



**Marine Strategy Framework Directive (MSFD)**  
***Common Implementation Strategy***

**MSFD guidance: reporting on the 2024  
update of Articles 8, 9 and 10**

**MSFD GUIDANCE DOCUMENT 20**  
**11 MAY 2023**

Further guidance for reporting, including use of the MSFD web reporting tool and schemas, is available from <http://cdr.eionet.europa.eu/help/msfd>.

***Disclaimer:***

*This document has been developed through a collaborative programme involving the European Commission, all EU Member States, the Accession Countries, and Norway, international organisations, including the Regional Sea Conventions and other stakeholders and Non-Governmental Organisations. The document should be regarded as presenting an informal consensus position on best practice agreed by all partners. However, the document does not necessarily represent the official, formal position of any of the partners. Hence, the views expressed in the document do not necessarily represent the views of the European Commission.*

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# Contents

<b>1.</b>	<b>INTRODUCTION</b>	<b>8</b>
1.1.	MSFD REPORTING REQUIREMENTS IN 2024.....	8
1.2.	OVERVIEW OF THE MSFD ARTICLES TO BE REPORTED .....	8
1.3.	REQUIREMENTS OF ARTICLES 8, 9 AND 10 AND COMMISSION DECISION (EU) 2017/848 .....	9
1.3.1.	Article 9 .....	9
1.3.2.	Article 8 .....	9
1.3.3.	Commission Decision (EU) 2017/848.....	9
1.3.4.	Article 10 .....	10
1.4.	UPDATING REPORTS ON ARTICLES 8, 9 AND 10 .....	10
1.4.1.	General considerations.....	10
1.4.2.	Article 9 .....	11
1.4.3.	Article 8 .....	11
1.4.4.	Article 10 .....	11
<b>2.</b>	<b>THE 2024 ‘REPORTING PACKAGE’</b>	<b>12</b>
2.1.	E-REPORTS .....	13
2.1.1.	Building upon previous reporting .....	13
2.1.2.	Sources of information .....	13
2.2.	INDICATOR ASSESSMENTS .....	15
2.3.	SUPPORTING DATA.....	16
2.4.	TEXT-BASED REPORTS .....	17
<b>3.</b>	<b>CONTENT OF THE E-REPORTS</b>	<b>18</b>
3.1.	MARINE REPORTING UNITS .....	18
3.1.1.	MRUs for marine waters .....	18
3.1.2.	MRUs for subdivisions of marine waters.....	18
3.1.3.	MRUs and regional assessments.....	21
3.1.4.	Updating MRUs for 2024 reporting.....	21
3.2.	FEATURES AND ELEMENTS ASSESSED .....	21
3.3.	ARTICLE 9: GES DETERMINATIONS.....	22
3.4.	ARTICLE 8(1A, B): ASSESSMENTS AGAINST GES DETERMINATIONS.....	23
3.5.	ARTICLE 8(1C): ECONOMIC AND SOCIAL ANALYSIS .....	26
3.6.	ARTICLE 10: ENVIRONMENTAL TARGETS .....	27
3.7.	INDICATORS.....	28
3.8.	REPORTER.....	29
<b>4.</b>	<b>E-REPORTING PROCESS AND TOOLS</b>	<b>29</b>
4.1.	REPORTING TOOLS .....	29
4.2.	OPTIONS FOR PREPARING E-REPORTS.....	29
4.3.	STEPS TO FOLLOW WHEN COMPLETING THE SCHEMAS .....	29
4.4.	QUALITY CONTROL SPECIFICATIONS.....	30
4.5.	TECHNICAL SUPPORT FOR REPORTING .....	31
<b>5.</b>	<b>PROCEDURES AND FORMAT FOR REPORTING</b>	<b>31</b>
5.1.	WHO CAN REPORT .....	31
5.2.	REPORTING LANGUAGE .....	31
5.3.	REPORTING FORMAT .....	31
5.4.	FORMAL NOTIFICATION.....	32
	<b>ANNEX I: GES ASSESSMENTS TO BE REPORTED PER DESCRIPTOR</b>	<b>34</b>

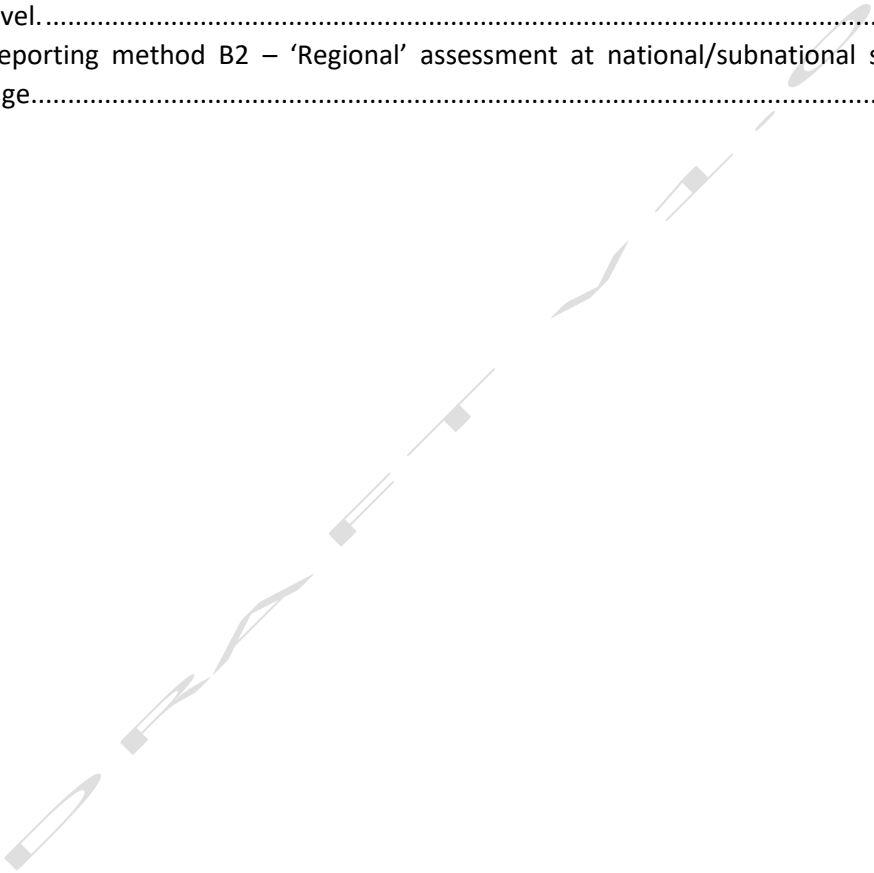
<b>ANNEX II: SCHEMAS AND GUIDANCE PER FIELD</b>	<b>41</b>
A. ART9_GES .....	41
B. ART8_GES .....	46
C. ART8_ESA .....	61
D. ART10_TARGETS .....	65
E. INDICATOR .....	70
F. MRU .....	74
<b>ANNEX III: ILLUSTRATIVE EXAMPLES OF E-REPORTING OUTPUTS</b>	<b>77</b>
ARTICLE 8 ASSESSMENTS OUTPUTS – EXAMPLES FOR ALL DESCRIPTORS .....	77
<b>ANNEX IV: COMMON INDICATOR STRUCTURE</b>	<b>78</b>
A. COMMON INDICATOR STRUCTURE: XML ELEMENTS ANNOTATED.....	78
B. MAPPING BETWEEN SCHEMA 'INDICATOR' AND THE 'COMMON INDICATOR STRUCTURE' .....	80
<b>ANNEX V: USING REGIONAL ASSESSMENTS FOR MSFD REPORTING PURPOSES</b>	<b>81</b>
A. INTRODUCTION .....	81
B. APPROACHES TO REPORTING REGIONAL ASSESSMENTS .....	81
<i>B.1 Reporting method A: 'regional' assessment reported without change.....</i>	<i>83</i>
<i>B.2 Reporting method B1: 'regional' assessment, reported at national level.....</i>	<i>84</i>
<i>B.3 Reporting method B2: 'regional' assessment, undertaken at national or subnational scale.....</i>	<i>85</i>
<i>B.4 Reporting method C: 'regional' assessment, supplemented with national information.....</i>	<i>86</i>
<i>B.5 Reporting method D: 'national' assessment .....</i>	<i>86</i>
C. USING REGIONAL ASSESSMENT RESULTS FOR MSFD E-REPORTING .....	86
D. FINALISATION OF MSFD E-REPORTING .....	88
<b>ANNEX VI: ENUMERATION LISTS</b>	<b>90</b>

## Tables and Figures

Table 1. Overview of the 2024 reporting package on updates of MSFD Articles 8, 9 and 10.....	12
Table 2. Main sources of other assessments in electronic format for 2024 MSFD Article 8 updates. .	14
Table 3. Proposed outline of contents for 2024 Articles 8, 9 and 10 text-based report. ....	17
Table 4. Organisation of region, subregion, subdivision and national scales of assessment to allow for integration across related descriptors. ....	19
Table 5. Features to be assessed in schema 'Art8_GES'. ....	34
Table 6. Fields of the schema 'ART9_GES'. ....	42
Table 7. Fields of the schema 'ART8_GES'. ....	47
Table 8. Fields of the schema 'ART8_ESA'.....	62
Table 9. Fields of the schema 'ART10_Targets'.....	66
Table 10. Fields of the schema 'Indicator'.....	71
Table 11. Fields of the schema 'MRU'. ....	74
Table 12. XML elements of the Common Indicator Structure. ....	78
Table 13. Correspondence between fields of the schema 'Indicator' and those of the 'Common Indicator Structure'. ....	80
Table 14. General approaches to undertaking assessments of indicators and integrated assessments at 'regional' and 'national' level for MSFD reporting.....	82
Table 15. Main fields for reporting an indicator assessment for a parameter/criterion and multiple elements in schema 'Art8_GES'. ....	87

Table 16. Main fields for reporting an integrated assessment for a Feature in the schema 'Art8\_GES'.  
 ..... 87

Figure 1 Main articles to be reported under the MSFD and their interconnections. .... 9  
 Figure 2. Diagram of the schema 'ART9\_GES' ..... 41  
 Figure 3. Diagram of the schema 'ART8\_GES' ..... 46  
 Figure 4. Diagram of the schema 'ART8\_ESA'. ..... 61  
 Figure 5. Diagram of the schema 'ART10\_Targets' ..... 65  
 Figure 6. Diagram of the schema 'Indicator' ..... 70  
 Figure 7. Diagram of the schema 'MRU'. ..... 74  
 Figure 8. Hypothetical MSFD (sub)region showing marine waters of EU and non-EU states..... 82  
 Figure 9. Reporting method A – 'Regional' assessment reported without change. .... 83  
 Figure 10. Reporting method B1 – 'Regional' assessment at subregion/subdivision scale but reported at national level..... 85  
 Figure 11. Reporting method B2 – 'Regional' assessment at national/subnational scale, reported without change..... 86



## LIST OF ABBREVIATIONS AND ACRONYMS

BSC	Black Sea Commission, implementing the Convention on the protection of the Black Sea against pollution (Bucharest Convention)
CDR	Central Data Repository (of the EEA's EIONET)
CFP	Common Fisheries Policy
DCF	Data Collection Framework (of CFP)
DPSIR	Drivers, Pressures, State, Impact and Response (assessment framework)
DOI	Digital Object Identifier
EC	European Commission
EEA	European Environment Agency
EIONET	European Environment Information and Observation Network
ETC-ICM	European Topic Centre on Inland, Coastal and Marine Waters
EU	European Union
EUNIS	European nature information system
GES	Good Environmental Status (MSFD Articles 3(5) and 9)
GIS	Geographical information system (file types)
HD	Habitats Directive
HELCOM	Helsinki Commission, implementing the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area
ICES	International Council for the Exploration of the Sea
INSPIRE	Infrastructure for Spatial Information in the European Community
MRU	Marine Reporting Unit
MD URL	Metadata for Unique Resource Locator
MS	Member State(s)
MSFD	Marine Strategy Framework Directive
NIS	Non-indigenous species
Non-UPBT	Not a Ubiquitous persistent, bioaccumulative and toxic substance (of WFD Article8a(1)(a))
OSPAR	Oslo-Paris Commission, implementing the Oslo-Paris Convention for the Protection of the Marine Environment of the North-East Atlantic
PoM(s)	Programme(s) of Measures (MSFD Article 13)
QA	Quality assurance
QC	Quality control
QSR	Quality Status Report
ReportNet	EEA's Eionet infrastructure for supporting data flows (e.g., by Member States for reporting obligations under an EU Directive). Latest version is ReportNet 3.0.
RFMO	Regional Fisheries Management Organisation
RSC	Regional Sea Convention
SOS	Sensor Observation Service
FTE	Full-Time Equivalent (employment)
UNEP/MAP	United Nations Environment Programme – Mediterranean Action Plan, implementing the Barcelona Convention for the protection of the marine environment and coastal region of the Mediterranean

UPBT	Ubiquitous persistent, bioaccumulative and toxic substance (of WFD Article8a(1)(a))
URL	Unique Resource Locator
WFD	Water Framework Directive
WFS	Web Feature Service
WMS	Web Map Service
WISE	Water Information System for Europe
XML	Extensible Mark-up Language (file types)



# Marine Strategy Framework Directive (MSFD)

## *Common Implementation Strategy*

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### **MSFD Guidance: reporting on the 2024 update of articles 8, 9 & 10**

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## **1. INTRODUCTION**

### **1.1. MSFD reporting requirements in 2024**

In accordance with Article 17(2) of the Marine Strategy Framework Directive (MSFD, [Directive 2008/56/EC](#)), Member States (MS) are to review and update their marine strategies every six years. This includes the reports on Articles 8 (initial assessment), 9 (determination of the Good Environmental Status (GES)) and 10 (establishment of targets) which were last updated in 2018, and which are to be updated by 15 July 2024, and notified to the European Commission (EC) by 15 October 2024 at the latest (MSFD Article 17(3)).

