

Reporting guidance on "Implementation of planned Programme of Measures" (2018) according to Article 15 (3) of the Water Framework Directive

Purpose

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy requires in Article 15 that the Member States "submit an interim report describing progress in the implementation of the planned programme of measures" the timeframe being "within three years of the publication of each river basin management plan or update under Article 13". The purpose of this document is to provide, to those responsible for reporting, guidance on how to fulfil this requirement of the Directive.

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1 INTRODUCTION

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 as part of the River Basin Management Plan (RBMP) that has to be submitted every 6 years. According to Article 15 of the WFD, an interim report of the implementation of the planned programme of measures has to be submitted within three years of the publication of the River Basin Management Plan or any update thereof. The European Commission, under Article 18, has to inform the European Parliament, the Council and the public on the progress in the implementation of the WFD².

According to the WFD, the second RBMPs were due by December 2015 and therefore the interim reports on the implementation of Programme of Measures are due by December 2018. The aim of this document is to provide a short guidance on what the 2018 reporting should contain and how it should be done. As for the previous interim reporting, an assessment will be done by the European Commission with the aim of having an implementation report to inform the European Parliament and the Council at the latest 2 years later i.e. by December 2020.

Chapter 2 of this document explains how the reporting guidance is structured and gives details on what it is expected from the background documents as well as on how the Commission will use the data reported.

Chapter 3 and the Annex present the schema developed for the 2018 reporting and specific guidance for reporting on the implementation of the planned Programmes of Measures.

¹ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy, Official Journal (OJ L 327), 22 December 2000

² http://ec.europa.eu/environment/water/water-framework/impl_reports.htm#fourth

2 THE REPORTING ON IMPLEMENTATION OF PROGRAMMES OF MEASURES

The Working Group on Data and Information Sharing (WG DIS) under the WFD Common Implementation Strategy has agreed that the reporting will be based, as much as possible, on the reporting schema on Programmes of Measures that was part of the 2016 reporting of the River Basin Management Plans³.

Member States are expected to report on:

- the progress on implementation of the planned measures as well as the overall progress and the main obstacles encountered in this process;
- updated replies to the targeted questions on measures as presented in the WISE reporting of the second RBMPs;
- the cost of measures;
- updated indicator of the gap to good status, if available; and
- the Key Types of Measures indicators as defined in the WISE reporting of the second RBMPs.

The targeted questions as well as the Key Types of Measures (KTM) concepts were used already in the reporting of the 2nd RBMPs therefore they are not going to be repeated here (see Section 10.1 of the WFD Reporting Guidance 2016³)

Member States are not expected to update the analysis of the pressures affecting water bodies, which is only required for the 3rd RBMPs.

Member States are expected to provide background documents on which they explain in detail how the information reported in a schema element was obtained. Similarly to the 2016 reporting, Member States will have two possibilities:

- a) Upload a copy of the documents to WISE, including a clear reference (document and section) where required in the electronic data (guidance on the naming of files is included in the user manual for reporting to WISE that can be found at

³ http://cdr.eionet.europa.eu/help/WFD/WFD_521_2016/Guidance/WFD_ReportingGuidance.pdf

<http://icm.eionet.europa.eu/schemas/dir200060ec/resources/Reporting%20User%20Manual%20RBMP%20v2.0.pdf>); or

b) Include a clear reference (document and section) and a URL to the document stored in a website in the Member State. Where this option is selected, the Member State must guarantee that the URL will remain active for a period of 6 years after reporting and that the document referred to will not be updated nor modified during that period.

As an example, a background document on costs of measures should include:

- calculation methods for assessing the updated costs;
- whether the updated costs calculated include only public budget or whether costs for private operators are also included;
- a supporting explanation on factors affecting the costs of measures;
- if available, projections on investment expenditure for the third planning cycle 2021-2027.

The above example is not intended to be comprehensive.

The European Commission will assess the 2018 reporting and prepare an implementation report to be submitted to the European Parliament and the Council by 2020. The assessment will look at the progress in the implementation of the Programmes of Measures as defined by the Member States in the 2nd RBMPs. The report will also complement the ongoing evaluation of RBMPs as regards the robustness of the PoMs in terms of addressing the significant gaps identified when evaluating the first RBMPs.

3 CONTENTS OF REPORTING 2018

3.1 Diagram of 2018 reporting

Figure 1 presents the UML diagram of the schema on the implementation of the planned Programmes of Measures. Some schema elements not directly relevant for this reporting are included, in order to be able to make the link between different Classes and also between the 2018 reporting schema and the previous one (2016). In those cases the Commission will ensure that information provided in 2016 will be pre-filled in the reporting tools. As a general rule, these values cannot be modified unless indicated otherwise.

