated data)
AT	Member State	400	35	-
BE	RBD	217	1	589
BG	Member State	-	-	1228
CY	Member State	80	28	-
CZ	RBD	-	-	650
DE	RBD	-	-	58
DK	Member State	-	-	140
EE	RBD	-	-	126
EL	Member State	-	-	NA
ES	RBD	1134	1166	-
FI	Member State	224	450	-
FR	RBD	-	-	9229
HR	Member State	710	230	-
HU	Member State	2884	1210	-
IE	Member State	-	-	-
IT	RBD	2067	8089	-
LT	Member State	-	-	2700
LU	Member State	-	-	360
LV	RBD	55	42	-
MT	Member State	5	49	-
NL	RBD	-	-	NA
PL	RBD	1062	151	0
PT	RBD	90783	71506	-
RO	RBD	2739	1775	-
SE	Member State	-	-	944
SI	Member State	-	-	-
SK	RBD	15	0	1151

Member States have reported the investments between 2015 and 2018. For some Member States, the period of reporting is 2016-2017 and others respond to 2015-2018. Thirteen Member States report investments on RBD level and 14 Member States on Member State level. Some Member States report on both investment expenditures relating to measures under Article 11.3.a and investment expenditures under Articles 11.3.b-1 and Articles 11.4 and 11.5. Where disaggregated data is not available some Member States report total expenditure under Article 11.3.a, Articles 11.3.b-1 and Articles 11.4 and 11.5.

Two Member States (IE and SI) reported 0 investments and two Member States (NL and EL) reported -9999 and has therefore been marked NA (not applicable).

2.6.2. *Cost explanation*

Member States were asked to report on the calculation methods for assessing the updated costs. A qualitative assessment of the provided information in the PoM was made. In general, the level of detail was low with no reference to background documentation or only a limited description in the PoM.

Fourteen Member States provided no information on the calculation methods.

Three of these Member States reported that a methodology for updating costs was lacking (BE, BG, CY).

Five Member States (AT, ES, LV, PT, SK) provided enough information (high level of detail) to understand the calculation methods used for assessing the costs.

Four Member States (IT, PL, RO, SI) provided some information on the calculation's methods (medium level of detail).

These nine Member States (that provided enough or some information as mentioned above) reported the following methodologies:

Existing measures: Updated costs were based on already existing measures (AT)

National database: A national database provided the updated costs (ES)

Implementing authorities: Authorities in charge of implementing the measures provided the costs. How they derived the costs is not clear (IT, PL, PT, RO)

Experts: Updated costs provided by experts. Most likely using unit values (SK)

Unit values: Updates costs based on standardized unit values (SK)

Public sources: Updated costs based on public sources. Most likely based on unit values (LV, RO)

Only two Member States (AT, SI) reported the methodology for assessing the costs for operation and maintenance. AT used a fixed percentage of the investment cost as an estimate, whereas SI evaluated annual material (no further specification) and labour costs.

Thirteen Member States did not mention operation and maintenance in the PoM.

2.6.3. *Funding sources*

Member States were asked to report on the sourcing from the EU funds for the financing of Article 11.3.b to 1 basic measures.

Only one Member State (ES) report sources from non-EU funds. Other Member States report various EU funds (e.g., LIFE+, INTEREG) in connection with public, private and governmental budgets. The most reported EU fund (for eight Member States) is the European Agricultural Fund for Rural Development (EAFRD).

Some Member States reported EU funding but did not specify the sources of this EU funding (CZ, EE, HR, LU).

2.7. Progress on EQS monitoring of new substances

A separate assessment was made of the current status in the Member States regarding monitoring and measures with respect to the new substances of the 2013 Environmental Quality Standard (EQS) Directive⁴. According to the 2013 EQS Directive an additional of 12 substances should be monitored by all Member States.

For this assessment an extract of the WISE database from the European Environmental Agency (EEA), including monitoring data, type and frequency of monitoring, pressures, key type measures and associated costs, was analysed. Additionally, background documents and QA/QS analysis data were requested from each Member State. Not all Member States provided the required information for the assessment⁵ (Table 5).

HR, EE, SK and SE provided information on the chemical status of all substances monitored and defined Key Type Measure (KTMs) for all substances failing. Member States BE, CZ, DK, FI, IT, LV, LT, LU, NL, PL, and RO provided information on the status of most substances monitored and defined KTMs for all substances failing. In MT information on the status of all substances was provided, but no substances failed and as such no KTMs were defined. EL only provided information on the status of heptachlor and heptachlor epoxide, no KTM was provided as no substance failure was identified. IE, PT and ES provided information on the chemical status of some substances, but no substances failed and as such no KTMs were defined. IE, however, provided information on KTMs in the background information. Member States AT, BG, CY, FR, SI, and HU provided no information on the status of the substances monitored, therefore also no KTMs were determined. AT provided this information in background documents.

Table 5: Metadata per Member State, compiled from the extracts from the WISE database and the background documents. I: No background documents, II: Only general information, III: Required information in native language, IV: Required information in English, Dutch or German.

MS	Monitoring	Background documents*	QA/QC analysis	Information EQS exceedance	Pressures	KTM	Costs
AT	X	II	X	X	X	X	-
BE	X	IV	X	X	X	X	X
BG	-	II	-	-	-	-	-
CY	X	IV	X	-	-	-	-
CZ	X	II	-	X	X	X	-
DE	X	I	-	X	X	X	-

⁴ DIRECTIVE 2013/39/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 August 2013 amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy

⁵ ASSESSMENT OF THE REPORTING ON THE NEW SUBSTANCES IN THE 2013 EQS DIRECTIVE – FINAL REPORT (2021).

DK	X	II	-	X	X	X	-
EE	X	II	-	X	X	X	-
EL	-	III	-	-	-	-	-
ES	X	IV	-	X	-	-	-
FI	X	IV	X	X	X	X	-
FR	X	I	-	-	-	-	-
HR	X	III	X	X	X	X	-
HU	X	I	-	-	-	-	-
IE	X	IV	X	-	-	X	-
IT	X	II	-	X	-	-	-
LT	X	II	-	X	X	X	-
LU	X	IV	X	X	X	X	-
LV	X	II	X	X	X	X	-
MT	X	IV	X	X	-	-	-
NL	X	II	-	X	X	X	-
PL	X	II	X	X	X	X	-
PT	X	II	-	X	X	X	-
RO	X	II	-	X	X	X	-
SE	X	III	X	X	X	X	-
SI	X	III	X	X	X	X	-
SK	X	III	X	X	X	X	-

Table 6 show the number of RBDs where substances failed fulfilling the EQS directive for each of the Member States where this assessment was possible. The most widespread substances, i.e, the substances failing in most Member States, was PFOS (perfluorooctane sulfonic acid and its derivatives) in 13 Member States (out of 16 in total), followed by heptachlor and heptachlor epoxide failing in 10 Member States. In contrast, no Member States reported issues with dicofol and quinoxifen. Out of the 12 substances (Table 6), some Member States found that more than seven substances were failing in at least one RBD. These Member States included BE, DE, HR, and NL.

Table 6: Number of River Basin Districts (RBD) in each Member State where substances failed the EQS directive. This assessment is only based on WISE data, and not the provided background

documents. *Dioxins and dioxin-like compounds, **Heptachlor and heptachlor epoxide, ***Hexabromocyclododecane (HBCDD), **** Perfluorooctane sulfonic acid and its derivatives.

MS (RBD)	Aclonifen	BifenoX	Cybutryne	Cypermethrin	Dichlorvos	Dicofol	Dioxins*	Heptachlor**	HBCDD***	PFOS****	Quinoxifen	Terbutryn
AT (3)	<i>No information provided</i>											
BE (8)	2	1	1	2	2	-	2	6	-	5	-	-
BG (4)	<i>No information provided</i>											
CY (1)	<i>No information provided</i>											
CZ (3)	-	-	-	1	2	-	1	-	1	-	-	-
DE (10)	2	3	3	3	4	-	2	7	-	7	-	7
DK (4)	-	-	-	-	-	-	-	-	-	4	-	-
EE (3)	-	-	2	-	-	-	-	1	-	1	-	-
EL (14)	<i>No substances failed (Only heptachlor and heptachlor epoxide monitored)</i>											
ES (25)	<i>No substances failed (Only some substances monitored)</i>											
FI (8)	-	-	-	-	-	-	-	-	-	1	-	-
FR (14)	<i>No information provided</i>											
HR (2)	-	-	1	1	1	-	1	2	1	1	-	-
HU (1)	<i>No information provided</i>											
IE (3)	<i>No substances failed (Only some substances monitored)</i>											
IT (8)	-	-	-	-	-	-	2	-	-	3	-	-
LT (4)	-	-	2	-	-	-	-	-	-	-	-	-
LU (2)	-	-	-	1	-	-	-	1	-	2	-	-
LV (4)	-	-	-	-	-	-	-	3	-	1	-	-
MT (1)	<i>No substances failed (All substances monitored)</i>											
NL (4)	4	4	4	-	4	-	4	4	-	4	-	-
PL (10)	-	-	-	-	-	-	-	6	3	3	-	-
PT (10)	<i>No substances failed (Only some substances monitored)</i>											
RO (1)	1	-	1	-	1	-	-	1	-	-	-	1
SE (5)	1	-	1	1	-	-	5	-	-	5	-	-
SI (2)	<i>No information provided</i>											
SK (2)	-	-	1	-	-	-	1	1	1	1	-	-

3. MEMBER STATE POM INFORMATION

3.1. Targeted questions on Basic measures on water use/water abstraction/groundwater (article 11.3.c-f)

Figure 3 shows Member State reporting on planned measures promoting efficient and sustainable water use in order to avoid compromising the achievement of the objectives specified in Article 4 (Article 11.3.c)

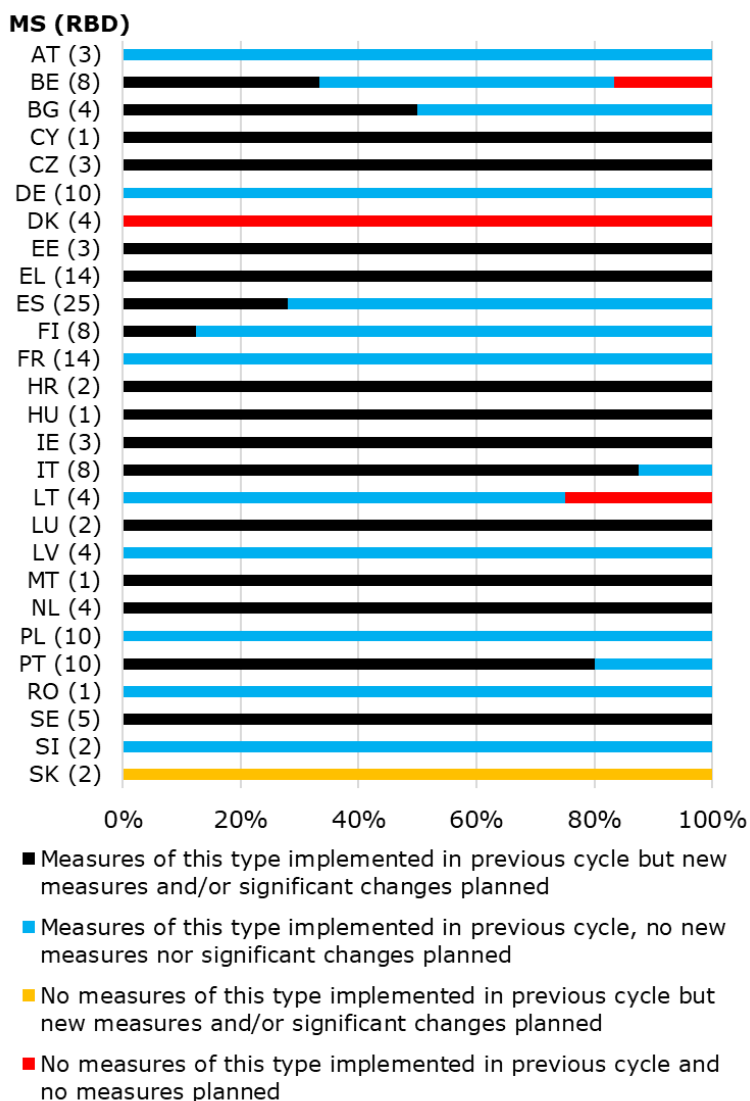


Figure 3: Planned basic measures promoting efficient and sustainable water use. The total number of RBDs for each Member State reported in brackets.

Figure 4 shows Member State reporting on planned measures to meet the requirements of Article 7 (Article 11.3.d), including measures to safeguard water quality in order to reduce the level of purification treatment required for the production of drinking water (i.e. have safeguard zones have been established).

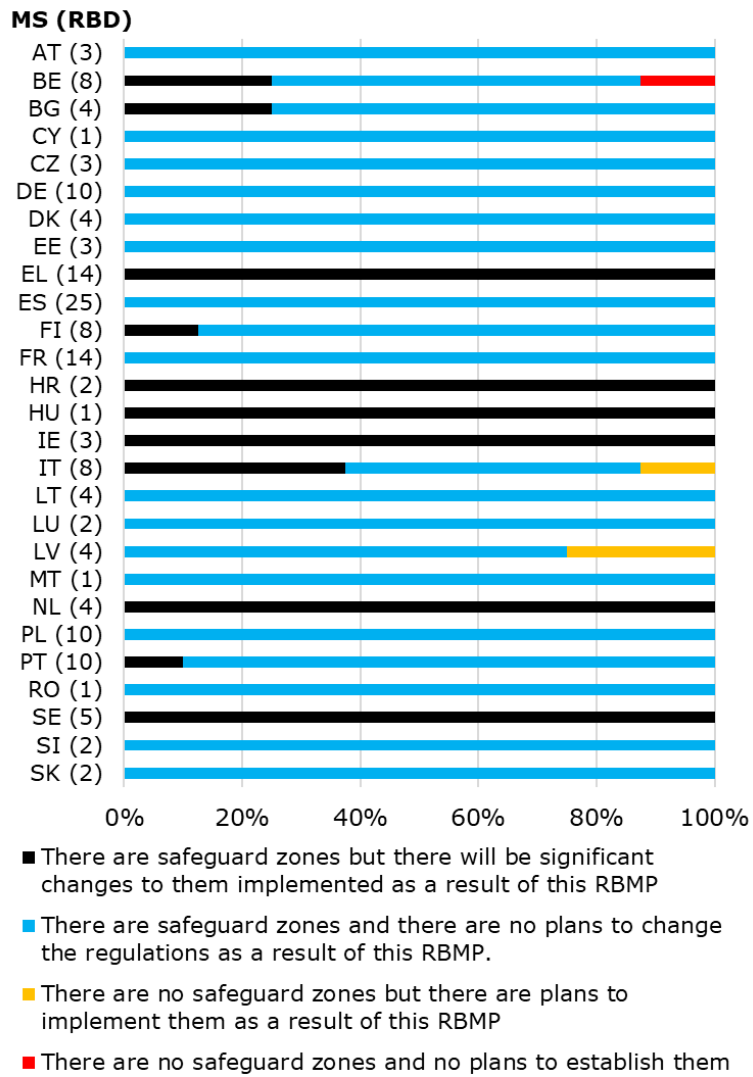


Figure 4: Planned basic measures to safeguard water quality. The total number of RBDs for each Member State reported in brackets.

Figure 5 shows Member State reporting on whether there is a concession, authorisation and/or permitting regime to control water abstractions (Article 11.3.e), and whether there is a register of abstractions (Article 11.3.e). The total number of RBDs for each Member State reported in brackets.

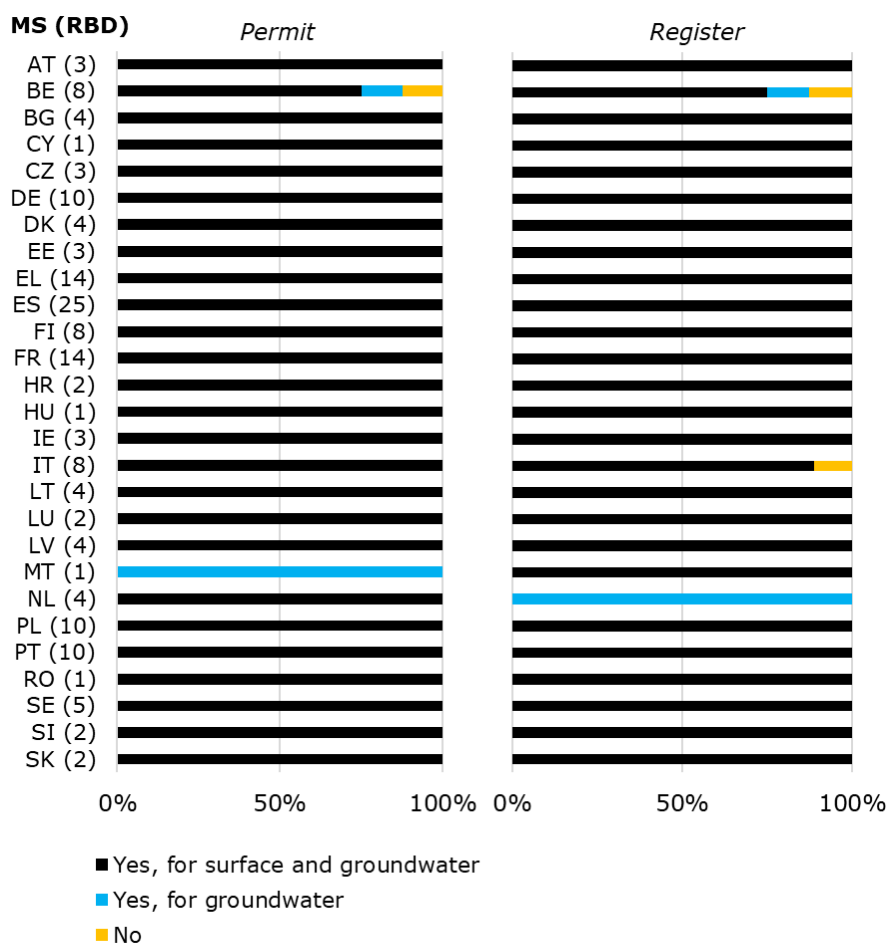


Figure 5: Permit or register to control water abstractions. The total number of RBDs for each Member State reported in brackets.

Figure 6 shows Member State reporting on whether there is a concession, authorisation and/or permitting regime to control water impoundment, and/or a register of impoundments (Article 11.3.e).

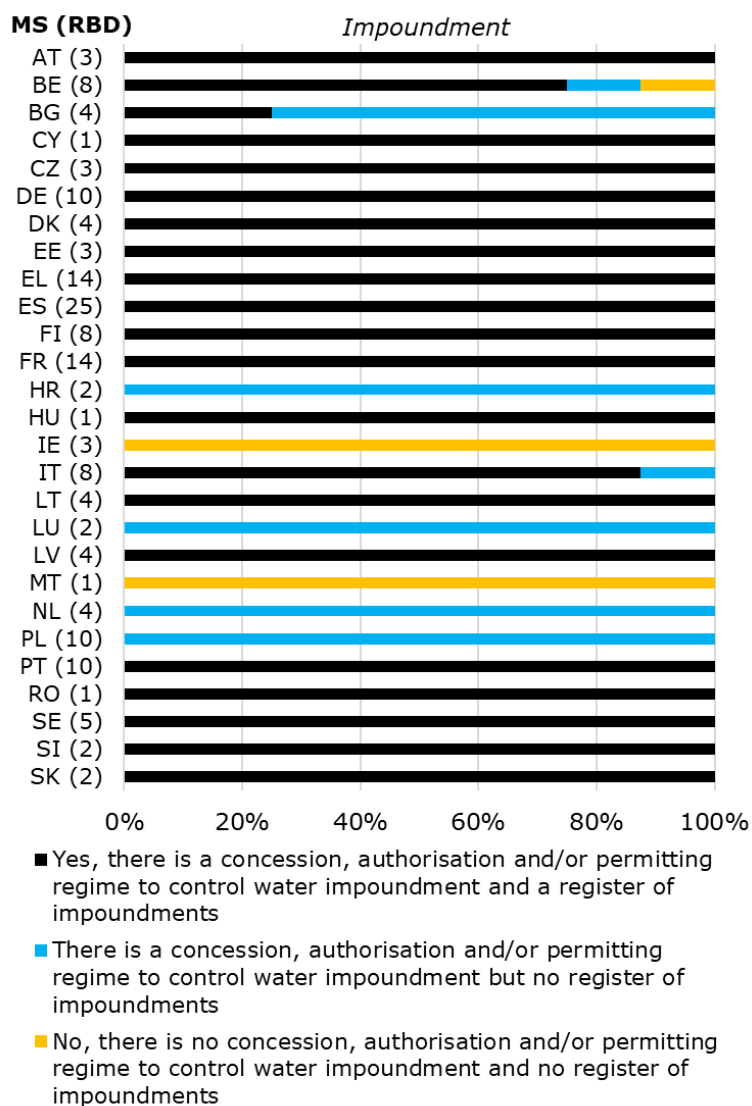


Figure 6: Permit or register to control water impoundment. The total number of RBDs for each Member State reported in brackets.

Figure 7 shows Member State reporting on whether there are thresholds below which abstractions do not require permits and are not subject to registration (Article 11.3.e).

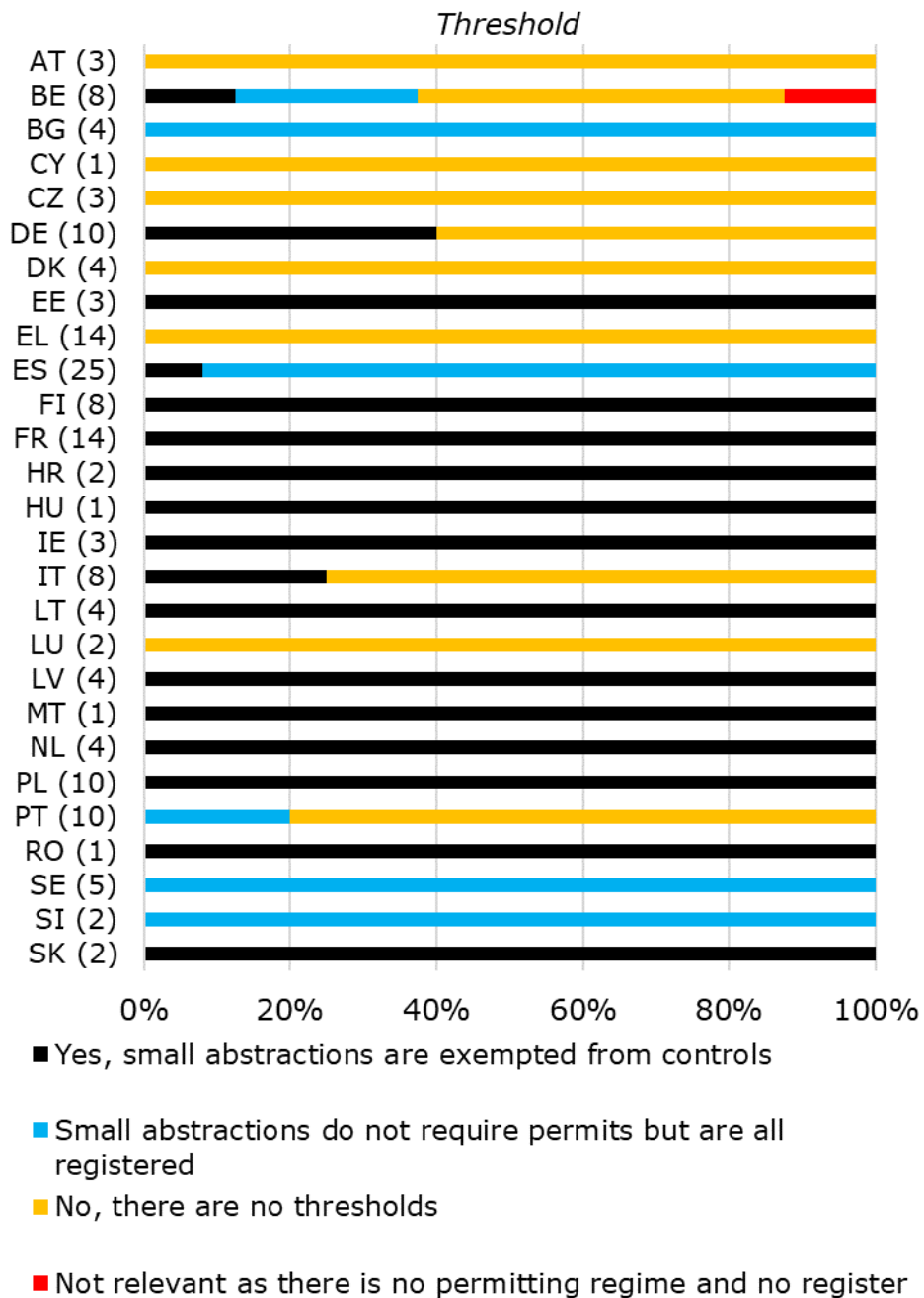


Figure 7: Thresholds for water abstractions. The total number of RBDs for each Member State reported in brackets.

Figure 8 shows Member State reporting on whether controls are in place, including a requirement for prior authorisation of artificial recharge or augmentation of groundwater bodies (Article 11.3.f).

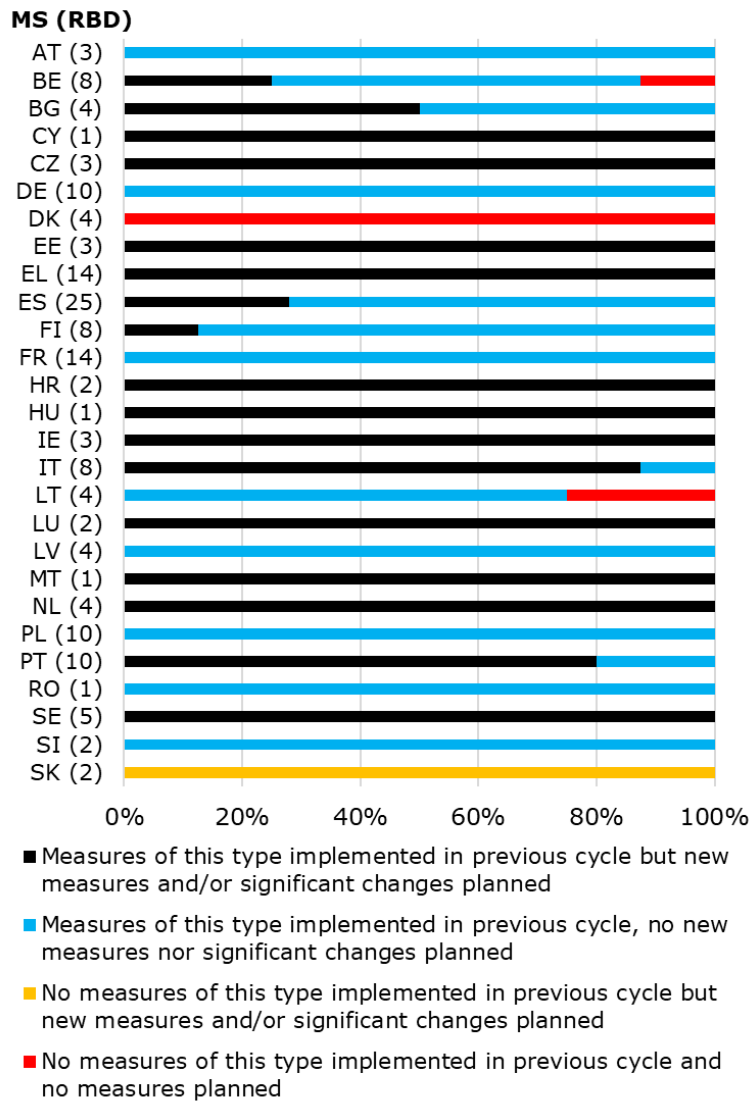


Figure 8: Authorisation for artificial recharge or augmentation of groundwater bodies. The total number of RBDs for each Member State reported in brackets.

3.2. Basic measures on wastewater (article 11.3.g)

Figure 9 shows Member State reporting on whether there is an authorisation and/or permitting regime to control wastewater point source discharges (Article 11.3.g), and whether there is a register of wastewater discharges (Article 11.3.g).

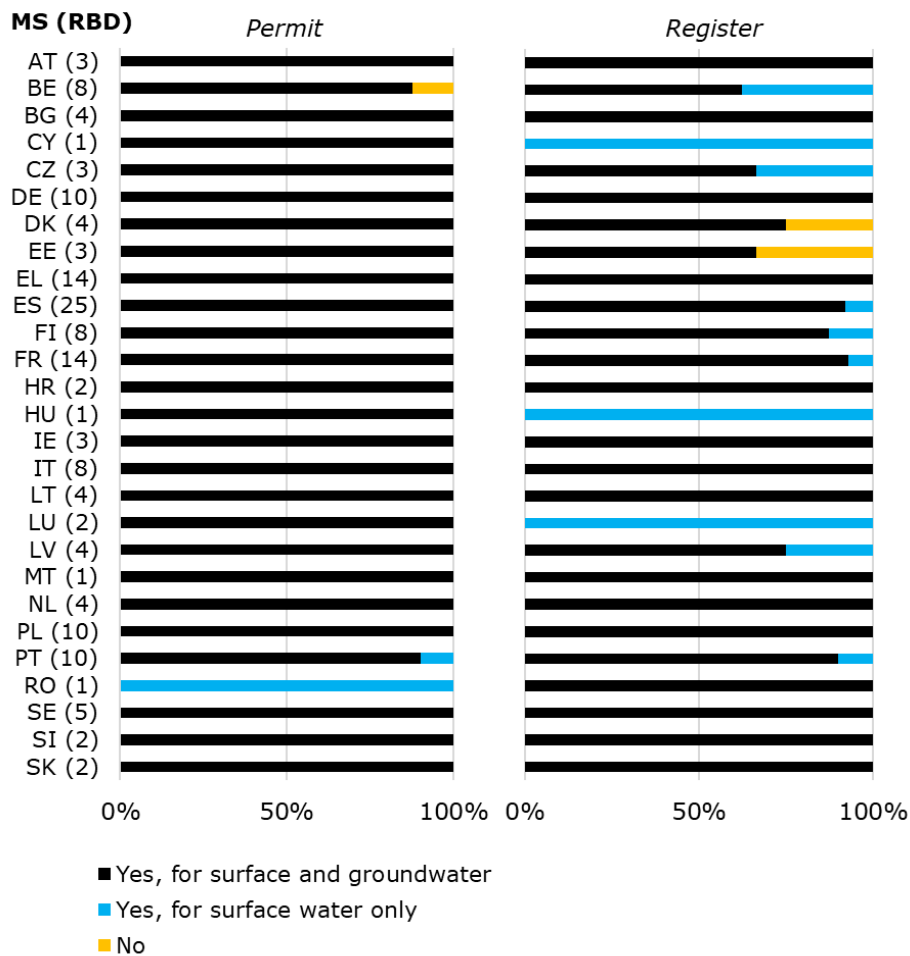


Figure 9: Permit or register on wastewater point source discharges. The total number of RBDs for each Member State reported in brackets.