The obligation to report under MSFD Article 17 applies to Member States with marine waters, as defined in MSFD Article 3(1). Land-locked countries are not required to report under MSFD Article 17.

This reporting guidance aims to support Member States with marine waters in fulfilling their 2024 reporting obligation.

The information reported by Member States under MSFD Articles 8, 9 and 10 will be used by the Commission services for assessing under MSFD Article 12 whether the elements notified are consistent with the requirements of the MSFD in each Member State as well as the coherence of frameworks within the different marine regions or subregions and across the Union, as was done for the 2012 and 2018 reports<sup>1</sup>.

The reported information will also serve the preparation of reports, for example to the European Parliament, Council and the general public, on implementation of the MSFD. It can also help determining topics where, at the European Union (EU) level, exchange of experiences and/or additional knowledge and information could help Member States. All the information reported will be made publicly available through WISE-Marine<sup>2</sup>, a web-based content management system that shows the efforts made across Europe on implementation of the MSFD.

### **1.2. Overview of the MSFD articles to be reported**

The preparation of reports for MSFD Articles 8, 9 and 10 in 2012 provided the basis and starting point for the Member State's marine strategies, upon which the monitoring programmes (MSFD Article 11) and the programmes of measures (MSFD Article 13) were built in 2014 and 2015 respectively. Member States are to keep their marine strategies up to date, through a 6-yearly review and update of the reports for each of these articles (MSFD Article 17).

Figure 1 represents the main articles to be reported under the MSFD, as well as the logical connections among them. In white are the articles to be reported in 2024, while the articles in grey are reported at different stages in the 6-year cycle.

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<sup>1</sup> [EUR-Lex - 52014DC0097 - EN - EUR-Lex \(europa.eu\)](#)

<sup>2</sup> <https://water.europa.eu/marine>

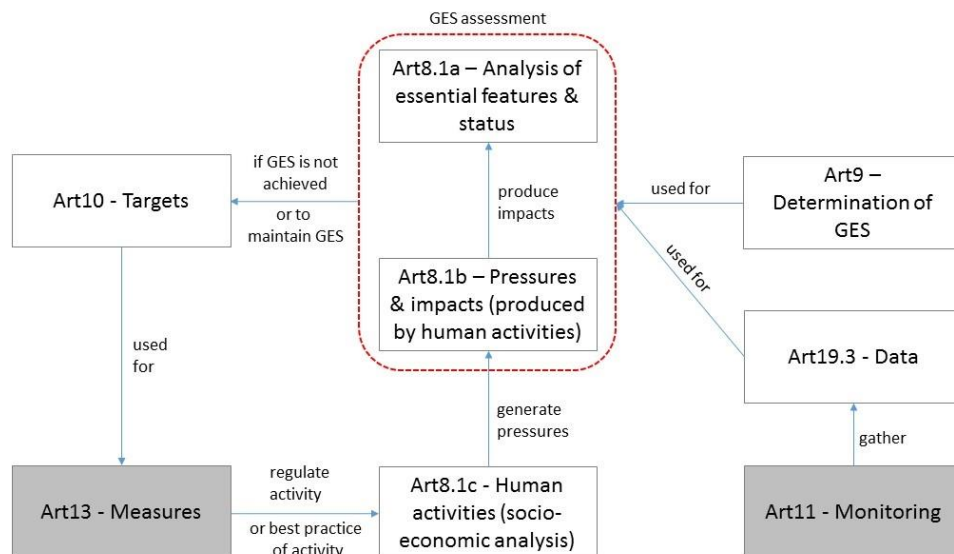


Figure 1 Main articles to be reported under the MSFD and their interconnections.

## 1.3. Requirements of Articles 8, 9 and 10 and Commission Decision (EU) 2017/848

### 1.3.1. Article 9

MSFD Article 9 requires MS to determine, in respect of each marine region or subregion concerned, a set of characteristics for GES on the basis of the qualitative descriptors listed in MSFD Annex<sup>3</sup> I.

### 1.3.2. Article 8

MSFD Article 8 requires MS to make an assessment of their marine waters. The assessment comprises three elements:

- An analysis of the predominant essential features and characteristics, and the current environmental status of their marine waters (Article 8(1)(a)). This analysis should be based on the indicative list of characteristics set out in Table 1 of MSFD Annex III. The analysis should cover the physical and chemical features, the habitat types, the biological features and the hydro-morphology.
- An analysis of the predominant pressures and impacts, including human activity, on the environmental status of those waters (Article 8(1)(b)), based on the list of elements in Table 2 of MSFD Annex III (including the updated list of pressures in Table 2a and the list of uses and human activities in Table 2b).
- An economic and social analysis of the use of the marine waters, and of the cost of degradation of the marine environment (Article 8(1)(c)), based on the list of uses and human activities marked with an \* in Table 2b of MSFD Annex III.

### 1.3.3. Commission Decision (EU) 2017/848

[Commission Decision \(EU\) 2017/848](#) (hereafter referred to as the ‘GES Decision<sup>4</sup>’) sets out the criteria and methodological standards to be used by Member States to ensure consistency and to allow for

<sup>3</sup> In this Guidance Document, all references to Annexes of the MSFD are prefixed with ‘MSFD’ to clearly distinguish them from references to the Annexes of this Guidance Document. All references to ‘MSFD Annex III’ refer to the updated Annex III of [Commission Directive \(EU\) 2017/845](#).



comparison between marine regions or subregions of the extent to which good environmental status (GES) is being achieved, in accordance with MSFD Article 9(3). The GES Decision sets out the elements, criteria, scales of assessment and how the criteria are to be used, for each of the MSFD Descriptors. Details of how to express ‘the extent to which GES has been achieved’ are included in the sections on ‘use of the criteria’.

The GES Decision provides detail per criterion, including a) prioritisation of criteria, b) scales of assessment, c) how to derive the extent to which GES is achieved, d) when it is expected to use the assessments coming from the coastal and territorial waters (as defined under the Water Framework Directive (WFD)) regarding eutrophication and contamination and other assessments, e) criteria for selecting the species and habitats to be assessed, and f) units of measurement for each of the criteria.

The requirements of the GES Decision are reflected in this guidance for reporting on environmental status under MSFD Article 8(1a, b). **Annex I** of this guidance summarises the assessments needed, indicating the **features** for which conclusions on the extent to which GES has been achieved should be drawn **and the units for expressing this, per assessment (reporting) area**. Examples of features are ‘eutrophication’, ‘seals’, ‘benthic broad habitats’ and ‘litter in the marine environment’.

The assessments are increasingly being based on the analysis of data and models (from MSFD Article 11 monitoring programmes and other sources) which lead to an **indicator assessment** that addresses a particular GES criterion for a number of elements (e.g., species, habitats, contaminants, litter types). To provide an overall assessment of progress towards GES at *feature* level typically requires the **integration of indicator assessments**, firstly to criterion level (in the occasional cases where several indicators address the same criterion), then to *element* level (when several criteria are relevant) and finally to *feature* level (when multiple elements are relevant). There is no requirement to integrate results across features or descriptors.

#### 1.3.4. Article 10

MSFD Article 10 requires that, on the basis of their initial assessment (in 2012), MS establish a comprehensive set of environmental targets and associated indicators for their marine waters. The aim of the targets and indicators is to guide progress towards achieving GES in the marine environment, taking into account the indicative lists of pressures and impacts set out in Table 2a of MSFD Annex III and of characteristics set out in MSFD Annex IV.

MSFD Article 10 targets have a different function to the assessments under MSFD Article 8. Targets are intended to guide progress towards GES and should focus on the actions needed to achieve GES, for example, by reducing pressures and impacts by certain amounts in order to achieve GES threshold values. The assessment of a target should therefore assess by how much the pressure or impact has been reduced rather than report on state (and so not duplicate the reports under MSFD Article 8).

## 1.4. Updating reports on Articles 8, 9 and 10

### 1.4.1. General considerations

The update of MSFD Articles 8, 9 and 10 in 2024 should take account of progress made since the last reporting of these articles in 2018, including:

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<sup>4</sup> In this Guidance Document, all references to ‘GES Decision’ are to Commission Decision (EU) 2017/848, which supersedes the first GES Decision ([Commission Decision 2010/477/EU](#)).

- a. The outcomes and recommendations of the EC's assessment of the 2018 reports<sup>5</sup>;
- b. The technical reviews of the 2018 reports by the Joint Research Centre<sup>6</sup>;
- c. The updated monitoring programmes (MSFD Article 11), reported in 2020 which, among others, aim to collect data and information to assess progress towards achieving GES and targets;
- d. Further implementation of the GES Decision on criteria and methodological standards;
- e. [Commission Directive \(EU\) 2017/845](#) which amends the MSFD by replacing its Annex III<sup>7</sup>;
- f. Relevant assessments undertaken under other EU policies and international conventions;
- g. Advancements in scientific and technical knowledge and in methods for assessment.

#### **1.4.2. Article 9**

Updates to the GES determinations should reflect improved regional or subregional coherence of the GES descriptive determinations, as noted in the EC's assessment of the 2018 reports<sup>8</sup>, to meet the aims of MSFD Article 3(5) for GES to 'be determined at the level of the marine region or subregion'.

The updates should also reflect further implementation of the GES Decision, including EU, regional and subregional agreements on lists of elements, threshold values and integration rules (note some of these details are reported under the schema [ART8\\_GES](#)).

#### **1.4.3. Article 8**

The first reporting of MSFD Article 8 in 2012 provided an incomplete and inconsistent set of assessments on the state of the marine waters at that time. The updated reports in 2018 for MSFD Article 8(1a) and 8(1b) provided more specific information on the current status of the marine waters in order to determine the progress towards achieving GES, based on the specifications laid out in the GES Decision. However, Member States were only able to partially implement the GES Decision in their 2018 reports due to the lack of time since its adoption in 2017. Much more complete assessments should be possible in the 2024 updates.

The update of this assessment in 2024 should take account of the data resulting from the monitoring programmes defined in the second cycle (2020, MSFD Article 11), as well as assessments coming from other processes, such as the Regional Sea Convention (RSC) assessments, assessments of commercial fish stocks under CFP and by Regional Fisheries Management Organisations (RFMOs) and Directives such as the WFD (further detailed in section 2.1.2.2).

#### **1.4.4. Article 10**

The updating of MSFD Article 10 in 2024 provides MS with the opportunity to assess progress with each of the targets last reported in 2018 and to add new targets if deemed necessary. It is also possible to reflect on the appropriateness of the targets reported in 2018, which in some cases were more compatible with GES determinations under MSFD Article 9 or contribute to MSFD Articles 8, 11 or 13<sup>9</sup>. Lastly, MS developed their Programmes of Measures (MSFD Article 13, updated in March 2022) in order to deliver their environmental targets and hence to help achieve GES; the 2024

<sup>5</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:0097:FIN>

<sup>6</sup> [Review and analysis of EU Member States' 2018 reports \(JRC, 2021\); JRC Recommendations for MSFD reporting \(DIKE\\_26-2021-05\)](#).

<sup>7</sup> Commission Directive amending Directive 2008/56/EC of the European Parliament and of the Council as regards the indicative lists of elements to be taken into account for the preparation of marine strategies. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1495097018132&uri=CELEX:32017L0845>.

<sup>8</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:0097:FIN>.

<sup>9</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:0097:FIN>

updates should provide a link back to these measures, thereby ensuring linkages between the different stages in the marine strategies.

## 2. THE 2024 ‘REPORTING PACKAGE’

The elements of the reporting package developed for the 2018 reporting will be reused and updated for 2024 reporting. The set of reports to be provided in 2024 comprises:

- a. structured electronic reporting (e-reports) of information via the European Environment Agency’s (EEA) ReportNet 3.0 reporting system;
- b. regional and national indicator assessments that are made available online;
- c. the supporting assessment data sets, made available online as per MSFD Article 19(3).
- d. in addition, text-based national reports and, where appropriate, regional ‘roof’ reports may be submitted.

The e-reports, together with the associated indicator reports and data sets, aim to include all the information considered necessary for the EC and EEA to perform their assessments.

Table 1 summarises the content of the reporting package and where guidance on its preparation can be found.