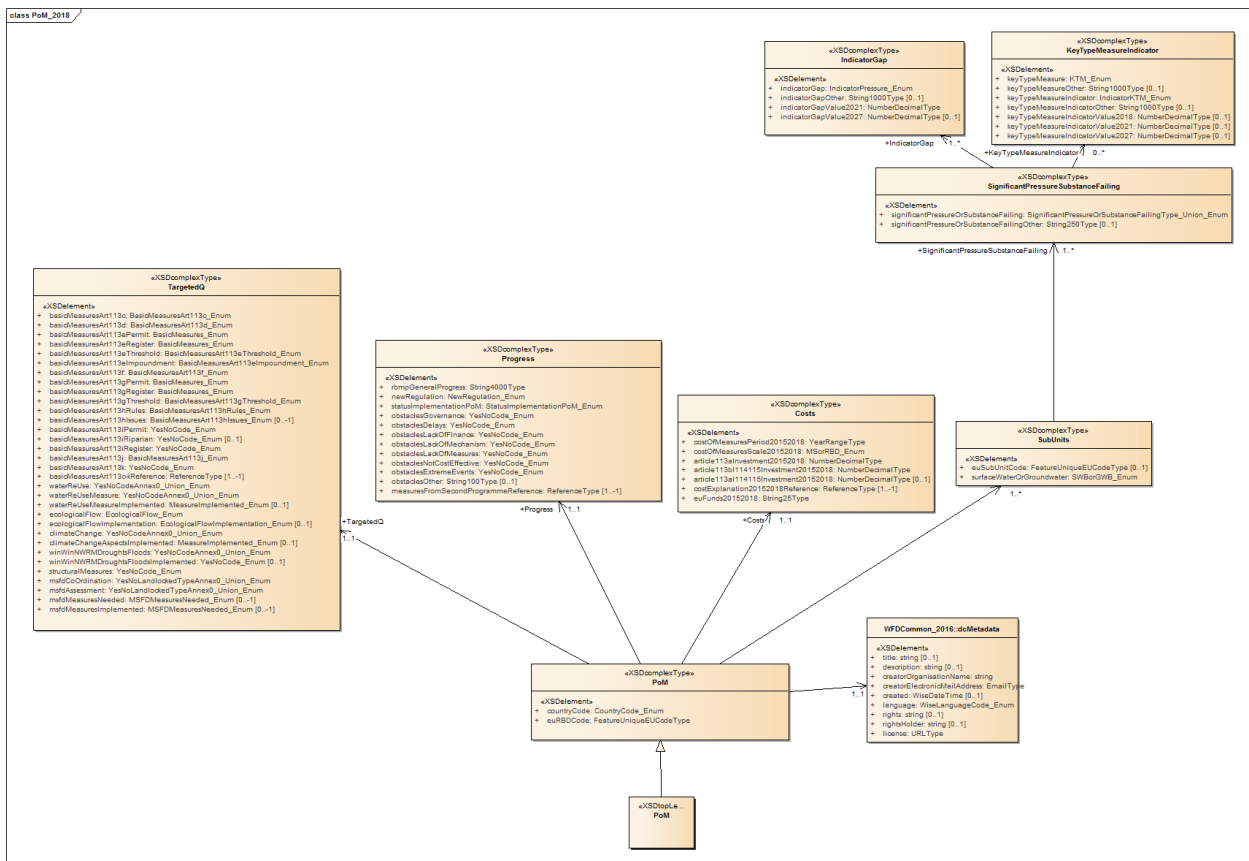


Figure 1: UML Diagram - implementation of planned programme of measures 2018 schema

3.2 Information and data to be reported using the schema

The descriptions below include a brief explanation of what should be reported under each schema element and, in the "Properties" field, the cardinality of each element. For the Classes, the cardinality is mentioned in the Class header.

Please note that the notation used for "many" (meaning that more than one value can be reported) is "-1", so a cardinality of "0..-1" for a Class or "maxOccurs = -1 minOccurs = 0" means that the Class or element has a cardinality of 0-to-many.

A minimum value of 1 means that the Class or element is required, while a minimum value of 0 for a Class means that the Class is optional and for an element means that the element is either optional or conditional. The distinction between these two cases is in the field "Guidance on completion of schema element", which also includes the conditions under which the reporting is required for conditional elements.

CLASS: PoM
Cardinality: 1..1
ATTRIBUTES
<p>Schema element: countryCode Field type / facets: CountryCode_Enum Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Two-letter ISO country code .</p> <p>This element can be pre-filled.</p>
<p>Schema element: euRBDCode Field type / facets: FeatureUniqueEUCodeType Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Unique EU code of the River Basin District. Prefix the RBD's national, unique code with the Member State's 2-alpha character ISO country code. Quality checks: Cross-schema check: The reported euRBDCode must be consistent with the codes reported in RBMPPoM in 2016.</p> <p>This element can be pre-filled.</p>

CLASS: SubUnits
Cardinality: 1..-1
ATTRIBUTES

Schema element: euSubUnitCode
Field type / facets: FeatureUniqueEUCodeType
Properties: maxOccurs = 1 minOccurs = 0
Guidance on completion of schema element:

Conditional. If applicable, report the unique EU code of the Sub-unit. If there are no sub-units this element does not need to be reported and the reporting of the information is done at RBD level. Sub-units are only relevant for surface water. Quality checks: Conditional. Report if sub-units are reported. Element check: First 2 characters must be the Member State's 2-alpha character ISO country code. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: surfaceWaterOrGroundwater
Field type / facets: SWBorGWB_Enum
Properties: maxOccurs = 1 minOccurs = 1
Guidance on completion of schema element:

Required. Select surface water or groundwater in turn from the enumeration list where measures are required to achieve the WFD Environmental Objectives. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

CLASS: SignificantPressureSubstanceFailing

Cardinality: 1..-1

ATTRIBUTES

Schema element: significantPressureOrSubstanceFailing
Field type / facets: SignificantPressureOrSubstanceFailingType_Union_Enum
Properties: maxOccurs = 1 minOccurs = 1
Guidance on completion of schema element:

Required. Select in turn: - each significant pressure type in turn from the enumeration list that is, by itself or in combination with other pressures, significant in terms of Environmental Objectives not being met (i.e. is causing failure of good ecological status or potential or failure of good chemical status), - each Priority Substance that is causing failure of good chemical status - each RBSP that is causing failure of good ecological status or potential and for which measures are required to reduce the pressure to a level and extent that enables the Environmental Objectives to be met. More than one significant pressure type may be selected. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: significantPressureOrSubstanceFailingOther
Field type / facets: String250Type
Properties: maxOccurs = 1 minOccurs = 0
Guidance on completion of schema element:

Conditional. If 'significantPressureOrSubstanceFailing' is 'EEA_00-00-0 Other chemical parameter' please indicate in this field the CAS number (if relevant) and the name of the pollutant or indicator. Quality check: Conditional check: report if 'significantPressureOrSubstanceFailing' is 'EEA_00-00-0 Other chemical parameter', otherwise do not report. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

CLASS: IndicatorGap

Cardinality: 1..-1

ATTRIBUTES

Schema element: indicatorGap

Field type / facets: IndicatorPressure_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. For each significant pressure type or chemical substance reported, select the 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. This is the gap to be filled to meet objectives. At least one of the pre-defined quantitative indicators must be selected from the enumeration list although more than one may be appropriate for the situation in the RBD. Select the 'Other' option from the enumeration list to report details of additional quantitative indicators developed by the Member State in the relevant schema elements. For indicative purposes, the pressures and chemical substances have been mapped to the pre-defined Key Types of Measure (KTMs) (see Annex 3 of the 2016 Reporting Guidance). Quantitative indicators have been proposed for each pressure or chemical substance causing failure and the relevant KTMs. All indicators are defined in terms of what needs to be done to achieve Environmental Objectives (i.e. good ecological status or potential or good chemical status). This means that the value of the indicator will be reduced with time as measures are implemented. A value of 0 is comparable with 100 % good ecological status or potential or good chemical status. Any 'Other' indicator reported by Member States should be constructed in the same way.

This element can be prefilled.

Schema element: indicatorGapOther

Field type / facets: String1000Type

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If 'Other' has been reported in indicatorGap, report a short name and description of the quantitative indicator of the scale and extent of the pressure or chemical substance that is to be reduced by measures to achieve Environmental Objectives. This is the gap to be filled to meet objectives. More than one 'Other' indicator may be reported. All indicators are defined in terms of what needs to be done to achieve Environmental Objectives (i.e. good ecological status or potential or good chemical status). This means that the value of the indicator will be reduced with time as measures are implemented. A value of 0 is comparable with 100 % good ecological status or potential or good chemical status. Any 'Other' indicator reported by Member States should be constructed in the same way. Quality checks: Conditional check: Report if indicatorGap is 'Other', otherwise do not report.

This element can be prefilled.

Schema element: indicatorGapValue2021

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. For each pre-defined quantitative indicator selected in IndicatorGap, report 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. If all measures needed to achieve the Environmental Objectives are expected to be fully operational, the value of the indicator should be 0.

This element can be pre-filled and can be modified if updated information is available. If this element was previously included in Annex 0 then this element appears in the pre-filling as -9999.

Schema element: indicatorGapValue2027

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Optional. For each pre-defined quantitative indicator selected in IndicatorGap, report the expected value of that indicator at the end of the third cycle in 2027. The value for 2027 should give an indication of the expected situation in 2027 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 2027 should provide an indication of the overall progress expected in the second and third cycles. If all measures needed to achieve the Environmental Objectives are expected to be fully operational, the value of the indicator should be 0.

This element can be pre-filled and can be modified if updated information is available. If this element was previously included in Annex 0 then this element appears in the pre-filling as -9999.

CLASS: KeyTypeMeasureIndicator

Cardinality: 0..-1

ATTRIBUTES

Schema element: keyTypeMeasure

Field type / facets: KTM_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. For each significant pressure type and chemical substance reported, report the pre-defined Key Types of Measure (KTM) that will be made operational to reduce the pressure or chemical substance. More than one 'Other key type of measure' (KTM99) may be relevant for a significant pressure type or chemical substance. Furthermore, there may be more than one indicator for a KTM. In those cases, each combination KTM/indicator should correspond to a separate entry. Therefore, the same KTM and the same indicator can be introduced more than once. For example, in terms of diffuse agricultural pressures, KTM2 (reduce nutrient pollution from agriculture), KTM3 (Reduce pesticide pollution from agriculture) and KTM17 (measures to reduce sediment from soil erosion and surface run-off) may be applicable depending on the impacts of the agricultural diffuse pressures. If the pre-defined KTM are not appropriate, select the 'KTM99 – Other key type measure reported under PoM' option from the enumeration list and report details of the other (new) KTM developed by the Member State in the schema element keyTypeMeasureOther. For indicative purposes, the pressures and chemical substances have been mapped to the pre-defined Key Types of Measure (KTM) (see Annex 3). Quantitative indicators have been proposed for each pressure or chemical substance causing failure and the relevant KTM. Cross-schema check: The reported values must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: keyTypeMeasureOther