Figure 10 shows Member State reporting on whether there are thresholds below which wastewater discharges do not require permits and are not subject to registration (Article 11.3.g).

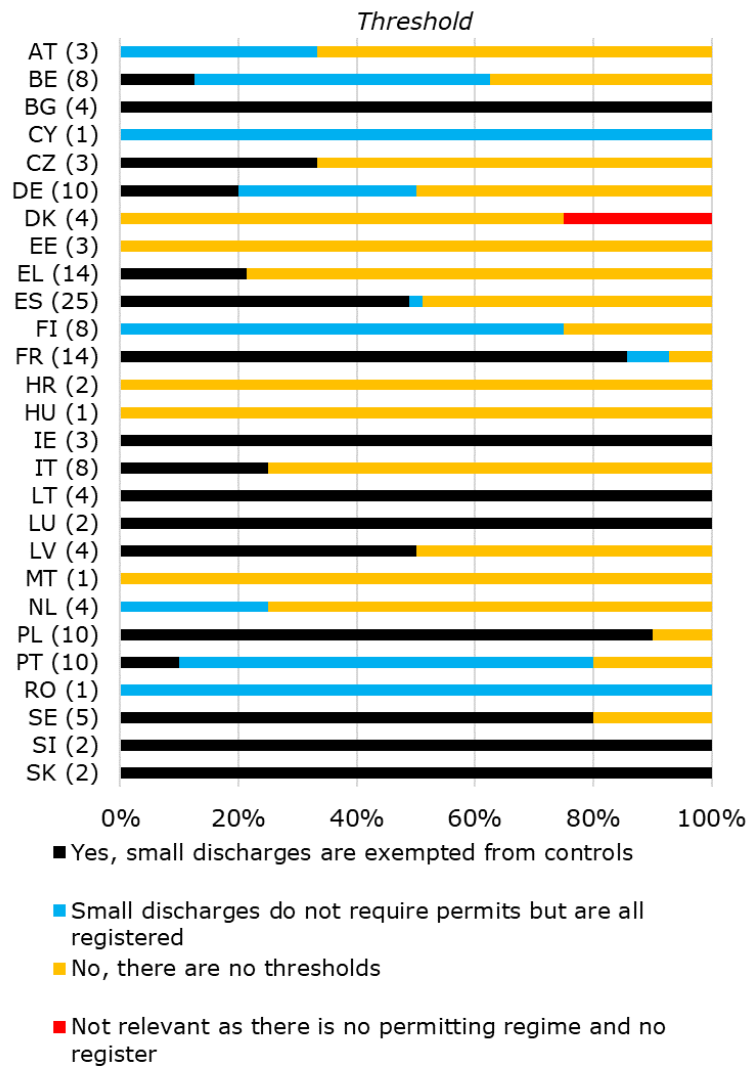


Figure 10: Thresholds below which wastewater discharges do not require permits. The total number of RBDs for each Member State reported in brackets.

3.3. Basic measures on diffuse pollution from agriculture (article 11.3.h)

Figure 11 shows Member State reporting on whether there are general binding rules for the control of diffuse pollution from agriculture.

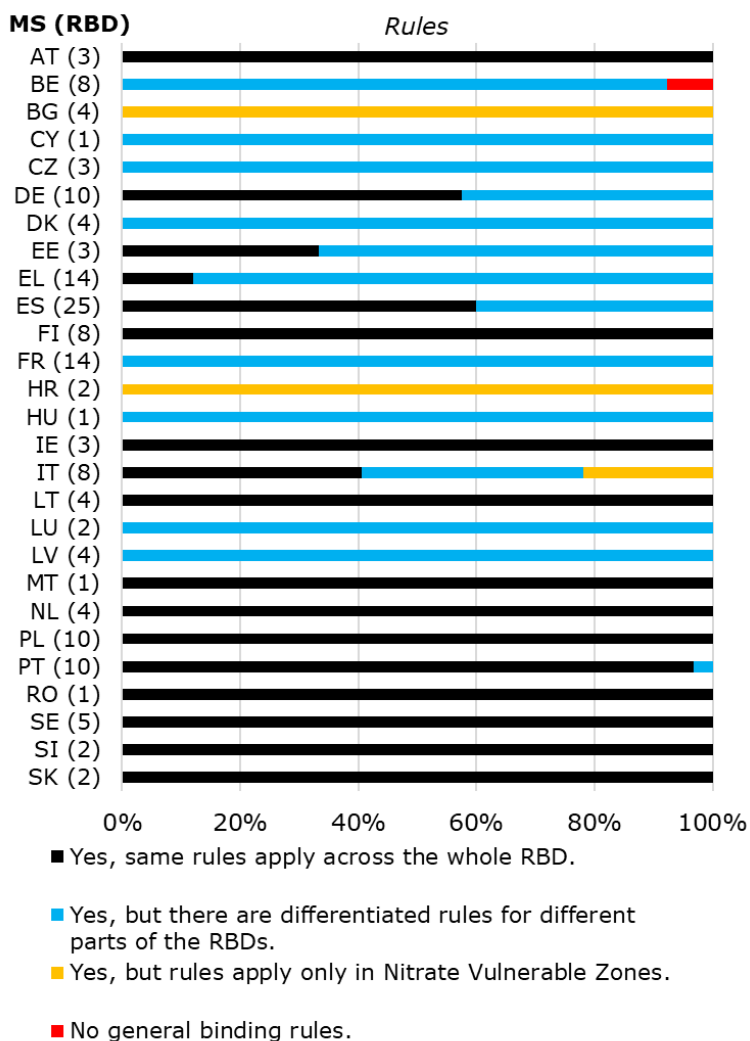


Figure 11: Binding rules for the control of diffuse pollution from agriculture. The total number of RBDs for each Member State reported in brackets.

Figure 12 shows the Member State reporting on the specific issues covered, in relation to diffuse pollution from agriculture, if there are general binding rules.

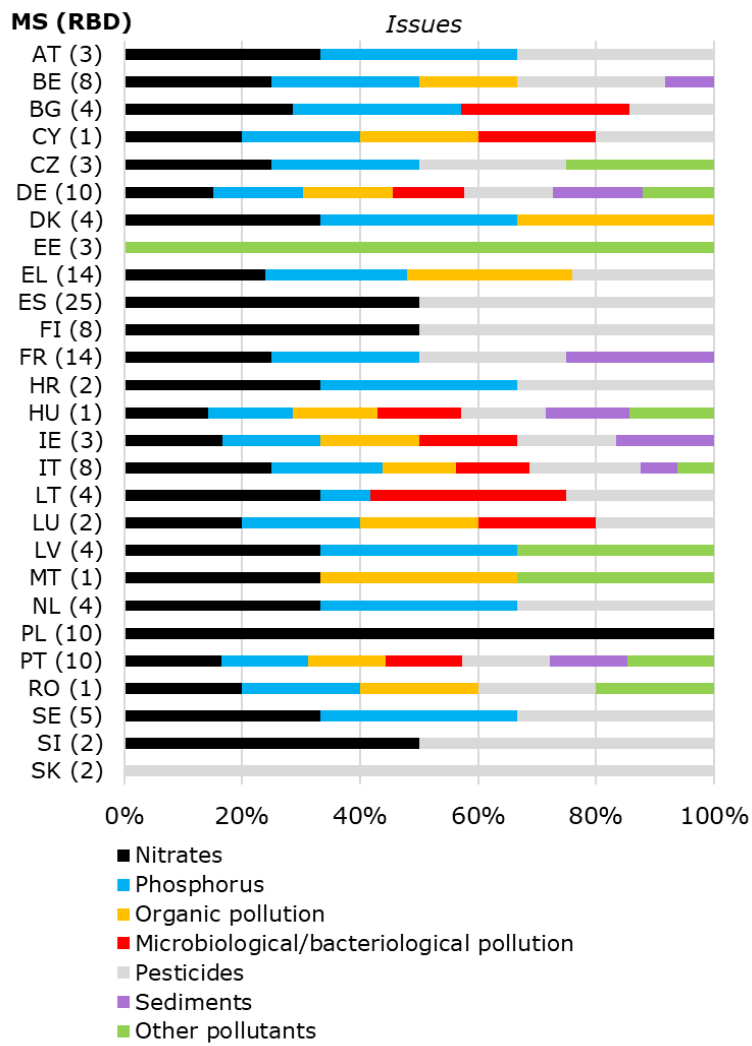


Figure 12: Specific issues covered, in relation to diffuse pollution from agriculture, if there are general binding rules. The total number of RBDs for each Member State reported in brackets.

3.4. Basic measures on hydromorphology (article 11.3.i)

Figure 13 shows Member State reporting on whether there is an authorisation and/or permitting regime to control physical modifications to the water bodies, whether the regime covers changes to the riparian area of water bodies, and whether there is a register of physical modifications of water bodies.

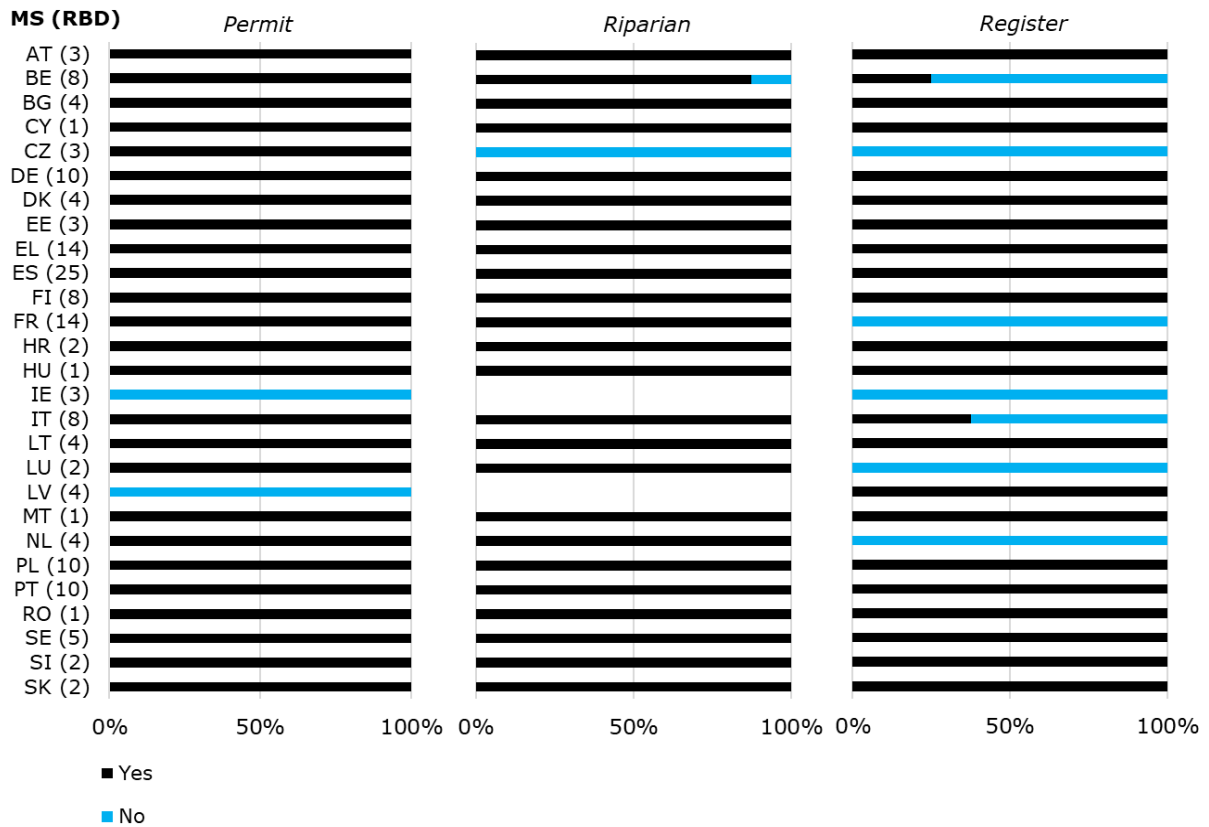


Figure 13: Permits to control physical modifications to the water bodies. The total number of RBDs for each Member State reported in brackets.

3.5. Basic measures on direct discharges to groundwater (article 11.3.j)

Figure 14 shows Member State reporting on whether there is a prohibition of direct discharges (Article 11.3.j).

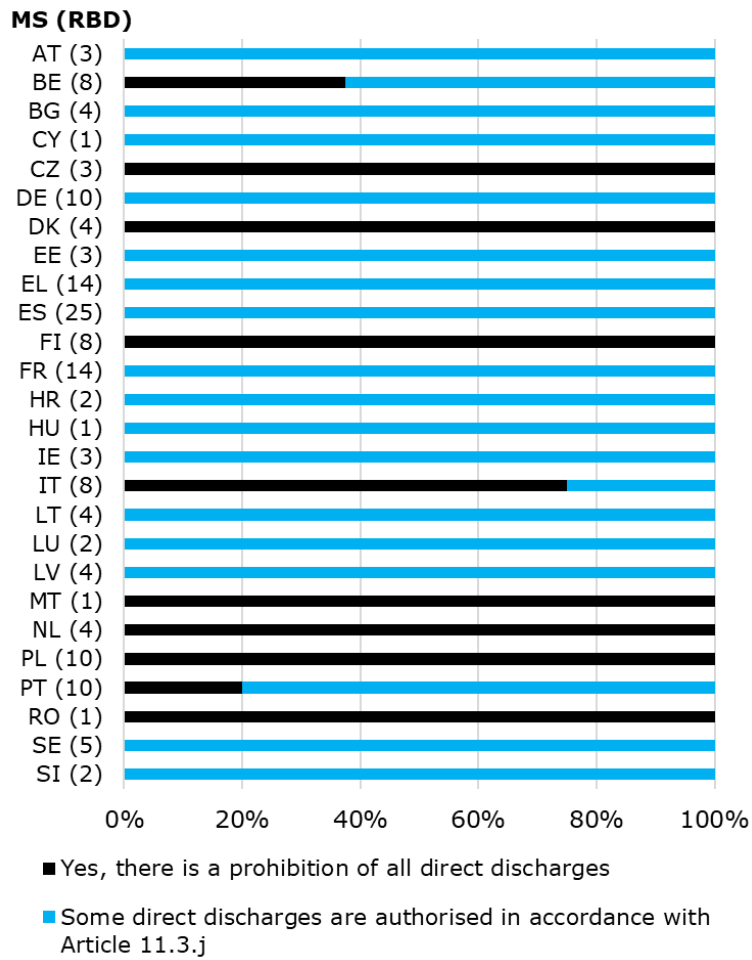


Figure 14: Prohibition of direct discharges. The total number of RBDs for each Member State reported in brackets.

3.6. Basic measures on Priority substances for surface water (article 11.3.k)

Figure 15 shows Member State reporting, in accordance with action taken pursuant to Article 16, whether there are measures to eliminate pollution of surface waters by those substances specified in the list of Priority Substances agreed pursuant to Article 16(2) and to progressively reduce pollution by other substances which would otherwise prevent Member States from achieving the objectives for the bodies of surface waters as set out in Article 4 (Article 11.3.k).

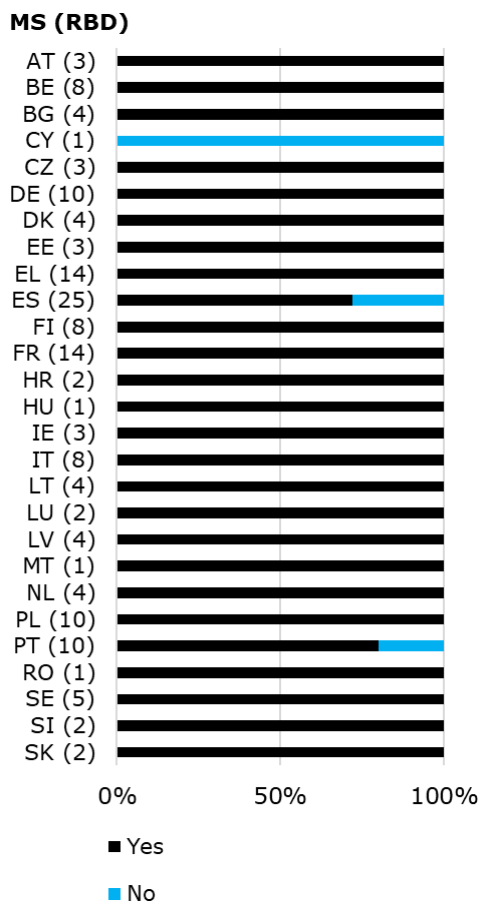


Figure 15: Measures to eliminate pollution of surface waters by Priority Substances. The total number of RBDs for each Member State reported the measures in brackets.

3.7. Supplementary measures on water Reuse

Figure 16 shows Member State reporting on whether reuse of water (e.g., from wastewater treatment or industrial installations) is considered to have a lower environmental impact than other alternative water supplies (e.g., water transfers or desalination).

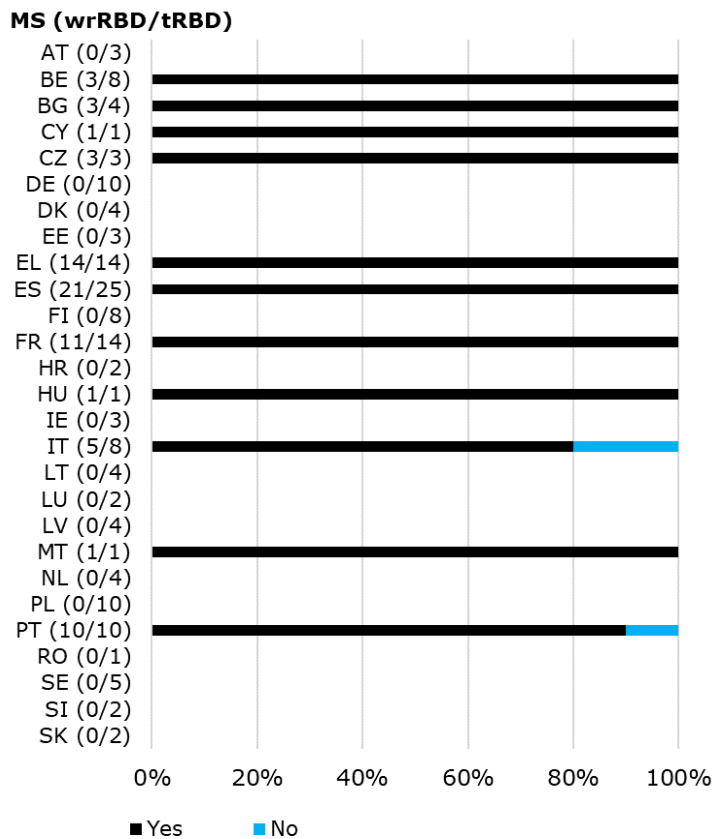


Figure 16: Member State reporting on RBDs where reuse of water has lower environmental impact than other alternative water supplies. wrRBD = RBD with water reuse potential, tRBD = total number of RBDs.

Figure 16 also shows Member State reporting on whether reuse of water has been included in the RBMP as a measure in terms of managing water resources. The 11 Member States in Figure 16 all included water reuse as a measure in selected RBMP.

3.8. Supplementary measure on Ecological Flow

Figure 17 shows Member State reporting on whether ecological flows have been derived for all water bodies at risk of failing the Environmental Objectives due to abstractions, flow diversions or impoundments. Only five Member States (BG, HR, LU, MT, and SK) did not report on whether ecological flows had been derived for all water bodies at risk.

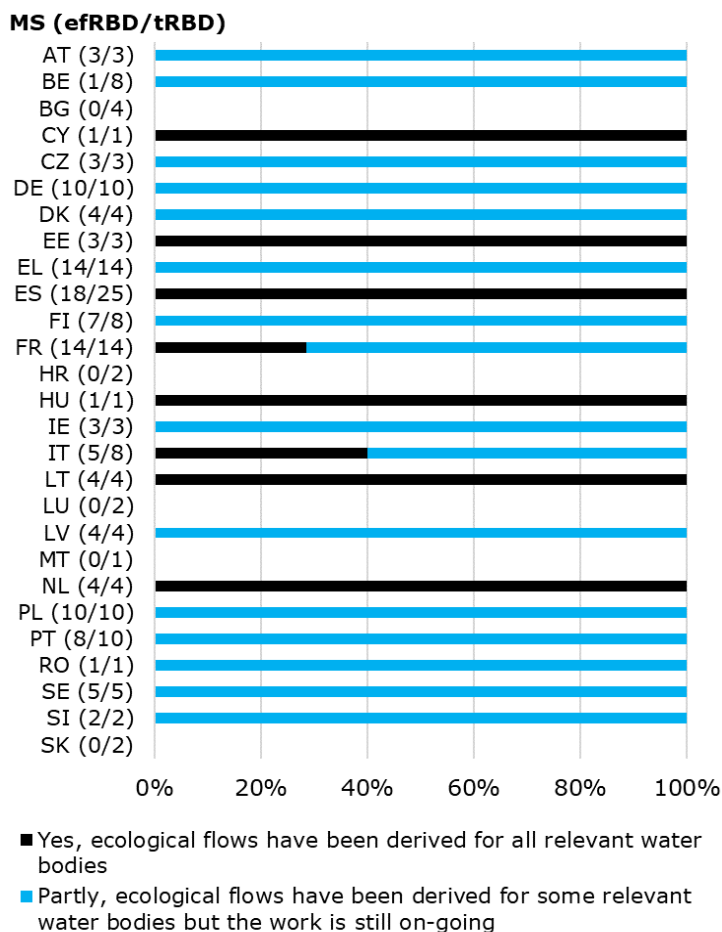


Figure 17: Member State reporting on whether ecological flows have been derived for all water bodies at risk of failing the Environmental Objectives due to abstractions, flow diversions or impoundments. *efRBD* = RBD where ecological flows have been derived fully or partly. *tRBD* = total number of RBDs.

Figure 18 shows Member State reporting on whether budgets for assuring ecological flows have been allocated for all or some measures in relevant RBDs, but implementation has not yet started. Most Member States state that budgets have been allocated for some measures, but implementation not yet started.

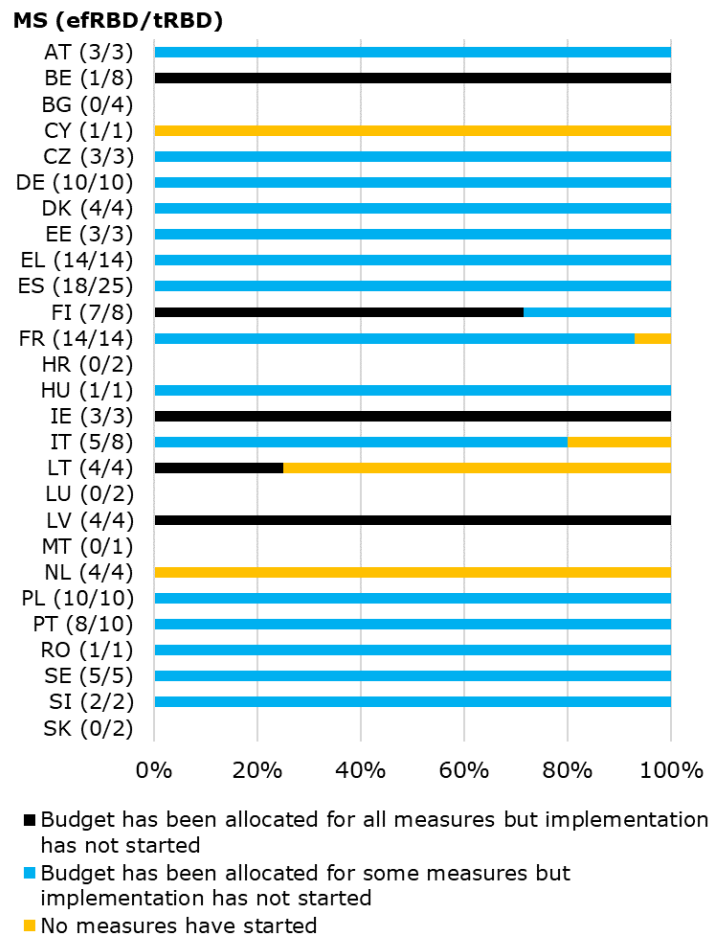


Figure 18: Member State reporting on whether budgets for ecological flows have been allocated. efRBD = RBD where ecological flows have been derived fully or partly. tRBD = total number of RBDs.

3.9. Supplementary measures on Climate Change

Figure 19 shows Member State reporting on whether projected climate changes have been assessed and considered in the second RBMP and PoM. Most Member States reported that some measures relating to Climate change had started. Four Member States (LV, SE, SK and IT for few RBDs) reported that no measures have started. Only two Member States (LT and SI) did not report on climate change related measures.

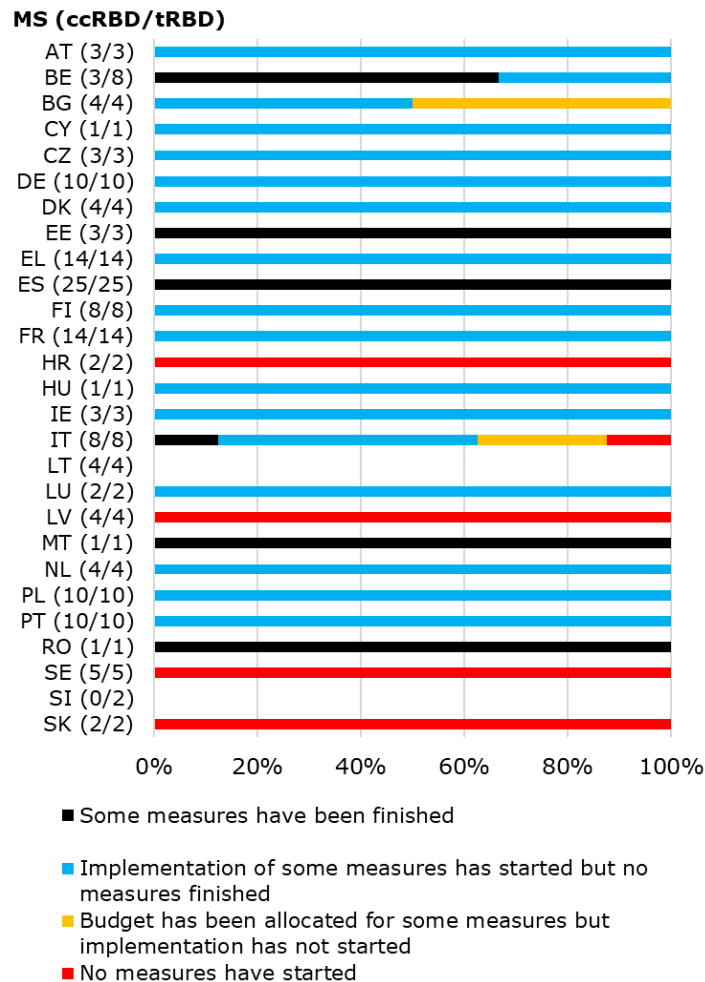


Figure 19: shows Member State reporting whether measures that manages water resources under climate change have been implemented. If no specific measures were planned, Member State reported 'No measures have started'. ccRBD = RBD where climate change measures are relevant. tRBD = total number of RBDs.

3.10. Supplementary measure on MSFD coordination

Figure 20 shows Member State reporting on whether the preparations of the RBMP and PoM have been coordinated with the implementation of the Marine Strategy Framework Directive (MSFD). Only four Member States (BE, IT, LT, and LV) reported that preparations of the RBMP and PoM did not consider the implementation of the MSFD. Five landlocked countries naturally did not report on this.

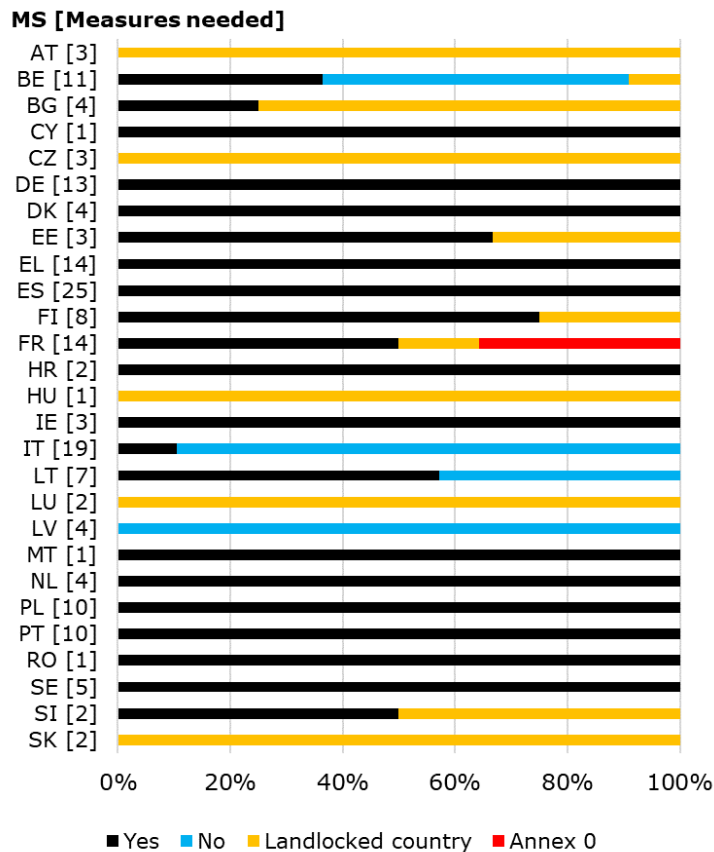


Figure 20: Member State reporting whether the preparations of the RBMP and PoM have been coordinated with the implementation of the Marine Strategy Framework Directive. The total number of RBDs for each Member State reported in brackets.

Figure 21 shows Member State reporting on whether there is a need for additional measures or more stringent measures beyond those required by the WFD in order to achieve the relevant MSFD objectives in coastal and marine environments have been considered in the PoM. Nine Member States reported a need for additional measures.