*Table 1. Overview of the 2024 reporting package on updates of MSFD Articles 8, 9 and 10.*

Report	Contents	Schema name	Guidance
e-report - Art. 9	GES determination	<a href="#">ART9_GES</a>	<a href="#">Annex IIa</a> <a href="#">Annex III</a> – worked examples
e-report - Art. 8(1a, b)	Assessment results concerning current status of marine waters and the predominant pressures and environmental impacts of human activities	<a href="#">ART8_GES</a>	<a href="#">Annex IIb</a> <a href="#">Annex III</a> – worked examples <a href="#">GD19 (2022)</a>
e-report - Art. 8(1c)	Socio-economic analysis of the uses of marine waters and the costs of degradation	<a href="#">ART8_ESA</a>	<a href="#">Annex IIc</a> <a href="#">GD01 (2018)</a>
e-report - Art. 10	Targets and associated indicators, including an assessment of the progress towards achieving them	<a href="#">ART10_Targets</a>	<a href="#">Annex II d</a>
e-report Indicators	Basic information on the indicators used by MS (national or regional) for the assessments, including links to where published and to underlying datasets	<a href="#">Indicator</a>	<a href="#">Annex IIe</a>
Indicator reports	Regional and national indicator assessments that are made available online	URL in schema <a href="#">Indicator</a>	<a href="#">Annex IV Common indicator structure</a> <a href="#">GD13 (2016)</a>
Datasets - Art. 19(3)	The supporting assessment data sets, made available online as per MSFD Article 19(3).	URL in schema <a href="#">Indicator</a>	<a href="#">GD15 Recommendations (2018)</a> <a href="#">GD15 Annexes (2018)</a> <a href="#">GD15 Annex V examples (2018)</a>
Text reports - Art. 8, 9 & 10	Text-based national reports and, where appropriate, regional ‘roof’ reports may be submitted.	-	Section 2.4, Table 3

## 2.1. E-reports

### 2.1.1. Building upon previous reporting

The Commission's Article 12 assessment of the 2018 reporting<sup>10</sup>, together with feedback from MS on the 2018 reporting process, showed that improvements should be made for the subsequent reporting exercises, such as:

- a. Requesting, where possible, more quantitative or categorical information that avoids ambiguity in interpretation of the information and allows for its aggregation for statistical and dissemination (European, regional and national) purposes, and keeping text reporting to a minimum;
- b. Increasing the use of code (enumeration) lists in order to improve the consistency of reporting between Member States and its usefulness for analysis and dissemination. The relevant code lists from the 2018 reporting of MSFD Article 17(2)(a) and (b) updates for Articles 8, 9 and 10<sup>11</sup>, 2020 reporting of Article 17(2)(c) updates for Article 11<sup>12</sup> and 2022 reporting of Article 17(2)(d) updates for Articles 13 and 14<sup>13</sup> have been included to allow linkages between the information reported under the different articles.
- c. Easing the reporting process for MS (e.g., fewer reporting fields, automation as far as possible, code lists for the main variables) and the national policy process by provision of reporting tools. The e-reporting will be implemented through the EEA's ReportNet 3.0 infrastructure, which provides a range of tools to enter, import, export and display the reported data.
- d. Reusing the assessment reports performed under other relevant policies (e.g., WFD) and regional assessment reports and indicators performed under the RSCs.

In order to address these issues, the data model and schemas used for the 2018 reporting have been reviewed and refined, whilst retaining the overall structure to allow for continuity.

### 2.1.2. Sources of information

#### 2.1.2.1. Prefilled 2018 reports

The starting point for the MSFD Article 17 updates of e-reports in 2024 is the e-reports from 2018. These provide the overall structure and content for each article to be reported, with information directly relevant to the marine waters of the Member State (e.g., the ecosystem components and main pressures which are present, as well as the uses and human activities that occur in their marine waters). The 2024 reports can therefore reuse much of the information already reported in 2018, only requiring the updating of those aspects which have changed over the 6-year period (e.g., the current status of ecosystem components, the progress made on environmental targets). To support this updating, the e-reports from 2018 will be provided to each Member State in the updated format used in ReportNet 3.0.

Regarding the link with the Programmes of Measures (PoM), a prefilling with the measures submitted under the PoM reporting (2022) will be provided.

#### 2.1.2.2. Other sources of information (assessments)

The second key source of information is the assessments which have become available from other sources and which are i) relevant for the MSFD Article 8 updates and ii) in an electronic format which

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<sup>10</sup> [C\(2022\) 1392](#), [SWD\(2022\) 55](#)

<sup>11</sup> [GD14 MSFD reporting guidance on 2018 updates of Art.8-9-10 rev20191015](#); [GD14 MSFD reporting guidance on 2018 updates of Art.8-9-10 AnnexII WorkedExamples rev20190913](#).

<sup>12</sup> [GD17 MSFD reporting guidance on 2020 updates of Art.11](#).

<sup>13</sup> [GD18 MSFD reporting guidance on 2022 updates of Art.13-14](#).

is compatible with the MSFD reporting schemas. The main sources are summarised in Table 2. Member States should also consider other assessments (e.g., those from the Birds Directive and Habitats Directive) which may have relevant information but have less-compatible reporting structures.

*Table 2. Main sources of other assessments in electronic format for 2024 MSFD Article 8 updates.*

Source of assessments	Geographical coverage	Relevant Descriptors
Regional Sea Conventions (RSC) for their 2023 Quality Status Reports (QSR)	Baltic Sea and North-east Atlantic Ocean regions <sup>14</sup>	All
ICES for commercial fish and shellfish stocks, undertaken to support the Common Fisheries Policy	Baltic Sea and North-east Atlantic Ocean regions	Descriptor 3
Member States for their coastal and territorial waters in the 2022 reporting under the Water Framework Directive	All Member States (subject to submission of WFD reports and transfer to MSFD ReportNet 3.0 format in time for use under MSFD)	Descriptors 5 and 8

### Regional quality status reports

The regional sea conventions (RSC) are preparing quality status reports (QSR)<sup>15</sup>, due in 2023, which are intended also to support Member States in fulfilling their obligations to report on environmental status for the MSFD as updates of their Article 8 reports, due in 2024.

The QSR reports are expected to be descriptive reports, supported by tables and graphs which summarise the results of the underlying data used; they are expected to follow a common structure for 'integrated/thematic' and 'indicator' assessments (e.g., for biodiversity, eutrophication, pollution) and be presented online. The MSFD assessments are reported as structured e-reports, focused on provision of information in a categorised or numeric way, with only limited text. The MSFD e-reports make URL links to the more detailed and descriptive information presented in the QSRs (or national reports), such as via the indicator used. In this way, the regional and national reports complement the EU-level reports and provide a narrative that is not captured in the e-reports. The MSFD e-reports allow aggregation of the results across countries and regions for dissemination via the [WISE Marine](#) web portal and facilitate assessment of the reports by the European Commission, as required by MSFD Article 12.

The information on regional indicators and thematic assessments from HELCOM and OSPAR, and which is provided in MSFD-compatible electronic (Excel spreadsheet) format to the EEA, will be uploaded to the schemas [Indicator](#) and [ART8\\_GES](#) in ReportNet 3.0. See [Annex V](#) for further information on using regional assessments, including [Annex Vc](#) on fields needed for reporting at Indicator and Feature level. The RSC data in ReportNet 3.0 format will then be exported as Excel files and made available to Member States (together with Excel files of their 2018 reports). It will be for each Member State to decide how they wish to use the data available from the two sources, including how regional assessment areas are related to national Marine Reporting Units (section 3.1.3).

<sup>14</sup> For the Mediterranean Sea region, UNEP/MAP are preparing an online 'Med QSR 2023' which may hold relevant information that could be extracted by Member States.

<sup>15</sup> HOLAS III for HELCOM, Quality Status Report 2023 for OSPAR, Quality Status Report 2023 for UNEP/MAP, [Black Sea State of Environment report 2009-2014/5](#) for BSC. In the context of MSFD implementation in the Black Sea there is cooperation between Bulgaria and Romania with cases where Article 8 assessments are prepared jointly.

### Water Framework Directive assessments

For WFD<sup>16</sup>, the status classification of the coastal water bodies (and territorial waters in the case of the chemical status) reported at the Quality Element level will be used to populate relevant fields for some criteria/elements (Descriptor 5 and Descriptor 8), using the schema [ART8\\_GES](#). Prefilling will be provided at WFD water body level. Member States may wish to aggregate the results to report on larger MRUs (e.g., a longer stretch of coast representing a water body type).

### Stock assessments under CFP

For CFP, the assessed information relating to criteria D3C1 (fishing mortality rates) and D3C2 (spawning stock biomass) per fish stock are provided from the latest assessments by the International Council for the Exploration of the Sea (ICES). For these stocks, the unique stock assessment key provided via the ICES Stock assessment database is used, where the relevant assessment information (F, SSB) is contained (see example<sup>17</sup>). Prefilling will be provided for the schema [Indicator](#).

### Provision of these other assessments as prefilled files

The EEA will make available the assessments shown in Table 2 in MSFD-compatible ReportNet 3.0 format for the most recent WFD, CFP and RSC assessments, whenever their use is required by the GES Decision (WFD, CFP), or where available in compatible electronic format (RSCs), according to the schemas and schema fields where they match. These prefilled data sets are offered as an option for Member States to use and submit as part of their 2024 MSFD reports. The MS will have the option to use, modify or not use the information prefilled from these other sources.

These prefilled assessments are accessible from the [MSFD reporting resources](#) web page in Excel file format, and from ReportNet 3.0.

The following should be noted:

- a. The assessments offer a source of information that can be reused for MSFD purposes, and which can support the needs of i) MSFD Article 5(2) to produce assessments which are consistent across a region and ii) the GES Decision 2017/848 to use assessments from WFD for Descriptors 5 and 8;
- b. The assessments were undertaken at regional<sup>18</sup> (RSC, ICES) and water-body scales (WFD); [Annex V](#) describes ways in which assessments at these scales can be reported, and some considerations on reuse of the information for MSFD purposes;
- c. The assessments may provide only a proportion of the information required for the schemas [ART8\\_GES](#) and [Indicator](#). Member States may need to add information which is missing;
- d. Member States should consider how they wish to use the assessment information from these other sources, particularly in relation to updating the information already provided in their 2018 reports.

## **2.2. Indicator assessments**

The MSFD Article 8 assessments on state and pressures, indicating progress towards achieving GES, and on the economic and social analysis, are typically informed by indicator assessments which draw from the available monitoring for each assessment topic in a structured manner. The indicators can cover all aspects of the Drivers-Pressures-State-Impacts-Responses (DPSIR) framework, where there

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<sup>16</sup> WFD reports were due by March 2022; however, their availability for MSFD reporting is dependent on when MS submit their WFD reports.

<sup>17</sup> <http://standardgraphs.ices.dk/ViewCharts.aspx?key=8114>

<sup>18</sup> 'Regional' may include scales equivalent to MSFD subregions and subdivisions, where each assessment area may cover several Member States.

may be indicators related to the analysis of the main characteristics, others related to the analysis of pressures and impacts and others related to the socio-economic analysis. Similarly, progress in achieving the MSFD Article 10 environmental targets is to be measured through associated indicators. Typically, the indicator assessments provide detailed information including the matrices, metrics and methods used, as well as the results. Selected information from each indicator assessment (e.g., elements assessed, values and trends) can be used to populate the e-reports.

Since 2012, considerable efforts have been made in each region to coordinate the development of indicators suited to the needs of MSFD assessments. Indicators have thus become the basis of the assessments performed at the regional level. Indicators are not yet available at the regional level for all MSFD topics in all regions. Where these regional indicators are not yet available, Member States use those available at national level.

Therefore, these indicator assessments have been incorporated as a key part of the 2018 and 2024 reporting. It is expected that Member States will make use of those regional indicators that are relevant for their waters, whilst complementing these with additional national indicators, where needed.

Where indicator assessments are made available on regional or national web sites, the URL link is requested in the schema [Indicator](#), to provide access to all the information related to the indicator assessment, including the methodologies, data sets used and results. Provision of a URL link avoids the need to directly report the entire indicator assessment. Several RSCs are making their indicator assessments available online.

The reporting on MSFD Articles 8 and 10 requests the code of the corresponding indicator(s) used for each feature assessment, thereby linking to the schema [Indicator](#).

To facilitate consistency in the presentation of indicator assessments across a wide range of topics and regions/countries, a *common indicator structure* was developed by the MSFD Common Implementation Strategy (CIS), in collaboration with the Regional Sea Conventions (Guidance Document 13<sup>19</sup>). Member States are encouraged to use the *common indicator structure*, whenever possible.

[Annex IV](#) includes a schema following the *common indicator structure* for the publication of these indicators. The annex also includes a mapping of the fields to the fields in the schema [Indicator](#).

## 2.3. Supporting data

The datasets used for the assessments are to be made available, as set out in MSFD Article 19(3), and in compliance with the INSPIRE Directive ([2007/02/EC](#)) “Implementing Rules (IR)”.

The MSFD CIS Technical Group on Marine Data (TG DATA) prepared Recommendations<sup>20</sup> for the publication of datasets under MSFD Article 19(3), including relevant INSPIRE elements. These documents are also available on the [MSFD reporting resources](#) web page.

MSFD Article 19(3) is to be fulfilled, in respect of data and information resulting from the [updating of] initial assessments made pursuant to MSFD Article 8, by publishing the datasets used for the indicator assessments. The URL where the datasets have been published, together with the URL to the metadata of these datasets, are requested in the schema [Indicator](#) (section 3.7), as well as in the *common indicator structure* ([Annex IV](#)). To ensure the quality of the reporting it is recommended to report URL links to both the metadata and to each dataset used for the indicator assessment. As the dataset(s) may be updated for future assessments, the links should be directly to snapshots of the data used in the 2024 reports and be permanently available and working.

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<sup>19</sup> [GD13 CommonStructureForIndicator-basedAssessments](#).

<sup>20</sup> [GD15 Recommendations \(2018\)](#), [GD15 Annexes \(2018\)](#), [GD15 Annex V examples \(2018\)](#).

## 2.4. Text-based reports

Member States typically prepare text-based reports at the national level, using these to serve their public consultation obligations under MSFD Article 19(2) and finalising them so that the Marine Strategies are adopted within their national planning.

In addition to the e-reports and associated indicator reports and datasets, Member States may submit their national text-based reports as part of their 2024 reporting package.

Table 3 shows the recommended contents to be covered in the national text-based reports. The outline follows the elements provided by the MSFD itself, by the 2017 GES Decision and MSFD Annex III, and the headlines covered by e-reporting. Member States may use the table of contents to structure their national text reports.

If the Member State adopts an alternative structure, it is recommended to prepare a correspondence table between this contents list and that followed in the Member State's report to facilitate access to the information by the Commission and others.

