7.3. Methodologies characterisation

7.3.1. Introduction

Article 5 of the WFD requires Member States to identify surface water bodies that will be used for assessing progress with, and achievement of, the WFD's Environmental Objectives. In addition, under certain conditions, Article 4(3) of the WFD permits Member States to identify and designate artificial water bodies (AWB) and heavily modified water bodies (HMWB). AWB and HMWB are required to achieve Good Ecological Potential (GEP) by 2015.

Identifying the size of surface water bodies was an important parameter that had implications on the design of the monitoring programmes and on the development of appropriate programmes of measures. A stepwise process for the identification of AWB and HMWB resulted in a provisional identification by 2004. Full identification should have been completed by 2010 for publication in the first RBMPs. The characterisation of surface water body types, including the identification of AWB and HMWB, may have been reviewed and revised as part of the review and update (if necessary) of the Article 5 analysis, required by December 2013.

Article 5 also requires Member States to analyse the characteristics of surface water bodies and to provide a summary report on surface water characterisation, including general information on their typology.

7.3.2. How will the European Commission and the EEA use the information reported?

The European Commission will use the information provided to check that small water bodies received sufficient consideration when not delineated as such, and to check compliance in the designation of AWB and HMWB. Statistics and information will be provided to the European Parliament at EU level. Information will be provided to the public through WISE.

7.3.2.1. Products from Reporting

The European Commission will produce tables showing:

- an overview of how small water bodies have been covered by the different Member States and water categories

7.3.3. Contents of the 2016 reporting

7.3.3.1. Schema sketch

See Annex 10.5.

7.3.3.2. Information and Data to be reported using the schemas

For each type of surface water body, report the following information:

Schema: SWMET
Class SWType ***Properties:*** *maxOccurs = unbounded minOccurs = 1*
Schema element: swTypeCode

Field type / facets: String100Type

Properties: maxOccurs =1 minOccurs = 1

Guidance on completion of schema element: Required. Member State code for the characterisation type of the water body, as reported for each water body in the surface water schema (SWB), and the RBMP and background documents. If typology for HMWBs and/or AWBs has been derived and used it should be reported here. This will allow reporting of e.g. physico-chemical standards linked to these types under the schema SWMET.

Details on the typologies are no longer requested but a brief description of the type is required in TypeName and reference to where further details can be found in the RBMP and background documents.

In the previous reporting exercise in 2010, some Member States reported more characterisation types than were subsequently reported with surface water bodies. Please ensure consistency in the data reported.

Quality assurance checks: Cross-schema check: The reported swTypeCode must be consistent with the codes reported in SWB/SurfaceWaterBody/surfaceWaterBodyTypeCode.

Schema element: swTypeDescription

Field type / facets: String1000Type

Properties: maxOccurs =1 minOccurs = 1

Guidance on completion of schema element: Required. Briefly describe the type (e.g. small, lowland, siliceous rivers). Provide a reference to where further details can be found in the RBMP and background documents.

Schema element: swIntercalibrationType

Field type / facets: SWIntercalibrationType_Enum (see Annex 8a)

Properties: maxOccurs =unbounded minOccurs = 1

Guidance on completion of schema element: Required. If the surface water body type corresponds with an intercalibration type, report the intercalibration type code (not name).

The intercalibration type reported in this element must be appropriate to the surface water body's Category.

If there is no corresponding intercalibration type, select 'Not applicable'.

Quality checks: Cross-schema check: The reported intercalibrationType must be consistent with the codes reported in SWB/SurfaceWaterBody/surfaceWaterBodyIntercalibrationType

Schema element: swTypeCategory

Field type / facets: SWCategory_Enum: RW, LW, TW, CW

Properties: maxOccurs =1 minOccurs = 1

Guidance on completion of schema element: Required. Report the category of surface water body to which this type refers.

'RW' = River water body.