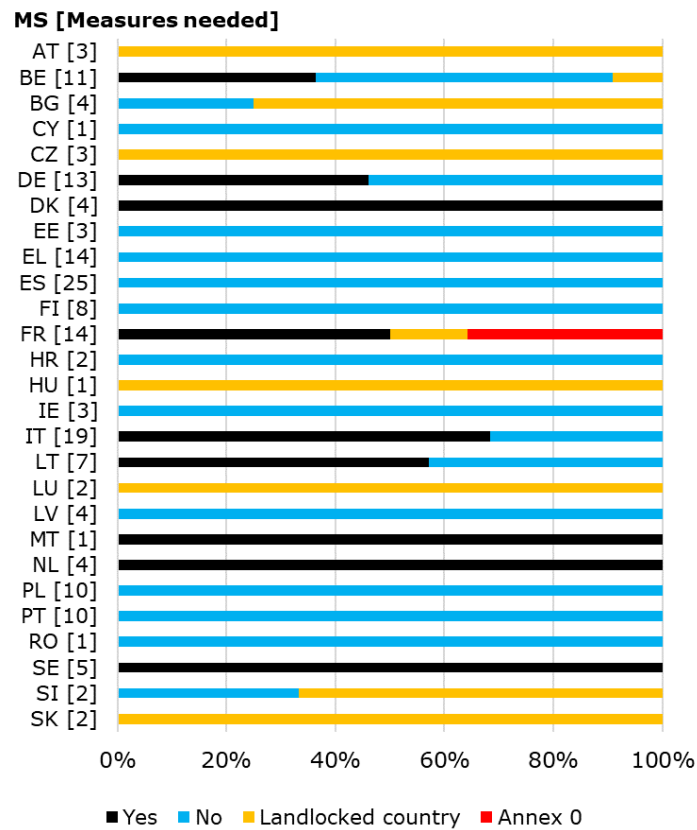


Figure 21: Member State reporting whether the need for additional measures or more stringent measures beyond those required by the WFD in order to contribute to the achievement of the relevant MSFD objectives in coastal and marine environments have been considered in the PoM. The total number of RBDs for each Member State reported in brackets.

Figure 22 shows Member State reporting on the types of additional measures or more stringent measures in order to achieve the relevant MSFD objectives in coastal and marine environments.

Eight Member States described additional measures needed.

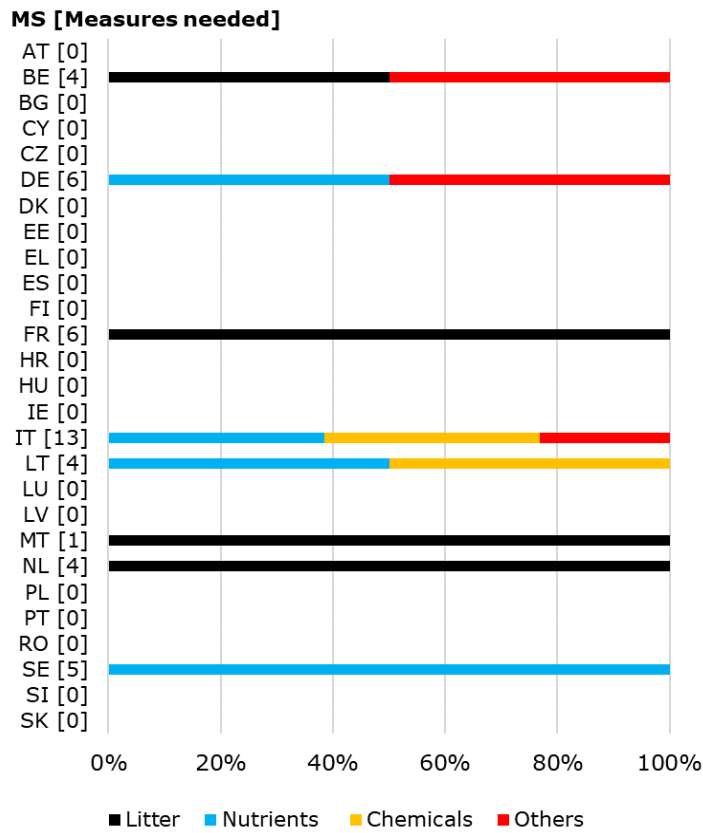


Figure 22: Member State reporting the types of additional measures needed to meet the MSFD objectives.

Figure 23 shows the Member State reporting on the status of implementation of the additional measures needed to meet the MSFD objectives. Only 2 Member State (DE and SE) have started all these measures.

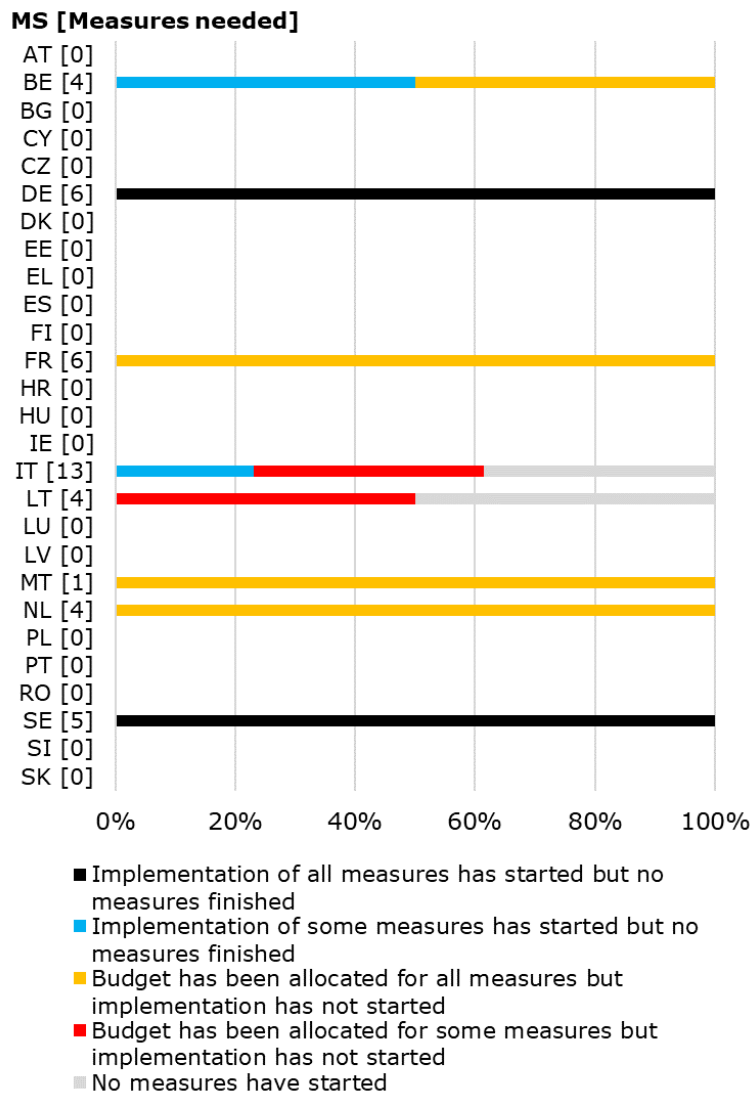


Figure 23: Member State reporting the status of implementation of the additional measures needed to meet the MSFD objectives.

4. THE COST AND FUNDING OF POMS

4.1. Total cost of measures

The Member States were asked to report the total costs of measures (not annualised). Reported expenditures are presented in Table 5. Twenty three Member States reported expenditures relating to Article 11.3.a or 11.3b-1, 11.4 and 11.5 investment, or both (aggregated).

Member states reported costs for different periods (Cost of measures period), and on different levels (Cost of measures scale). Twelve Member States reported costs for each

RBD, where some RBDs even had different periods. For example, IT had three different periods for different RBDs.

23 Member States reported that they received EU funding between 2015-2018. Section 4.1.2 provides more detail on the different funding sources.

Table 7: Costs being reported by Member States (MS).

Member State	Article 11.3a Investment 2015-2018	Article 11.3b-1, 11.4, 11.5 Investment 2015-2018	Article 11.3a-1, 11.4, 11.5 Investment 2015-2018 (aggregated)	Cost of measures period	Level (Cost of measures scale)	EU Funds 2015-2018
AT	X	X		2016-2018	MS	X
BE	X	X	X	2016-2017 2015-2018	RBD	X
BG			X	2015-2018 2016-2018	MS	X
CY	X	X		2015-2018	MS	
CZ			X	2015-2018	RBD	X
DE			X	2016-2018	RBD	X
DK			X	2016-2018	MS	X
EE		X	X	2015-2017	RBD	X
EL					MS	X
ES	X	X	X	2015-2017	RBD	X
FI	X	X		2016-2018	MS	X
FR			X	2015-2017 2016-2017	RBD	
HR	X	X		2015-2018	MS	X
HU	X	X		2015-2018	MS	X
IE				2015-2018	MS	
IT	X	X		2015-2018 2016-2017 2016-2018	RBD	X
LT			X	2015-2018	MS	
LU			X	2016-2018	MS	X
LV		X		2016-2018	RBD	X
MT	X	X		2015-2018	MS	X
NL						X
PL	X	X		2016-2018	RBD	X
PT	X	X	X	2015-2017 2016-2017	RBD	X
RO	X	X	X	2016-2018	RBD	X
SE			X	2016-2017	MS	X
SI				2015-2018	MS	X
SK	X	X	X	2015-2018	RBD	X

4.1.1. Cost Explanation – methods used

Member States were asked to report on the calculation methods for assessing the updated costs. A qualitative assessment of the provided information in the PoM was made (Table 8):

Low level of detail: Lacking description in the PoM and there is no reference to a background document (assuming more details)

Medium level of detail: Description in PoM, but no reference to background document, or no limited description in PoM but reference to background document

High level of detail: Description in PoM and reference to background document

14 Member States provided no information on the calculation methods (Table 6). Three of these Member States reported that a methodology for updating costs was lacking (BE, BG, CY).

Five Member States (AT, ES, LV, PT, SK) provided enough information (high level of detail) to understand the calculation methods used for assessing the costs.

Four Member States (IT, PL, RO, SE) provided some information on the calculation's methods (medium level of detail). These nine Member States reported the following methodologies (Table 8):

Existing measures: updated costs were based on already existing measures (AT)

National database: a national database provided the updated costs (ES)

Implementing authorities: authorities in charge of implementing the measures provided the costs. How they derived the costs is not clear (IT, PL, PT, RO)

Experts: updated costs provided by experts. Most likely using unit values (SK)

Unit values: updates costs based on standardized unit values (SK)

Public sources: updated costs based on public sources. Most likely based on unit values (LV, RO)

Only two Member States (AT, SI) reported the methodology for assessing the costs for operation and maintenance. AT used a fixed percentage of the investment cost as an estimate, where SI evaluated annual material (no further specification) and labour costs. 15 Member States did not mention operation and maintenance in the PoM (Table 8).

Table 8: A qualitative assessment of the details provided for the calculation methods of the updated cost. If available, the methodology for estimating investment cost and operation and maintenance cost (O&M) is provided.

Member State	High level of detail	Medium level of detail	Low level of detail	Investment							O&M		Not mentioned
				Existing measures	National database	Implementing authorities	Experts	Unit values	Public sources	Lack of methodology	% of investment	Annual material and labour cost	
AT	X			X							X		
BE			X							X			X
BG			X							X			X
CY			X							X			X
CZ			X										X
DE			X										X
DK		X											X
EE			X										X
EL			X										X
ES	X				X								
FI			X										X
FR			X										X
HR			X										
HU			X										X
IE			X										
IT		X				X							
LT			X										X
LU		X											X
LV	X								X				X
MT		X											
NL			X										
PL		X				X							
PT	X					X							
RO		X				X			X				
SE		X											X
SI		X										X	
SK	X						X	X					

4.1.2. Funding sources

Member States were asked to report on the source of EU funds for the financing of Article 11.3.b to l basic measures. The breakdown of sources of funding are shown in Table 9. Note that some funds are overlapping. For example, The European Regional Development Fund (ERDF) and The European agricultural fund for rural development (EAFRD) (named “rural development”) are part of the European structural and investment funds (named “structural funds” in Table 9).

Only one Member State (ES) has reported sources from non-EU funds. Other Member States have reported various EU funds (e.g., LIFE+, INTEREG) in connection with public, private and governmental budgets. The most reported EU fund is The European agricultural fund for rural development (EAFRD) (named “rural development” in Table 9) reported by eight Member State.

Some Member States have reported EU funding (Table 7), but not specified the sources of that EU funding (CZ, EE, HR, LU).

Table 9: Breakdown of sources of funding. Some sources are overlapping (e.g., Structural and regional development fund), thus this table indicates the level of detail provided by the Member State.

Member State	LIFE+	Public budgets (e.g., tax)	Private budgets	Government/ National/ Federal resources	Structural funds	Rural development program	Regional development fund	INTREREG	Cohesion funds	Horizon 2020	Erasmus+	European social fund	European maritime and fisheries fund	Natura 2000	Non-EU funds
AT	X	X	X	X											
BE		X		X											
BG			X												
CY				X	X	X									
CZ															
DE		X		X											
DK		X		X											
EE				X											
EL	X				X	X	X	X							
ES	X				X	X			X						X
FI															
FR															
HR															
HU															

IE															
IT	X					X	X								
LT															
LU				X											
LV						X	X		X						
MT	X	X	X			X	X	X	X	X	X	X			
NL					X			X		X					
PL				X											
PT					X								X		
RO		X	X			X	X		X				X		
SE	X					X									
SI		X													
SK					X									X	

5. OBJECTIVES OF THE WFD

For each significant pressure type or chemical substance reported, a pre-defined quantitative indicator of the scale and extent of the pressure or chemical substance that is to be reduced by measures to achieve Environmental Objectives has been reported. This is the gap to be filled to meet the objectives.

5.1. Indicator gap to achieving good status

Eighteen Member States have reported comparable indicators for the period 2015-2021 (AT, CY, CZ, DE, DK, EE, ES, FR, HR, HU, LT, LV, MT, PL, PT, SI, SK) and it is therefore only possible to comment the indicator gap trend for these Member States (Figure 24, CY not included).

In three out of the 18 Member States (EE, LV, MT), 70-100% of the objectives have been met for their RBDs. For ES, 16 out of their 25 RBDs also report that objectives have been met.

A large decreasing trend is particularly observed for one third of the Member States (AT, CZ, FR, PT). In most of the RBDs, 30-80% of the indicators have a decreasing gap.

No change in indicator gaps is also observed. This is particularly relevant for 9 out of 10 RBDs in PT, almost half of the RBDs in PL and DE, and both RBDs in SI and SK.

An increasing indicator gap is observed in ES, DK, DE, HU, HR, and SE. For these Member States it is only for some RBDs with increasing indicator gaps varying between 3-30%.

In CY (not shown in the figure), there has been no updates to the 2021 values provided in 2015 but all measures (except one) have met their objective by 2021. The only pressure remaining is diffuse pressure from agriculture. It is reported to be reduced by 4 tonnes of nitrogen load per year between 2015 and 2021.

Indicator gap trend, 2015-2021

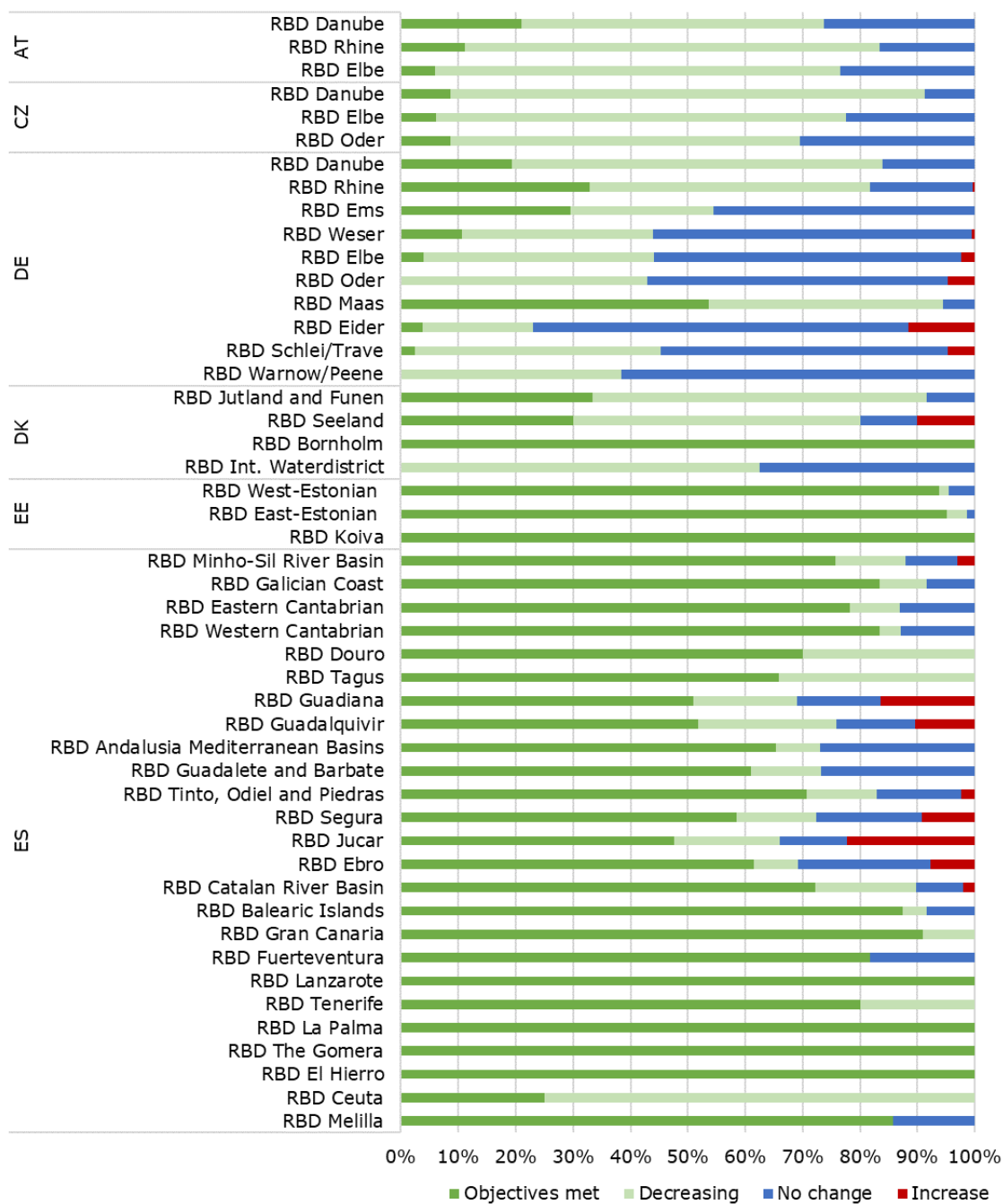


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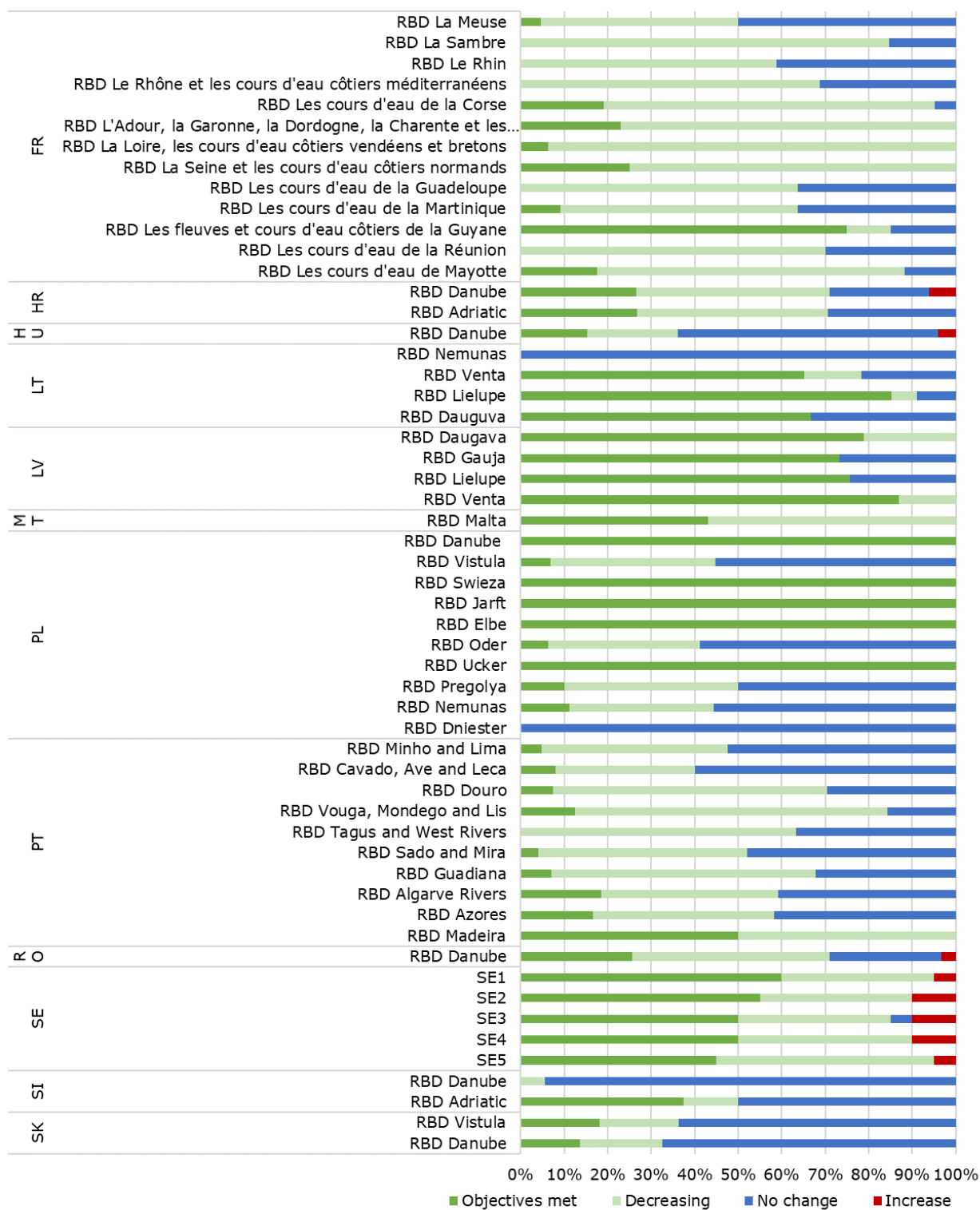


Figure 24: Trend in indicator gap 2015-2021 reported for the implementation of planned Programme of Measures (2018). "Objectives met" equals all measures needed to achieve the environmental objectives are fully operational. Data on CY not available.

6. REPORTING OF KEY TYPE OF MEASURES (KTM)

In 2018, Member States were asked to report on the progress in the implementation of their defined Key Types of Measures (KTM). KTMs are expected to incorporate Article 11.3 (b to l) basic measures and supplementary measures. Their implementation and completion are expected to deliver the bulk of the actions required to achieve WFD objectives, i.e., to reduce significant pressures to the extent required to achieve good status or to prevent deterioration of status in high and good status water bodies. A key type of measure is expected to be reported by Member States only if it was related to a significant pressure in that Member State. Member States can identify a limited number of key types of measures for each RBD and provide for those quantitative indicators of progress in implementation. The progress is expressed as KTM indicator values expressing the gap from full implementation. Member States were also given the possibility to report different or additional KTMs according to their specific situations and requirements (under KTM99). Table 10 provides an overview of the KTMs explained in the following sections.

Table 10: Overview of Key Type of Measures

KTM	Title
1	Construction or upgrades of wastewater treatment plants
2	Reduce nutrient pollution from agriculture
3	Reduce pesticides pollution from agriculture
4	Remediation of contaminated sites (historical pollution including sediments, groundwater, soil)
5	Improving longitudinal continuity (e.g., establishing fish passes, demolishing old dams)
6	Improving hydromorphological conditions of water bodies other than longitudinal continuity
7	Improvements in flow regime and/or establishment of ecological flows
8	Water efficiency, technical measures for irrigation, industry, energy, and households
9	Water pricing policy measures for the implementation of the recovery of cost of water services from households
10	Water pricing policy measures for the implementation of the recovery of cost of water services from industry
11	Water pricing policy measures for the implementation of the recovery of cost of water services from agriculture
12	Advisory services for agriculture
13	Drinking water protection measures (e.g., establishment of safeguard zones, buffer zones, etc.)
14	Research, improvement of knowledge base reducing uncertainty
15	Measures for the phasing-out of emissions, discharges, and losses of Priority Hazardous Substances or for the reduction of emissions, discharges and losses of Priority Substances
16	Upgrades or improvements of industrial wastewater treatment plants (including farms)
17	Measures to reduce sediment from soil erosion and surface run-off
18	Measures to prevent or control the adverse impacts of invasive alien species and introduced diseases
19	Measures to prevent or control the adverse impacts of recreation including angling
20	Measures to prevent or control the adverse impacts of fishing and other exploitation/removal of animal and plants
21	Measures to prevent or control the input of pollution from urban areas, transport and built infrastructure
22	Measures to prevent or control the input of pollution from forestry
23	Natural water retention measures
24	Adaptation to climate change
25	Measures to counteract acidification
99	Other key type measure reported under PoM

6.1. KTM overview

There are large differences in the numbers of KTMs reported by Member States reflecting differences in pressures, and also between the RBDs within the Member States (Figure 25). FR and IE have reported the most KTMS (24) and have also reported KTM99. Compared to the previous 2015 PoM assessment, DK, EL, HR, and SI have now reported KTMs for all their RBDs (Figure 25 and Table 9).

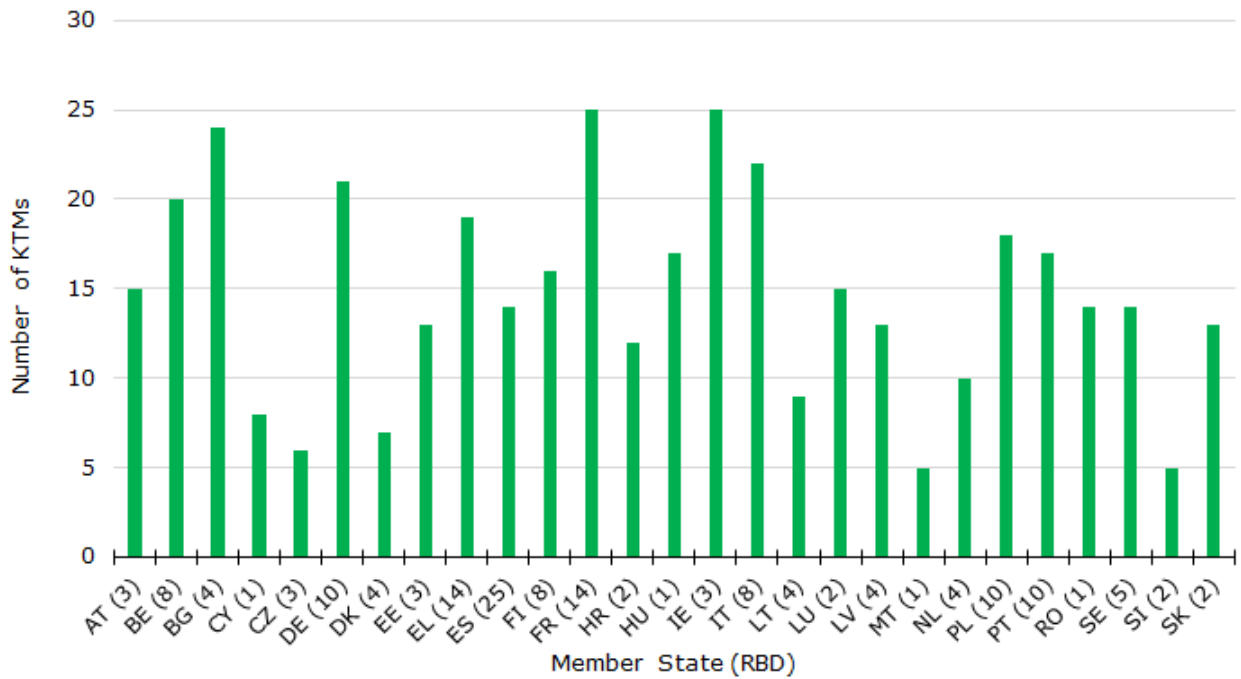


Figure 25: Number of Key Types of Measure reported by Member States

KTM1 (Construction or upgrades of wastewater treatment plants) and KTM2 (Reduce nutrient pollution from agriculture) were the most reported KTMs (26 Member States), whereas KTM25 (Measures to counteract acidification) was the least reported KTM (five Member States) (Figure 26). Twenty Member States reported under KTM99, indicating that the defined KTMs did not cover specific situations and requirements. DE (10 RBDs), ES (25 RBDs) and EL (14 RBDs) reported KTM99 in nearly all their RBDs (Table 9).

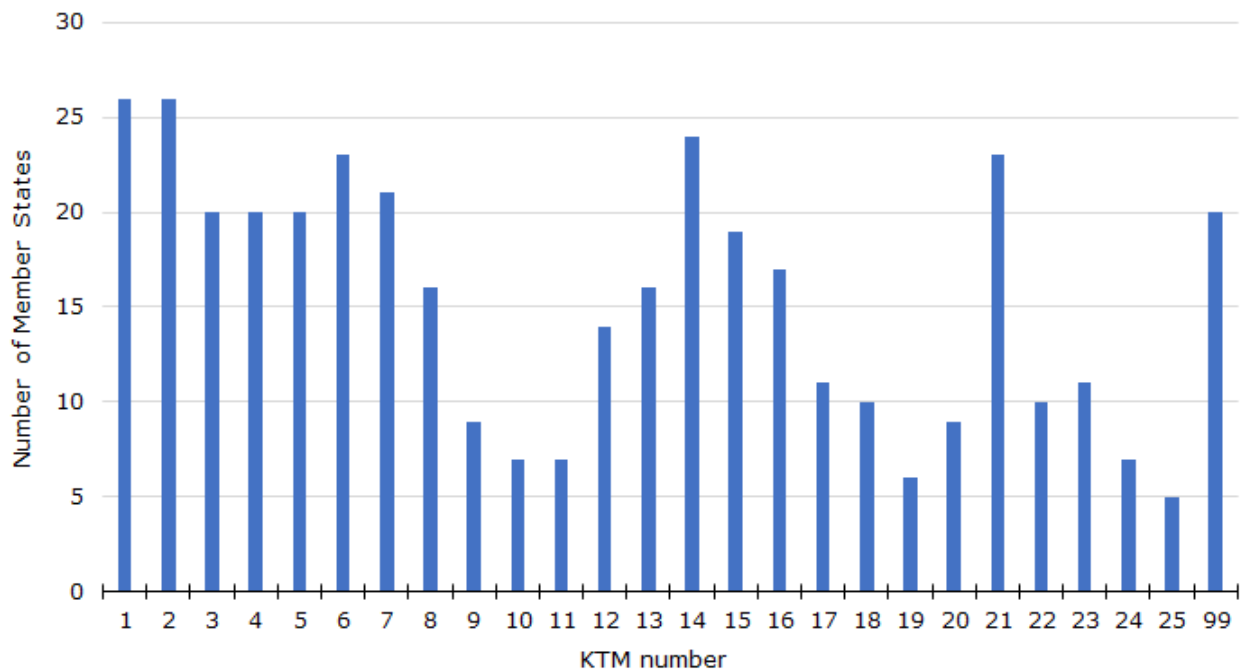


Figure 26: Number of Member States reporting on the different Key Types of Measures (see KTM overview in Table 8).