*Table 3. Proposed outline of contents for 2024 Articles 8, 9 and 10 text-based report.*

Overall topic	Themes
Introductory sections	Background, general characteristics of the marine waters, process and methodologies for preparation of the report, public consultation, etc.
Objective of the MSFD - Good Environmental Status (Art. 9)	Updated determination of GES, taking account of the 2017 GES Decision
Uses of the marine environment (Art. 8 (1c))  DPSIR: <b>Drivers</b> (activities)	Uses and human activities in or affecting the marine environment (MSFD Annex III, Table 2b uses/activities marked with *) Economic and social analysis of uses and human activities: Physical restructuring of (rivers,) coastline and seabed Extraction of non-living resources Production of energy Extraction of living resources Cultivation of living resources Transport Urban and industrial uses Tourism and leisure Security and defence Education and research
Pressures and impacts on the marine environment (Art. 8 (1b))  DPSIR: <b>Pressures</b> (and environmental impacts)	Anthropogenic pressures and their impacts (GES Decision Part I and MSFD Annex III Table 2a) Incidental bycatch (D1C1) Introduction or spread of non-indigenous species (D2) Extraction of, or injury to, wild species (partially D3) Other biological disturbances Physical disturbance to the seabed (D6C2-C3) Physical loss of the seabed (D6C1) Hydrological changes (D7) Nutrient and organic matter enrichment (eutrophication) (D5) Contaminants in the environment (D8) Contaminants in seafood (D9) Litter (D10) Underwater noise and other forms of energy (D11) Climate change <sup>21</sup>

<sup>21</sup> See section 3 of Article 8 assessment guidance ([GD19](#)) regarding how climate change could be addressed in the report.



Overall topic	Themes
State of the marine environment (Art. 8 (1a))  DPSIR: <b>State</b> (including environmental impacts)	Structure, functions and processes of marine ecosystems (GES Decision Part II and MSFD Annex III Table 1) Marine species (D1): Birds Mammals Reptiles Fish Cephalopods Commercially exploited fish and shellfish (D3) Marine habitats: Pelagic habitats (D1) Sea-floor integrity/Benthic habitats (D6, D1) Marine ecosystems, including food webs (D4, D1)
Cost of degradation (Art. 8 (1c))  DPSIR: <b>Impact</b> (loss of ecosystem services)	Cost of degradation of the marine environment (loss of ecosystem services) <sup>22</sup>
Environmental targets to achieve GES (Art. 10)  DPSIR: <b>Response</b> (with links to Art. 13 Measures)	Progress in achievement of 2018 environmental targets Update of targets, links to Programme of Measures

## 3. CONTENT OF THE E-REPORTS

In this section, more specific information about the e-reports is described, including an overview of the fields that are part of the schemas. Detailed information about each field in the schemas is provided in [Annex II](#).

The three articles are linked in the schemas via two common aspects: the area being reported on (Marine Reporting Unit) (section 3.1) and the particular topic being reported (feature) (section 3.2). Each schema also includes fields for the reporter information (section 3.8).

### 3.1. Marine Reporting Units

As has been the practice with each previous reporting round, all articles to be reported are linked to a specific Marine Reporting Unit (MRU), thereby linking the reported information to a specified part of the Member State's marine waters. The MRUs can be of varying sizes, covering all or part of a Member State's marine waters (see sections below).

#### 3.1.1. MRUs for marine waters

The Marine Reporting Units should cover the entire area of the Member State's marine waters, as defined in MSFD Article 3(1). This can be either as a single MRU (for countries with waters in only one MSFD subregion) or several MRUs (for countries with marine waters in more than one MSFD region or subregion).

#### 3.1.2. MRUs for subdivisions of marine waters

The MRU(s) for marine waters can be subdivided to allow for reporting on smaller areas, e.g., for monitoring and assessment related to the different descriptors.

<sup>22</sup> Whenever a Member State follows the 'ecosystem services' approach.

The boundaries of these smaller MRUs should, wherever possible, be coincident<sup>23</sup> with i) the borders of the marine waters, ii) the boundaries of the MSFD marine regions and subregions, iii) the boundaries of WFD water bodies and iv) subdivisions used for regional assessments by RSCs and RFMOs.

The subdivisions should be defined from an ecological perspective, as indicated for each descriptor/criterion in the GES Decision; however, within each Member State’s marine waters management considerations are also likely to influence the definition of MRUs.

Further guidance on assessment scales is given in section 5.4 of the Commission Staff Working Document (2020, [SWD\(2020\) 62](#)). Wherever possible, the set of MRUs should be defined coherently across the descriptors in a nested system. This promotes an integrated approach to MSFD implementation across the descriptors by recognising ecological relationships, for example, between food-webs (D4) and water column (D1) and seabed (D6) habitats and state-pressure relationships (e.g., between eutrophication (D5) and habitats (D1, D6), between underwater noise (D11) and mammals or fish (D1, D3), between contaminants in seafood (D9) and commercial fish populations (D3).

Use of a nested system could mean that some assessments are based on an aggregated set of smaller MRUs (e.g., for Descriptor 5 reporting on multiple WFD water bodies as a single MRU which represents a coastal water type).

[SWD\(2020\) 62](#) recommends that a low number of subdivisions are defined per region or subregion. It would, for example, be possible to assess and report all features using three principal scales: region/subregion, subdivision and national waters, with national waters divided into coastal and offshore (for eutrophication and contaminants) or by subdivision. Use of the same assessment areas for multiple features can help minimise the overall complexity of the whole assessment system. Table 4 sets out how the multiple scales expressed in the GES Decision could be brought together in a more coherent manner.

*Table 4. Organisation of region, subregion, subdivision and national scales of assessment to allow for integration across related descriptors.*

*The relevant features and criteria per descriptor are shown in the table.*

Descriptor	Scale of assessment for Features			
	Region (Atlantic, Mediterranean)	Sub-region (of Atlantic and Mediterranean) Region (Baltic or Black Sea)	Subdivision of the (sub)regions (e.g., to reflect biogeographic/ hydrological characteristics)	National part of subdivision
D1 Birds		Grazing birds Wading birds Surface-feeding birds Pelagic-feeding birds Benthic-feeding birds (D1C1-C5)		
D1 Mammals	Deep-diving toothed cetaceans Baleen whales (D1C1-C5)	Small toothed cetaceans Seals (D1C1-C5)		
D1 Reptiles		Turtles (D1C1-C5) ,		

<sup>23</sup> The degree of coincidence will depend on the purpose of defining each MRU (e.g., for a D5 assessment using WFD water bodies compared with a D3 assessment using RFMO boundaries that cross the marine waters).

<sup>24</sup> Rare or absent in Baltic Sea

<sup>25</sup> Absent in Black Sea

Descriptor	Scale of assessment for Features			
	Region (Atlantic, Mediterranean)	Sub-region (of Atlantic and Mediterranean) Region (Baltic or Black Sea)	Subdivision of the (sub)regions (e.g., to reflect biogeographic/ hydrological characteristics)	National part of subdivision
D1 Fish	Deep-sea fish (D1C1-C5)	Pelagic shelf fish Demersal shelf fish Commercial fish (D1C1-C5)	Coastal fish (D1C1-C5)	
D1 Cephalopods		Coastal/shelf cephalopods Deep-sea cephalopods (D1C1-C5) <sup>26, 27</sup>		
D3		Commercially exploited fish and shellfish (D3C1-C3)		
D1 Pelagic habitats			Pelagic broad (and Other) habitats (D1C6)	
D6 Benthic habitats			Physical loss of the seabed (D6C1) Physical disturbance to the seabed (D6C2) Benthic broad (and Other) habitats (D6C3-C5)	
D4		Coastal ecosystems Shelf ecosystems Oceanic/deep-sea ecosystems (D4C1-C4)		
D2		Established NIS (species groups) (D2C2) Species groups (adverse effects D2C3)	Established NIS (benthic, pelagic habitats) (D2C2) Pelagic, Benthic broad habitats (adverse effects D2C3)	Newly introduced NIS (D2C1)
D5			Eutrophication (offshore waters) (D5C1-D5C8)	Eutrophication (WFD coastal water bodies or types) (D5C1-D5C8)
D7			Hydrographical changes (D7C1) Benthic broad habitats (adverse effects D7C2)	
D8		Adverse effects (on species groups) (D8C4)	UPBT and non-UPBT substances and adverse effects (offshore waters) (D8C1, D8C2) Acute pollution events and adverse effects on habitats (D8C3, D8C4)	UPBT and non-UPBT substances and adverse effects (WFD coastal and territorial waters) (D8C1, D8C2)
D9		Contaminants in seafood (D9C1)		
D10		Adverse effects (on species) (D10C4)		Litter (D10C1), Micro-litter (D10C2) <sup>28</sup> , Litter & micro-litter in species (D10C3)
D11		Impulsive sound (D11C1) Continuous sound (D11C2)		

MRUs for different descriptors with similar but non-coincident boundaries should be avoided, using instead a coincident boundary.

<sup>26</sup> Rare or absent in Baltic Sea

<sup>27</sup> Absent in Black Sea

<sup>28</sup> According to MSFD Article 8 assessment guidance (GD19), reporting for D10C1 and D10C2 is for 'National part of a region or subregion'.

### 3.1.3. MRUs and regional assessments

So that reported data can be presented for all countries together, without overlaps<sup>29</sup>, in WISE-Marine, MRUs must not extend beyond the boundary of the Member State's marine waters. **Note:** this is a change from previous guidance which allowed Member States to report MRUs which extended beyond their borders to report on regional assessments.

To accommodate reports (assessments) undertaken at scales which extend beyond a single Member State (such as undertaken by RSCs or RFMOs), according to the appropriate scale for the different reports (e.g. region, subregion, subdivision, WFD coastal waters) as indicated in the GES Decision by the scale of assessment to be used, a new field 'RegionalAssessmentArea' has been introduced in the schema [Indicator](#) (metadata for indicator assessments) and the schema [ART8 GES](#) (for feature assessments) to indicate the broader assessment area that was used.

The use of regional assessments requires that i) the regional assessment area(s) relevant to each national MRUs are identified and reported in field 'RegionalAssessmentArea', and ii) the regional assessment results are reported in a manner relevant for each national MRU. See section [Annex V](#) on possible approaches to using regional assessments.

### 3.1.4. Updating MRUs for 2024 reporting

The preparation of the set of MRUs to cover all marine waters, particularly to create an integrated and nested system, takes time to fully establish, ultimately leading to a stable set of MRUs. In addition, the regional assessment areas used by the RSCs for their 2023 QSRs have also been further developed since their 2017 QSRs which, in turn, may influence how a Member State defines its MRUs for 2024 reporting.

Member States should update their existing set of MRUs, taking account of the latest regional assessment areas from RSCs and RFMOs relevant to their national waters, further developments in their national MSFD implementation, and the considerations described in section 3.1.2 on integration across Descriptors.

The reporting of MRUs in ReportNet 3.0 has been modified compared with the previous way of reporting (which used the schema '4geo.xml' and provision of associated GIS shapefiles). The MRU information (from 4.geo.xml) is accommodated in schema [MRU](#) which now also incorporates a field for the spatial coordinates (in place of the previously reported GIS shapefile).

A first step in the e-reporting process is to ensure the available set of MRUs in ReportNet is up to date, so that the MRU codes are available to select in the other schemas (section 4). Member States should update their set of MRUs for 2024 reporting, as described in [Annex II](#).

## 3.2. Features and elements assessed

As well as the spatial organisation of reporting according to MRUs (section 3.1), the reporting is organised around a set of topics termed 'Features'. These are derived from MSFD Annex III which provides indicative lists of ecosystem elements including physical and chemical characteristics, anthropogenic pressures and uses and human activities relevant to the marine waters. For reporting on GES, the Features are further specified in the GES Decision via expressions of the extent to which GES has been achieved. For example, assessments of contaminants for criterion D8C1 are to be reported as 'UBPT substances' and 'non-UBPT substances', so these are Features in the reporting system.

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<sup>29</sup> There are overlaps in marine waters of neighbouring Member States due to differing jurisdictional claims. In addition, where neighbouring states have formally agreed marine borders, the GIS boundary data provided are not always coincident, for technical reasons. Both types of overlaps are accommodated in the presentation of data in WISE-Marine (e.g., by presenting the extent of assessments with 'overlaps').

A list of features<sup>30</sup> relevant to all MSFD reporting articles is provided on the [MSFD reporting resources](#) web page, within the file of enumeration lists. [Annex I](#) shows the Features to be assessed for each descriptor under MSFD Article 8(1a, b). It indicates which Features are to have a GES determination (MSFD Article 9) and hence an assessment of the extent to which GES has been achieved. It follows logically that the environmental targets (MSFD Article 10) should focus on the Features which are not yet in GES.

Some Features are narrowly defined (for reporting purposes): for example, each use or activity under MSFD Article 8(1c) and certain pressures under MSFD Article 8(1b) such as ‘impulsive sound in water’ (D11C1) and ‘physical disturbance to the seabed’ (D6C2). However, for others there may be multiple ‘elements’ per feature (e.g., specific contaminants for D8, specific species within each species group for D1). In some cases, Elements are further qualified (as field ‘Element2’): for example, the species used to assess a contaminant in biota (D8C1, D9C1) or the litter ingested (D10C3) or the population (stock) for commercial fish and shellfish (D3).

The information reported for each article should always be related to a particular feature and element.

A reference lists of elements has been compiled from those used in previous reporting rounds and is maintained on the [MSFD reporting resources](#) web page. This also includes a list for use in the field Element2. Use of this standardised list ensures consistency among Member States in the elements reported. In ReportNet, the elements are linked to the relevant Features to facilitate their selection from drop-down lists.

Prior to starting reporting, MS should check whether all the Elements they need to report on are in the Reference List of Elements. Otherwise, they should request the MSFD Helpdesk ([msfd.helpdesk@eionet.europa.eu](mailto:msfd.helpdesk@eionet.europa.eu)) to add the additional Elements needed.

### 3.3. Article 9: GES determinations

The schema [ART9 GES](#), developed for reporting on the GES determinations, aims to collect descriptive information at the Descriptor and criterion level, with links to relevant MRUs and features. The threshold and proportion values, applicable to the features and component elements and contributing to the GES determination, are to be provided under the schema [ART8 GES](#), together with the values achieved (section 3.4).