Field type / facets: String1000Type

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. For each significant pressure type and chemical substance reported, report the name of Key Types of Measure (KTM) if the pre-defined KTM are not appropriate that will be made operational to reduce the pressure or chemical substance. More than one new KTM may be reported. Quality checks: Conditional check: report if 'KTM99 – Other key type measure reported under PoM' is reported in keyTypeMeasure, otherwise do not report. Cross-schema check: The reported value must be consistent with the values reported in RBMPPoM.

This element can be pre-filled.

Schema element: keyTypeMeasureIndicator

Field type / facets: IndicatorKTM_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Select the pre-defined quantitative indicator from the enumeration list that relates to each pre-defined KTM reported in keyTypeMeasure. The indicator selected should give an indication of the remaining measures that will need to be made operational to achieve Environmental Objectives. At least one of the pre-defined quantitative indicators of the KTM must be selected from the enumeration list although more than one may be appropriate for the situation in the RBD. Select the 'KO99 – Other indicator' option from the enumeration list to report details of additional quantitative indicators of the KTM developed

by the Member State in the relevant schema elements. There may be more than one indicator for a KTM. In those cases, each combination KTM/indicator should correspond to a separate entry. Therefore, the same KTM and the same indicator can be introduced more than once. For indicative purposes, the pressures and chemical substances have been mapped to the pre-defined Key Types of Measure (KTMs) (see Annex 3 of the 2016 Reporting Guidance). Quantitative indicators have been proposed for each pressure or chemical substance causing failure and the relevant KTMs. All indicators are defined in terms of what needs to be done to achieve Environmental Objectives (i.e. good ecological status or potential or good chemical status). This means that the value of the indicator will be reduced with time as measures are implemented. A value of 0 is comparable with 100 % good ecological status or potential or good chemical status. Any 'Other' indicator reported by Member States should be constructed in the same way. Cross-schema check: The reported values must be consistent with the value reported in RBMPPoM.

This element can be pre-filled. If this element was not reported in the 2nd RBMP, it has to be reported now as 'KO00 - No information reported in the 2nd RBMP'.

Schema element: keyTypeMeasureIndicatorOther

Field type / facets: String1000Type

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If 'KO99 – Other indicator' has been reported in keyTypeMeasureIndicator, report a short name and description of the quantitative indicator relating to the KTMs. More than one 'Other' indicator may be reported. All indicators are defined in terms of what needs to be done to achieve Environmental Objectives (i.e. good ecological status or potential or good chemical status). This means that the value of the indicator will be reduced with time as measures are implemented. A value of 0 is comparable with 100 % good ecological status or potential or good chemical status. Any 'Other' indicator reported by Member States should be constructed in the same way. Quality checks: Conditional check: Report if keyTypeMeasureIndicator is 'KO99 – Other indicator'. Cross-schema check: The reported value must be consistent with the values reported in RBMPPoM.

This element can be pre-filled.

Schema element: keyTypeMeasureIndicatorValue2018

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. For each pre-defined quantitative indicator relating to the KTMs selected in keyTypeMeasureIndicator, report the expected value of that indicator at the time of reporting in 2018. The value for 2018 should give a quantitative indication of the scale of measures still needed to achieve 100% compliance with the achievement of Environmental Objectives (i.e. good ecological status or potential or good chemical status). This means that the value of the indicator will be reduced with time as measures are implemented. A value of 0 is comparable with 100% good ecological status or potential or good chemical status. Quality checks: Conditional check: Report if keyTypeMeasureIndicator is not 'KO00 - No information reported in the 2nd RBMP', otherwise do not report.

Schema element: keyTypeMeasureIndicatorValue2021

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. For each pre-defined quantitative indicator relating to the KTMs selected in keyTypeMeasureIndicator, report if the expected value of that indicator at the start of the third cycle in 2021 has changed. 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. If all measures needed to achieve the Environmental Objectives are expected to be fully operational, the value of the indicator should be 0. Quality checks: Conditional check: Report if keyTypeMeasureIndicator is not 'KO00 - No information reported in the 2nd RBMP', otherwise do not report.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: keyTypeMeasureIndicatorValue2027

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. For each pre-defined quantitative indicator relating to the KTMs selected in keyTypeMeasureIndicator, report if the expected value of that indicator at the end of the third cycle in 2027 has changed. The value for 2027 should give an indication of the expected situation in 2027 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 2027 should provide an indication of the overall progress expected in the second and third cycles. If all measures needed to achieve the Environmental Objectives are expected to be fully operational, the value of the indicator should be 0. Quality checks: Conditional check: Report if keyTypeMeasureIndicator is not 'KO00 - No information reported in the 2nd RBMP', otherwise do not report.