Table 9 gives an overview of the KTMs reported by Member States. Compared to the 2015 PoM, all Member States have reported KTMs. It should be noted that it would not necessarily be expected that all KTMs would be reported by Member States as significant pressures types vary across Member States and some may not be required. These differences may reflect differences in the extent and type of pressures between and within Member States, but they may in some cases also reflect a lack of a common understanding of what is meant by a “Key Type of Measure” and what should be reported. For example, IE have reported all KTMs, except KTM19, in all their RBDs.

Table 11: Breakdown of the Key Type of Measures reported by Member States in 2018.

MS (RBD)	Key Type Measure																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	99
AT (3)	3	3	1	1	3	3	3					3	1	3	3	3	3				3					1
BE (8)	5	5	6	6	5	5	4	5	1	1			1	4	4	4	4	1	2		4			2		5
BG (4)	4	4	3	3	4	4	4	4	2	3	3	3	2	3	3	4	1	2	2	2	4	1	3	2		
CY (1)	1	1			1	1	1	1						1							1					
CZ (3)	3	3	3	3										3												3
DE (10)	9	9	9	7	9	9	9	7				9	7	9	6	6	9	6		8	9		9	5	6	9
DK (4)	4	4		4	4	3								4												2
EE (3)	3	3		2	3	2	3					3	1	3	2	2					3	3				
EL (14)	12	14	14		3	14	13	14	9	10	14	14	14	14	14	12	6			2	12					14
ES (25)	16	12	7	3		3		17	3		3	4		3			5	6			8					24
FI (8)	8	7	5	5	7	6	8	3				7			4	7					6	7	4		2	7
FR (14)	14	12	13	12	13	14	8	11	11	10	11	10	5	11	13	13	6	3	4	3	12	2	9	7		7
HR (2)	2	1	2				2	1			1	2	1	2	2	2					2					
HU (1)	1	1	1	1	1	1	1	1					1	1	1	1	1				1	1	1			1
IE (3)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
IT (8)	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	3	1			3	1	2	3		
LT (4)	3	4				1	4							4	2						3		3			4
LU (2)	2	1	1		1	2	2	2				1	1	2			1				2	1	2			2
LV (4)	4	4		4	4	4	4					1		4	4				2		4	4				4
MT (1)	1							1						1									1			1
NL (4)	4	4	4	3										4	4				4	3	4					4
PL (10)	5	6	1	2	3	4	1	3	1	1			1	9	6				1	1	8				1	5
PT (10)	8	9		3	1	8	8	7	1			1	2	10	3	8		2		5	9					1
RO (1)	1	1	1	1	1	1	1							1	1	1				1	1		1			1
SE (5)	5	5	5	5	5	5	5					5	5			5		5			5	5				5
SI (2)		1	1			2								2												2
SK (2)	2	2	1	1	2	2	1							1	2	1		2			2			1		

6.2. Progress on KTMs to achieve Environmental objectives

Similar to section 5.1, the reported difficulties in comparing the indicator gaps, also applies to KTM indicator values. Only 16 Member States reported comparable values for 2016-2018 (Figure 27).

In 22 out of 25 RBDs in ES, more than 50% of the objectives have been meet. A similar trend is seen for half the RBDs in PT.

In FR, PT, and SE most RBDs have met their objectives and/or indicator values have a decreasing trend, i.e., indicator gaps are closing over time with the PoM.

In seven Member States (DE, DK, HR, HU, LT, LV, PL), many of the indicator value trends have shown no progress.

Increasing indicator gaps are seen in CZ (all RBDs), DE (all RBDs), EE (two RBDs), ES (eight RBDs), HR (all RBDs), LV (one RBD), RO (all RBDs), SE (two RBDs), SI (one RBD) and SK (all RBDs).

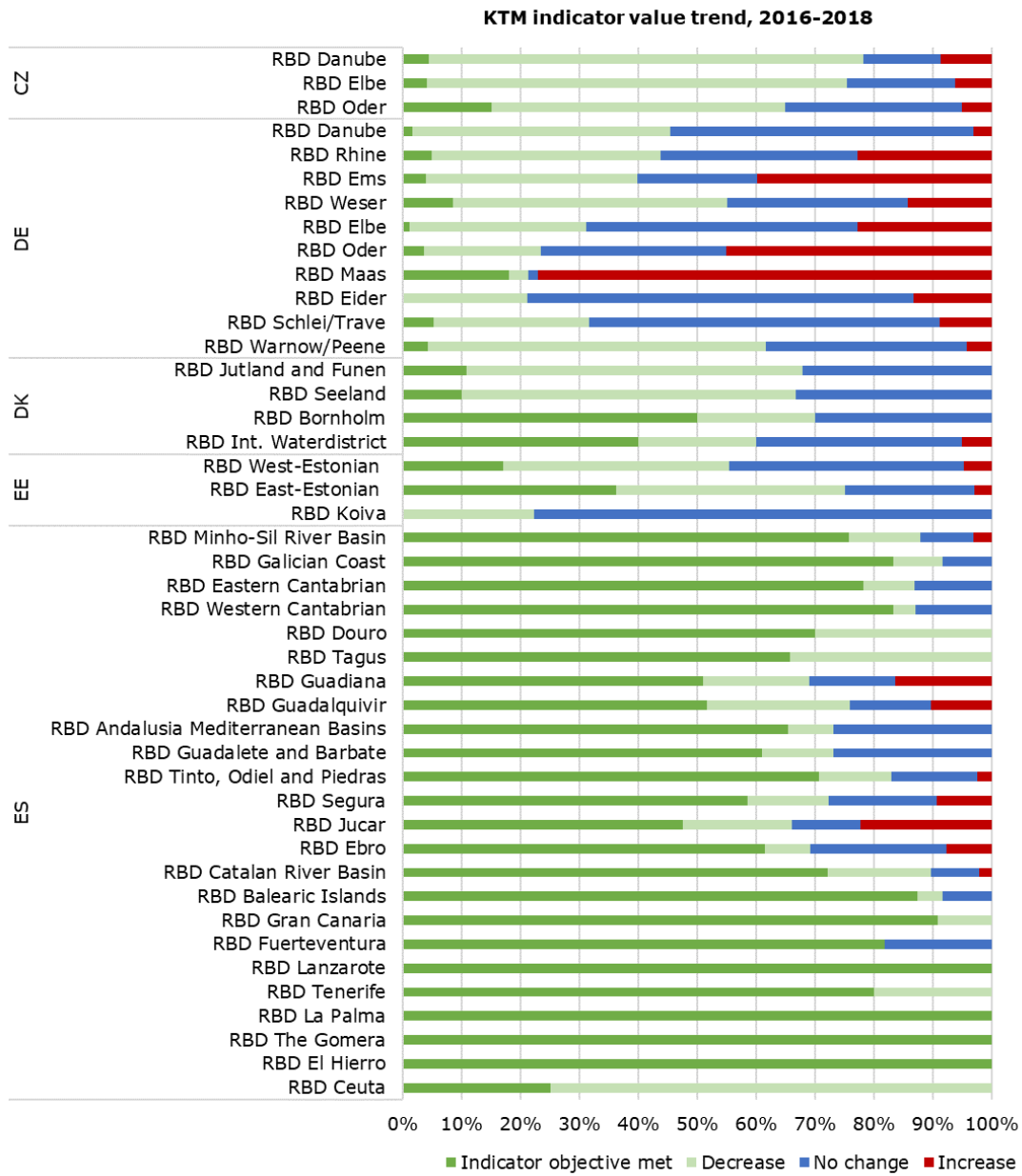


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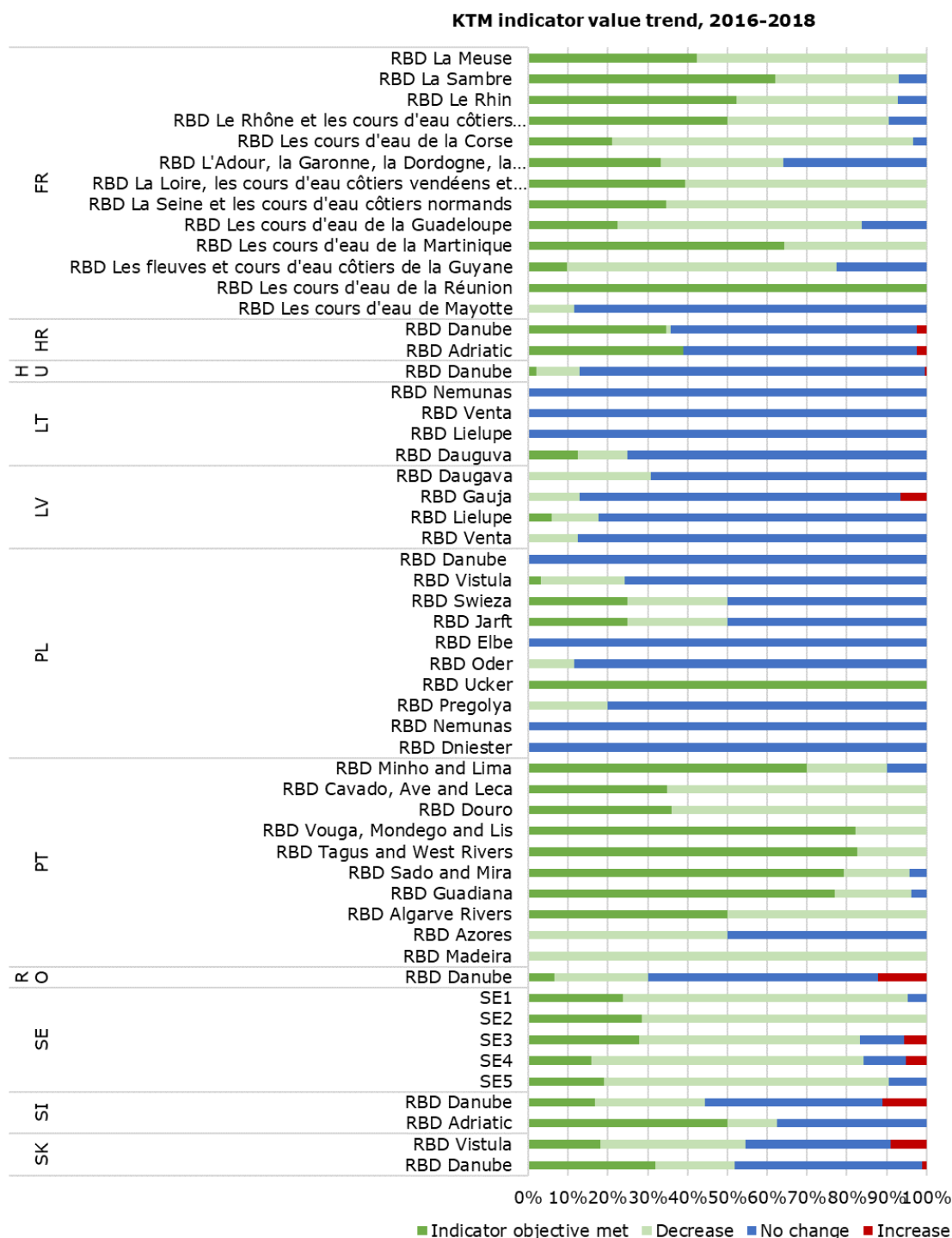


Figure 27: Trend in Key Type Measure indicator gap from the 2nd RBMP to the PoM progress reporting (2016-2018) reported for the implementation of planned Programme of Measures (2018). "Indicator objectives met" equals measure is fully operational to achieve the environmental objectives.

The remaining 20 Member States have not reported indicator values for both 2016 and 2018, making the comparison impossible. Most Member States reported the indicator

values for 2018, 2021 and 2027. Generally, many of the indicator values reveal a downward trend, whereas some report no progress.

6.3. Progress with implementation of measures to reduce pressures from agriculture

Agricultural activities are significant sources of pressures on water bodies in the EU. The three most relevant Key Types of Measures associated with reducing pressures from agriculture are:

- KTM2 - Reduce nutrient pollution from agriculture
- KTM3 - Reduce pesticide pollution from agriculture
- KTM12 - Advisory services for agriculture

The following sections provide an overview of the progress of implementation of each measure, as well as an assessment of significant pressures.

6.3.1. KTM2 - Reduce nutrient pollution from agriculture

The main pressures reported by Member States relating to nutrient pollution from agriculture in surface water and groundwater are presented in Figure 28 and Figure 29.

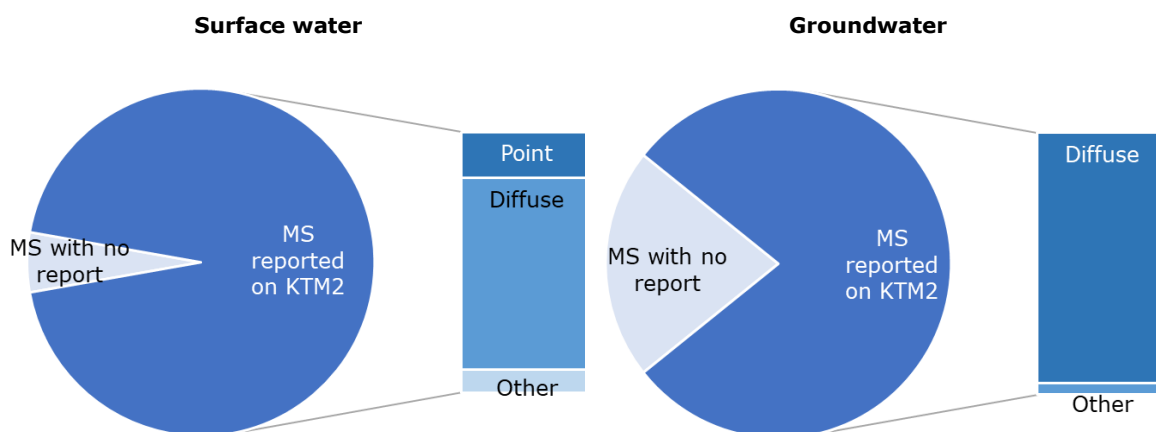


Figure 28: Status of Member States reporting on KTM2, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

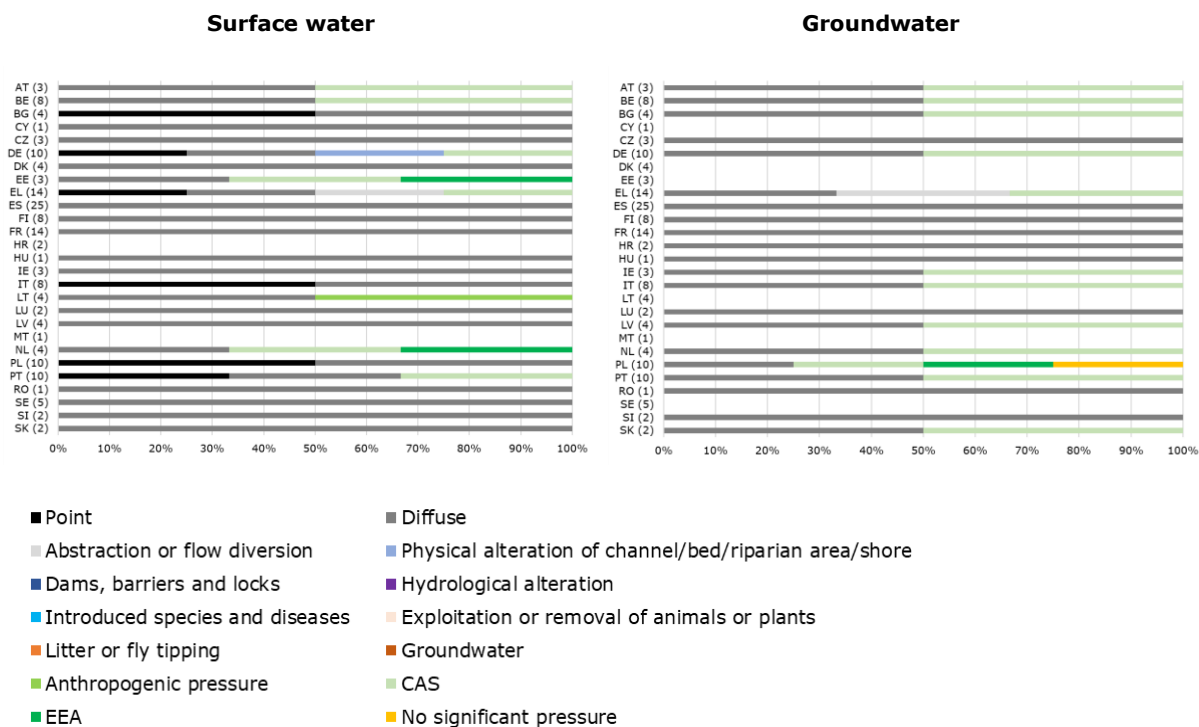


Figure 29: KTM2, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State has stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Most Member States have reported diffuse pollution (dark grey), as the main pressure. Other important pressure types reported are point sources and priority substances and River Basin Specific Pollutants represented by the EEA and CAS columns (incl. N and P substances).

AT, BE, DE, PT have reported Nitrate, Nitrite, Ammonium and Total Nitrogen in surface water (SW) as specific pressures. It's most likely other countries also have issues with Nitrogen in SW, but don't report it explicitly.

AT, BE, BG, DE, EL, IT, LV, NL, PL, PT and SK have reported Nitrate, Nitrite, Ammonium and Total Nitrogen in groundwater (GW) as specific pressures. Its most likely other countries also have issues with Nitrogen in GW, but don't report it explicitly.

DE, NL and PT report Phosphorus; Phosphate and Total Phosphorus in SW as specific pressures. Its likely other countries also have issues with Phosphorus in SW, but don't report it explicitly.

BE, BG, IE, NL and PL report Phosphate and Total Phosphorus in GW as specific pressures. Its likely other countries also have issues with Phosphorus in GW, but don't report it explicitly.

For 2018-2021, Member States including AT, CZ, DE, EL, ES, IE, IT, PL, and RO report indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time with the PoM, meaning it indicates the gap to good status is closing with the planned measures in the PoM. LT and LV report indication of achieving the objective of

reduced nutrient pollution from agriculture by 2021 by implementing the planned measures.

For Member States CY, HR, HU, PT and SI the reported indicator values indicate no change in the trend. In SK a mixed trend across the 2 RBDs was reported.

For SE, indicators are projected to increase from 2018 to 2021.

For Member States BG, DK, FI, FR and LU no trends can be reported, as only indicator values for 2018 were reported. For BE, EE, LU and NL indicator values were generally missing or difficult to interpret. In MT this KTM was not mapped.

6.3.2. KTM3 - Reduce pesticides pollution from agriculture

The main pressures reported by Member States relating to pesticides pollution from agriculture in surface water and groundwater are presented in Figure 30 and Figure 31.

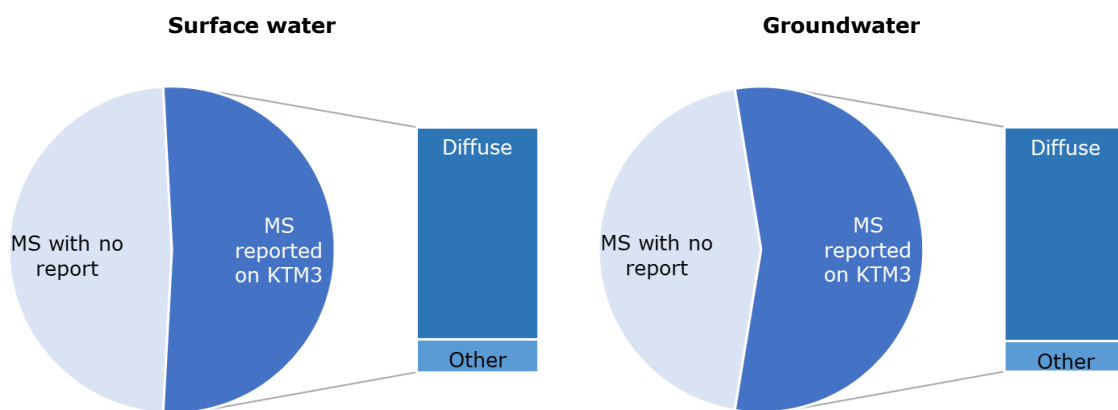
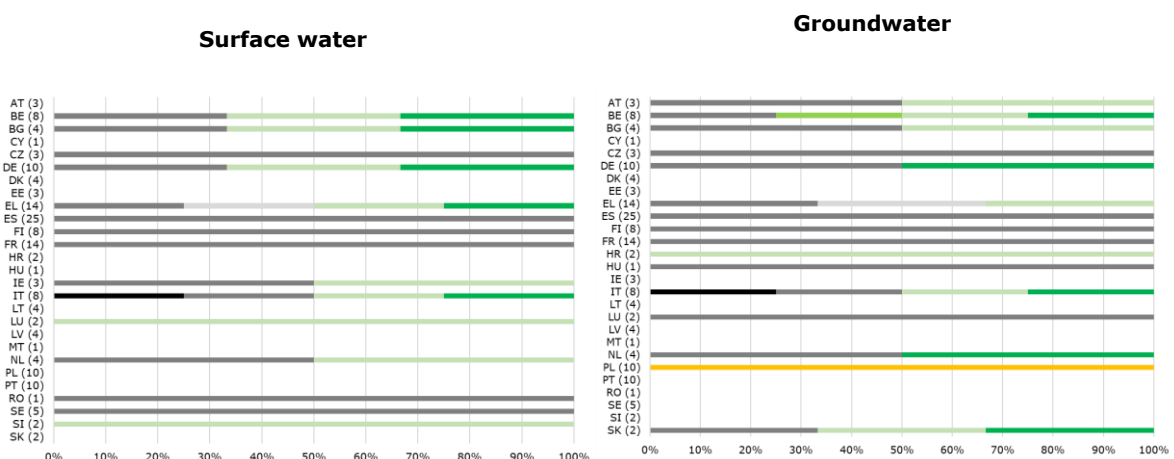


Figure 30: Status of Member States reporting on KTM3, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.



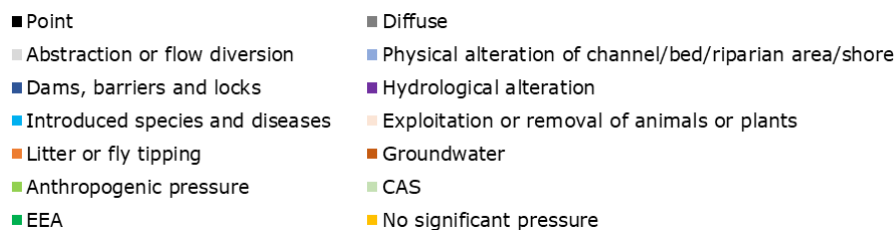


Figure 31: KTM3, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State has stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Half of the Member States did not report on KTM3. The other half of the Member States have reported diffuse pollution (dark grey) as the main pressure. Other important pressure types reported are priority substances and River Basin Specific Pollutants presented by CAS (light green) and EEA (dark green).

BG, DE and EL have reported specific pressures such as ‘CAS_140-66-9 - Octylphenol (4-(1,1',3,3'-tetramethylbutyl)-phenol)’, and ‘CAS_87-68-3 - Hexachlorobutadiene’, CAS_34123-59-6 – Isoproturon and CAS_117-81-7-‘Di(2-ethylhexyl)phthalate (DEHP)’, CAS_470-90-6-‘Chlorfenviphos’, CAS_50-29-3-‘DDT, p,p’’, EEA_32-03-1-‘Total DDT’ (DDT,p,p’ + DDT,o,p’ + DDE,p,p’ + DDD,p,p’)’ and CAS_7439-98-7 – ‘Molybdenum and its compounds’.

For 2018-2021, Member States including CZ, DE, EL, ES, IE, IT and RO report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM meaning it indicates the gap to good status is closing with the planned measures in the PoM. PL and SE report indication of achieving the objective of reduced pesticide pollution from agriculture by 2021 by implementing the planned measures.

For Member States AT, HR, HU, SI and SK the reported indicator values indicate no change in the trend.

For Members States BG, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BE and NL indicator values were generally missing or difficult to interpret. For CY, DK, EE, LT, LV, MT, and PT this KTM was not mapped.

6.3.3. KTM12 - Advisory services for agriculture

The main pressures reported by Member State relating to advisory services for agriculture are presented in Figure 32 and Figure 33.

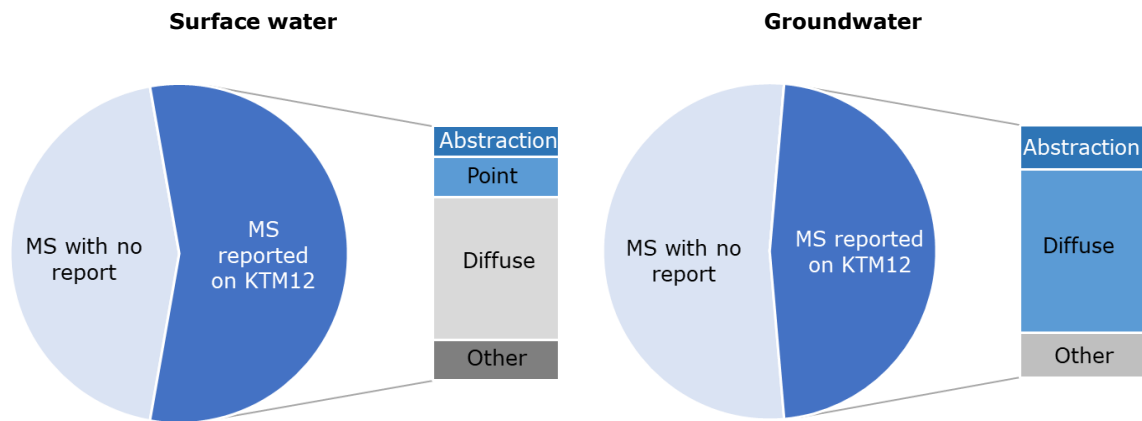


Figure 32: Status of Member States reporting on KTM12, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

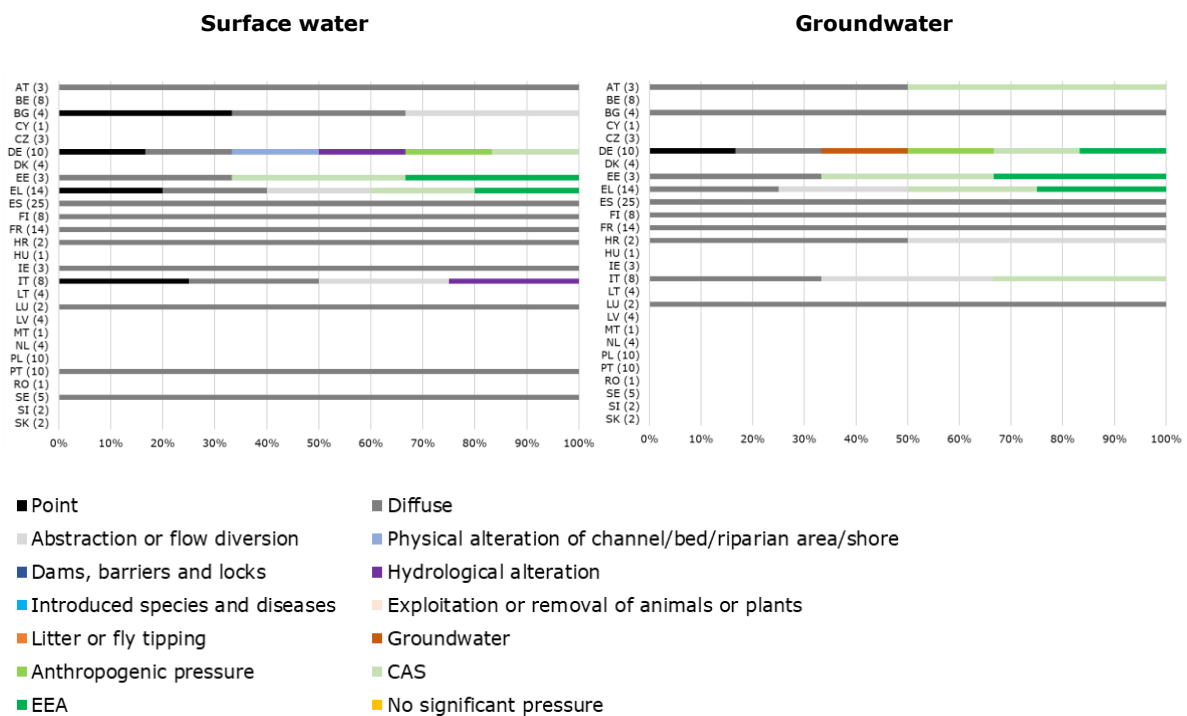


Figure 33: KTM12, Advisory services reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Half of the Member States did not report on KTM12 for surface water, and less than half of the Member States reported on KTM12 for both surface water and groundwater. Most of the Member States reported diffuse pollution (dark grey) as the main pressure. Other important pressure types reported are point sources (black), abstraction and flow diversion (light grey), hydrological alteration (purple) and priority substances (very light and dark green).

For 2018-2021, Member States including AT, DE, EL, ES, IE, IT and PT report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. SE report achieving the objective of improved agricultural advisory services reducing agricultural pressures by 2021..

For HR the reported indicator values indicate no change in the trend.

For EE no trend was mentioned in the reporting. For Member States BG, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BE, CY, CZ, DK, HU, LT, LV, MT, NL, PL, RO, SI and SK this KTM was not mapped.

6.4. Progress with implementation of measures to reduce pressures from urban and industrial wastewater treatment and chemicals

6.4.1. KTM1 - Construction or upgrades of wastewater treatment plants

The main pressures reported by Member State relating to urban and industrial wastewater in surface water and groundwater are presented in Figure 34 and Figure 35.