The schema includes fields to cover the following topics:

- a. GES descriptor: the MSFD Annex I descriptor being reported;
- b. Feature: features to which the GES determination applies. See [Annex I](#) for Features relevant to each Descriptor. Specific elements of these features (e.g., specified species or contaminants) are to be included in the schema [ART8 GES](#);
- c. Areas: national Marine Reporting Unit(s) where the GES determinations, or justifications for non-use of primary criteria, apply;
- d. GES criteria: criteria being reported; all primary criteria plus the secondary criteria selected for use by the Member State should be reported;
- e. Description: text description of the (updated) GES determination, which should be linked to the criterion level and may, additionally be at Descriptor level. Whenever Member States reported only at Descriptor level in 2018, they should now ensure a descriptive text is also (or only) provided at criterion level. At criterion level, the text descriptions in the GES Decision provide a starting point for the GES description, which may be adapted to reflect

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<sup>30</sup> A list of ecosystem services has also been added, for those Member States that use an ecosystem services assessment under MSFD Article 8(1c).

regional or subregional specificities and variation across Features. Specific threshold values, proportion threshold values and GES extent thresholds per feature or element are to be included in the schema [ART8 GES](#); Member States may wish to include these values here, especially in cases where there are only a few values for the Descriptor/criterion or they express important aspects of the GES determination (e.g., the GES extent threshold);

- f. **Determination date:** date (in the reporting cycle 2012, 2018 or 2024) when the currently reported GES determination was agreed/adopted;
- g. **Update type:** whether the GES determination reported in 2024 is as previously reported (i.e., in 2018 or 2012) (not modified), modified from the previously reported determination or new;
- h. **Justification for non-use:** describes why it is not appropriate to use a primary criterion for the determination of the GES (GES Decision Art. 3(1)). Even when there is a lack of data to undertake an Article 8 assessment the relevant GES criteria should be reported, at least with a qualitative description<sup>31</sup>;
- i. **Justification for delayed GES determinations:** describes why threshold values, lists of criteria elements or methodological standards, where relevant, have not yet been established at Union, regional or subregional level (GES Decision Art. 5(2)), noting that these details are reported under schema [ART8 GES](#).

A table with guidance for reporting on each of the schema fields is given in [Annex IIa](#).

### 3.4. Article 8(1a, b): assessments against GES determinations

The schema [ART8 GES](#) is used for reporting the assessment of current environmental status, and on the pressures and impacts, under MSFD Articles 8(1a) and (1b). The reporting is organised around the assessment of a Feature in an MRU. The schema accommodates the requirements of the GES Decision for assessing the extent to which GES has been achieved for relevant Features<sup>32</sup>.

For some assessments conclusions on GES for the Feature are not needed, but instead the results feed into other assessments. For example, assessments on non-indigenous species (D2C2) and their impacts (D2C3) feed into assessments under Descriptor 1 (biodiversity) and Descriptor 6 (sea-floor integrity). Refer to [Annex I](#) for a list of Features to be assessed per Descriptor, including which are expected to have conclusions on the extent to which GES has been achieved, and which are contributing to other assessments. This dual purpose of the schema can be seen in [Annex III](#), through worked examples for all criteria.

The schema accommodates the outputs from the assessment of each Feature. This includes the specific elements assessed for the features covered by the GES determination under MSFD Article 9(1) (schema [ART9 GES](#)), together with their threshold values (where needed and available) and, where needed as part of the GES determination, the proportion of the assessment area (MRU) over which the threshold values are to be achieved.

Conclusions on status are to be reported per element and feature; these may require use of several criteria and, in a few cases (e.g., D1C6), several parameters. The assessments at parameter and criterion level are typically undertaken through an indicator, which addresses the parameter/criterion for multiple elements. To accommodate this one-to-many relationship (indicators to elements), the schema includes a cross reference to the schema [Indicator](#).

In addition to reporting conclusions on status, the trend in status compared to the previous 6-year assessment period (i.e., improving, stable, deteriorating) can be reported at parameter, element and

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<sup>31</sup> Follows approach of Commission's Article 12 assessment of 2018 reports.

<sup>32</sup> Further described in the *MSFD Article 8 assessment guidance* ([GD19](#)).

feature levels. The trend is particularly important in cases where a threshold value is not yet available. It is also particularly relevant given that environmental status can be slow to respond to measures and so a trend can give an indication that progress is being made towards GES, even if not yet reached. 'Trend' is not used to reflect long-term changes in the underlying data for the parameter (indicator), although this can inform conclusions on trend in status.

The schema includes fields to cover the following topics:

- a. Marine Reporting Unit: area of MS marine waters to which each assessment applies; it is also possible to report the regional assessment area (for an RSC or RFMO assessment, if relevant) and report the component MRUs in cases where the MRU comprises several smaller MRUs (e.g., where WFD water bodies have been aggregated);
- b. GES descriptor: the MSFD Annex I descriptor being reported;
- c. Feature: the specific feature(s) (from those specified as being relevant in the GES determination) being assessed. Features for MSFD Article 8(1a, b) are listed in [Annex I](#);
- d. Element: elements of the feature used in the assessment; elements need to be given for species (D1, D2, D3, D5, D8, D10), habitats (D1, D2, D6, D7, D8), ecosystem/trophic guilds (D4), eutrophication-related elements (D5), contaminants (D8, D9) and litter categories (D10). For D1, assessment of breeding and non-breeding populations of birds can be reported. For D3, different fish populations (stocks) need to be reported; for D8C1, D8C2 and D9 the species used to assess each contaminant need to be expressed, and for D10 the species used to assess litter ingestion need to be expressed (D10C3); for D10C6, the components of a pelagic habitat (e.g. phytoplankton, zooplankton) can be expressed; for D10C1 subcategories of plastic litter (e.g. single-use plastics, fishing gear, other) can be expressed and for D11C2 the associated species used can be expressed; where the GES Decision requires lists of elements to be agreed at EU, regional or subregionally, the source of the list (e.g., EU policy or RSC) is reported;
- e. Criteria: GES criterion for which the thresholds and assessment results are reported;
- f. Parameter: parameter assessed (as used in the related indicator);
- g. Threshold value: where applicable and defined, the value(s) defined for the parameter. If appropriate, a range of values can be reported<sup>33</sup>, or a qualitative threshold in cases where a quantitative threshold is not yet available. The source of the threshold value, such as the relevant EU legislation, Regional Sea Convention or national policy process, should be reported;
- h. Value achieved: value(s) resulting from the calculation of the parameter (in the indicator assessment);
- i. Proportion threshold value: the proportion or areal extent of the MRU over which the threshold value is to be achieved;
- j. Proportion value achieved: the proportion or areal extent over which the threshold values have been achieved in the MRU;
- k. Parameter achieved: indicate for the element/criteria/parameter whether the threshold value has been achieved or not over the required proportion of the MRU (depending on the descriptor, there may be further integration of results needed to report overall status of the Feature – see below);

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<sup>33</sup> For some bird and fish species, upper and lower threshold values for population size are set, such that the population size should lie between these values. For all other elements a single threshold is set, with good status achieved by being above or below this value (or equal to it), acknowledging that there may be uncertainty around such a single value.

- l. Parameter trend: indicate whether the status at parameter level ('ParameterAchieved' value) (for the criterion and element) has improved, deteriorated or remained stable compared with the previous 6-year reporting period;
- m. Related indicator: indicator(s) from which the assessment has been extracted (as reported under the schema [Indicator](#)).

From the results above, the status of each criterion and for each element is reported, as follows:

- a. Criteria status: the status of the criterion as 'Good' OR 'Not good', based on an integration rule applied if several parameters are used;
- b. Element status: when applicable, indicate the status of the specific element as 'Good' OR 'Not good', based on an integration rule applied across the criteria used;
- c. Element status trend: the trend in status of the Element compared to the previous 6-year assessment;

Finally, from the results of the first (criteria-level) and, where needed second (element-level) steps, the 'Overall status' on the extent to which GES has been achieved per feature, where needed, is reported as follows:

- a. Integration rules: the type of rule used to integrate the parameters to criterion or the criteria to element, and a description of how the rules have been applied (or link to a suitable reference). Where integration rules are not yet available at EU or regional level, the national approaches used to determine the extent to which GES has been achieved can be reported;
- b. Reporting method – indicate how the assessment at feature level was derived (regional or national process), according to the generic methods described in [Annex V](#);
- c. Assessment period: start and end date of the 6-year assessment period, reflecting the latest year for which the assessment is applicable (e.g., whether the assessment covers 2016-2021 data or 2017-2022 data when reported in 2024). The status conclusions at parameter, criterion, element and feature levels are applicable to this 6-year period, as is the trend in status at each level. Note that a longer time series of data may be used in the assessment (which should be documented in the 'indicator fact sheet'<sup>34</sup>, accessible via the 'RelatedIndicator' field);
- d. GES extent threshold: threshold boundary defined for GES to be achieved;
- e. GES extent achieved: indicates to what extent GES has been achieved for the Feature (as a percentage or proportion), including how this is measured (unit) (e.g., number of contaminants or species, extent/proportion of MRU);
- f. Feature status trend: the trend in status of the Feature compared to the previous 6-year assessment;
- g. GES achieved date: indicates when (which reporting cycle) GES was achieved or is expected to be achieved, selecting from the following options: 'GES achieved by 2012', 'GES achieved by 2018', 'GES achieved by 2024', 'GES expected to be achieved later than 2024, no Article 14 exception reported', 'GES expected to be achieved later than 2024, Article 14 exception reported'<sup>35</sup>, 'Not assessed', 'Unknown' or 'Not relevant'. The data reported in 2018 will be prefilled; those assessments that had the value 'GES achieved' in 2018 will be replaced with 'GES achieved by 2018' while, for all other assessments, this field will be left blank.

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<sup>34</sup> 'Indicator fact sheet' refers to the full indicator assessment report, structured according to the Common Indicator Structure ([Annex IV](#)) and made available via RSC, RFMO or national web sites.

<sup>35</sup> As reported in the 2022 updates of MSFD Article 13 (Programmes of Measures) and Article 14 (Exceptions).



- h. Related pressures: the pressures that are affecting the feature/elements assessed. It is suggested to restrict the number of pressures reported (e.g., up to three) to those considered most preventing GES from being achieved or providing risk that GES cannot be maintained.
- i. Related targets: target(s) defined because GES has not yet been achieved (as reported under the schema [ART10 Targets](#));

Also, text Description fields are included in each of the schema classes to allow comment on the information reported at each level of aggregation (note this field is not intended to duplicate information provided in the 'indicator fact sheet', accessible via the 'Related indicator' field).

A table with guidance for reporting on each of the schema fields is given in [Annex IIb](#). [Annex I](#) includes a list of the GES assessments to be provided per Descriptor. [Annex III](#) provides worked examples of e-reports for each Descriptor and criterion.

### 3.5. Article 8(1c): economic and social analysis

The schema [ART8 ESA](#) is for reporting on the economic and social analysis of the uses of marine waters and on the costs of degradation, as required under MSFD Article 8(1c). The overall report structure and contents follows that used in 2018 reporting, with the list of uses and activities reflecting MSFD Annex III Table 2b (those marked with an \* should be reported when relevant to the marine waters of the MS).

The schema includes fields to cover the following topics:

- a. Marine Reporting Unit: area to which each assessment applies; in cases when national data are used that cover several (sub)regions, this can be indicated in the 'Regional assessment Area' field;
- b. Feature: select the relevant use/activity, ecosystem service or pressure (only in certain cases) to which the assessment applies; for relevant activities, the NACE codes should be provided. Features include the indicative lists in the MSFD Annex III;
- c. Related GES component: Descriptors or Criteria associated to the assessment, where relevant (optional field, only to be used for approaches such as 'cost-based' in the Cost of degradation assessment, when it is done by 'degradation theme').

The economic and social analysis of the use of marine waters is covered by the following fields:

- a. Description: description of the use/activity (e.g., its characteristics in the area reported), of the approach to the economic and social analysis and of the assessment outcomes, including the results of the assessment when the ecosystem services approach is used;
- b. Employment: direct employment (\*1000 full-time equivalents (FTE)) under the specific activity in the area assessed;
- c. Production value: production value (€ million) of the specific activity in the area assessed;
- d. Value added: value-added (€ million) by the specific activity in the area assessed;
- e. Related indicator: indicator(s) from which the assessment results have been extracted (indicator codes reported under the schema [Indicator](#));
- f. Related pressures: pressure(s) that are caused by the activity; it is suggested to restrict the number of pressures reported (e.g., up to three) to those considered of most relevance to achieving or maintaining GES in the area.
- g. Related ecosystem services: ecosystem service(s) that the activity is dependent on.

The cost of degradation assessment is covered by the following fields:

- a. Approach: to indicate which approach (method) has been used for the calculation of the costs of degradation;
- b. Description: description of main costs or changes due to degradation; details, where relevant, of the importance or value of the theme, or on the benefits derived from it;
- c. Cost of degradation type: selected from a list of types (e.g., preventing costs, mitigation costs);
- d. Results: provide results of the estimated costs (cost-based approach), or a qualitative or quantitative indication of the value of the changes in the ecosystem (ecosystem services approach). Any residual impacts that may be generated should be described here;
- e. Related indicator: indicator(s) from which the assessment results have been extracted (indicator codes reported under the schema [Indicator](#)).

A table with guidance for reporting each of the schema fields is given in [Annex IIc](#).

### 3.6. Article 10: environmental targets

The schema [ART10 Targets](#) collects a general description of the Target, together with associated information, such as the target values to be achieved, assessment of progress with achieving the target and the achieved values.