This element can be pre-filled, and can be modified if updated information is available.

CLASS: Progress

Cardinality: 1..1

ATTRIBUTES

Schema element: rbmpGeneralProgress

Field type / facets: String4000Type

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Report a brief description of the progress achieved since the second RBMP, in particular on the reduction of pressures achieved and measures taken.

Schema element: newRegulation

Field type / facets: NewRegulation_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether new legislation or regulations were required to implement the PoMs in the second cycle.

Schema element: statusImplementationPoM

Field type / facets: StatusImplementationPoM_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Select the description from the enumeration list which best describes the level of implementation of PoMs in the RBD since the second RBMP.

Schema element: obstaclesGovernance

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Have governance issues presented an obstacle to the implementation of the PoMs?

Schema element: obstaclesDelays

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Have unexpected planning delays presented an obstacle to the implementation of the PoMs?

Schema element: obstaclesLackOfFinance

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Has a lack of finance presented an obstacle to the implementation of the PoMs?

<p>Schema element: obstaclesLackOfMechanism Field type / facets: YesNoCode_Enum Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Has the lack of a mechanism for implementing measures (e.g. national regulations not yet adopted) presented an obstacle to the implementation of the PoMs?</p>
<p>Schema element: obstaclesLackOfMeasures Field type / facets: YesNoCode_Enum Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Has a lack of effective measures presented an obstacle to the implementation of the PoMs?</p>
<p>Schema element: obstaclesNotCostEffective Field type / facets: YesNoCode_Enum Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Have some planned measures no longer being considered to be cost effective, therefore presenting an obstacle to the implementation of the PoMs?</p>
<p>Schema element: obstaclesExtremeEvents Field type / facets: YesNoCode_Enum Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element: Required. Have any unexpected extreme events presented an obstacle to the implementation of the PoMs?</p>
<p>Schema element: obstaclesOther Field type / facets: String100Type Properties: maxOccurs = 1 minOccurs = 0 Guidance on completion of schema element: Optional. Report if other obstacles were encountered in the implementation of the PoMs. More than one other obstacle may be reported in the same string.</p>
<p>Schema element: measuresFromSecondProgrammeReference Field type / facets: ReferenceType Properties: maxOccurs = -1 minOccurs = 1 Guidance on completion of schema element: Required. Provide references or hyperlinks to documents and sections that contain more information on the progress and achievements of the programme of measures from the second planning cycle. Guidance on what should be included in this document is provided in Section 10.5.3.3. of the WFD 2016 Reporting Guidance.</p>

<p>CLASS: Costs Cardinality: 1..1</p>
<p>ATTRIBUTES</p>
<p>Schema element: costOfMeasuresPeriod20152018 Field type / facets: YearRangeType Properties: maxOccurs = 1 minOccurs = 1 Guidance on completion of schema element:</p>

Required. Report the time period (e.g. 2015--2018, 2015--2017, etc) to which the reported costs refer. Quality checks: Element check: Period must be reported in the format YYYY--YYYY.

Schema element: costOfMeasuresScale20152018

Field type / facets: MSorRBD_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether the costs reported refer to this specific RBD or for the Member State as a whole.

Schema element: article113aInvestment20152018

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Report the total investment expenditure (in millions of Euros) of measures under Article 11.3.a that were effectively implemented during the second planning cycle. Expenditure should not be annualised. The total investment expenditure should include, for example, expenditure on construction of waste water treatment plants. If disaggregated data is not available, then report '0' in this element and report the aggregated data in article113a114115Investment20152018.

Schema element: article113b114115Investment20152018

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Report the total investment expenditure (in millions of Euros) of measures under Articles 11.3.b-1 and Articles 11.4 and 11.5 that were effectively implemented during the second planning cycle. Expenditure should not be annualised. Total investment expenditure should include, for example, expenditure on infrastructure to control over-abstraction. If disaggregated data is not available, then report '0' in this element and report the aggregated data in article113a114115Investment20152018.

Schema element: article113a114115Investment20152018

Field type / facets: NumberDecimalType

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. Report the total investment expenditure (in millions of Euros) of measures under Articles 11.3.a, 11.3.b-1, 11.4 and 11.5 that were effectively implemented during the second planning cycle if only aggregated data is available. Expenditure should not be annualised. Total investment expenditure should include, for example expenditure on construction of waste water treatment plants. Quality checks: Conditional check: Report if article113aInvestment20152018 and article113b114115Investment20152018 are both '0', otherwise do not report

Schema element: costExplanation20152018Reference

Field type / facets: ReferenceType

Properties: maxOccurs = -1 minOccurs = 1

Guidance on completion of schema element:

Required. Provide a reference or hyperlink to the relevant document and section where specific information can be found on how the costs reported for the second planning cycle have been calculated. This information must be uploaded to WISE or made available on the web. Guidance on the naming of files and documents to be uploaded to WISE is included in the user manual for reporting to WISE (see 6 of the WFD 2016 Reporting Guidance). If a hyperlink to information stored on a Member State's server is reported, the Member State must guarantee that the hyperlink will remain stable and active for a period of 6 years after reporting, and that the information referred to will not be revised or updated.