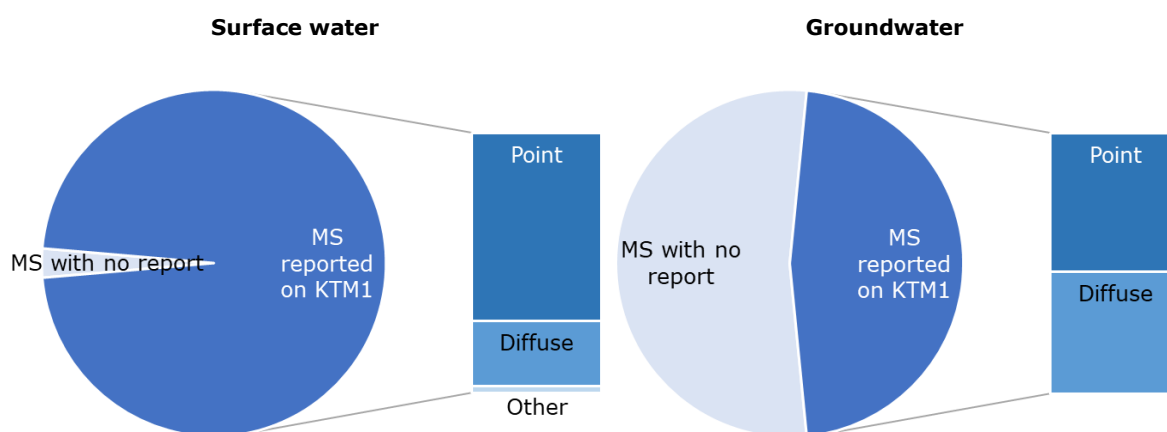


Figure 34: Status of Member States reporting on KTM1, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

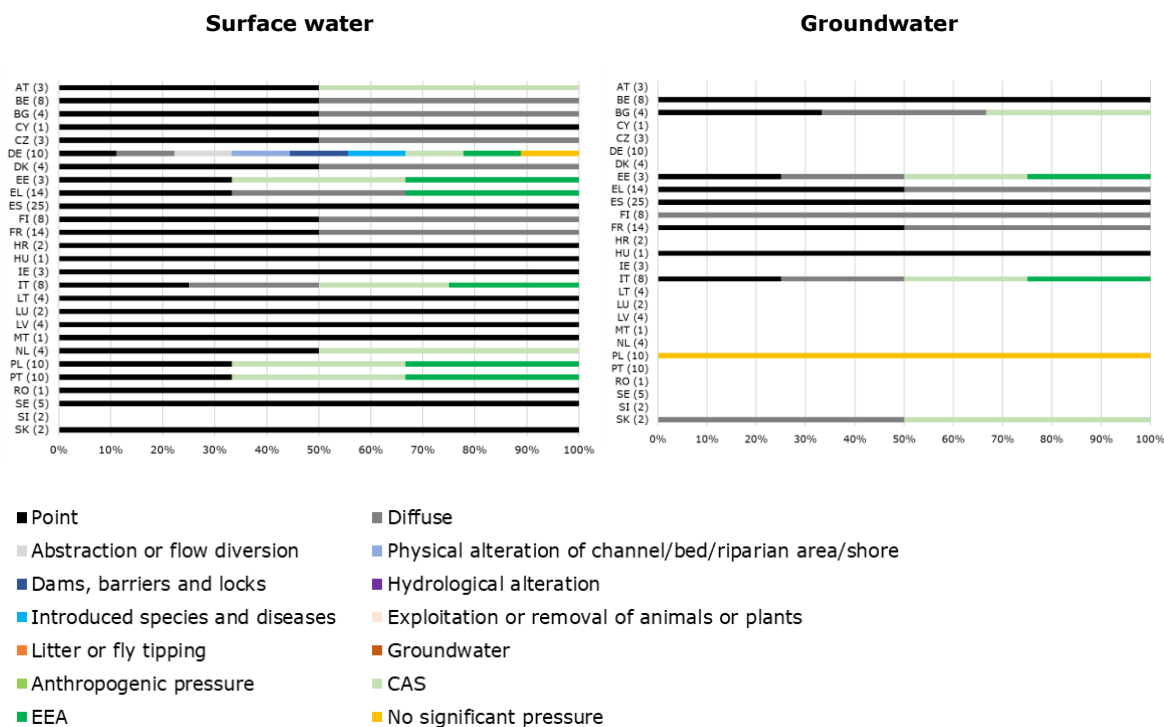


Figure 35: KTM1, Main pressures reported by Member State relating to urban and industrial wastewater pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

All Member States have reported point source pollution (black) as the main pressure on surface waters. Other pressure types reported are diffuse sources (grey), priority substances and River Basin Specific Pollutants (tea green, dark green). As the only country DE reported on multiple pressures to be targeted with KTM1. SI did not report on KTM1. Only 11 Member States reported pressures on groundwater resources from urban and industrial wastewater.

Many Member States reported pressures and specific points for the discharges, e.g. 1.1- 'Point-Urban Waste Water', 1.2 - Point - Storm overflows', 1.3-'Point-IED plants', 1.4-'Point-Non IED plants', 2.1 - Diffuse - Urban run-off, 2.2.-'Diffuse-Agricultural', 2.4 Diffuse - Transport and 2.6-'Diffuse-Discharges not connected to sewerage network'.

EE and PL reported many specific priority substances as pressures.

For 2018-2021, over half of the Member State including AT, BG, CY, CZ, DK, EL, ES, HU, IE, IT, LV, LT, PL, RO, and SK report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. CY, DK, LT, and LV report achieving the objective of reduced impact of urban and industrial wastewater in surface water and groundwater by 2021.

For PT the reported indicator values indicate no change in the trend. In DE a mixed trend across the 10 RBDs was reported.

For HR, indicators are projected to increase from 2018 to 2021, most probably due to an expected increase in number of installations (wastewater treatment plants) where upgrades or improvements are required to achieve the objectives (indicator KN15).

For Member States, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BE, EE, LU, MT, and NL indicator values were generally missing or difficult to interpret. In SI this KTM was not mapped.

6.4.2. *KTM15 - Measures for the phasing-out of emissions, discharges and losses of Priority Hazardous Substances or for the reduction of emissions, discharges and losses of Priority Substances*

The main pressures reported by Member State relating to emissions, discharges and losses of Priority Substances are presented in Figure 36 and Figure 37.

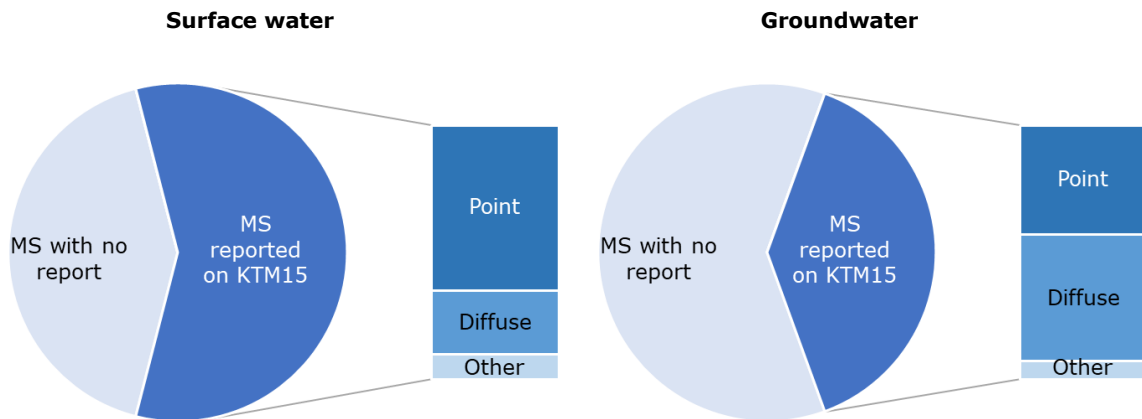


Figure 36: Status of Member States reporting on KTM15, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

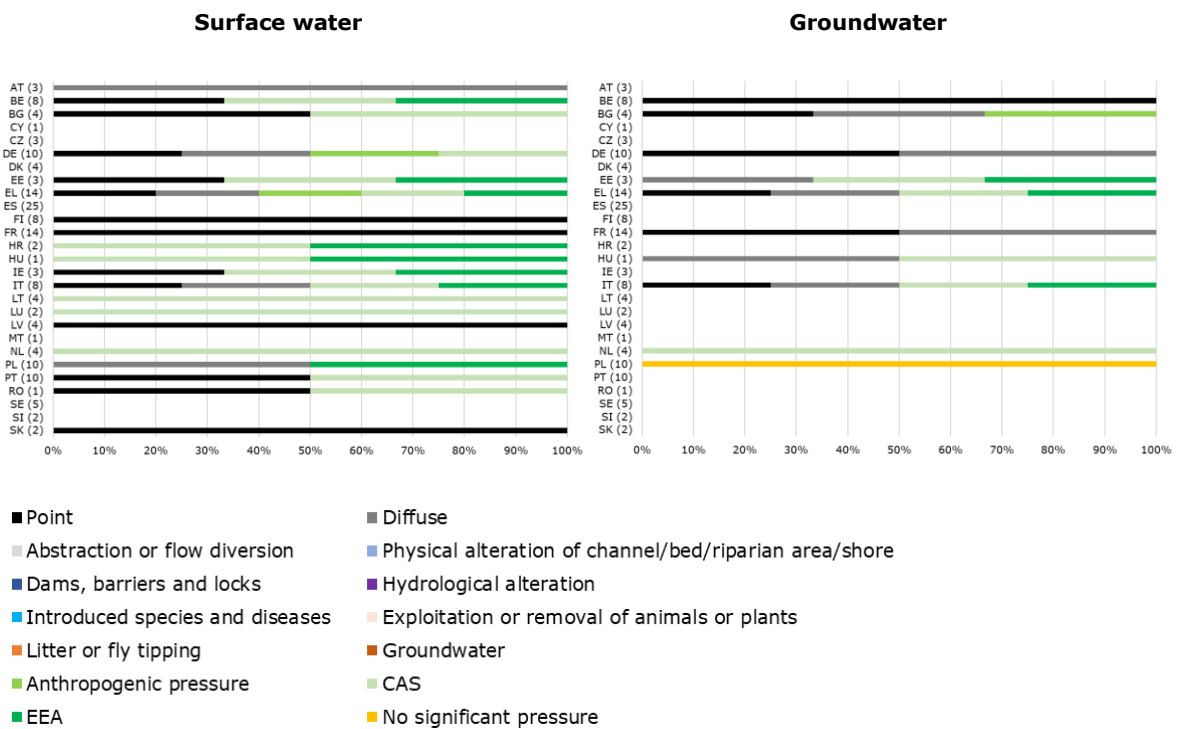


Figure 37: KTM15, Main pressures reported by Member State relating to Priority Substances'

pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

20 Member States reported on KTM15 for surface water, whereas only 10 of the Member State reported on KTM15 for both surface water and groundwater. Most of the Member State reported point sources (black) and priority substances (light and dark green).

Many Member States reported pressures ad specific points for the discharges, e.g. 1.1- ‘Point-Urban Waste Water’, 1,2 – Point – Storm overflows’, 1.3-‘Point-IED plants’, 1.4- ‘Point-Non IED plants’, 2.1 - Diffuse - Urban run-off, 2.2.-‘Diffuse-Agricultural’, 2.4 Diffuse – Transport and 2.6-‘Diffuse-Discharges not connected to sewerage network’, as well as numerous specific CAS and EEA priority substances as pressures: CAS_118-74-1 – Hexachlorobenzene, CAS_206-44-0 – Fluoranthene; CAS_36643-28-4 - Tributyltin-cation; CAS_50-32-8 - Benzo(a)pyrene, etc.

For 2018-2021, Member States including DE, EL, HR, IE, IT, LT, PL, and RO report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. LV reports achieving the objective of reduced emissions, discharges, and losses of Priority Substances by 2021.

For Member States AT, BG, HU, and PT reported indicator values indicate no change in the trend. In SK a mixed trend across the 2 RBD was reported.

For one Member State, SK, indicators are projected to increase from 2018 to 2021.

For Member States FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BE, EE and NL indicator values were generally missing or difficult to interpret. For Member States CY, CZ, DK, ES, LU, MT, SE, and SI this KTM was not mapped.

6.4.3. KTM16 - Upgrades or improvements of industrial wastewater treatment plants (including farms).

The main pressures reported by Member States relating to industrial wastewater treatment plants are presented in Figure 38 and Figure 39.

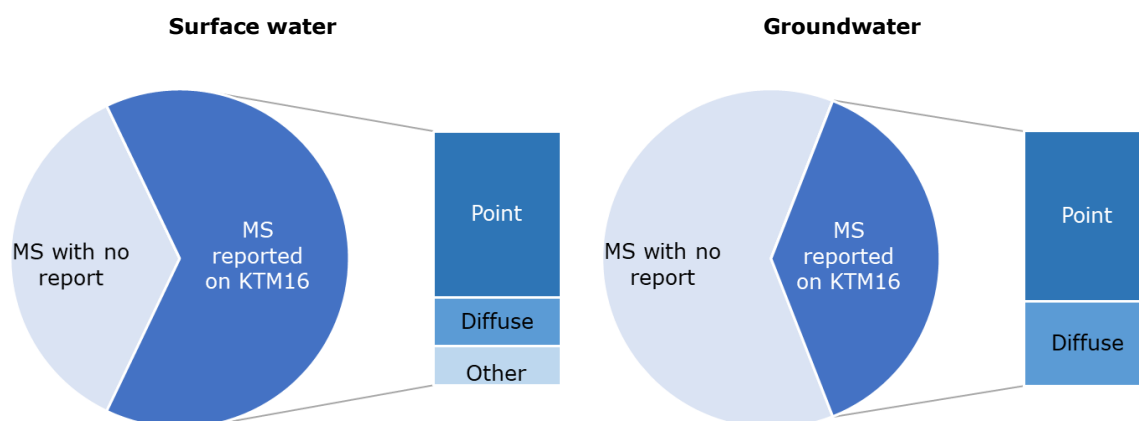


Figure 38: Status of Member States reporting on KTM16, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

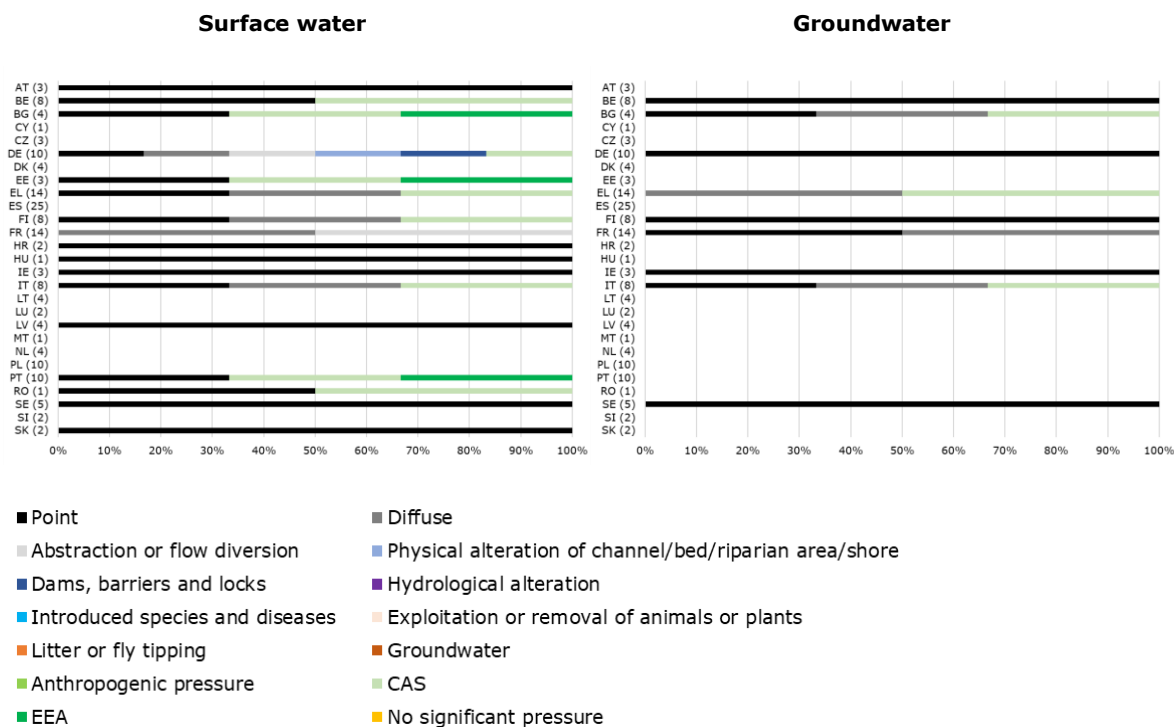


Figure 39: KTM16, Main pressures reported by Member State relating to industrial wastewater pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

Seventeen Member States reported on KTM16 for surface water, whereas only nine of the Member States reported on KTM16 for both surface water and groundwater. Most reported point source pollution (black) as the main pressure on surface waters. Other pressure types reported are diffuse sources (dark grey), priority substances and River Basin Specific Pollutants (light green, dark green). As the only Member State DE reported on multiple pressures to be targeted with KTM16.

Many Member States reported pressures as specific points for the discharges, e.g., 1.3- 'Point-IED plants', 1.4- 'Point-Non IED plants', .6 - Point - Waste disposal sites, 2.2 - Diffuse – Agricultural 1.7 - Point - Mine waters' and '2.8 - Diffuse - Mining', 3.5 - Abstraction or flow diversion – Hydropower, as well as numerous specific CAS and EEA priority substances as pressures: Octylphenol (4-(1,1',3,3'-tetramethylbutyl)-phenol)', Iron and its compounds', Manganese and its compounds', Mercury and its compounds', Hexachlorobutadiene', CAS_57-12-5 - Free cyanide", CAS_7440-02-0 – 'Nickel and its compounds'; CAS_7440-38-2 – 'Arsenic and its compounds'; CAS_7440-39-3 – 'Barium'; CAS_7440-66-6 – 'Zinc and its compounds'; CAS_87-86-5 – 'Pentachlorophenol'; EEA_33-19-2 – 'Mono basic phenols'; EEA_33-22-7 – 'Oil fractions (C10-40)'; CAS_14797-55-8 – 'Nitrate' (in Crete), CAS_7439-97-6- 'Mercury and its compounds', 'CAS_7440-50-8 - Copper and its compounds', 'CAS_7440-02-0 - Nickel and its compounds', CAS_7439-92-1 - Lead and its compounds', 'CAS_7440-43-9 - Cadmium and its compounds', 'CAS_7440-47-3 - Chromium and its compounds' and 'EEA_33-64-7 - Total cyanide'.

For 2018-2021, Member States including AT, DE, IE, IT, RO and SK report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM

meaning it indicates the gap to good status is closing with the planned measures in the PoM.. HR and LV report indication of achieving the objective of reduced emissions from industrial wastewater treatment plants (including farms) by 2021 by implementing the planned measures.

Member States BG, EL and HU reported indicator values indicate no change in the trend. In DE a mixed trend across the 10 RBDs was reported.

For one Member State, SE, indicators are projected to increase from 2018 to 2021 indicating it is going further away from achieving good status and the planned measures are not closing the gap to good status.

For Member States BE, FI, FR and PT no trends can be reported, as only indicator values for 2018 or 2021 were reported. For EE and NL indicator values were generally missing or difficult to interpret. For Member States CY, CZ, DK, ES, LT, LU, MT, PL and SI this KTM was not mapped.

6.5. Progress with implementation of measures to reduce pressures from water abstraction

6.5.1. KTM7 - Improvements in flow regime and/or establishment of ecological flows

The main pressures reported by Member State related to water abstraction are presented in Figure 40 and Figure 41.

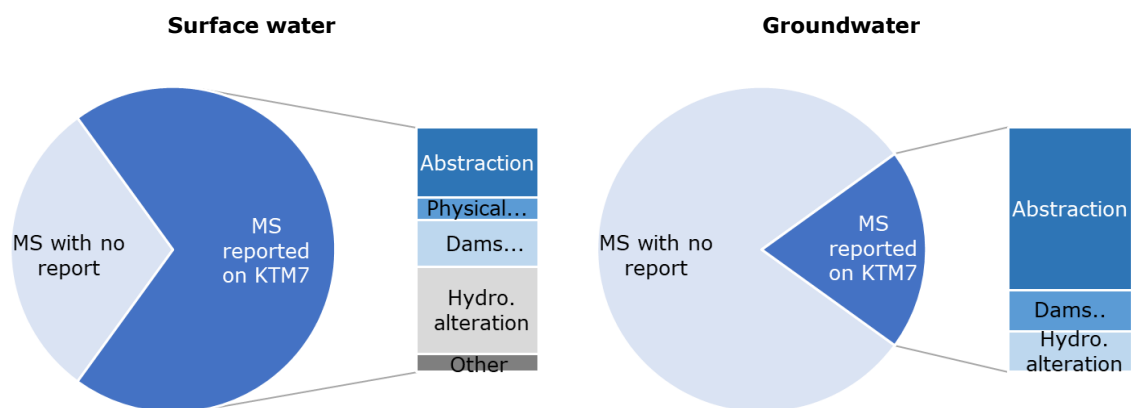


Figure 40: Status of Member States reporting on KTM7, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

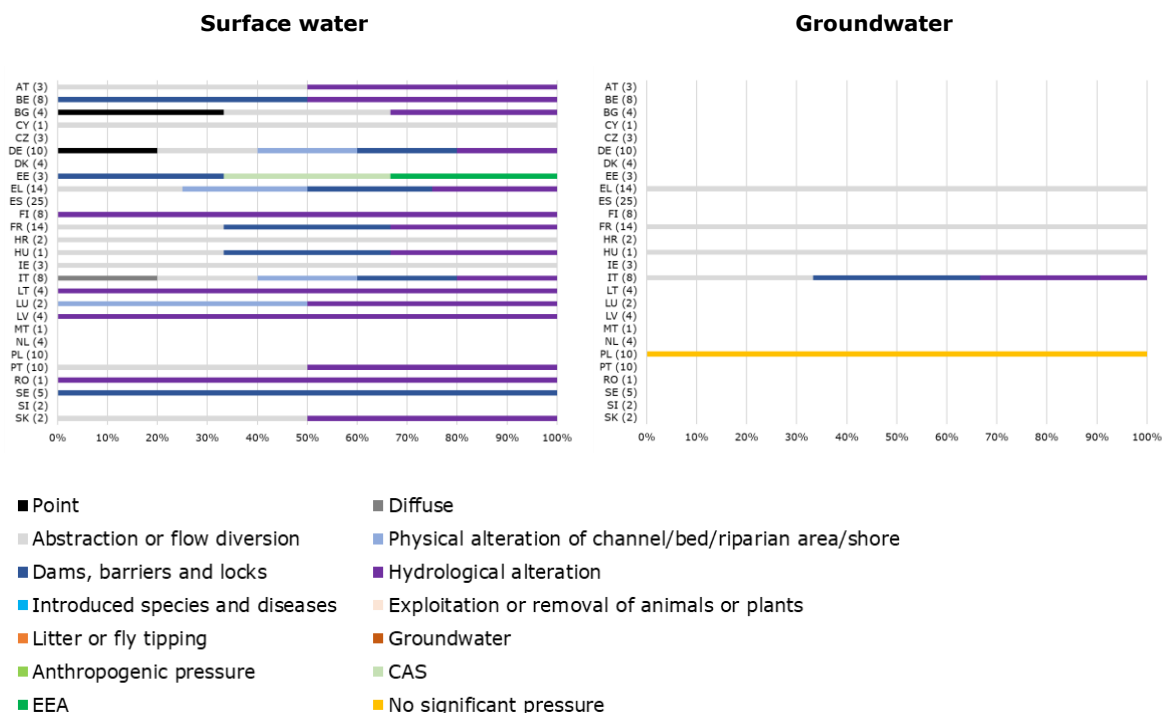


Figure 41: KTM7, Main pressures reported by Member State relating to water abstraction pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

Twenty Member States reported on KTM7 for surface water, whereas only 5 of the Member States reported on KTM7 for both surface and groundwater. Most Member States reported point hydrological alterations (pink) as the main pressure on surface waters. Another important pressure type reported was abstraction and flow diversion (grey).

The most used pressure groups were 3.1-‘Abstraction or flow diversion-Agriculture’, 3.2-‘Abstraction or flow diversion-Public water supply’, 3.5- ‘Abstraction or flow diversion-Hydropower’; 4.1.1-‘Physical alteration of channel, bed, riparian area, shore-Flood protection’, 4.1.2-‘Physical alteration of channel, bed, riparian area, shore- Agriculture’, 4.1.3 -‘Physical alteration of channel, bed, riparian area, shore- Navigation’, 4.1.4 - ‘Physical alteration of channel, bed, riparian area, shore- Other’; 4.2.1-‘Dams, barriers and locks – Hydropower’, 4.2.2 -‘Dams, barriers and locks – Flood protection’, 4.2.3-‘Dams, barriers and locks – Drinking water’, 4.2.4 -‘Dams, barriers and locks – Irrigation’, 4.2.6 -‘Dams, barriers and locks – Industry’, 4.2.8 -‘Dams, barriers and locks – Other’;4.3.1 – ‘Hydrological alteration – Agriculture’, 4.3.3 - ‘Hydrological alteration – Hydro-power’, 4.3.4 - ‘Hydrological alteration – Public water supply’, 4.3.6 - ‘Hydrological alteration – Other’ and 4.5 – ‘Hydromorphological alteration – Other’."

For 2018-2021, seven Member States including AT, EL, HU, IE, IT and RO report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. CY, HR, LT, LV and PL report achieving the objective of reduced effect of point hydrological alterations, water abstraction and flow diversion by 2021.

Member States BG and PT reported indicator values indicating no change in the trend for 2018-2021. In DE, a mixed trend across the 10 RBDs was reported.

For one Member State, SE, indicators are projected to increase from 2018 to 2021.

For BE, FI and FR, no trends can be reported, as only indicator values for 2018 were reported. For EE, LU and SK indicator values were generally missing or difficult to interpret. For CZ, DK, ES, MT, NL and SI, this KTM was not mapped.

6.5.2. *KTM8 - Water efficiency, technical measures for irrigation, industry, energy and households*

The main pressures reported by Member States relating to water efficiency, technical measures for irrigation, industry, energy, and households are presented in Figure 42 and Figure 43.

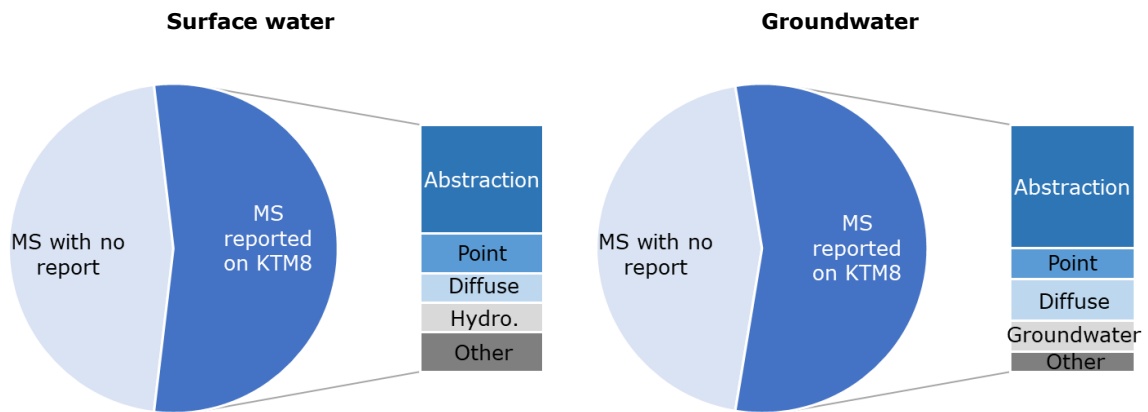


Figure 42: Status of Member States reporting on KTM8, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

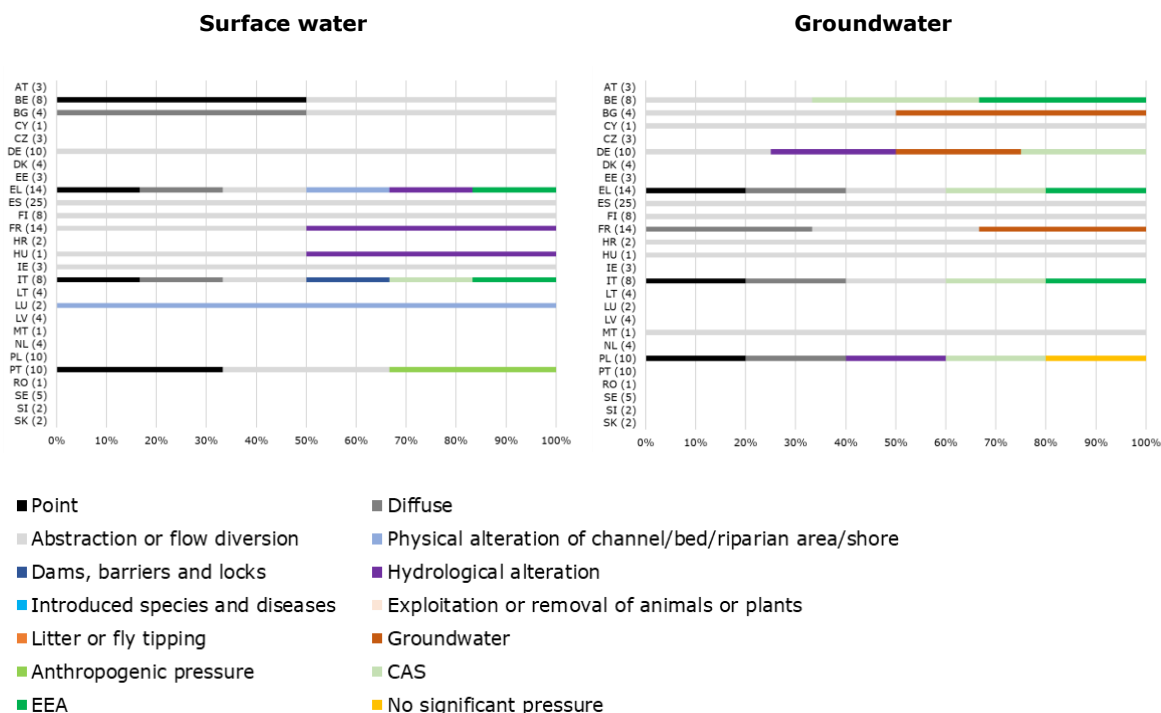


Figure 43: KTM8, Main pressures reported by Member State relating to irrigation, industry, energy and households' pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

Twelve Member States reported on KTM8 for surface water and 13 Member States reported on KTM8 for both groundwater and 10 Member States reported on both. Most Member States reported abstraction and flow diversion (light grey) as a main pressure.

The most used pressure groups were 3.1 - Abstraction or flow diversion – Agriculture, 3.2 - Abstraction or flow diversion – Public water supply, 3.3 - Abstraction or flow diversion – Industry, 3.5 - Abstraction or flow diversion – Hydropower, 3.6 - Abstraction or flow diversion - Fish farms, 3.7 - Abstraction or flow diversion – Other, 6.2 - Groundwater - Alteration of water level or volume"

For 2018-2021, Member States including DE, EL, ES, HU, IE, IT and PL report indicator values indicating a decreasing (positive) trend, with indicator gaps closing over time with the PoM.