The schema includes fields to cover the following details about each target:

- a. Marine Reporting Unit: area to which each target and its assessment applies;
- b. GES component: Descriptor or Criteria to which the target applies;
- c. Feature: feature(s) to which the target applies;
- d. Target code: code used for the target;
- e. Target purpose: indicates if the target aims to directly reduce a pressure or impact, act indirectly on a pressure or impact, or to restore a species or habitat. There are also options for targets that contribute to another part of MSFD implementation (e.g., development of threshold values, assessment of state, monitoring, measures) because some 2018 targets were of this nature; the EC assessment of 2018 reports recommends these types of targets be reported under the relevant MSFD articles;
- f. Target description: description/definition of the target;
- g. Timescale: timescale for achievement of the target.
- h. Update date: date when the target was defined (in 2012, in 2018, or in 2024);
- i. Update type: whether the target reported in 2024 is as previously reported (i.e., in 2012 or 2018) (not modified), modified from the previously reported target, new or no longer required;

For reporting on progress in achieving the target (but not by repeating the associated Article 8 assessment), the following fields are requested:

- a. Element: from the list of 'pressure inputs to the marine environment';
- b. Parameter: parameter assessed (as used in the related indicator);
- c. Target value: where applicable, value defined for the target;
- d. Value achieved: value(s) resulting from the calculation of the parameter (in the indicator assessment);
- e. Target status: whether or not the target has been achieved;

- f. Assessment period: Start and end date of the 6-year assessment;
- g. Description: Description of the assessment outcomes;
- h. Related indicator: indicator(s) from which the assessment has been extracted (as reported under the schema [Indicator](#));
- i. Related measures: measure(s) that are used to deliver the target (measure codes reported under the Programmes of Measures reporting in 2022).

A table with guidance for reporting on each of the schema fields is given in [Annex IIe](#).

### 3.7. Indicators

The schema [Indicator](#) is applicable to indicators used for MSFD Article 8 assessments (including pressure and socio-economic indicators) and to indicators related to MSFD Article 10 targets (to show progress towards achievement of the targets).

As described in section 2.2, it is expected that Member States, as well as the RSC, will publish their indicator assessments online, following the Common Indicator Structure (see [Annex IV](#)). This is the reason why only limited information needs to be captured as e-reports.

The schema includes fields to cover the following topics:

- a. Indicator code: to be submitted as the Unique identifier for the indicator;
- b. Indicator title: as used in the Common indicator structure (see [Annex IV](#));
- c. Indicator source: whether it is a national indicator, from a Regional Sea Convention, from the CFP, from the WFD or another policy/Directive;
- d. Reporting method – indicator: the method/approach to preparing the indicator assessment regarding use of regional or national assessments (see [Annex V](#) for details of possible methods);
- e. Indicator unique reference: URL or DOI (Digital Object Identifier) where the full indicator assessment can be accessed. The publication online is expected to follow the Common Indicator Structure ([Annex IV](#)<sup>36</sup>), where all details regarding methodology and assessment results are included;
- f. Related environmental target: target(s) for which the indicator can show progress (where the indicator is applicable to MSFD Article 10);
- g. Related GES component: Descriptor and/or Criteria to which the indicator applies (whenever the indicator is a socio-economic indicator, or if it is linked to a target that is not related to a specific GES component, it should be marked as ‘Not Relevant’);
- h. Feature: feature(s) that has been assessed (it can be an Ecosystem component, Pressure, Use/Activity or Ecosystem service);
- i. Area: national Marine Reporting Unit(s), and if relevant the regional assessment area, to which the indicator assessment applies;

And the following fields on the underpinning datasets are requested:

- a. URL: URL or DOI for the data from the relevant monitoring programme (Article 11) and the dataset underpinning the indicator assessment (or web service) (Article 8); where relevant, reason for non-availability of the data set;
- b. MD URL: Unique resource locator for the metadata (or web service).

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<sup>36</sup> [GD13 Common indicator structure](#).

A QC routine will check if the URL links are valid and the dataset or service and corresponding metadata are accessible.

A table with guidance for reporting on each of the schema fields is given in [Annex IId](#).

## 3.8. Reporter

Within each of the schemas, the following information about the reporter(s) is to be reported:

- a. Reporter: name and contact email;
- b. Reporting organisation: Ministry or Institute responsible for the reports.

# 4. E-REPORTING PROCESS AND TOOLS

## 4.1. Reporting tools

For 2024 reporting the ReportNet 3.0 platform will be used, following a similar process to that used for the 2022 reporting of updates for MSFD Articles 13 and 14. Using this platform avoids the need to report the electronic files directly into the CDR as had been done up to the 2020 updating of MSFD Article 11.

For 2024 update reporting, the reporting tools have been updated according to what is described in this guidance<sup>37</sup>. The revised schemas reflect the updated reporting structure and contents, and the [MSFD reporting resources](#) page can be found under the 'MSFD' section in CDR Help<sup>38</sup>.

Schema files prefilled with the information reported in 2018 according to the revised schemas will be made available on the [MSFD reporting resources](#) page for [2024](#).

## 4.2. Options for preparing e-reports

MS will have the following ways to prepare the reporting information:

- a. to use ReportNet 3.0 to enter the information directly into the schemas. These will be prefilled with the information from the 2018 reports and should be updated where necessary;
- b. to download the 2018 prefilled information from ReportNet 3.0 in Excel format, update the information where necessary, and import the updated files into ReportNet 3.0.

## 4.3. Steps to follow when completing the schemas

The process for preparing the e-reports in ReportNet 3.0 comprises the following steps. These are generated automatically in ReportNet or can be generated directly from a Member State's database:

**Step 0.** The schemas require some previously reported information to be available prior to commencing the 2024 reporting, so that drop-down lists can be provided in ReportNet 3.0 to enable easy selection of the correct information. The relevant reports are as follows:

- a. Marine Reporting Unit codes (following the guidance in [Annex IIf](#));
- b. Measure codes (from 2022 reporting on MSFD Article 13).

Member States should ensure that the relevant reports are up to date, so that the latest code lists are available in ReportNet **before** starting to report into the Article 8, 9 and 10 schemas.

<sup>37</sup> <https://cdr.eionet.europa.eu/help/msfd/MSFD%202024>

<sup>38</sup> <https://cdr.eionet.europa.eu/help/msfd>.

**Step 1.** Select the ‘source’ data to be modified (prefilled from the 2018 reports) and, for Article 8(1a, b), consider relevant prefilled datasets that are available from RSCs, CFP (ICES) and WFD. Member States should update the 2018 prefilled data, based on their 2024 information and available assessments from RSCs, WFD and CFP.

**Step 2.** Once the reporting exercise starts MS should first complete schema [ART9\\_GES](#), with a general description of the determination of GES at the criterion (and descriptor) level.

**Step 3.** MS should then complete the schema [Indicator](#), to provide the basic information for all the assessments that have been performed. Afterwards, the indicator codes will be used within the other schemas ([ART8\\_GES](#), [ART8\\_ESA](#), [ART10\\_Targets](#)).

**Step 4.** Then the schema [ART10\\_Targets](#) should be completed. This will generate the set of target codes to be referred to in the schema [ART8\\_GES](#).

**Step 5.** The third schema to be completed is [ART8\\_GES](#), which includes the elements, threshold and proportion values that are the specific parts of the Article 9 GES determination but intrinsically linked to the Article 8 assessment, as well as the link to the indicators that have been used within the different assessments (from step 3) and the targets (from step 4).

**Step 6.** The schema of [ART8\\_ESA](#) should then be completed.

**Step 7<sup>39</sup>.** Finally, text-based reports (e.g., national reports, regional roof reports, other documents) may be uploaded.

**Step 8.** Once the data are in each schema in ReportNet, a validation is run to check that the entered data pass all the quality control (QC) rules, including cross-schema validations, and thus ensure a delivery without errors (see section 4.4). Once all schemas have completed the QC validation process, the complete set of schemas can be released; this will generate a ‘receipt’ to be used for the formal notification (see section 5.4). After this ‘first’ release of all schemas, it is possible to update an individual schema (e.g., via an Excel download, modification and upload procedure); the data for the other schemas (with their original date of reporting) remains unchanged; a QC check on the full set of schemas is run again (to check the conformity of the updated data) and the new version is released.

## 4.4. Quality Control specifications

Quality control (QC) specifications have been developed to ensure that the e-reports submitted by Member States are as required in the schema specifications and the guidance. Among these, there are:

- Schema field checks: they will check whether all the fields provided have the required content/format.
- Within-schema checks: they will check all the dependencies among fields within each of the schemas.
- Cross-schema checks: they will check all the dependencies among the schemas reported.

Feedback will be provided to MS through *warnings* and *blockers*, so that they can be aware of errors and amend the submitted files in ReportNet. The QCs are run in ReportNet before releasing the reports, so that the Member State can ensure the delivery of reports without errors.

The QC specifications are part of the reporting package and can be downloaded from EEA’s repository

(<https://svn.eionet.europa.eu/repositories/Reportnet/Dataflows/MarineDirective/MSFD2018/MarineDB/Stored%20Procedures/>).

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<sup>39</sup> This step is independent of steps 0-6 and can be completed at any time before step 8.

## 4.5. Technical support for reporting

For details on the technical preparation of the reports, including use of online tools for reporting and preparation of schemas, as well as the applicable quality control rules, please refer to the CDR [MSFD reporting resources](#) web page:

<https://cdr.eionet.europa.eu/help/msfd>

During the reporting process, the **MSFD Helpdesk** ([msfd.helpdesk@eionet.europa.eu](mailto:msfd.helpdesk@eionet.europa.eu)) will be in operation to support both content and technical queries which may arise.

## 5. PROCEDURES AND FORMAT FOR REPORTING

This section outlines the mechanisms for preparing the reporting information, its formats and the transmission procedure as part of the formal requirement to notify the Commission.

### 5.1. Who can report

The submission of final reports can only be done by a nominated MSFD reporter. However, these nominated reporters may allow other persons to either a) prepare the reporting information (write access) or b) view the reported information (read access). These functions can be assigned within ReportNet 3.0 by the nominated reporter at any time.

The list of MSFD-nominated reporters is available here: [http://www.eionet.europa.eu/ldap-roles/?role\\_id=extranet-msfdreporter-data](http://www.eionet.europa.eu/ldap-roles/?role_id=extranet-msfdreporter-data). A Member State (via their members of the Marine Strategy Coordination Group or Working Group on Data, Information and Knowledge Exchange) may request changes to one or more of its nominated reporters by contacting the MSFD Helpdesk.

### 5.2. Reporting language

Member States have the right to complete their reports in any official EU language.

However, reporting of the few text fields in English is strongly encouraged by the Commission services for the following reasons:

- a. The information reported is needed to support and enhance ongoing cooperation among Member States within a region or subregion; use of a common language will facilitate such cooperation;
- b. The translation of a Member State's information into a common language will support its further use in aggregation of the information to regional, European and global scales;
- c. The Commission has 6 months from receiving all Member State reports in which to undertake its Article 16 assessment. If the information is available in a common language, this assessment will be greatly assisted. This short time period means it is not feasible to have the information formally translated; consequently, translation by the Member State itself prior to submission will help avoid misinterpretation of the information reported.

### 5.3. Reporting format

The format for reporting<sup>40</sup> has not been *formally* specified in the directive.

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<sup>40</sup> MSFD Article 24 provides for technical formats to be adopted for the purposes of transmission and processing of data, including statistical and cartographic data. MSFD implementation to date has relied upon

E-reporting in schema format is strongly encouraged by the Commission services for the following reasons:

- a. The information reported is needed to support ongoing cooperation among Member States within a region or subregion so that the marine strategies are coherent and follow common approaches, as required under Article 5(2); use of an electronic format enables the information to be made available in WISE Marine and will facilitate such regional and subregional cooperation;
- b. Provision of the information in a common format, such as through use of standard code lists, will support its further use in aggregation of the information to regional, European and global scales;
- c. The Commission has 6 months from receiving all Member State reports in which to undertake its Article 16 assessment. If the information is available in a common electronic format, this assessment will be greatly assisted. This short time period means it is not feasible to adequately assess and compare across Member State information which is provided in free-text reports following different structures and styles.

## 5.4. Formal notification

Formal notification of the Member State's report(s) should follow the standard practice, as follows:

The Member State's Permanent Representation to the European Commission should send to the Commission a) a suitable cover letter indicating the relevant Directive and articles to which the notification refers and b) the receipt(s) obtained from ReportNet for all the reports (files) that have been deposited in relation to this notification.

The cover letter and ReportNet receipt(s) can be sent in hard copy to the Head of Unit responsible for MSFD implementation (i.e. DG Environment Unit C.2), or electronically (as pdf files) via email ([ENV-MARINE-ENVIRONMENT@ec.europa.eu](mailto:ENV-MARINE-ENVIRONMENT@ec.europa.eu)).

The reports deposited in ReportNet 3.0 as part of the notification should be:

- a. Validated data for the following schemas: 'Art9\_GES', 'Art8\_GES', 'Art8\_ESA', 'Art10\_Targets' and 'Indicator'. Each file should hold the data and information defined in the schemas, including URL links to the relevant publicly and permanently available indicator assessments and associated data sets;
- b. Text-based (pdf file) report(s) as described in section 2.4 and Table 3, if considered necessary. Where the structure of the report differs to that in Table 3, a correlation table showing where the sections in Table 3 can be found (pages, section number) should be provided;
- c. In cases where the indicator assessments under point (a) are not available online, these should be submitted in pdf format (for example, as annexes to the report under point (b));
- d. In cases where the Marine Reporting Units, or their spatial data is updated by the Member State, an updated schema [MRU](#)<sup>41</sup>, should be provided.

Each Member State has the right to submit any further information it considers appropriate as part of its formal notification. This could, for example, include joint documentation ('roof report')

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definition of such technical formats (i.e., schema reports and GIS shapefiles) through informal agreement via the MSFD Common Implementation Strategy, including this reporting guidance.