Schema element: euFunds20152018

Field type / facets: String25Type

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Report the total investment expenditure for the Programme of Measures for the first half of the second planning cycle, which were financed by EU funds as an estimated cost or range.

CLASS: TargetedQ

Cardinality: 1..1

ATTRIBUTES

Schema element: basicMeasuresArt113c

Field type / facets: BasicMeasuresArt113c_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there are 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) (e.g. water metering and allocations).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113d

Field type / facets: BasicMeasuresArt113d_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there are measures to meet the requirements of Article 7, 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 been established) (Article 11.3.d).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113ePermit

Field type / facets: BasicMeasures_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a concession, authorisation and/or permitting regime to control water abstractions (Article 11.3.e).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113eRegister

Field type / facets: BasicMeasures_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a register of abstractions (Article 11.3.e).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113eThreshold

Field type / facets: BasicMeasuresArt113eThreshold_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there are thresholds below which abstractions do not require permits and are not subject to registration (Article 11.3.e).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113eImpoundment

Field type / facets: BasicMeasuresArt113eImpoundment_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a concession, authorisation and/or permitting regime to control water impoundment, and/or a register of impoundments (Article 11.3.e).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113f

Field type / facets: BasicMeasuresArt113f_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether controls are in place, including a requirement for prior authorisation of artificial recharge or augmentation of groundwater bodies (Article 11.3.f).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113gPermit

Field type / facets: BasicMeasures_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is an authorisation and/or permitting regime to control waste water point source discharges (Article 11.3.g).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113gRegister

Field type / facets: BasicMeasures_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a register of waste water discharges (Article 11.3.g).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113gThreshold

Field type / facets: BasicMeasuresArt113gThreshold_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there are thresholds below which waste water discharges do not require permits and are not subject to registration (Article 11.3.g).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113hRules

Field type / facets: BasicMeasuresArt113hRules_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there are general binding rules for the control of diffuse pollution from agriculture.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113hIssues

Field type / facets: BasicMeasuresArt113hIssues_Enum

Properties: maxOccurs = -1 minOccurs = 0

Guidance on completion of schema element:

Conditional. Report the issues covered if there are general binding rules. Quality checks: Conditional check: Report if basicMeasuresArt113hRules is not 'No general binding rules'.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113iPermit

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is an authorisation and/or permitting regime to control physical modifications to the water bodies.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113iRiparian

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If there is an authorisation and/or permitting regime to control physical modifications to the water bodies, indicate whether the regime covers changes to the riparian area of water bodies. Quality checks: Conditional check: Report if basicMeasuresArt113iPermit is 'Yes'.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113iRegister

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a register of physical modifications of water bodies.

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113j

Field type / facets: BasicMeasuresArt113j_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether there is a prohibition of direct discharges (Article 11.3.j).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113k

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether, in accordance with action taken pursuant to Article 16, 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).

This element can be pre-filled, and can be modified if updated information is available.

Schema element: basicMeasuresArt113c-kReference

Field type / facets: ReferenceType

Properties: maxOccurs = -1 minOccurs = 1

Guidance on completion of schema element:

Required. Provide references or hyperlinks to the relevant document and section where specific information can be found on the application of basic measures (Article 11.3.c-k). Guidance on what should be included in this document is provided in Section 10.2.3. of the WFD 2016 Reporting Guidance.

Schema element: waterReUse

Field type / facets: YesNoCodeAnnex0_Union_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether re-use of water (e.g. from waste water treatment or industrial installations) is considered to have a lower environmental impact than other alternative water supplies (e.g. water transfers or desalination).

Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: waterReUseMeasure

Field type / facets: YesNoCodeAnnex0_Union_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether re-use of water has been included in the RBMP as a measure in terms of managing water resources.

Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: waterReUseMeasureImplemented

Field type / facets: MeasureImplemented_Enum

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If re-use of water has been included in the RBMP as a measure in terms of managing water resources, has it been implemented? Conditional check: report if waterReUseMeasure is 'Yes', otherwise do not report.

Schema element: ecologicalFlow

Field type / facets: EcologicalFlow_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether ecological flows been derived for all water bodies at risk of failing the Environmental Objectives due to abstractions, flow diversions or impoundments.

This element can be pre-filled, and can also be modified if updated information is available.

Schema element: ecologicalFlowImplementation

Field type / facets: EcologicalFlowImplementation_Enum

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. Indicate whether the ecological flows already available have been implemented in all relevant water bodies.

Quality checks: Conditional check: Report if ecologicalFlow is 'Yes...' or 'Partly...'.

Schema element: climateChange

Field type / facets: YesNoCodeAnnex0_Union_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether projected climate changes have been assessed and taken into account in the second RBMP and PoM. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: climateChangeAspectsImplemented

Field type / facets: MeasureImplemented_Enum

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If aspects related to climate change have been included in the RBMP as a measure in terms of managing water resources, have the corresponding measures been implemented? If no specific measures were planned, please report 'No measures have started'. Conditional check: Report if climateChange is 'Yes'.