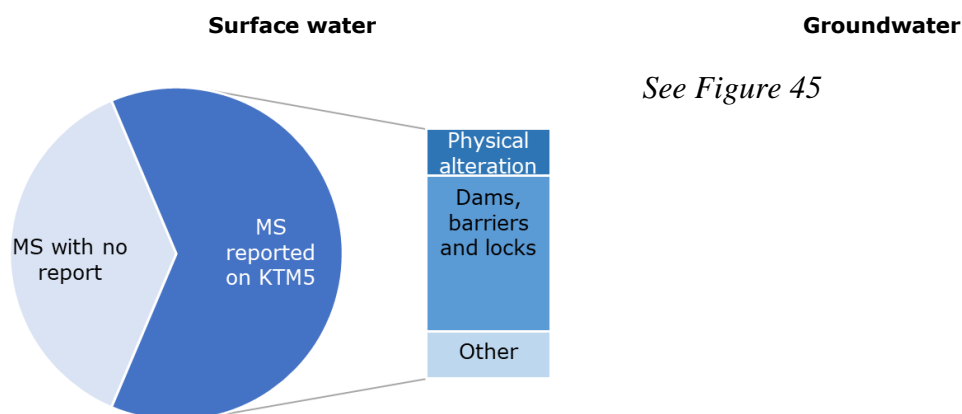
Member States BG, CY and HR reported indicator values showing no change in the trend.

For Member States FI and FR, no trends can be reported, as only indicator values for 2018 were reported. For BE and LU, indicator values were generally missing or difficult to interpret. For Member States AT, CZ, DK, EE, LT, LV, NL, RO, SE, SI and SK, KTM8 was not mapped.

6.6. Progress with implementation of measures to reduce pressures from hydromorphological alterations

6.6.1. KTM5 - Improving longitudinal continuity (e.g. establishing fish passes, demolishing old dams)

The main pressures reported by Member State relating to longitudinal continuity are presented in Figure 44 and 45.



See Figure 45

Figure 44: Status of Member States reporting on KTM5, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

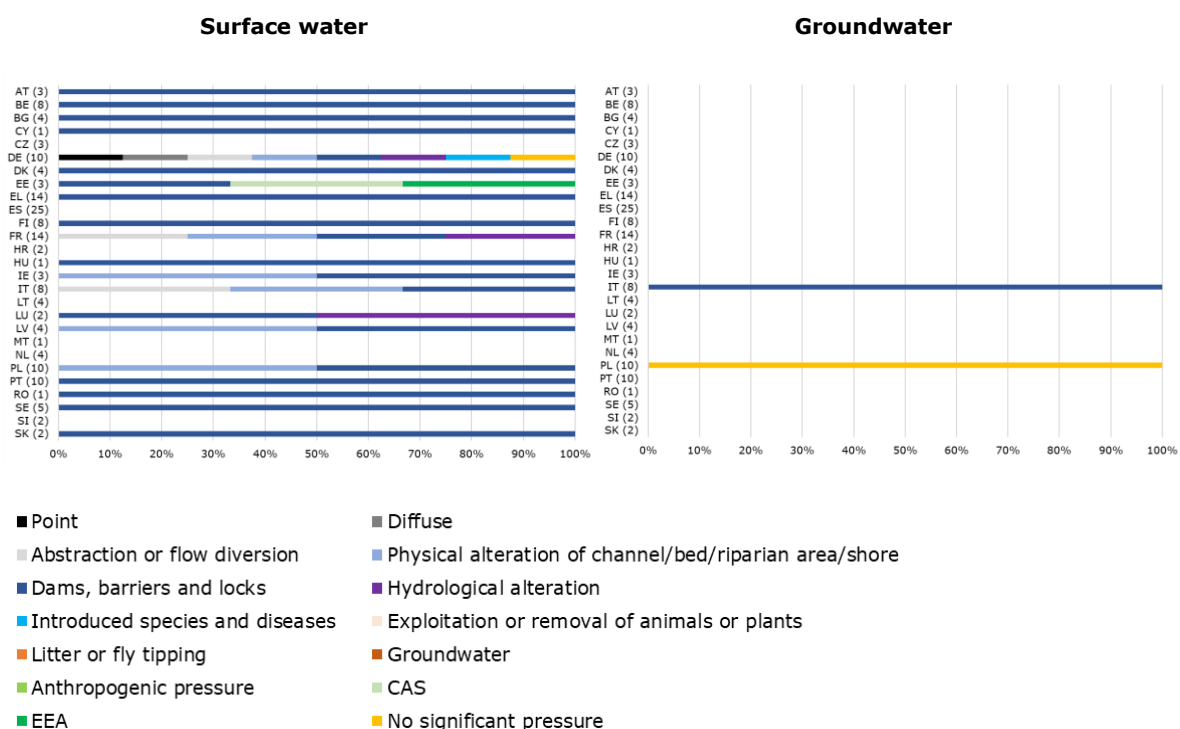


Figure 45: KTM5, Main pressures reported by Member State relating to longitudinal continuity (fish passes, dams etc.) for surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

20 Member States reported on KTM5 for surface water, and only 2 Member State reported on KTM5 for both surface water and groundwater. Most Member State reported dams, barriers and locks (blue) as a main pressure.

The most used pressure groups were, 4.1.5 - Physical alteration of channel/bed/riparian area/shore - Unknown or obsolete, 4.2.1 - Dams, barriers and locks - Hydropower’ and ‘4.2.4 - Dams, barriers and locks - Irrigation’, 4.2.2 - Dams, barriers and locks - Flood protection’ and ‘4.2.6 - Dams, barriers and locks - Industry, .2.5 - Dams, barriers and locks - Recreation’ and ‘4.2.7 - Dams, barriers and locks - Navigation’, 4.2.3 - Dams, barriers and locks - Drinking water’, 4.2.8 - Dams, barriers and locks - Other’. 3.1 - Abstraction or flow diversion – Agriculture, 3.2 - Abstraction or flow diversion - Public water supply, 3.3 - Abstraction or flow diversion – Industry.

For 2018-2021, Member States including AT, HU, IE, IT, PL, RO, and SE report indicator values indicating a decreasing trend, with indicator gaps closing over time with the implementation of the PoM. CY and LV report achieving the objective of improving longitudinal continuity by 2021.

Two Member States, BG and EL, reported indicator values indicating no change in the trend. In DE and SK, a mixed trend across the RBDs was reported.

For Members States BE, DK, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For EE, LU and PT indicator values were generally missing or difficult to interpret. For Member States CZ, ES, HR, LT, MT, NL and SI this KTM was not mapped.

6.6.2. *KTM6 - Improving hydromorphological conditions of water bodies other than longitudinal continuity*

The main pressures reported by Member State relating to hydromorphological conditions of water bodies other than longitudinal continuity are presented in Figure 46 and Figure 47.

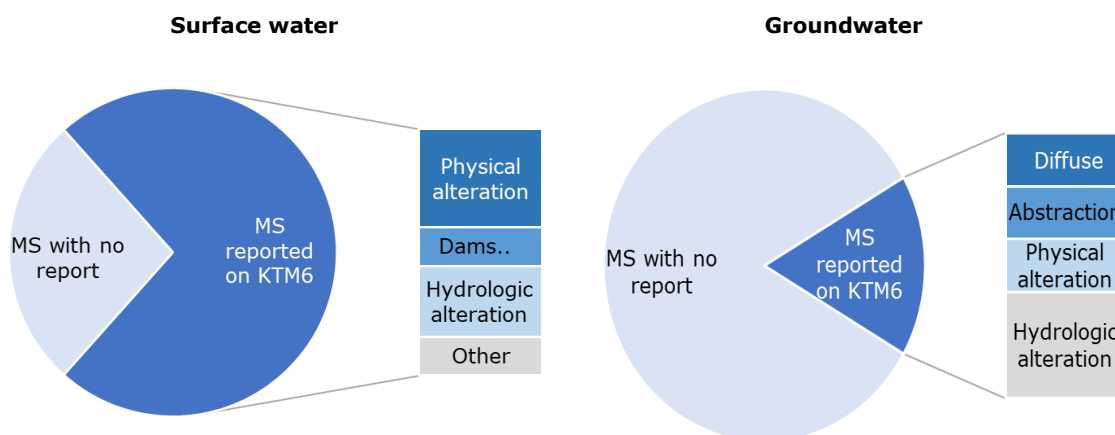


Figure 46: Status of Member States reporting on KTM6, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

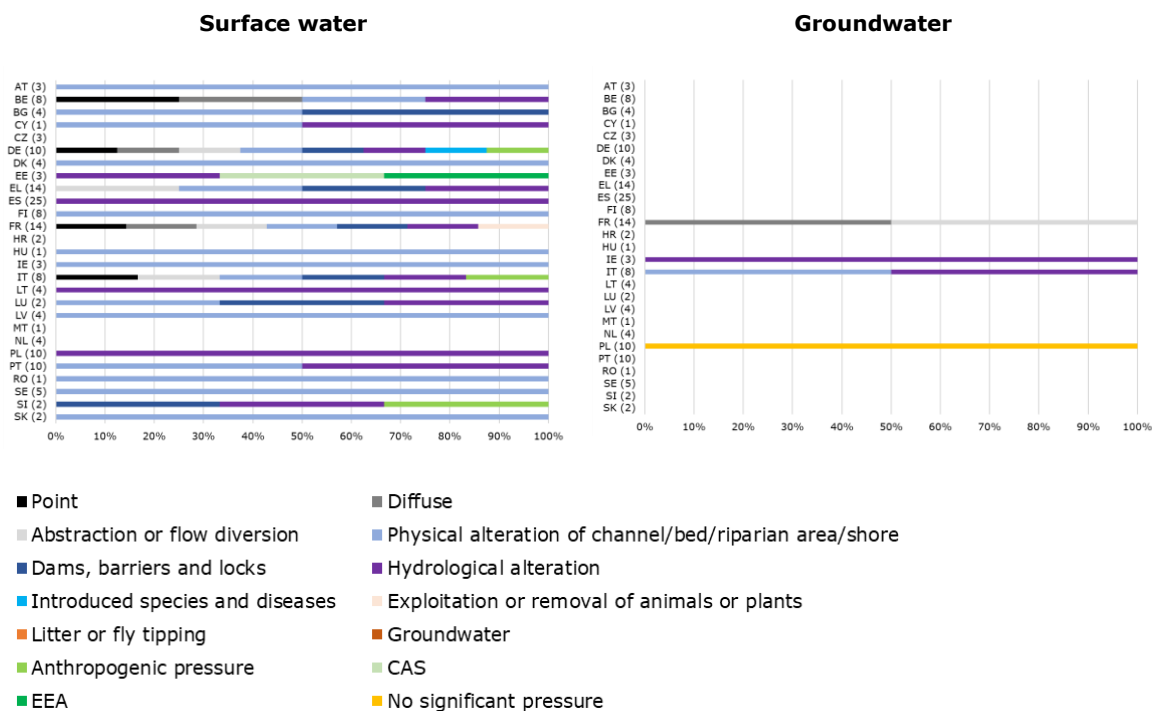


Figure 47: KTM6, Main pressures reported by Member State relating to hydromorphological conditions (other than longitudinal continuity) pressure for surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

23 Member States reported on KTM6 for surface water, and 4 Member State reported on KTM6 for both surface water and groundwater. Most Member State reported physical alterations (light blue) as a main pressure.

The main pressure groups reported are 3.1-‘Abstraction or flow diversion-Agriculture’, 3.2-‘Abstraction or flow diversion-Public water supply’, 3.5-‘Abstraction or flow diversion-Hydropower’;

4.1.1-‘Physical alteration of channel, bed, riparian area, shore - Flood protection’, 4.1.2-‘Physical alteration of channel, bed, riparian area, shore - Agriculture’, 4.1.4-‘Physical alteration of channel, bed, riparian area, shore - Other’; 4.2.1-‘Dams, barriers and locks – Hydropower’, 4.2.2- ‘Dams, barriers and locks – ‘Flood protection’, 4.2.3 – ‘Dams, barriers and locks – Drinking water’, 4.2.4 – ‘Dams, barriers and locks – Irrigation’, 4.2.6 – ‘Dams, barriers and locks – Industry’ and 4.2.8 – ‘Dams, barriers and locks – Other’; 4.3.1-‘Hydrological alteration-Agriculture’, 4.3.3-‘Hydrological alteration-Hydropower’, 4.3.4-‘Hydrological alteration-Public water supply’, 4.3.6-‘Hydrological alteration-Other’; 4.5-‘Hydromorphological alteration – Other’."

For 2018-2021, Member States including AT, EL, ES, HU, IE, IT, PL, RO, and SI report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. CY, LT, and LV report achieving the objective of improving hydromorphological conditions other than longitudinal continuity by 2021.

Member States BG, PT and SK reported indicator values indicating no change in the trend. In DE a mixed trend across the RBDs was reported.

For Member States BE, DK, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For EE and LU indicator values were generally missing or difficult to interpret. For Member States CZ, HR, MT, and NL this KTM was not mapped.

6.7. Progress with implementation of other measures relating to drinking water protection

6.7.1. KTM4 - Remediation of contaminated sites (historical pollution including sediments, groundwater, soil)

The main pressures reported by Member State relating to contaminated sites (historical pollution including sediments, groundwater, soil) are presented in Figure 48 and Figure 49.

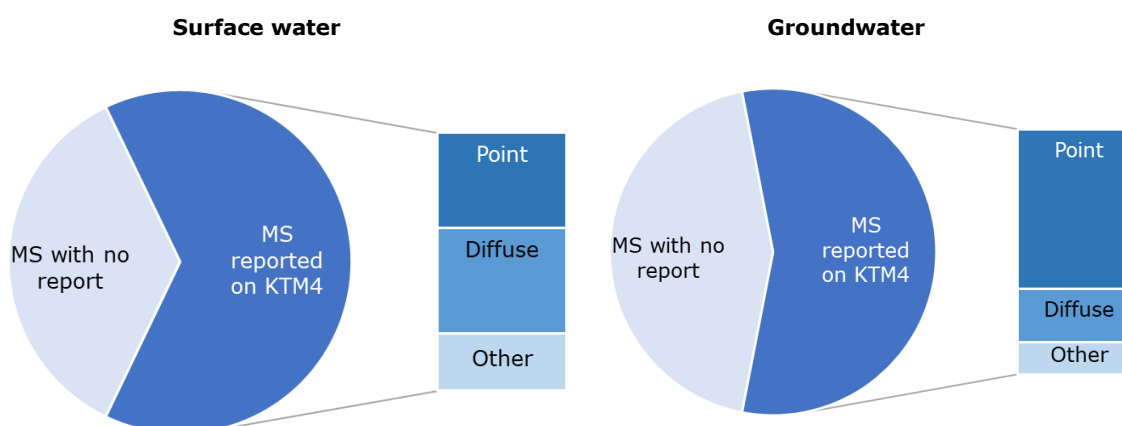


Figure 48: Status of Member States reporting on KTM4, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

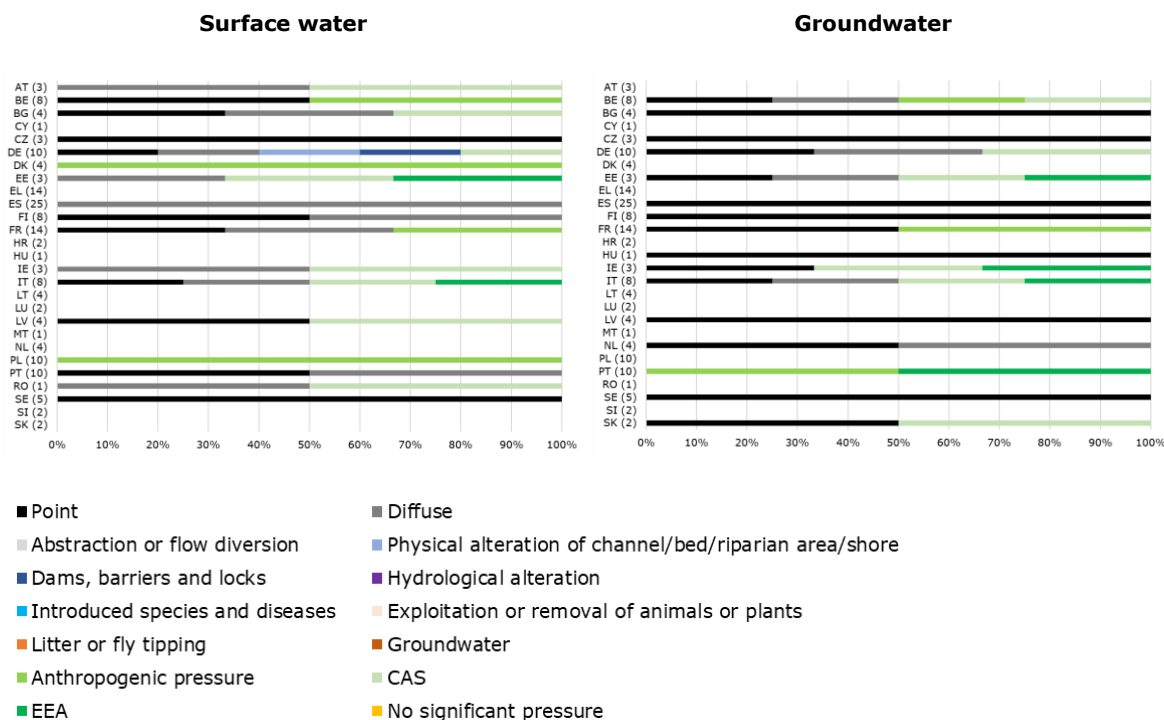


Figure 49: KTM4, Main pressures reported by Member State relating to contaminated sites' pressure on surface water (left) and groundwater (right). The total number of RBDs for each Member State reported in brackets.

17 Member States reported on KTM4 for surface water, 13 Member States reported on KTM4 for both surface water and groundwater, and 3 Member State reported on KTM4 only for groundwater. Most of the Member State reported point sources (black), diffuse sources (grey) anthropogenic pressure (green), and CAS and EEA priority substances (light and dark green).

For 2018-2021, Member States including HU, IT, LV, PL, RO, and SE report indicator values indicating a decreasing trend, with indicator gaps closing over time with the objective of improving remediation of contaminated sites.

Member States AT, BG, CZ, ES, IE, and SK reported indicator values indicating no change in the trend.

For Members States BE, DK, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For EE and NL indicator values were generally missing or difficult to interpret. For Member States CY, EL, HR, LT, LU, MT, and SI this KTM was not mapped.

6.7.2. KTM13 - Drinking water protection measures (e.g. establishment of safeguard zones, buffer zones etc)

The main pressures reported by Member State relating to drinking water protection are presented in Figure 50 and Figure 51.

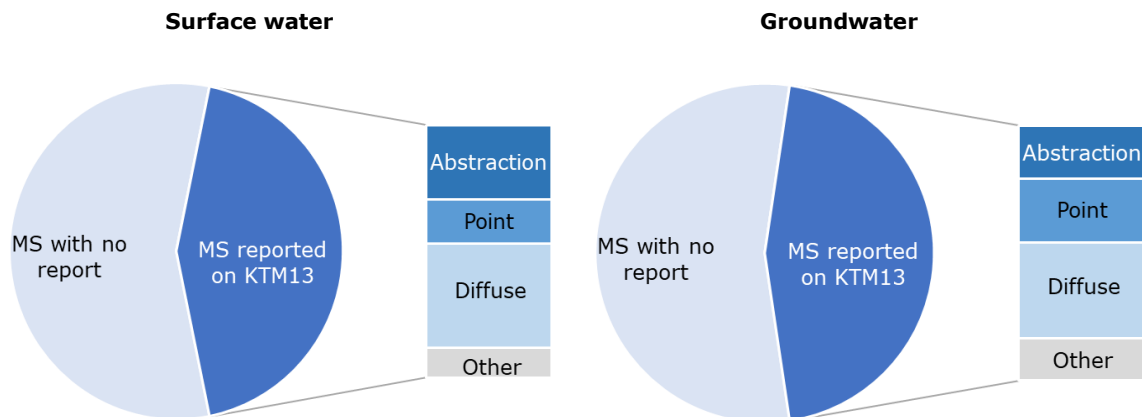


Figure 50: Status of Member States reporting on KTM13, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

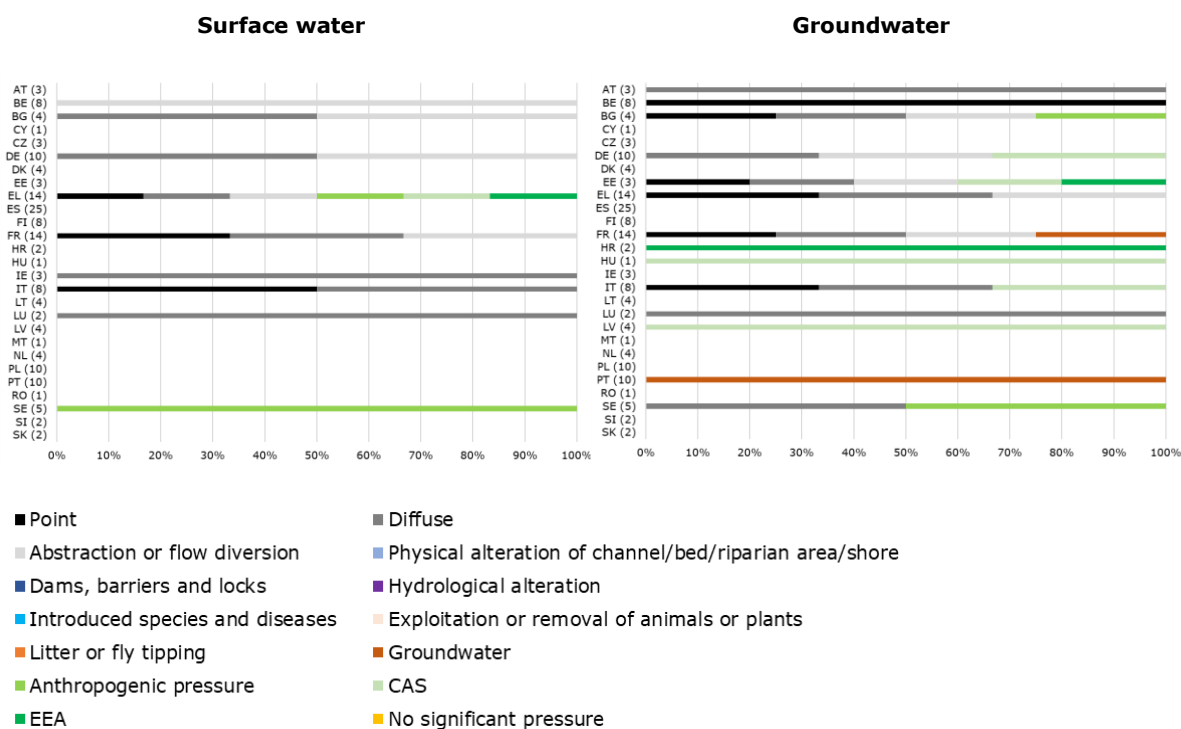


Figure 51: KTM13, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to drinking water protection. The total number of RBDs for each Member State reported in brackets.

Nine of the Member States reported on KTM13 for surface water, eight Member States reported on both surface and groundwater, and half of the Member States reported on KTM13 for groundwater. Most of the Member State reported point pollution (black) and diffuse pollution (grey). Other important pressure types reported are abstraction or flow diversion (light grey), anthropogenic pressure (green) and River Basin Specific Pollutants (CAS (light green)).

For 2018-2021, Member States including AT, DE, HU, IE and IT report indicator values showing a decreasing trend, with indicator gaps closing over time, achieving the objective of improving drinking water protection, by the establishment of safeguard zones, buffer zones etc. LV and PL report achieving the objective already by 2021.

One Member State, HR, reported indicator values showing no change in the trend.

In DE and SE, a mixed trend across the RBDs was reported.

For one Member State, EL, indicator values are projected to increase from 2018 to 2021, showing a negative trend.

For one Member State, FR, no trends can be reported, as only indicator values for 2018 were reported. For BE, BG, EE, LU and PT indicator values were generally missing or difficult to interpret. For Member States CY, CZ, DK, ES, FI, LT, MT, NL, RO, SI and SK this KTM was not mapped.

6.8. Progress with implementation of measures relating to water pricing

6.8.1. KTM9 - Water pricing policy measures for the implementation of the recovery of cost of water services from households

The main pressures reported by Member State relating to water pricing policies and cost recovery in households are presented in Figure 52 and Figure 53.

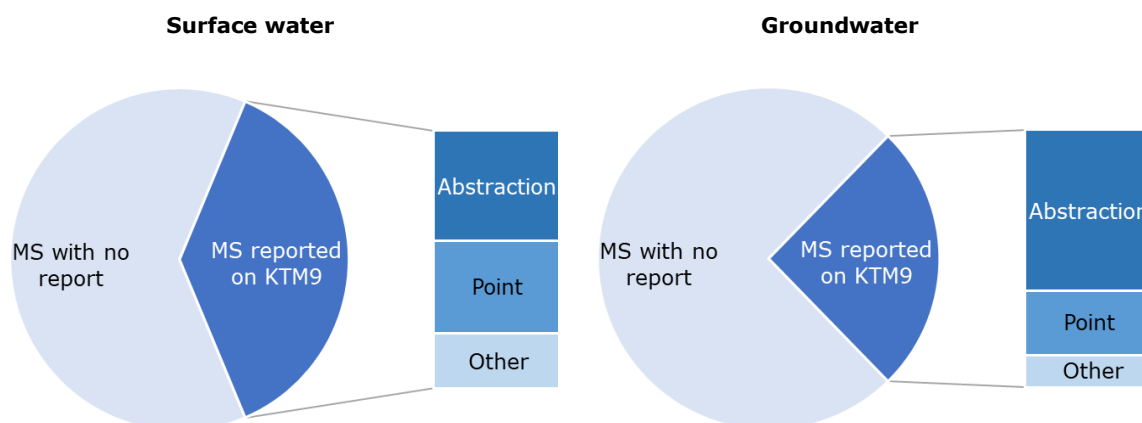


Figure 52: Status of Member States reporting on KTM9, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

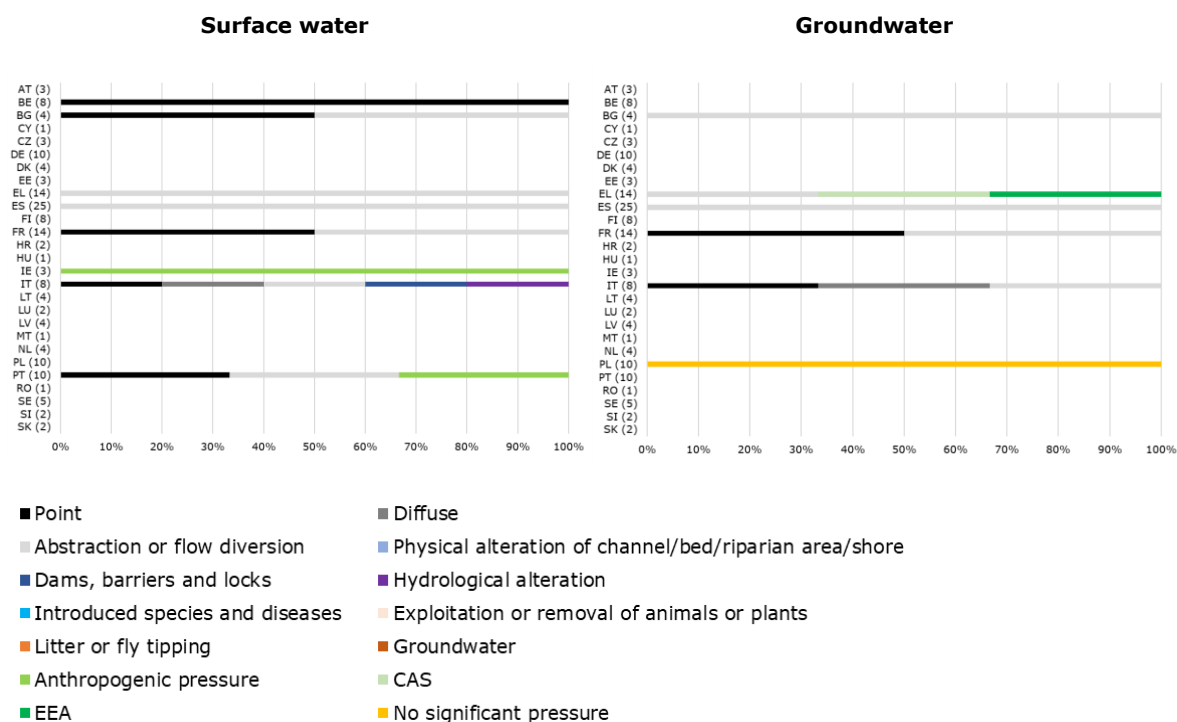


Figure 53: KTM9, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to water pricing policies and cost recovery in households. The total number of RBDs for each Member State reported in brackets.

Eight of the Member States reported on KTM9 for surface water, five Member States reported on both surface water and groundwater and one Member State (PL) reported on KTM9 for groundwater only. Most of the Member State reported point pollution (black) and abstraction or flow diversion (light grey). Other pressure types reported are anthropogenic pressure (green), CAS (light green), EEA (dark green), dams, barriers, and locks (dark blue) and hydrological alteration (purple).

For 2018-2021, Member States EL, IT reported indicator values indicating a decreasing trend, with indicator gaps closing over time, achieving the objective of improving water savings by water pricing policies and cost recovery in households. ES reported achieving the objective already by 2021.

Member State BE reported indicator values indicating no change in the trend.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE, IE, PL, and PT indicator values were generally missing or difficult to interpret. For Member States CY, CZ, DE, DK, EE, FI, HR, HU, LT, LU, LV, MT, NL, RO, SE, SI, and SK this KTM was not mapped.

6.8.2. KTM10 - Water pricing policy measures for the implementation of the recovery of cost of water services from industry

The main pressures reported by Member State relating to water pricing policies and cost recovery in the industry are presented in Figure 54 and Figure 55.