'LW' = Lake water body. 'TW' = Transitional water body. 'CW' = Coastal water body.
Schema element: swTypeSpecificReferenceConditionsForBQEs Field type / facets: AllSomeNone_Enum: All, Some, None Properties: maxOccurs =1 minOccurs = 1 Guidance on completion of schema element: Required. Indicate whether type-specific reference conditions have been established for this surface water type for all relevant BQEs: 'All': Yes, reference conditions have been set for this type for all relevant BQEs 'Some': Partly, reference conditions have been set for this type for some BQEs 'None': No, reference conditions have not been set for this type for any BQEs
Schema element: swTypeSpecificReferenceConditionsForHyMoQEs Field type / facets: AllSomeNone_Enum: All, Some, None Properties: maxOccurs =1 minOccurs = 1 Guidance on completion of schema element: Required. Indicate whether type-specific reference conditions have been established for this surface water type for all relevant hydromorphological QEs. 'All': Yes, reference conditions have been set for this type for all relevant hydromorphological QEs 'Some': Partly, reference conditions have been set for this type for some hydromorphological QEs 'None': No, reference conditions have not been set for this type for any hydromorphological QEs
Schema element: swTypeSpecificReferenceConditionsForPhysChemQEs Field type / facets: AllSomeNone_Enum: All, Some, None Properties: maxOccurs =1 minOccurs = 1 Guidance on completion of schema element: Required. Indicate whether type-specific reference conditions have been established for this surface water type for all relevant physico-chemical QEs: 'All': Yes, reference conditions have been set for this type for all relevant physico-chemical QEs 'Some': Partly, reference conditions have been set for this type for some physico-chemical QEs 'None': No, reference conditions have not been set for this type for any physico-chemical QEs

The following class is used to report information on methodologies:

Schema: SWMET (continued)
Class SWMethodologies ***Properties:*** *maxOccurs = 1 minOccurs = 1*
Schema element: typologyMethodologyReference **Field type / facets:** ReferenceType (see Annex 9) **Properties:** maxOccurs =unbounded minOccurs = 1 **Guidance on completion of schema element**: Required. Provide references or hyperlinks to the documents and sections where relevant information relating to the typology methodology can be found. Guidance on what should be included in this document is provided in Section 7.3.3.3.
Schema element: smallWBsMethodologyReference **Field type / facets:** ReferenceType (see Annex 9) **Properties:** maxOccurs =unbounded minOccurs = 1 **Guidance on completion of schema element**: Required. Provide references or hyperlinks to the documents and sections where relevant information relating to the methodology for small water bodies can be found. Guidance on what should be included in this document is provided in Section 7.3.3.3.
Schema element: minimumCatchmentAreaRivers **Field type / facets:** NumberDecimalType **Properties:** maxOccurs =1 minOccurs = 1 **Guidance on completion of schema element**: Required. If defined, state the minimum catchment area in km² for a river to be delineated as a water body in the RBMP. If not defined report -8888. **Quality checks**: Element check: Report -8888 if a minimum catchment area of rivers has not been defined.
Schema element: minimumSurfaceAreaLakes **Field type / facets:** NumberDecimalType **Properties:** maxOccurs =1 minOccurs = 1 **Guidance on completion of schema element**: Required. If defined, state the minimum surface area in km² for a lake to be delineated as a water body in the RBMP. If not defined report -8888. **Quality checks**: Element check: Report -8888 if a minimum surface area of lakes has not been defined.
Schema element: otherMinimumCriteria **Field type / facets:** String1000Type **Properties:** maxOccurs =1 minOccurs = 0

Guidance on completion of schema element: Optional. If the minimum criteria used for the delineation of river water bodies is not based on catchment area, or for lake water bodies is not based on surface area, describe the criteria used.
Schema element: iRBDTypologyCoOrdinationReference Field type / facets: ReferenceType (see Annex 9) Properties: maxOccurs =unbounded minOccurs = 0 Guidance on completion of schema element: Conditional. Provide references or hyperlinks to the documents and sections where relevant information relating to the co-ordination of typology methodology in international RBDs can be found. Guidance on what should be included in this document is provided in Section 7.3.3.3. Quality checks: Cross-schema check: Report if RBDSUCA/RBD/internationalRBD is 'Yes'.
Schema element: hmwbMethodologyReference Field type / facets: ReferenceType (see Annex 9) Properties: maxOccurs =unbounded minOccurs = 1 Guidance on completion of schema element: Required. Provide references or hyperlinks to the documents and sections where any relevant information relating to the methodology for the designation of AWB and HMWB, can be found. Guidance on what should be included in this document is provided in Section 7.3.3.3.

7.3.3.3. Guidance on contents of RBMPs/Background Documents

The following provides guidance on the aspects that the European Commission expects to find in the relevant chapters on methodologies in the RBMPs or in background documents. This guidance is not intended to be comprehensive in terms of what the Member States have to include in their RBMPs or background documents, rather to provide certain concrete elements of information that the European Commission expects to find.