Schema element: winWinNWRMDroughtsFloods
Field type / facets: YesNoCodeAnnex0_Union_Enum
Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether specific win-win measures in terms of achieving the objectives of the WFD and Floods Directive, drought management and use of Natural Water Retention Measures (NWRM) have been included in the PoM. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: winWinNWRMDroughtsFloodsImplemented

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If specific win-win measures in terms of achieving the objectives of the WFD and Floods Directive, drought management and use of Natural Water Retention Measures (NWRM), have been included in the RBMP, have they been implemented? Conditional check: report if winWindNWRMDroughtsFloods is 'Yes', otherwise do not report.

Schema element: structuralMeasures

Field type / facets: YesNoCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether the design of new and existing structural measures, such as flood defences, storage dams and tidal barriers, have been adapted to take into account WFD Environmental Objectives.

This element can be pre-filled, and can also be modified if updated information is available.

Schema element: msfdCoOrdination

Field type / facets: YesNoLandlockedTypeAnnex0_Union_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate whether the preparations of the RBMP and PoM have been co-ordinated with the implementation of the Marine Strategy Framework Directive.

Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: msfdAssessment

Field type / facets: YesNoLandlockedTypeAnnex0_Union_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Indicate 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. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: msfdMeasuresNeeded

Field type / facets: MSFDMeasuresNeeded_Enum

Properties: maxOccurs = -1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If the 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, select the additional measures needed to meet the MSFD objectives from the enumeration list. 'None' should be selected if the need for additional measures was considered but the conclusion was that no additional measures are needed. Quality checks:

Conditional check: Report if msfdAssessment is 'Yes', otherwise do not report. Cross-schema check: The reported value must be consistent with the value reported in RBMPPoM.

This element can be pre-filled.

Schema element: msfdMeasuresImplemented

Field type / facets: MSFDMeasuresNeeded_Enum

Properties: maxOccurs = -1 minOccurs = 0

Guidance on completion of schema element:

Conditional. If the 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, select the additional measures that were implemented. Conditional check: report if msfdMeasuresNeeded is anything except 'None'. Do not report if msfdMeasuresNeeded is 'None'.

CLASS: dcMetadata

Cardinality 1..1

ATTRIBUTES

Schema element: title

Field type / facets: string

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Name given to the dataset.

Schema element: description

Field type / facets: string

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Optional. Description of the dataset.

Schema element: creatorOrganisationName

Field type / facets: string

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Organisation responsible for the dataset.

Schema element: creatorElectronicMailAddress

Field type / facets: EmailType

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Email address of the point of contact in the organisation responsible for the dataset.

Schema element: created

Field type / facets: WiseDateTime

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element:

Optional. Date of creation of the dataset.

Schema element: language

Field type / facets: WiseLanguageCode_Enum

Properties: maxOccurs = 1 minOccurs = 1

Guidance on completion of schema element:

Required. Code of the language of the file.

This element can be pre-filled.

Schema element: license**Field type / facets:** URLType**Properties:** maxOccurs = 1 minOccurs = 1**Guidance on completion of schema element:**

Required. A legal document giving official permission to do something with the resource. Provide the URL to the licence text of a CC BY compatible licence. Use a persistent identifier to an English or multilingual version of the licence agreement.

Schema element: rights**Field type / facets:** string**Properties:** maxOccurs = 1 minOccurs = 0**Guidance on completion of schema element:**

Optional. Information about rights held in and over the resource. If necessary, provide the attribution text required by the licence, or other relevant information.

Schema element: rightsHolder**Field type / facets:** string**Properties:** maxOccurs = 1 minOccurs = 0**Guidance on completion of schema element:**

Optional. A person or organization owning or managing rights over the resource. This element can be provided if the rights holder reserved rights (e.g. should to be contacted for specific uses), or if the rights holder is not the organisation responsible for the dataset.

ANNEX - ENUMERATION LISTS

All enumeration lists used in this reporting are the same as in the WFD Reporting Guidance 2016, except IndicatorKTM_Enum to which an additional element was added, KO00, to indicate that an indicator was not reported in the 2nd RBMP and MeasureImplemented_Enum.

IndicatorKTM_Enum:

KA01 - Area (km2) of agricultural land required to be covered by advisory services to achieve objectives

KA02 - Area (km2) of agricultural land required to be covered by measures to achieve objectives

KA03 - Area (km2) of agricultural land required to be covered by measures to reduce pesticide pollution in agriculture to achieve objectives

KA04 - Area (km2) of agricultural land where water pricing policy measures are required to achieve the objectives of Article 9

KA05 - Area (km2) of bank/shore that require rehabilitation and/or restoration measures to achieve objectives

KA06 - Area (km2) of bank/shore that require removal of hard infrastructure to achieve objectives

KA07 - Area (km2) of buffer zones required to achieve objectives

KA08 - Area (km2) of buffer zones required to counteract acidification to achieve objectives

KA09 - Area (km2) of forest land required to be covered by measures to achieve objectives

KA10 - Area (km2) of forest land requiring measures to reduce nutrient inputs to levels compatible with the achievement of objectives