<sup>41</sup> See section 3.1; these should be submitted before the rest of the reports in order to have the MRU codes available to populate the other schemas.

prepared via a Regional Sea Convention or summary documentation used for the MSFD Article 19(2) public consultation (where this differs to the text-based report under point (b) above).





## ANNEX I: GES ASSESSMENTS TO BE REPORTED PER DESCRIPTOR

Table 5 indicates the features to be assessed per descriptor in the schema 'Art8\_GES' and the features to be associated to the Descriptors and criteria reported in the schema 'Art9\_GES'. The table includes the GES extent unit, pre-defined elements and lists, the scale of assessment<sup>42</sup> and the criteria to be used per Feature.

Table 5. Features to be assessed in schema 'Art8\_GES'.

	Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)
Source	GD14 Annex VI				Commission Decision (EU) 2017/848	
Pressures and their impacts	D2 Non-indigenous species	Newly introduced non-indigenous species	Number of newly introduced species	NIS list	Subdivisions of the region or subregion, divided where needed by national boundaries.	<b>D2C1 Newly-introduced NIS</b>
		Established non-indigenous species	Not relevant	NIS list		As used for assessment of the corresponding species groups or broad habitat types under Descriptors 1 and 6.
		Benthic broad habitats		Benthic broad habitat types	D2C3 Adverse effects of NIS	
		Pelagic broad habitats		Pelagic broad habitat types		
		Species groups		Species groups		
	D5 Eutrophication	Eutrophication	Proportion of area in good status	DIN; TN; DIP; TP	Within coastal waters, as used under Directive 2000/60/EC [WFD].	<b>D5C1 Nutrient concentrations</b>
				Chlorophyll-a		<b>D5C2 Chlorophyll-a concentration</b>
				Harmful algal blooms species list	Beyond coastal waters, subdivisions of the region or subregion, divided where	D5C3 Harmful algal blooms
				Photic limit (transparency)		D5C4 Photic limit

<sup>42</sup> Where scale is indicated as regional, subregional or subdivision of a region or subregion, the assessments should be reported for the associated national MRU for these areas (see Annex V for further details).

Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)
			Dissolved oxygen	needed by national boundaries.	<b>D5C5 Dissolved oxygen concentration</b>
			Benthic habitats – opportunistic species		D5C6 Opportunistic macroalgae of benthic habitats
			Benthic habitats – macrophyte communities		D5C7 Macrophyte communities of benthic habitats
			Benthic habitats – macrobenthic communities		D5C8 Macrofaunal communities of benthic habitats
D7 Hydrographical changes	Hydrographical changes	Not relevant	As Feature	As used for assessment of the benthic broad habitat types under Descriptors 1 and 6.	D7C1 Permanent alteration of hydrographical conditions
	Benthic broad habitats [Other benthic habitats]		Benthic broad habitat types		D7C2 Adverse effects from permanent alteration of hydrographical conditions
D8 Contaminants	Contaminants - non UPBT substances	Proportion of substances in good status	Contaminants list	Within coastal and territorial waters, as used under Directive 2000/60/EC [WFD]. Beyond territorial waters, subdivisions of the region or subregion, divided where needed by national boundaries.	<b>D8C1 Contaminant in environment</b>
	Contaminants - UPBT substances	Proportion of substances in good status	Contaminants list		<b>D8C1 Contaminant in environment</b>
	Species Benthic broad habitats [Other benthic habitats]	Not relevant	Species list Benthic broad habitat types		D8C2 Adverse effects of contaminants
	Acute pollution events	Not relevant	As Feature	Regional or subregional level, divided where needed by national boundaries.	<b>D8C3 Significant acute pollution events</b>
	Species groups	Not relevant	Species list	As used for assessment of the species groups or benthic broad habitat types under Descriptors 1 and 6.	D8C4 Adverse effects of significant acute pollution events
	Benthic broad habitats	Not relevant	Benthic broad habitat types		

	Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)
	D9 Contaminants in seafood	Contaminants – in seafood	Proportion of substances in good status	Contaminants in Foodstuffs Regulation	The catch or production area in accordance with Article 38 of Regulation (EU) No 1379/2013 of the European Parliament and of the Council.	<b>D9C1 Contaminants in seafood</b>
	D10 Marine litter	Litter in the environment	Proportion of litter categories in good status	Marine litter categories, plus - Single-use plastic - Fishing gear	Subdivisions of the region or subregion, divided where needed by national boundaries.	<b>D10C1 Litter (excluding micro-litter)</b>
		Micro-litter in the environment	Proportion of litter categories in good status	Marine litter categories		<b>D10C2 Micro-litter</b>
		Litter and micro-litter in species	Proportion of litter categories in good status	Species list		D10C3 Litter ingested
		Species	Not relevant	Species list	As used for assessment of the species group under Descriptor 1.	D10C4 Adverse effects of litter
	D11 Energy, including underwater noise	Impulsive sound in water	Proportion of area in good status	As Feature	Region, subregion or subdivisions.	<b>D11C1 Anthropogenic impulsive sound</b>
		Continuous low frequency sound	Proportion of area in good status	As Feature (with associated species, if appropriate)		<b>D11C2 Anthropogenic continuous low-frequency sound</b>
[Mobile] species	D1 Birds	Grazing birds Wading birds Surface-feeding birds Pelagic-feeding birds Benthic-feeding birds	Proportion of species in good status within species group	Species list	As used for assessment of the corresponding species or species groups under criteria D1C2-D1C5.	<b>D1C1 Mortality rate from incidental by-catch</b>
					Ecologically-relevant scales for each species group shall be used, as follows: — for birds: region or subdivisions for Baltic Sea and Black Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea	<b>D1C2 Population abundance</b>
						D1C3 Population demographic characteristics
						D1C4 Population distributional range and pattern
						D1C5 Habitat for the species

Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)
D1 Mammals	Small toothed cetaceans Deep-diving toothed cetaceans Baleen whales Seals	Proportion of species in good status within species group	Species list	As used for assessment of the corresponding species or species groups under criteria D1C2-D1C5.	<b>D1C1 Mortality rate from incidental by-catch</b>
				Ecologically-relevant scales for each species group shall be used, as follows: — for deep-diving toothed cetaceans, baleen whales: region, — for small toothed cetaceans: region or subdivisions for Baltic Sea and Black Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea — for seals: region or subdivisions for Baltic Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea	<b>D1C2 Population abundance</b>
					<b>D1C3 Population demographic characteristics</b>
					<b>D1C4 Population distributional range and pattern</b>
					<b>D1C5 Habitat for the species</b>
D1 Reptiles	Turtles	Proportion of species in good status within species group	Species list	As used for assessment of the corresponding species or species groups under criteria D1C2-D1C5.	<b>D1C1 Mortality rate from incidental by-catch</b>
				Ecologically-relevant scales for each species group shall be used, as follows: — for turtles: region or subdivisions for Baltic Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea	<b>D1C2 Population abundance</b>
					<b>D1C3 Population demographic characteristics</b>
					<b>D1C4 Population distributional range and pattern</b>
					<b>D1C5 Habitat for the species</b>

Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)
D1 Fish	Coastal fish Pelagic shelf fish Demersal shelf fish Deep-sea fish	Proportion of species in good status within species group	Species list	As used for assessment of the corresponding species or species groups under criteria D1C2-D1C5.	<b>D1C1 Mortality rate from incidental by-catch</b>
				Ecologically-relevant scales for each species group shall be used, as follows: — for deep-sea fish: region, — for pelagic and demersal shelf fish: region or subdivisions for Baltic Sea and Black Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea — for coastal fish: subdivision of region or subregion, — for commercially-exploited fish and cephalopods: as used under Descriptor 3.	<b>D1C2 Population abundance</b> D1C3 Population demographic characteristics [ <b>primary for commercial species</b> ] D1C4 Population distributional range and pattern [ <b>primary for HD fish</b> ] D1C5 Habitat for the species [ <b>primary for HD fish</b> ]
D1 Cephalopods	Coastal/shelf cephalopods Deep-sea cephalopods	Proportion of species in good status within species group	Species list	As used for assessment of the corresponding species or species groups under criteria D1C2-D1C5.	<b>D1C1 Mortality rate from incidental by-catch</b>
				Ecologically-relevant scales for each species group shall be used, as follows: — for cephalopods: region or subdivisions for Baltic Sea; subregion for North-East Atlantic Ocean and Mediterranean Sea, — for commercially-exploited fish and cephalopods: as used under Descriptor 3.	<b>D1C2 Population abundance</b> D1C3 Population demographic characteristics [ <b>primary for commercial species</b> ] D1C4 Population distributional range and pattern D1C5 Habitat for the species

	Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)	
	D3 Commercially exploited fish and shellfish	Commercially exploited fish and shellfish	Proportion of populations in good status	Commercial species list	Populations of each species are assessed at ecologically-relevant scales within each region or subregion, as established by appropriate scientific bodies as referred to in Article 26 of Regulation (EU) No 1380/2013, based on specified aggregations of International Council for the Exploration of the Sea (ICES) areas, General Fisheries Commission for the Mediterranean (GFCM) geographical sub-areas and Food and Agriculture Organisation (FAO) fishing areas for the Macaronesian biogeographic region.	D3C1 Fishing mortality rate (F)	
						D3C2 Spawning stock biomass (SSB)	
						D3C3 Population age/size distribution	
Habitats	D1 Pelagic habitats	Pelagic broad habitats	Proportion of habitats in good status	Pelagic broad habitats	Subdivision of region or subregion as used for assessments of benthic broad habitat types, reflecting biogeographic differences in species composition of the habitat type.	D1C6 Pelagic habitat condition	
		Other pelagic habitats	Proportion of habitats in good status	MS-reported habitats (e.g., from EUNIS and RSCs)			
	D6 Sea-floor integrity/D1 Benthic habitats	Physical loss of the seabed	Not relevant	As Feature	As used for assessment of the benthic broad habitat types under Descriptors 1 and 6.	D6C1 Physical loss of the seabed	
		Physical disturbance to seabed	Not relevant	As Feature		D6C2 Physical disturbance to the seabed	
		Benthic broad habitats	Not relevant	Benthic broad habitat types		Subdivision of region or	D6C3 Adverse effects from physical disturbance
			Proportion of habitats in good				D6C4 Benthic habitat extent

	Descriptor	Features to be assessed	GES extent unit	Pre-defined elements & lists	Scale of assessment	Criteria (primary, secondary)	
			status		subregion, reflecting biogeographic differences in species composition of the broad habitat type.	<b>D6C5 Benthic habitat condition</b>	
			Other benthic habitats	Not relevant	MS-reported habitats (e.g., from EUNIS, Habitats Directive and RSCs)	As used for assessment of the benthic broad habitat types under Descriptors 1 and 6.	<b>D6C3 Adverse effects from physical disturbance</b>
				Proportion of habitats in good status		Subdivision of region or subregion, reflecting biogeographic differences in species composition of the broad habitat type.	<b>D6C4 Benthic habitat extent</b>
Ecosystems	D4/D1 Ecosystems, including food webs	Coastal ecosystems Shelf ecosystems Oceanic/deep-sea ecosystems	Not relevant	Trophic guilds	Regional level for Baltic Sea and Black Sea; subregional level for North-East Atlantic and Mediterranean Sea.  Subdivisions may be used where appropriate.	<b>D4C1 Trophic guild species diversity</b>	
						<b>D4C2 Abundance across trophic guilds</b>	
						D4C3 Trophic guild size distribution	
						D4C4 Trophic guild productivity	

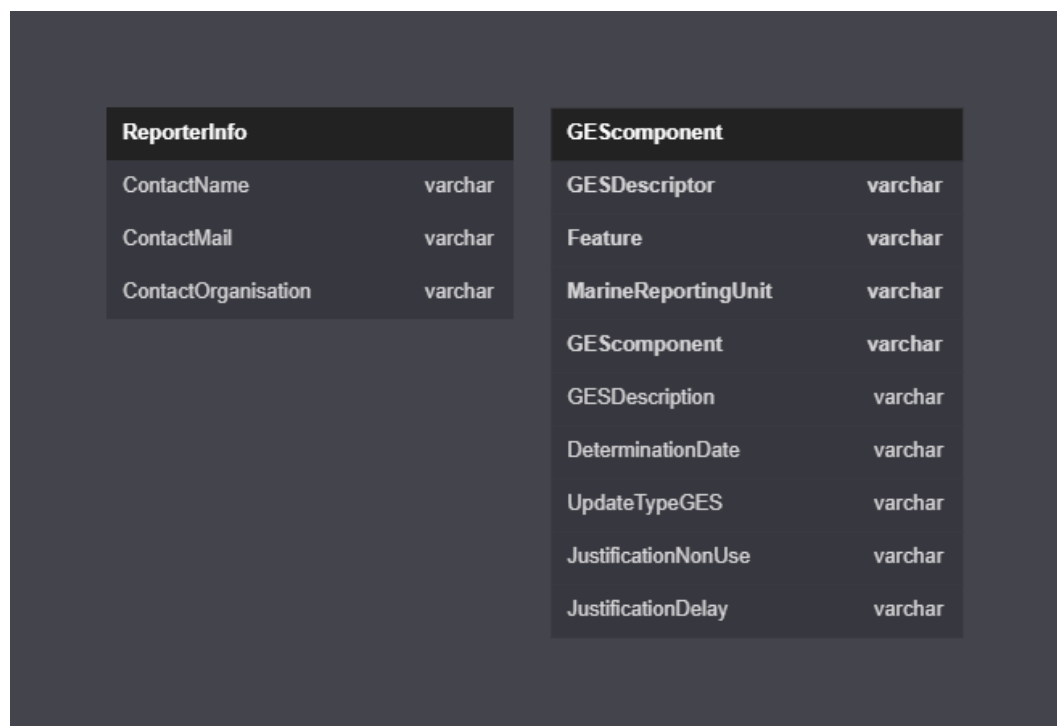
## ANNEX II: SCHEMAS AND GUIDANCE PER FIELD

Fields marked with \* are new fields compared with 2018 reporting.