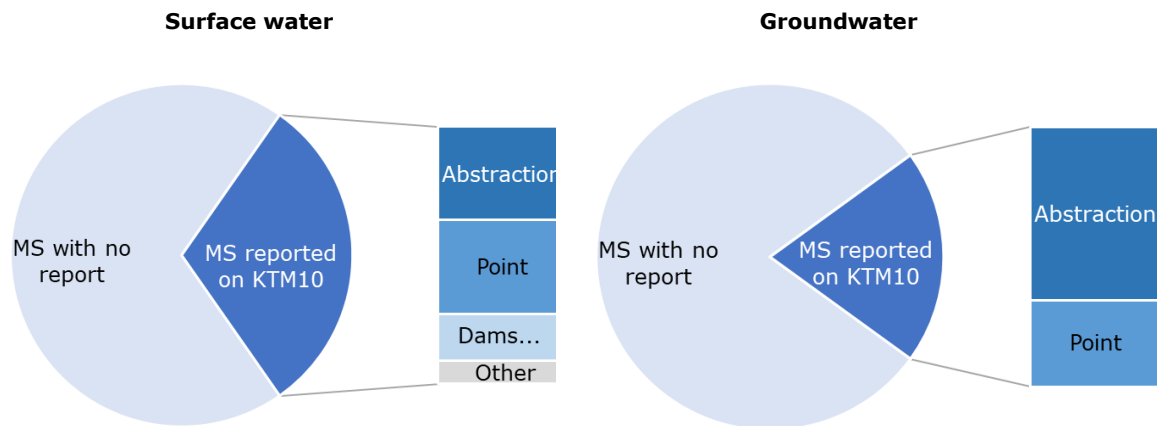


Figure 54: Status of Member States reporting on KTM10, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

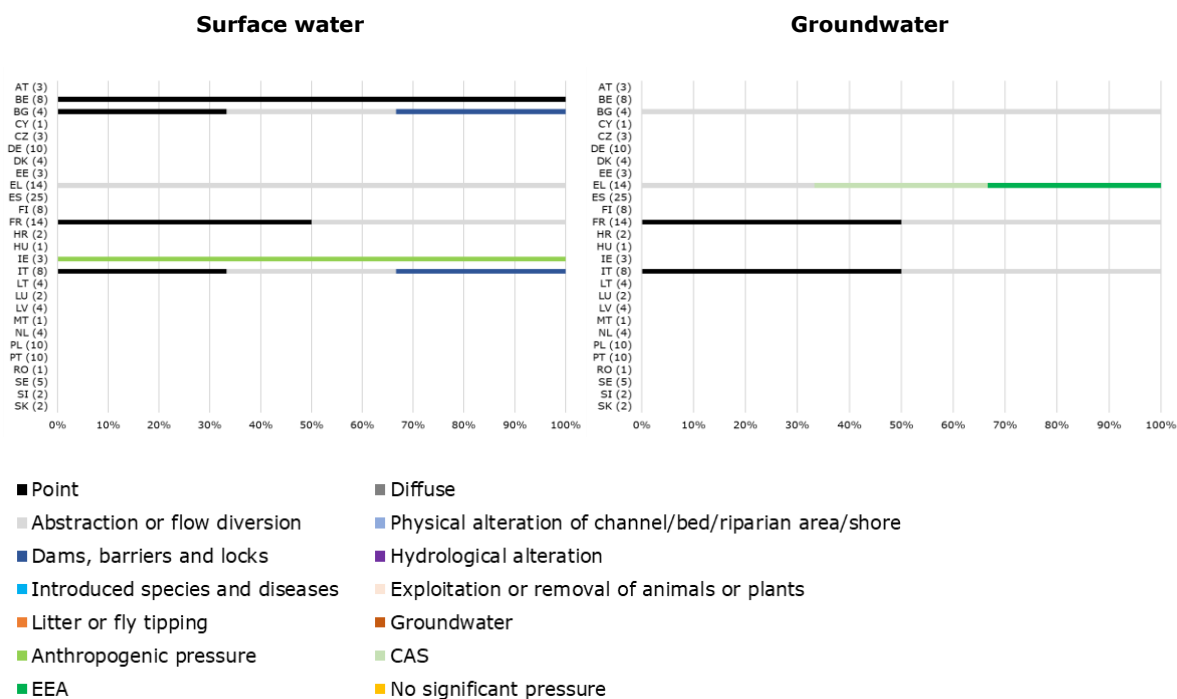


Figure 55: KTM10, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to water pricing policies and cost recovery in the industry. The total number of RBDs for each Member State reported in brackets.

Six of the Member State reported on KTM10 for surface water, and four of the Member State reported on KTM10 for both surface water and groundwater. Most of the Member State reported point pollution (black) and abstraction or flow diversion (light grey). Other pressure types reported are anthropogenic pressure (green), River Basin Specific Pollutants (CAS (light green), EEA (dark green)) and dams, barriers, and locks (dark blue).

For 2018-2021, Member States EL and IT report indicator values indicating a decreasing trend, with indicator gaps closing over time, achieving the objective of improving water savings by water pricing policies and cost recovery in the industry.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE, BG and IE indicator values were generally missing or difficult to interpret. For Member States CY, CZ, DE, DK, EE, FI, HR, HU, LT, LU, LV, MT, NL, RO, SE, SI, and SK this KTM was not mapped.

6.8.3. KTM11 - Water pricing policy measures for the implementation of the recovery of cost of water services from agriculture

The main pressures reported by Member States relating to water pricing policies and cost recovery in agriculture are presented in Figure 56 and Figure 57.

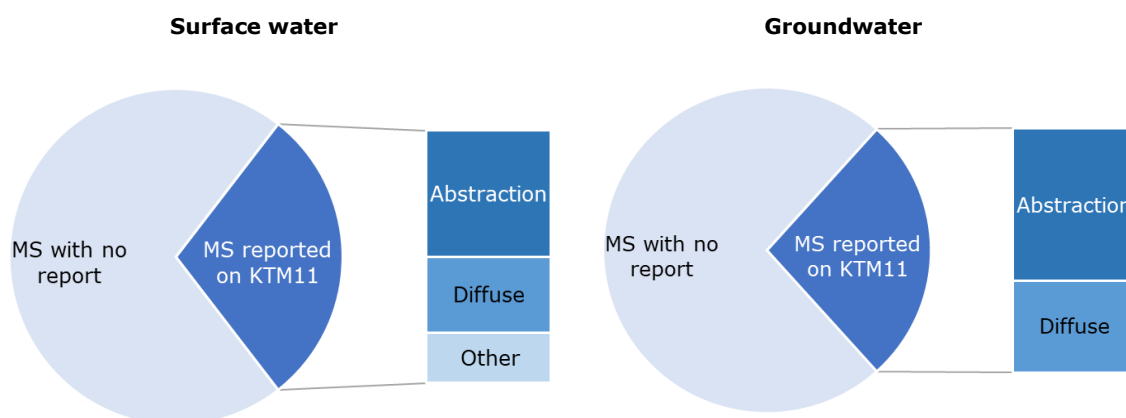


Figure 56: Status of Member States reporting on KTM11, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

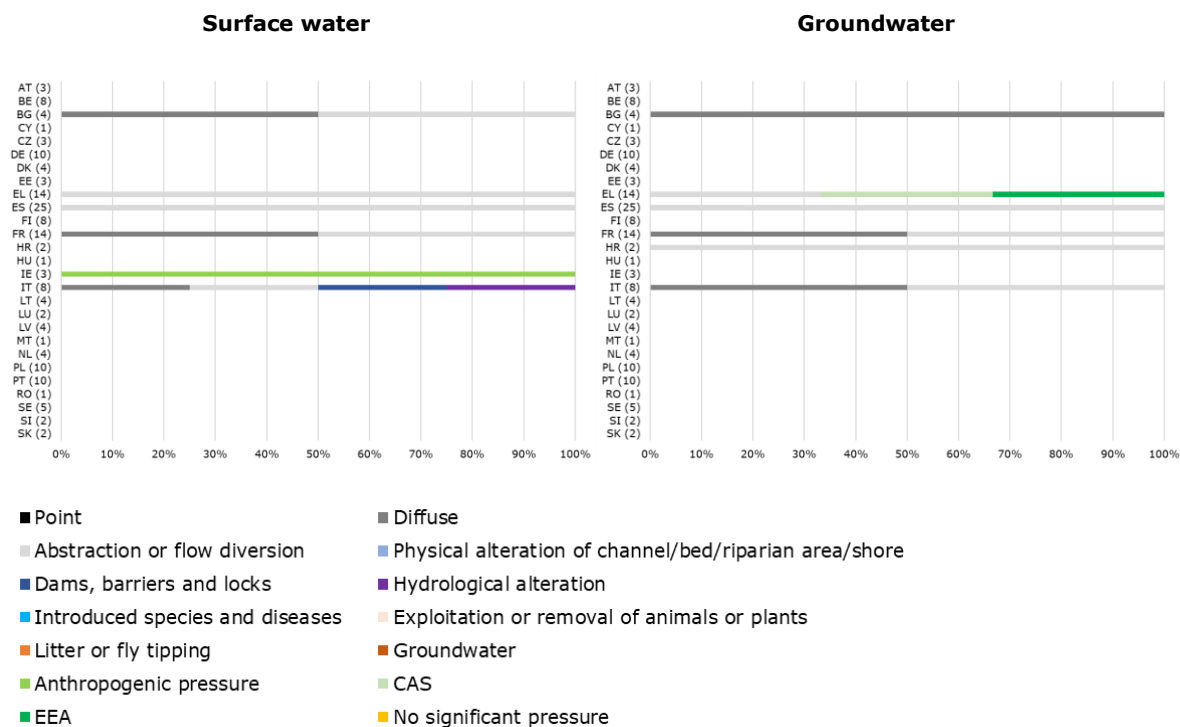


Figure 57: KTM11, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to water pricing policies and cost recovery in agriculture. The total number of RBDs for each Member State reported in brackets.

Six of the Member States reported on KTM11 for surface water, five Member States reported on both surface water and groundwater and one of the Member State reported on KTM11 for groundwater only. Most of the Member States reported on abstraction or flow diversion (light grey) and diffuse pollution (grey).

For 2018-2021, Member States EL, IT report indicator values indicating a decreasing trend, with indicator gaps closing over time, achieving the objective of improving water savings by water pricing policies and cost recovery from agriculture meaning it indicates the gap to good status is closing with these planned measures. ES report indication of achieving the objective already by 2021 with the planned measures.

Member State HR reported indicator values indicating no change in the trend.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BG and IE indicator values were generally missing or difficult to interpret. For Member States AT, BE, CY, CZ, DE, DK, EE, FI, HU, LT, LU, LV, MT, NL, PL, PT RO, SE, SI, and SK this KTM was not mapped.

6.9. Progress with implementation of measure relating to Research

6.9.1. KTM14 - Research, improvement of knowledge base reducing uncertainty

The main pressures reported by Member State relating to research and the improvement of the knowledge base are presented in Figure 58 and Figure 59.

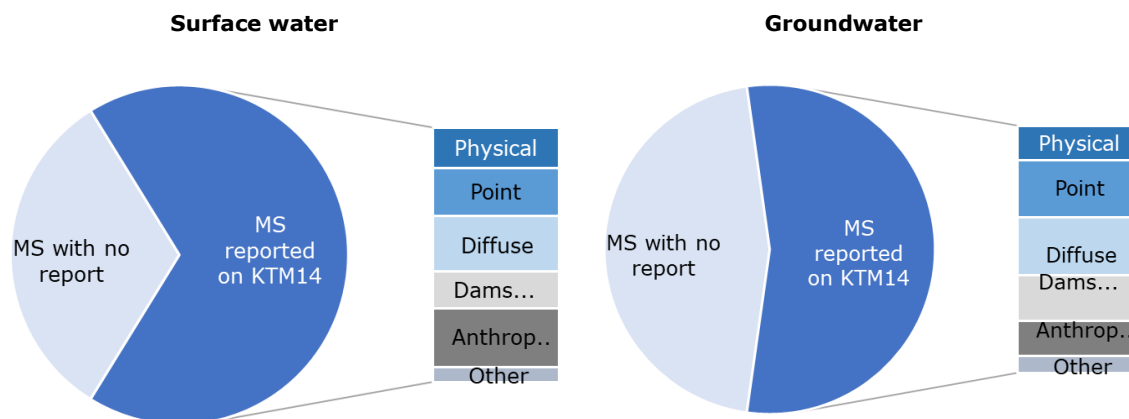


Figure 58: Status of Member States reporting on KTM14, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

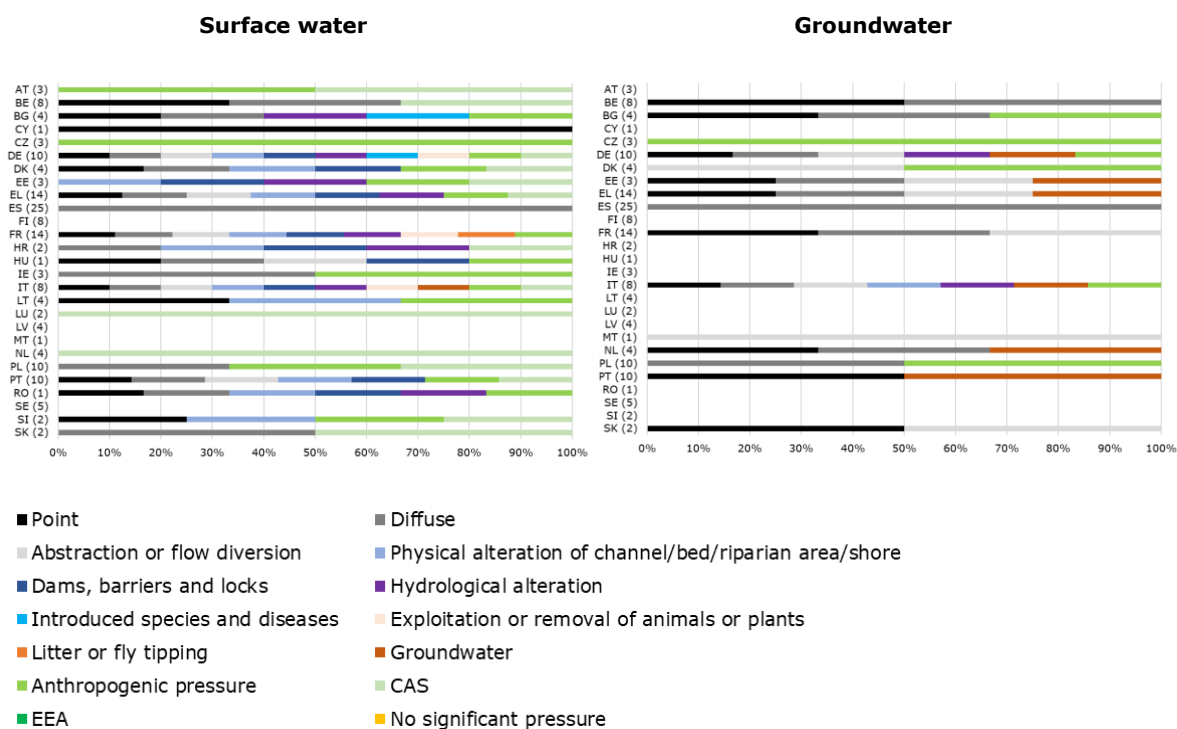


Figure 59: KTM14, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to Research and the improvement of the knowledge base. The total number of RBDs for each Member State reported in brackets.

Most of the Member State reported on KTM14 for surface water, and half of the Member State reported on KTM14 for both surface water and groundwater, and one Member State (MT) reported on KTM14 for groundwater only. Most of the Member State reported point pollution (black), diffuse pollution (grey), physical alteration (light blue) and River Basin Specific Pollutants (CAS (light green)). Other important pressure types reported are hydrological alteration (purple), dams, barriers, and locks (dark blue) and abstraction or flow diversion (light grey).

For 2018-2021, Member States including AT, EL, HR, IE, IT, PL, and RO report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. Member States CY, DK, ES, LT and MT report achieving the objective of improving research and the knowledge base by 2021.

Member States BG, CZ, HU, PT and SK reported indicator values indicating no change in the trend. In DE a mixed trend across the RBDs was reported.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE, EE and LU indicator values were generally missing or difficult to interpret. For Member States FI, LV, NL, and SE this KTM was not mapped.

6.10. Progress with implementation of measure relating to pollution from urban areas, transport and built infrastructure

6.10.1. KTM21 - Measures to prevent or control the input of pollution from urban areas, transport and built infrastructure

The main pressures reported by Member State relating to pollution from urban areas, transport and built infrastructure are presented in Figure 60 and Figure 61.

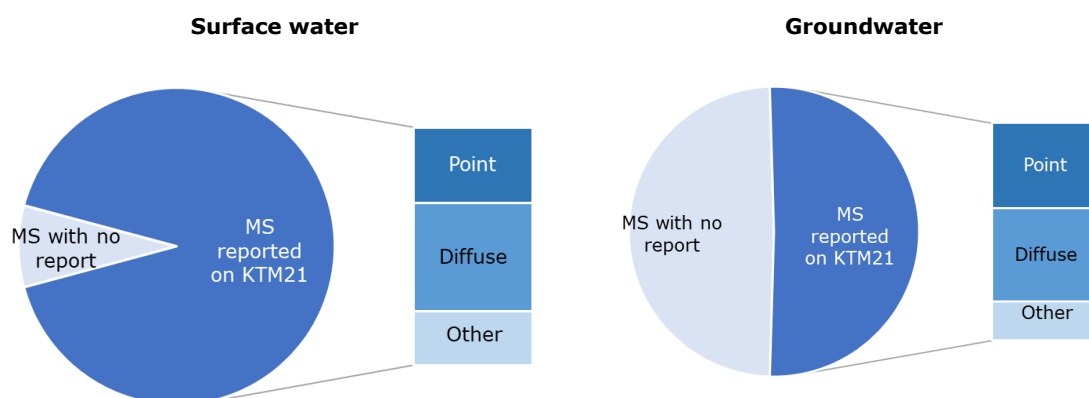


Figure 60: Status of Member States reporting on KTM21, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

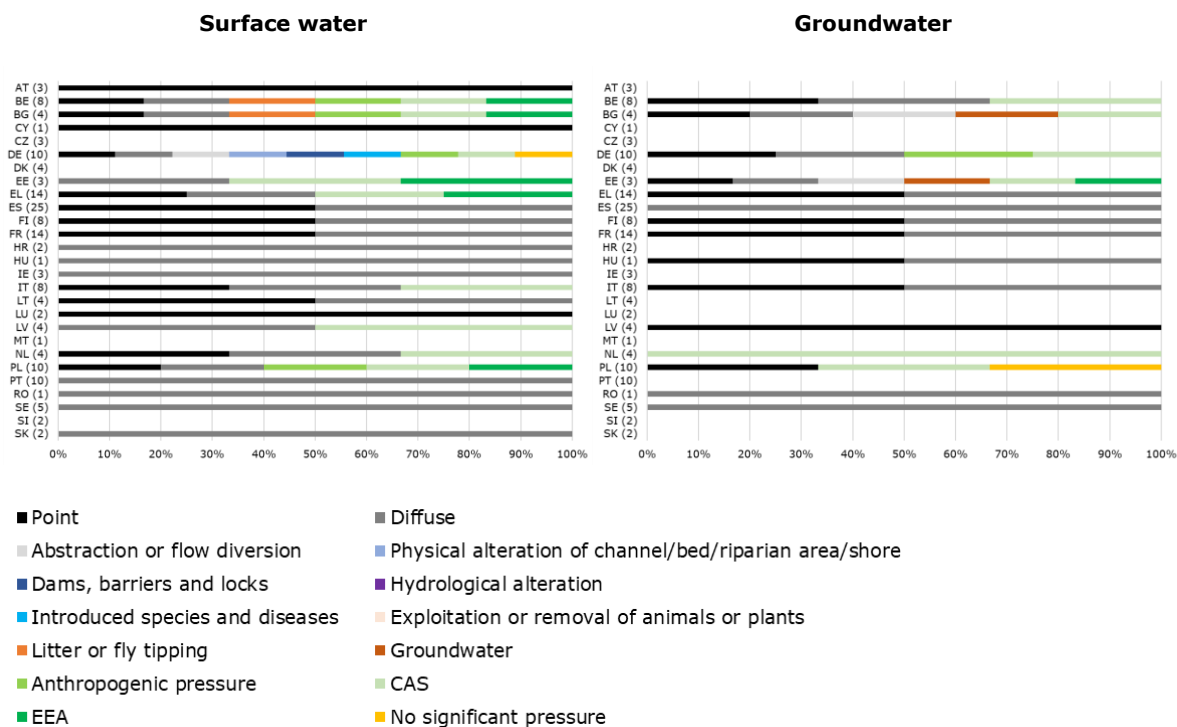


Figure 61: KTM21, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to pollution from urban areas, transport and built infrastructure. The total number of RBDs for each Member State reported in brackets.

Most of the Member State reported on KTM21 for surface water, and half of the Member State reported on KTM21 for both surface water and groundwater. Most of the Member State reported diffuse pollution (grey) and point pollution (black). Other important pressure types reported are CAS (light green), anthropogenic pressure (green) and EEA (dark green).

For 2018-2021, Member States including AT, CY, HU, IT, LV, PL, RO, SE and SK report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. Member States ES, IE and LT report achieving the objective of preventing or controlling the input of pollution from urban areas, transport and built infra-structure by 2021.

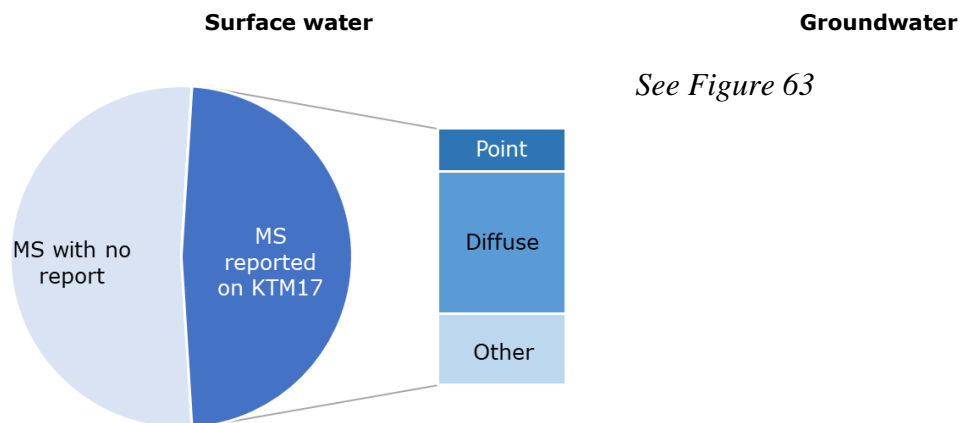
Member State PT reported indicator values indicating no change in the trend. In DE a mixed trend across the RBDs was reported.

For Member States FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BE, BG, EE, EL, HR, NL and LU indicator values were generally missing or difficult to interpret. For Member States CZ, DK, MT and SI this KTM was not mapped.

6.11. Progress with implementation of other Key Type of Measures

6.11.1. KTM17 - Measures to reduce sediment from soil erosion and surface run-off

The main pressures reported by Member State associated with KTM17 “measures to reduce sediment from soil erosion and surface run-off” are presented in Figure 62 and Figure 63.



See Figure 63

Figure 62: Status of Member States reporting on KTM17, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

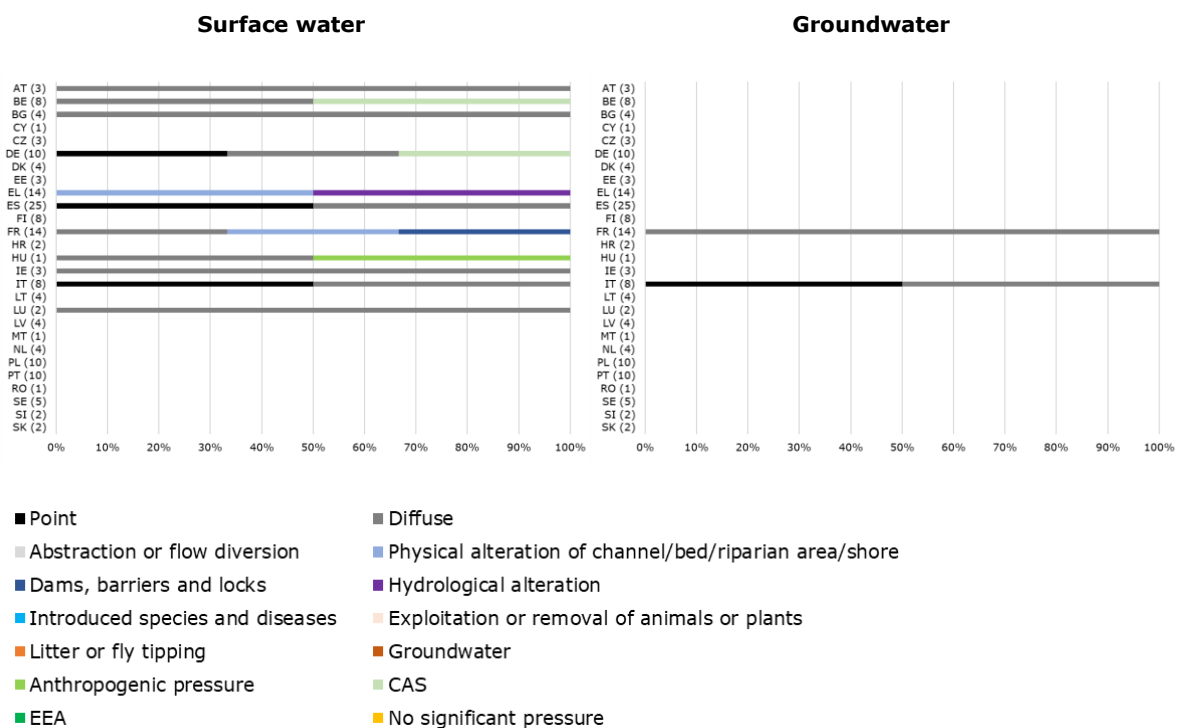


Figure 63: KTM17, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to soil-erosion and surface run-off. The total number of RBDs for each Member State reported in brackets.

Almost half of the Member State reported on KTM17 for surface water, but only two of the Member State reported on KTM17 for both surface water and groundwater. Most of the Member State reported diffuse pollution (grey). Other important pressure types reported are point sources (black), physical alteration (light blue) and River Basin Specific Pollutants.

For 2018-2021, 5 Member States (AT, EL, ES, IE and IT) report indicator values indicating a decreasing trend, with indicator gaps closing over time.

Member State HU reported indicator values indicating no change in the trend. In DE a mixed trend across the RBDs was reported.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE, BG and LU indicator values were generally missing or difficult to interpret. For 16 Member States (CY, CZ, DK, EE, FI, HR, LT, LV, MT, NL, PL, PT, RO, SE, SI, and SK) this KTM was not mapped.

6.11.2. KTM18 - Measures to prevent or control the adverse impacts of invasive alien species and introduced diseases

Ten of the Member State reported KTM18 (BE, BG, DE, ES, FR, IE, IT, PT, SE, SK). The main pressures reported by Member State related to the adverse impacts of invasive alien species and introduced diseases were '5.1 - Introduced species and diseases'. This pressure was reported by all 10 Member State. FR also reported pressures of diffuse pollution and anthropogenic pressure.

For 2018-2021, Member States ES and IE report indicator values indicating a decreasing trend, with indicator gaps closing over time, achieving the objective of preventing or controlling the adverse impacts of invasive alien species and introduced diseases.

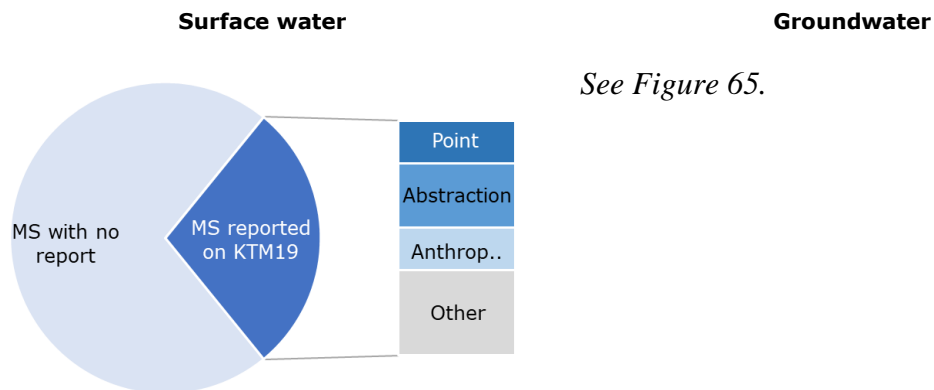
For Member States SE and SK indicator values are projected to increase from 2018 to 2021, showing an expected increased impact on water bodies of invasive alien species and introduced diseases.

Member State DE reported indicator values showing a mixed trend across the RBDs.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE, BG, LU and PT indicator values were generally missing or difficult to interpret. For Member States AT, CY, CZ, DK, EE, EL, FI, HR, HU, LT, LV, MT, NL, PL, RO, and SI this KTM was not mapped.

6.11.3. KTM19 - Measures to prevent or control the adverse impacts of recreation including angling

The main pressures reported by Member State relating to adverse impacts of recreation including angling are presented in Figure 64 and Figure 65.



See Figure 65.

Figure 64: Status of Member States reporting on KTM19, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

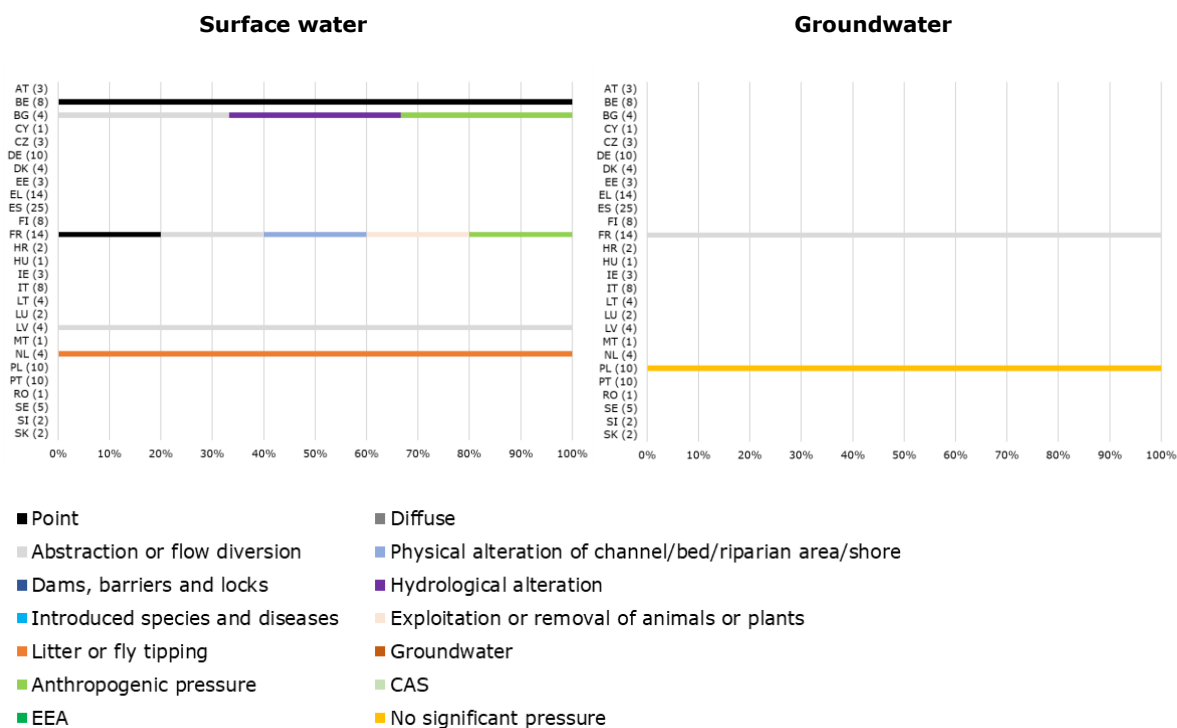


Figure 65: KTM19, Main pressures on surface water (left) and groundwater (right) reported by Member State relating to adverse impacts of recreation including angling. The total number of RBDs for each Member State reported in brackets.