KA11 - Area (km2) of irrigated land required to be covered by measures to achieve objectives

KA12 - Area (km2) of land for which water pricing policy measures are required to achieve the objectives of Article 9

KA13 - Area (km2) of land required to be covered by drinking water protection zones to achieve objectives

KA14 - Area (km2) of land required to be covered by measures to achieve objectives

KA15 - Area (km2) of land requiring regulation and/or codes of practice for use and disposal of chemicals in urbanised areas, transport and infrastructure to achieve objectives

KA16 - Area (km²) of water bodies required to be covered by measures to achieve objectives

KA17 - Area (km²) of water bodies required to be restored or reconnected to floodplains to achieve objectives

KA18 - Area (km²) of water bodies requiring buffer zones to intercept or reduce sediment loads to water bodies to achieve objectives

KL01 - Length (km) of bank/shore that require rehabilitation and/or restoration measures to achieve objectives

KL02 - Length (km) of bank/shore that require removal of hard infrastructure to achieve objectives

KL03 - Length (km) of remeandering of straightened river channels required to achieve objectives

KL04 - Length (km) of river network requiring measures to achieve objectives

KL05 - Length (km) of river requiring bed restoration measures to achieve objectives

KL06 - Length (km) of river requiring buffer zones to achieve objectives

KL07 - Length (km) of river requiring buffer zones to counteract acidification to achieve objectives

KL08 - Length (km) of river requiring buffer zones to intercept or reduce sediment loads to rivers to achieve objectives

KL09 - Length (km) of transport infrastructure required to be subject to regulation and/or codes of practice for use and disposal of chemicals to achieve objectives

KL10 - Length (km) of water bodies required to be restored or reconnected to floodplains to achieve objectives

KL11 - Length (km) of water bodies requiring litter removal to achieve objectives

KN01 - Number of advisory services required to achieve objectives

KN02 - Number of aquaculture sites/facilities for which measures are required to achieve objectives

KN03 - Number of barriers required to be tackled to achieve objectives

KN04 - Number of Combined Sewer Overflows required to be upgraded to achieve objectives

KN05 - Number of contaminated sites to be remediated or where preventative actions need to be taken to achieve objectives

KN06 - Number of discharges required to be connected to sewerage network to achieve objectives

KN07 - Number of drinking water protection zones required to achieve objectives

KN08 - Number of Farm Surveys required to achieve objectives

KN09 - Number of farms that need to be covered by advisory services to achieve objectives

KN10 - Number of fish/continuity passes required to be installed to achieve objectives

KN11 - Number of households required to be covered by measures to achieve objectives

KN12 - Number of Individual Species Action Plans required for species identified as presenting particular risk levels for the achievement of objectives

KN13 - Number of installations associated with priority substances requiring measures to achieve objectives

KN14 - Number of installations for which water pricing policy measures are required to achieve the objectives of Article 9

KN15 - Number of installations where upgrades or improvements are required to achieve objectives

KN16 - Number of mine discharges requiring measures to achieve objectives

KN17 - Number of new permits required or permits that need to be updated to achieve objectives

KN18 - Number of research studies etc that are required to achieve objectives

KN19 - Number of sites requiring measures to achieve objectives

KN20 - Number of sources of litter that require control measures to achieve objectives

KN21 - Number of species for which codes of practice for reducing the spread of invasive alien species are required to be developed and implemented for the achievement of objectives

KN22 - Number of storm overflows required to be upgraded to achieve objectives

KN23 - Number of storm overflows where sediment flow to surface water is required to be intercepted or reduced to achieve objectives

KN24 - Number of substances requiring restrictions or bans on uses to achieve objectives

KN25 - Number of surface water interceptors and treatment facilities required to achieve objectives

KN26 - Number of sustainable drainage systems required to achieve objectives

KN27 - Number of waste disposal sites required to be upgraded or remediated to achieve objectives

KN28 - Number of wastewater treatment works requiring to be constructed or upgraded to achieve objectives

KN29 - Number of water bodies required to be affected by drinking water protection measures to achieve objectives

KN30 - Number of water bodies required to be covered by measures to achieve objectives

KN31 - Number of water bodies required to have eradication or control measures for the achievement of objectives

KN32 - Number of water bodies that are expected to achieve objectives as a result of research etc

KN33 - Number of water bodies that need to be limed to achieve objectives

KN34 - Number of water bodies where ecological flows need to be established to achieve objectives

KN35 - Number of water bodies where the operational modification of hydro-peaking is required to achieve objectives

KP01 - Reduction (%) in water consumption required to achieve objectives

KS01 - Population equivalent required to be treated by construction or upgrade of wastewater treatment plants to achieve objectives

KS02 - Population size for which water pricing policy measures are required to achieve the objectives of Article 9

KO99 - Other indicator

KO00 - No information reported in the 2nd RBMP

MeasureImplemented_Enum:

No measures have started

Budget has been allocated for some measures but implementation has not started

Budget has been allocated for all measures but implementation has not started

Implementation of some measures has started but no measures finished

Implementation of all measures has started but no measures finished

Some measures have been finished