Typology

- The background documents accompanying the RBMPs should include a detailed description of the typology methodology, with information on whether system A or B has been used, typology factors (descriptors) and related ranges, methods for testing typology versus biological data, and setting the type-specific reference conditions.

- Member States with a coastline where no transitional waters have been delineated should include a clear justification for this in these documents.

- For international RBDs, it should be indicated whether typology was co-ordinated with the Member States and third countries sharing the international RBD and, if so, how this co-ordination was achieved and the results. If the typology was not co-ordinated, provide reasons why, steps that have been taken to address this shortcoming and by when co-ordination will be achieved.

Small water bodies

- Describe the approach that has been taken to deal with small water bodies including information on the size threshold used for the delineation of water bodies for rivers, lakes and transitional waters.

Reference conditions

- Describe the reference conditions for all types and quality elements (biological, physico-chemical and hydromorphological). If there are gaps, identify them explicitly. Identify any quality elements which are not considered reliable for some types (under WFD Annex II section 1.3.vi) and explain the basis of information.

Designation of HMWBs

- Describe in detail the methodology for the designation of HMWBs, including:
    - Criteria used for the identification of substantial change in character. Thresholds should be included if they have been used (such as percentage, length or area of the water body affected by modification, the size of dams or impoundment).
    - Type of physical alterations considered for the designation of HMWB.
    - Criteria used for the assessment of significant adverse effect on the use. Indicate if thresholds have been used for the different water uses to define significant adverse effect (such as percentage of losses in energy production, agricultural production, and increase in risk of flooding).
    - List the water uses behind the designated HMWB and the number or percentage of water bodies for each use.
    - Explain how WFD Article 4(3)b has been applied (better environmental option). Which 'other means' have been considered for each water use. Describe all cases in which this assessment has concluded that there is a need to restore a water body and achieve the beneficial objectives through other means which are significantly better environmental options.

For further information, refer to the following CIS Guidance Documents:

- CIS Guidance Document No. 2: Identification of Water Bodies[1]

[1] https://circabc.europa.eu/sd/a/655e3e31-3b5d-4053-be19-15bd22b15ba9/Guidance%20No%202%20-%20Identification%20of%20water%20bodies.pdf

- CIS Guidance Document No. 4: Identification and Designation of Heavily Modified and Artificial Water Bodies[2]

- CIS Guidance Document No. 5: Transitional and Coastal Waters – Typology, Reference Conditions and Classification Systems[3]

- CIS Guidance Document No. 10: Rivers and Lakes - Typology, Reference Conditions and Classification Systems[4].

In addition, refer to the Intercalibration Official Decision[5] and Technical Reports[6].

7.3.3.4. Glossary: clarification of terms and reporting requirements

Wider environment:

WFD Article 4(3)(a)(i) refers to the 'wider environment'. 'Consequently a restricted definition of environment would not be appropriate and the environment is considered to include the natural environment and the human environment including archaeology, heritage, landscape and geomorphology'[7].

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2 https://circabc.europa.eu/sd/a/f9b057f4-4a91-46a3-b69a-e23b4cada8ef/Guidance%20No%204%20-%20heavily%20modified%20water%20bodies%20-%20HMWB%20(WG%202.2).pdf

3 https://circabc.europa.eu/sd/a/85912f96-4dca-432e-84d6-a4dded785da5/Guidance%20No%205%20-%20characterisation%20of%20coastal%20waters%20-%20COAST%20(WG%202.4).pdf

4 https://circabc.europa.eu/sd/a/dce34c8d-6e3d-469a-a6f3-b733b829b691/Guidance%20No%2010%20-%20references%20conditions%20inland%20waters%20-%20REFCOND%20(WG%202.3).pdf

5 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:332:0020:0044:EN:PDF

6 https://circabc.europa.eu/sd/a/61fbcb5b-eb52-44fd-810a-63735d5e4775/IC_GUIDANCE_FINAL_16Dec2010.pdf

7 CIS Guidance Document No. 4: Identification and Designation of Heavily Modified and Artificial Water Bodies https://circabc.europa.eu/sd/a/f9b057f4-4a91-46a3-b69a-e23b4cada8ef/Guidance%20No%204%20-%20heavily%20modified%20water%20bodies%20-%20HMWB%20(WG%202.2).pdf