Five of the Member States reported on KTM19 for surface water, and two of the Member State reported on KTM19 for groundwater. One Member State, FR, reported on both surface water and groundwater. The Member State reported mixed pressures for KTM19. Four of the Member States reported abstraction or flow diversion (light grey), but pressures of point pollution (black) and CAS (light green) were also important.

For 2018-2021, two Member States LV and PL report indicator values indicating a decreasing trend, with indicator gaps closing by 2021, achieving the objective of reducing the adverse impacts of recreation including angling.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BE and BG indicator values were generally missing or difficult to interpret.

For most Member States including CY, CZ, DE, DK, EE, EL, ES, FI, HR, HU, IE, IT, LT, LU, LV, MT, NL, PT, RO, SE, SI, and SK this KTM was not mapped.

6.11.4. KTM20 - Measures to prevent or control the adverse impacts of fishing and other exploitation/removal of animal and plants

The main pressures reported by Member State relating to adverse impacts of fishing and other exploitation/removal of animal and plants are presented in Figure 66 and Figure 67.

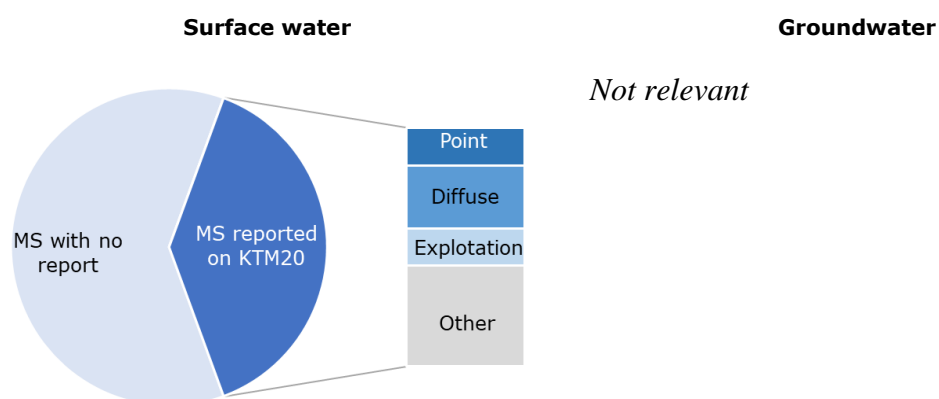


Figure 66: Status of Member States reporting on KTM20, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

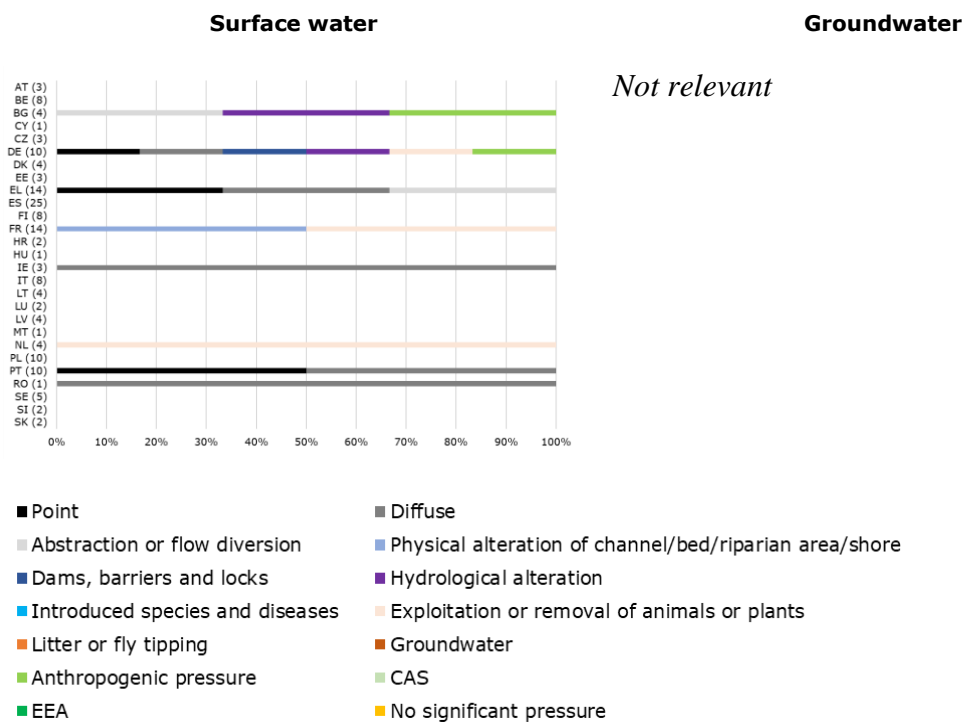


Figure 67: KTM20, Main pressures on surface water reported by Member State relating to adverse impacts of fishing and other exploitation/removal of animal and plants. The total number of RBDs for each Member State reported in brackets.

One third of the Member States reported on KTM20 for surface water. The Member States reported mixed pressures for KTM20. Half of the Member States reported diffuse pollution (grey), but pressures of exploitation or removal of animals or plants (light orange) and point pollution (black) were also important.

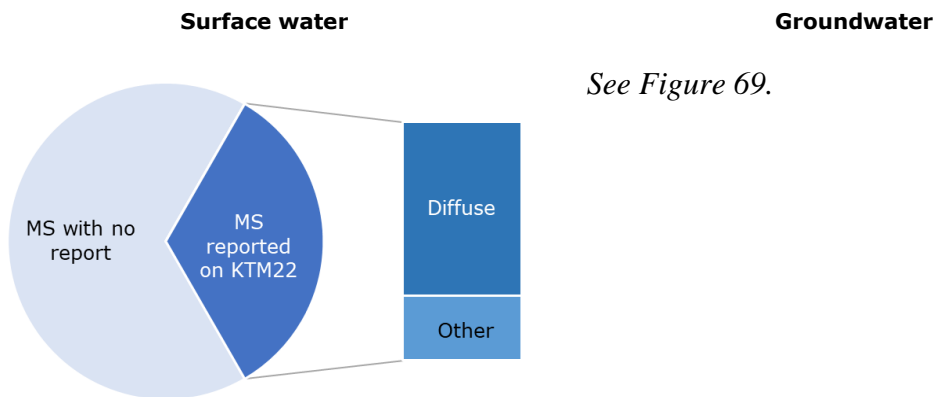
For 2018-2021, Member States IE and RO report indicator values indicating a decreasing trend, with indicator gaps closing over time, achieving the objective of preventing or controlling the adverse impacts of fishing and other exploitation/removal of animal and plants. PL is expected to achieve the objective already by 2021.

Member State EL reported indicator values indicating no change in the trend. Member State DE reported indicator values showing a mixed trend across the RBDs.

For Member State FR no trends can be reported, as only indicator values for 2018 were reported. For BG, NL, PT indicator values were generally missing or difficult to interpret. For Member States AT, BE, CY, CZ, DK, EE, ES, FI, HR, HU, IT, LT, LU, LV, MT, SE, SI, and SK this KTM was not mapped.

6.11.5. KTM22 - Measures to prevent or control the input of pollution from forestry

The main pressures reported by Member State relating to pollution from forestry are presented in Figure 68 and Figure 69.



See Figure 69.

Figure 68: Status of Member States reporting on KTM22, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

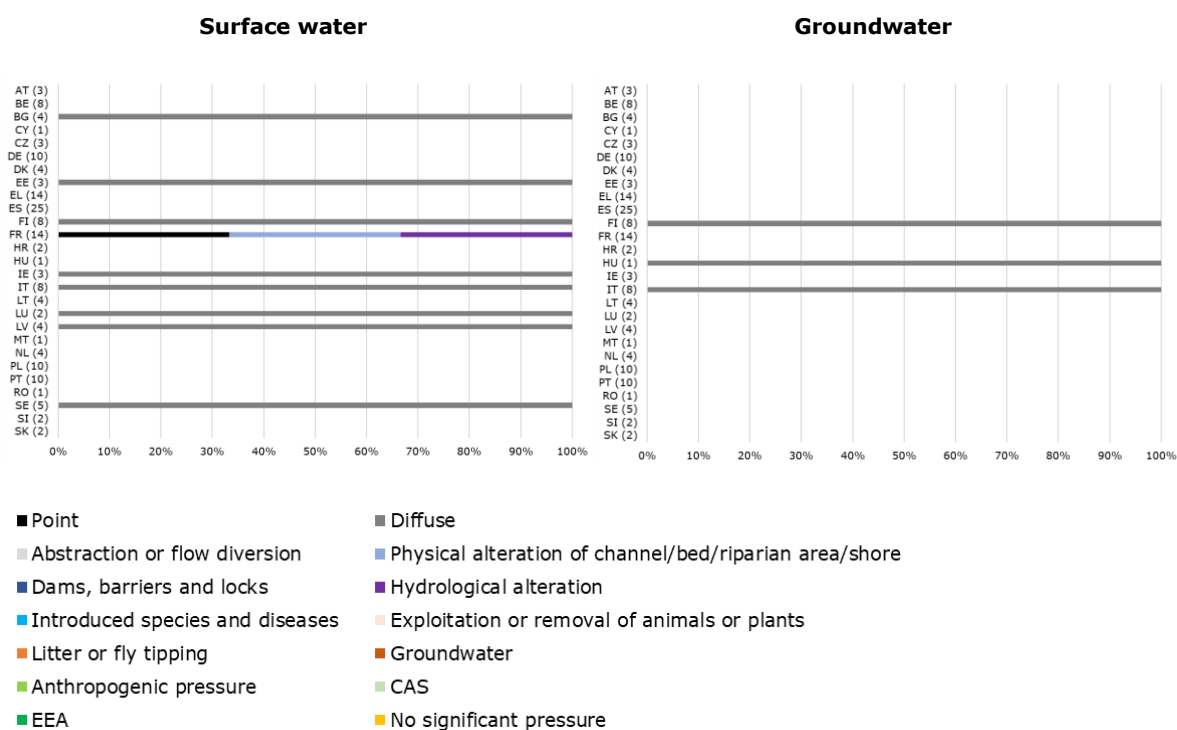


Figure 69: KTM22, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Nine of the Member States reported on KTM22 for surface water, two Member States reported both on surface water and groundwater and one Member State (HU) reported on KTM22 for groundwater only. Most of the Member State reported diffuse pollution (grey). Only FR reported pressures related point pollution (black), physical alteration (light blue) and hydrological alteration (purple).

For 2018-2021, Member States IE and SE report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. LV report achieving the objectives of preventing or controlling pollution from forestry by 2021.

HU reported indicator values showing no change in the trend.

For Members States EE, FI and FR no trends can be reported, as only indicator values for 2018 were reported. For BG and LU indicator values were generally missing. For Member States AT, BE, CY, CZ, DE, DK, EL, ES, HR, LT, MT, NL, PL, PT, RO, SI, and SK this KTM was not mapped.

6.11.6. KTM23 - Natural water retention measures

The main pressures reported by Member State relating to natural water retention are presented in Figure 70 and Figure 71.

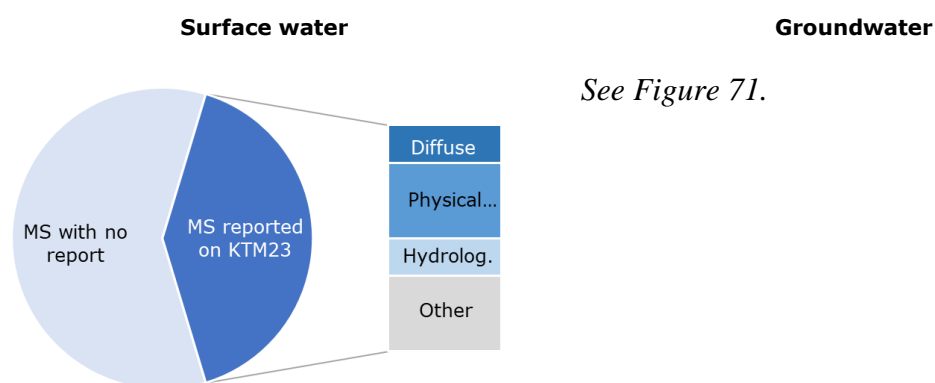


Figure 70: Status of Member States reporting on KTM23, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

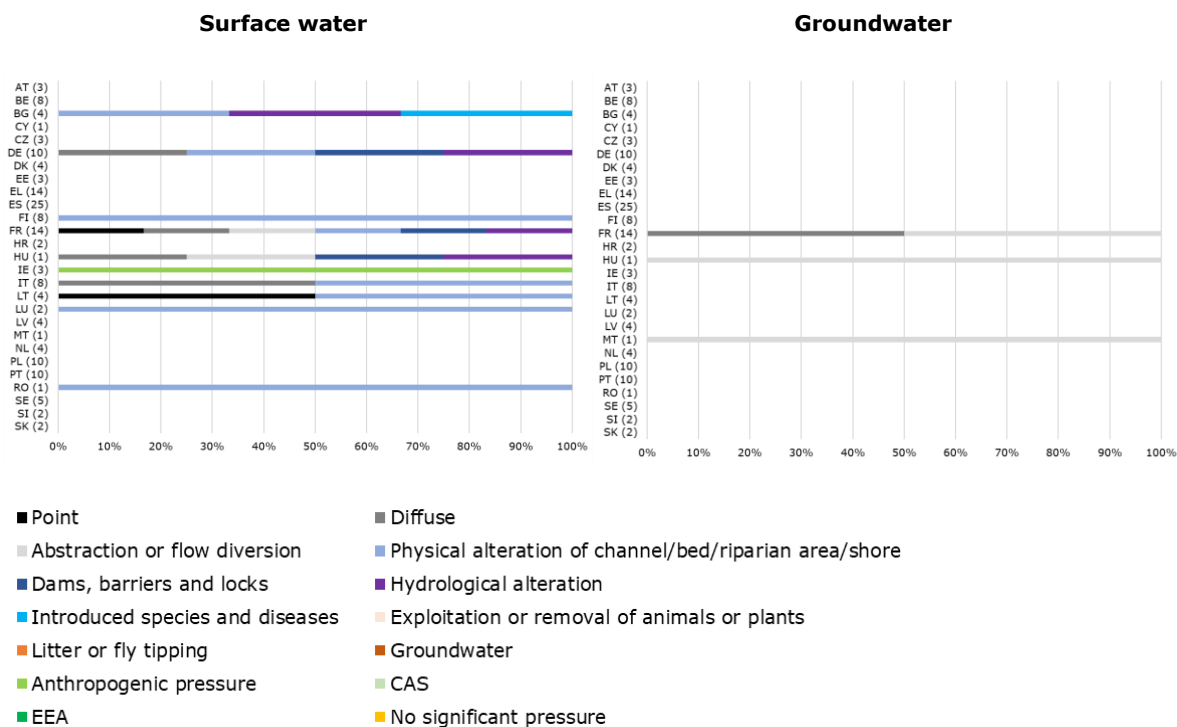


Figure 71: KTM23, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Less than half of the Member State reported on KTM23 for surface water, and only three Member States reported on KTM23 for groundwater (FR, HU, MT). Most of the Member State reported physical alteration (light blue) for surface water and abstraction or flow diversion (light grey) for groundwater. Other important pressure types reported are diffuse pollution (grey), dams, barriers, and locks (dark blue) and hydrological alteration (purple).

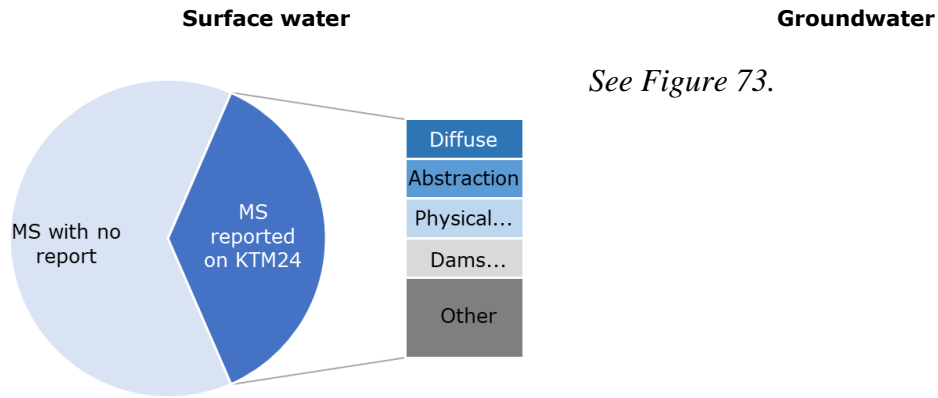
For 2018-2021, Member States including IT and RO report indicator values showing a decreasing (positive) trend, with indicator gaps closing over time with the PoM. IE, LT and MT report achieving the objectives of implementing natural water retention measures by 2021.

HU reported indicator values showing no change in the trend. In DE a mixed trend across the RBDs was reported.

For Members States FI and FR, no trends can be reported, as only indicator values for 2018 were reported. For BG and LU indicator values were generally missing. For Member States AT, BE, CY, CZ, DK, EE, EL, ES, HR, LV, NL, PL, PT, SE, SI, and SK this KTM was not mapped.

6.11.7. KTM24 - Adaptation to climate change

The main pressures reported by Member State relating to climate change are presented in Figure 72 and Figure 73.



See Figure 73.

Figure 72: Status of Member States reporting on KTM24, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

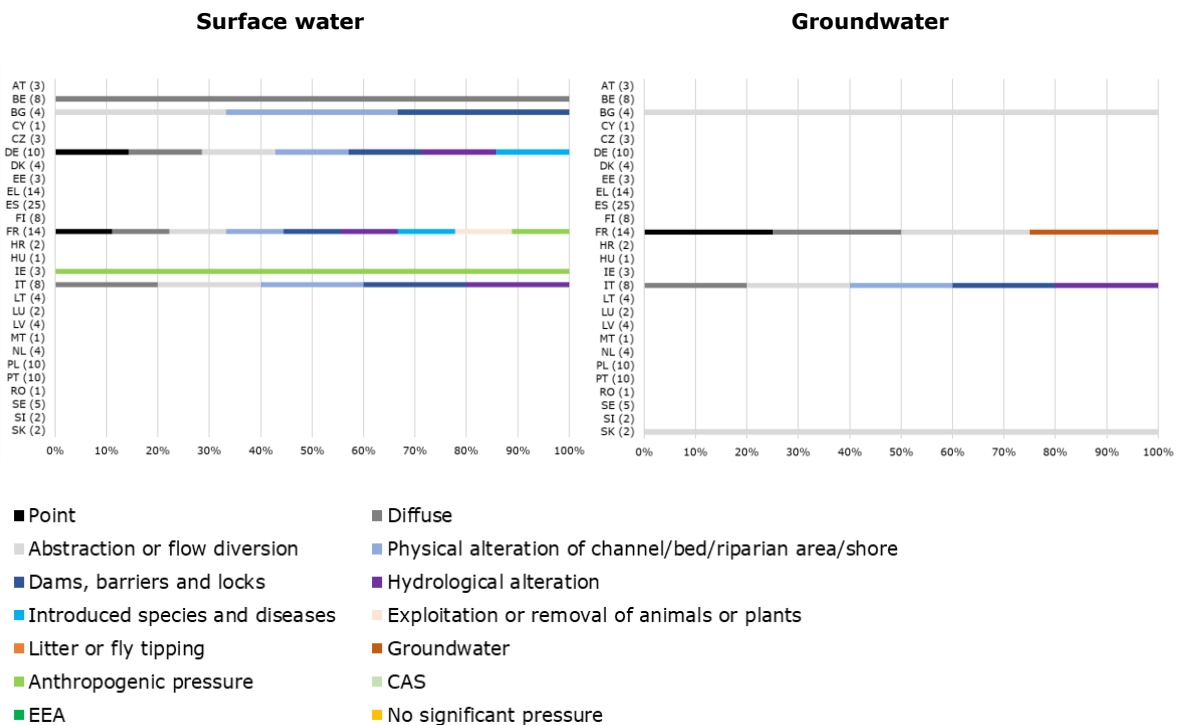


Figure 73: KTM24, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Only six Member States reported on KTM24 for surface water (BE, BG, DE, FR, IE, IT), and four Member States reported on KTM24 for groundwater (DE, FI, PL, SK). Most of the Member States reported diffuse pollution (grey), abstraction or flow diversion (light grey), physical alteration (light blue) and dams, barriers and locks (dark blue). Other important pressure types reported are point sources (black) and hydrological alteration (purple).

For 2018-2021, Member States including DE (for most indicators) and IT report indicator values showing a decreasing (positive) trend, with indicator gaps closing over time with the PoM. IE and SK report achieving the objective of adapting to climate change by 2021.

For Members States BE, BG, and FR, no trends can be reported, as only indicator values for 2018 were reported. For Member States AT, CY, CZ, DK, EE, EL, ES, FI, HR, HU, LT, LU, LV, MT, NL, PL, PT, RO, SE and SI the KTM was not mapped.

6.11.8. KTM25 - Measures to counteract acidification

The main pressures reported by Member State relating to acidification are presented in Figure 74.

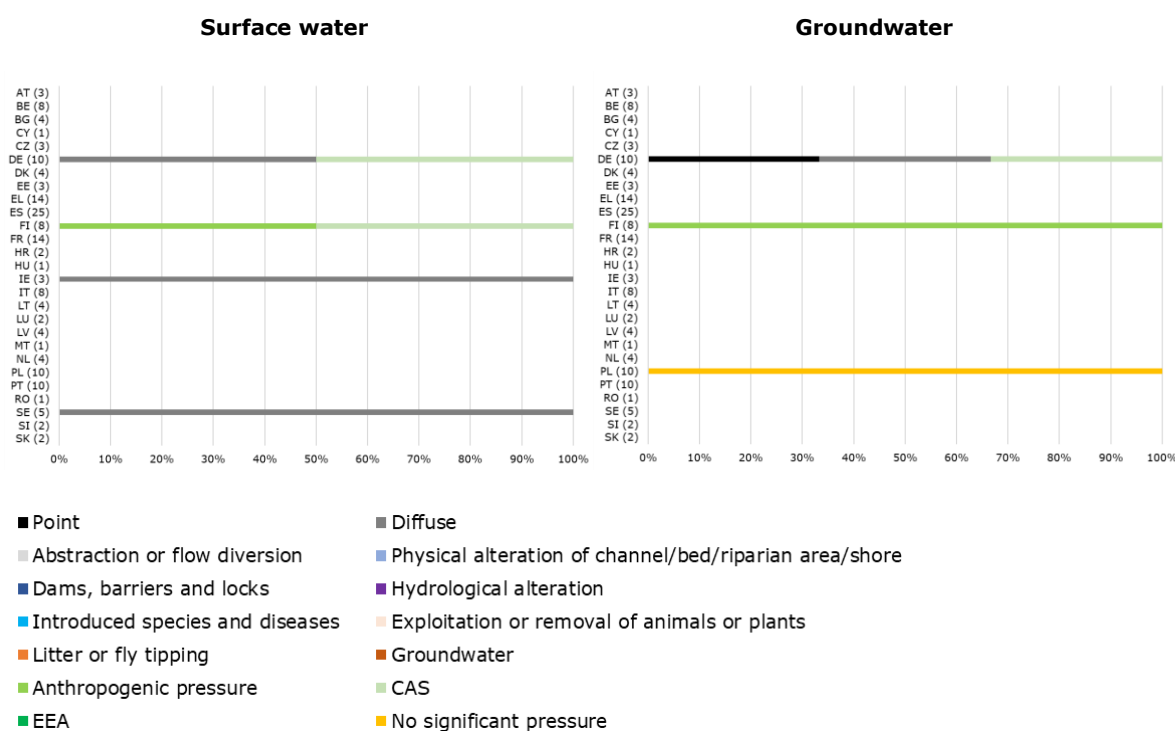


Figure 74: KTM25, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

Only four Member States reported on KTM25 for surface water (DE, FI, IE, SE), and three Member States reported on KTM25 for groundwater (DE, FI, PL). Most of the Member States reported diffuse pollution (grey) and CAS (light green). Other important pressure types reported are point sources (black) and anthropogenic pressure (green).

For 2018-2021, Member States including DE (for most indicators), IE, and SE report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. PL report having achieved the objective of counteracting acidification already by 2018.

For Members State FI no trends can be reported, as only indicator values for 2018 were reported. For Member States AT, BE, BG, CY, CZ, DK, EE, EL, ES, FR, HR, HU, IT, LT, LU, LV, MT, NL, PT, RO, SI, and SK the KTM was not mapped.

6.11.9. KTM99 - Other key type measure reported under PoM

The main pressures reported by Member State relating other key type measures reported under PoM are presented in Figure 75 and Figure 76.

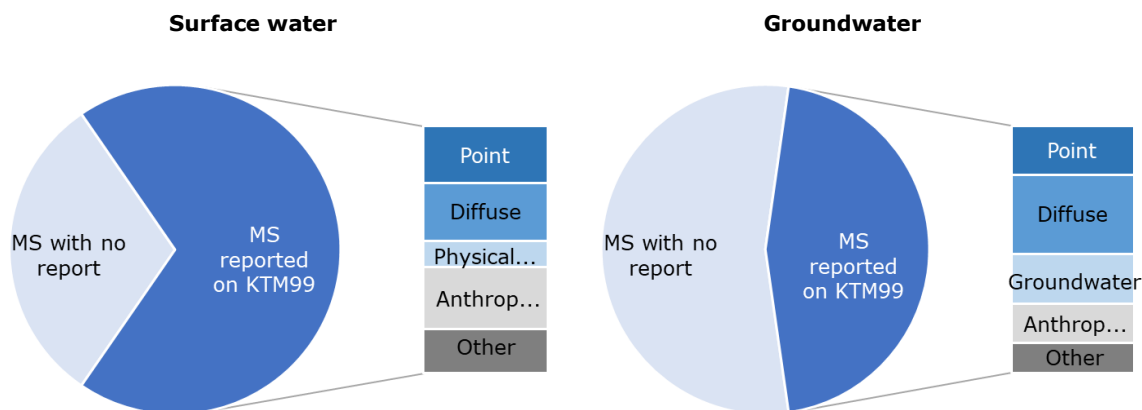


Figure 75: Status of Member States reporting on KTM99, and the main pressures associated with the KTM. Priority substances (EEA and CAS) are included in the presented pressure groups.

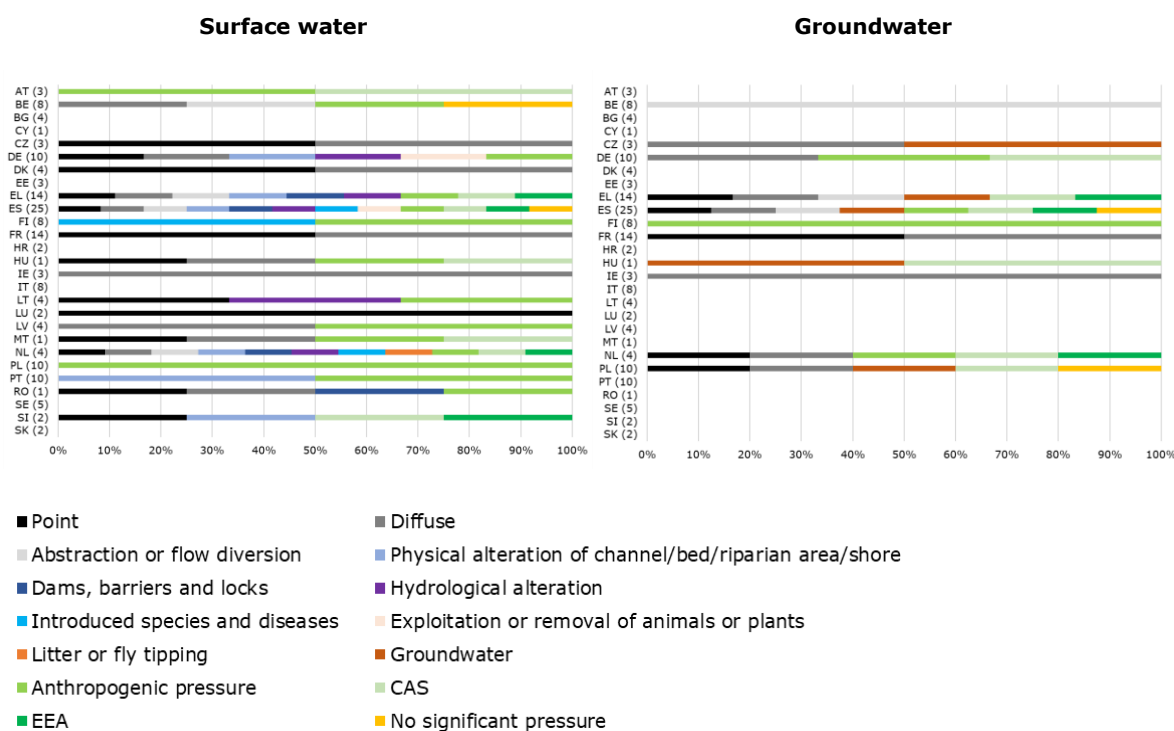


Figure 76: KTM99, reported pressures for surface water (left) and groundwater (right). Percentage not based on RBDs, but on whether a Member State have stated the pressure or not. The total number of RBDs for each Member State reported in brackets.

One third of the Member States did not report on KTM99 for surface water, and less than half of the Member State reported on KTM99 for groundwater. Most of the Member State reported diffuse pollution (grey) and CAS (light green). Other important pressure types reported are point sources (black), physical alteration of channel/bed/riparian area/shore (light blue) and dams, barriers, and lock (dark blue).

For 2018-2021, Member States including ES, IE, LT, PL, RO, and SI report indicator values indicating a decreasing trend, with indicator gaps closing over time with the PoM. LV report achieving the objectives already in 2018.

Member States AT and HU reported indicator values indicate no change in the trend. In DE a mixed trend across the RBDs was reported, and CZ reported an increasing trend widening the indicator gap over time.

For Members States BE, DK, EL, FI, FR, and MT no trends can be reported, as only indicator values for 2018 were reported. For LU and PT indicator values were generally missing. For Member States BG, CY, EE, HR, IT, NL, SE, and SK this KTM was not mapped.

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