### A. ART9\_GES

According to what has been described in section Article 9: GES determination3.3, Figure 2 represents the structure of the schema.

Figure 2. Diagram of the schema 'ART9\_GES'.



The diagram shows two tables side-by-side. The first table is titled 'ReporterInfo' and has three rows: ContactName (varchar), ContactMail (varchar), and ContactOrganisation (varchar). The second table is titled 'GESComponent' and has eight rows: GESDescriptor (varchar), Feature (varchar), MarineReportingUnit (varchar), GESComponent (varchar), GESDescription (varchar), DeterminationDate (varchar), UpdateTypeGES (varchar), JustificationNonUse (varchar), and JustificationDelay (varchar).

ReporterInfo	
ContactName	varchar
ContactMail	varchar
ContactOrganisation	varchar

GESComponent	
GESDescriptor	varchar
Feature	varchar
MarineReportingUnit	varchar
GESComponent	varchar
GESDescription	varchar
DeterminationDate	varchar
UpdateTypeGES	varchar
JustificationNonUse	varchar
JustificationDelay	varchar

Based on the schema, Table 6 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.



Table 6. Fields of the schema 'ART9\_GES'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the organisation	Required	Email address (max. 100 characters).
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
GEScomponent	GESDescriptor	Descriptor for Article 9(1) report	Required	Enter one 'Descriptor' code from List 'GESDescriptor'. Relevant criteria codes for the descriptor are entered in a second step ('GESCriteria').
GEScomponent	Feature	Feature(s) to which the GES determination and/or justification for non-use of a primary criterion applies	Required	<p>Enter one or more codes from List 'FeatureGESstate' or 'FeatureGESpressure' for which the GES determination and/or justification for non-use of a primary criterion applies. The Features relevant for each Descriptor and criterion are given in <a href="#">Annex 1</a>.</p> <p>It is recommended that a single GES determination is reported for a Feature (or group of Features for D1), using all relevant criteria AND is applicable to the same MRU (or set of MRUs).</p> <p>Where appropriate, a <u>separate</u> GES determination for the same Feature(s) can be reported for <u>another</u> MRU (or set of MRUs). For example, a determination for Feature 'eutrophication' for all the relevant D5 criteria, applied to coastal waters (one or multiple MRUs), and a separate determination applied to offshore waters (one or multiple MRUs) using the same or different D5 secondary criteria. Or, one determination for a subregion and a separate determination for another subregion, to reflect differing characteristics of the Feature in each subregion.</p> <p>This alignment between Features and MRUs aims to ensure the GES determination for a given Feature/area is clearly expressed, and will assist the assessment of the Feature, and its component elements and criteria, in each area (MRU) under Article 8.</p>

Schema class	Schema field	Description	Property	Guidance
GEScomponent	MarineReportingUnit	Area(s) where the GES determination(s) and/or justification for non-use of a primary criterion applies	Required	<p>Enter all Marine Reporting Units (as reported in schema <a href="#">MRU</a>) relevant for the Feature and associated GES descriptions (or justifications for non-use of primary criteria).</p> <p>The MRUs can be reported as all the individual MRUs used for the Article 8 assessments or, more simply, as a larger MRU covering the region or subregion part of the Member State's marine waters to which the GES determination or justification for non-use is applicable.</p> <p>In cases where the GES determination for a particular Feature(s) differs between different parts of MS marine waters (such as in different subregions), separate GES determinations linked to the corresponding MRUs can be reported for the Feature(s).</p> <p>In cases where there is no GES determination for a primary criterion (i.e., a non-use justification is provided), provide a suitable MRU (e.g., the marine waters of the MS) to enable the justification to be linked to a geographical area.</p>
GEScomponent	GEScomponent	Descriptor or criteria for which the GES determination is provided, or for which a justification for non-use (primary criterion) is provided	Required	<p>Enter the corresponding 'Criteria' code from List 'GESCriteria'.</p> <p>Report all primary criteria (with a 'GESDescription' or 'JustificationNonUse') and all secondary criteria that are part of the GES determination (including all those assessed in schema 'ART8_GES').</p> <p>Select the corresponding 'GESDescriptor' code in cases where a 'GESDescription' is also being reported at Descriptor level.</p>
GEScomponent	GESDescription	Description of the GES determination, based on either the MSFD Annex I descriptor text (when defined at Descriptor level) or the criterion text in Decision (EU) 2017/848 (when defined at criterion level).	Required (when a justification for non-use of a primary criterion is not provided)	<p>Free text (max. 2500 characters).</p> <p>Description of the (updated) GES determination which should be linked to the criterion level and may, additionally be at Descriptor level. In line with MSFD Article 3(5), this determination should be agreed at regional or subregional level. The description at criterion level should reflect the description in the GES Decision but adapted to the characteristics of the area being reported (MRUs), reflecting regional or subregional specificities and variation across Features.</p> <p>A description should be provided for all relevant criteria, i.e., all Primary criteria (unless 'JustificationNonUse' is reported) and all secondary criteria that are used. Additionally, a descriptor-level description may be provided. Whenever Member States reported only at Descriptor level in 2018, they should now ensure a descriptive text is also (or only) provided at criterion level. All criteria reported in 2018 should be reported, but if no longer part of the GES determination, select this option in 'UpdateType'</p>

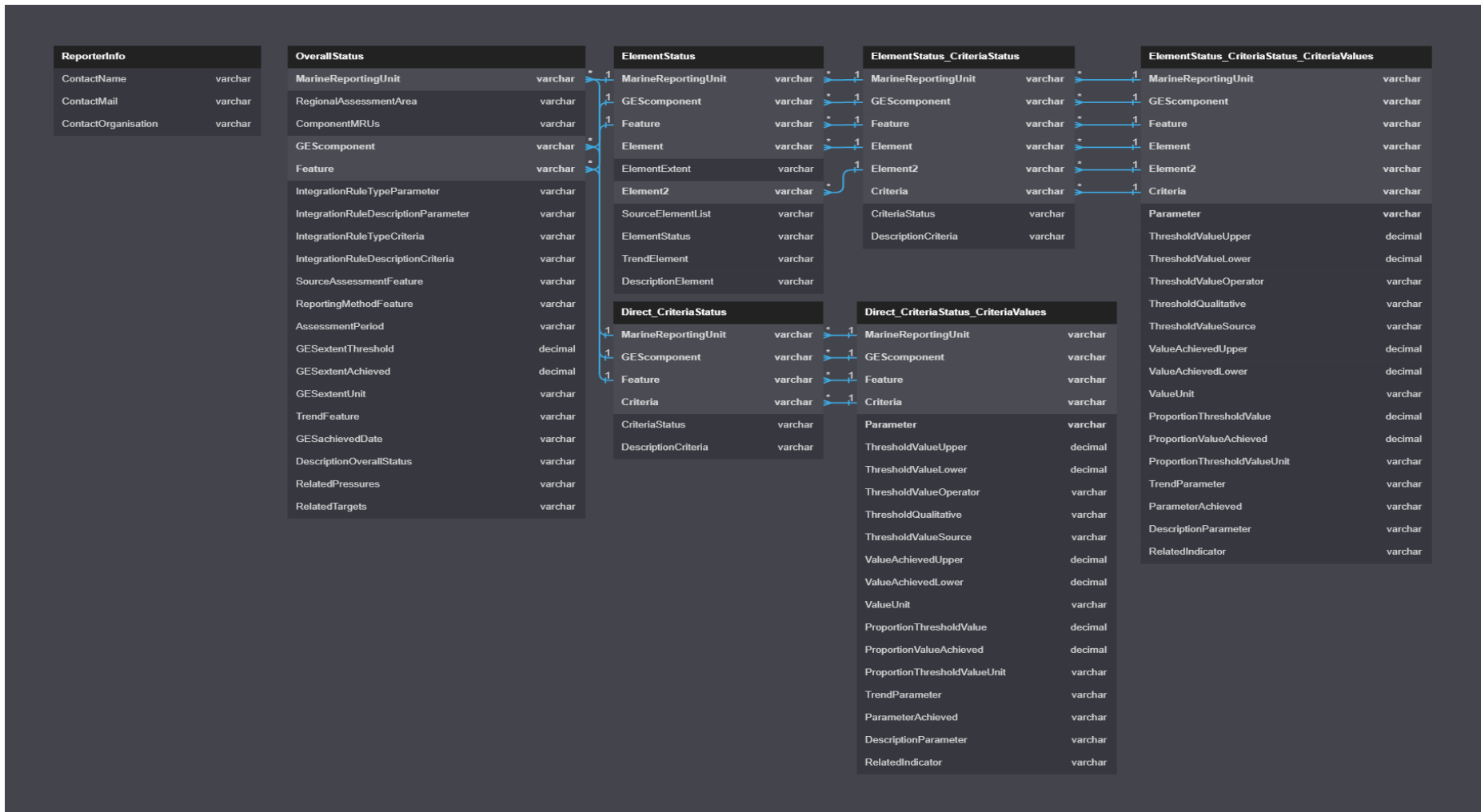
Schema class	Schema field	Description	Property	Guidance
				<p>and provide a justification in 'JustificaionNonUse'.</p> <p>The description (at Descriptor and/or criterion level) should be applicable to the Feature reported in the area(s) reported (MRU(s)). Where appropriate, separate descriptions can be reported for the same Feature in different areas (MRUs) (e.g., coastal and offshore determinations for D5 eutrophication, separate descriptions per subregion).</p> <p>Specific threshold values, proportion threshold values and GES extent thresholds per feature or element are to be included in the schema <a href="#">ART8_GES</a>; Member States may wish to include these values here, especially in cases where there are only a few values for the Descriptor/criterion or they express important aspects of the GES determination (e.g., the GES extent threshold). Where threshold values for elements of a Feature differ between MRUs, the values are reported in the Art8_GES schema, and therefore do not need to be reported as separate GES descriptions in the Art9_GES schema. In this sense, the GES description can be more generically expressed and apply to multiple MRUs (with the Article 8 assessment reported to each MRU, using the threshold value specific to that MRU).</p>
GEScomponent	DeterminationDate	Date when this GES determination was officially agreed/adopted	Required (when a GESDescription is provided)	<p>YYYYMM</p> <p>Date when the GES description in its current form was agreed/adopted by the MS (through a regional or subregional process). This could be the 2012, 2018 or 2024 reporting cycle.</p> <p>This does not refer to the date when e-reporting was undertaken.</p>
GEScomponent	UpdateTypeGES	Indicate whether the GES determination reported is as reported previously (e.g., in 2012), modified or new	Required	<p>Enter one of the following from List 'UpdateTypeGES':</p> <ol style="list-style-type: none"> <li>'Same as last reported determination'</li> <li>'Modified from last reported determination'</li> <li>'New determination'</li> <li>'2018 determination no longer needed' - compared with last reporting of Article 9(1)'.</li> </ol> <p>If '2018 determination no longer needed' is selected, provide a justification in 'JustificationNonUse'.</p>
GEScompoenent	JustificationNonUse	Justification for why it is not considered appropriate to use a primary criterion for determination of GES, which	Conditional: required for primary criteria with no 'GESDescription'	<p>Free text (max. 1000 characters).</p> <p>Even if there is a lack of data to undertake an Article 8 assessment, the relevant GES criteria should be reported under Article 9, at least with a qualitative description.</p>

Schema class	Schema field	Description	Property	Guidance
		MS were informed, how and when (GES Decision Art 3(1))		
GEScomponent	JustificationDelay	Justification, where relevant, for why threshold values, lists of criteria elements or methodological standards have not yet been established at Union, regional or subregional level (GES Decision Art. 5(2)). Explanation for cases where these are available but are not used.	Conditional: required where relevant	Free text (max. 1000 characters). Where threshold values are not yet established at Union, regional or subregional level (where required by Decision (EU) 2017/848), provide a justification under the relevant criterion. Where lists of criteria elements or methodological standards are not yet established at Union, regional or subregional level (where required by Decision (EU) 2017/848), provide a justification under the relevant Descriptor. In cases where this information is available from other policies/mechanisms but not used, a justification should be provided.

## B. ART8\_GES

According to what has been described in section 3.4, Figure 3 represents the structure of the schema.

Figure 3. Diagram of the schema 'ART8\_GES'.



Based on the schema, Table 7 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.

Table 7. Fields of the schema 'ART8\_GES'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the organisation	Required	Email address (max. 100 characters).
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
OverallStatus	MarineReportingUnit	Area of MS marine waters (part or whole) where the assessment applies and the 'extent to which GES has been achieved' is reported for the Feature.	Required	<p>Enter one Marine Reporting Unit (as reported by MS in schema <a href="#">MRU</a>) for the area on which as assessment is being reported.</p> <p>The MRU codes used for the 2024 assessments need to be up to date so they are available for selection in this schema.</p> <p>The MRU can extend over all or part of the area of marine waters for a Member State in a region or subregion but should NOT extent beyond its national borders.</p> <p>In cases where the assessment was undertaken for an area that goes beyond the MS national border (e.g., the assessment was carried out by an RSC or RFMO), enter the associated 'regional' assessment area in the field 'RegionalAssessmentArea'.</p> <p>The assessment results are specific to an MRU, which may cover only part of a Member State's marine waters (in contrast to the GES determination under Article 9 which could be applicable over a larger area).</p> <p>Extent of MRU is used to calculate the proportion of the [element/criterion/parameter] in good status in the MRU, when relevant.</p> <p>The extent will be calculated with the geometry provided with the 4geo.xml file, using the ETRS89 LAEA (EPSG:3035) projection. This value will be automatically filled in ReportNet.</p>

Schema class	Schema field	Description	Property	Guidance
OverallStatus	RegionalAssessmentArea*	Area of the marine region or subregion where the assessment was originally undertaken and for which the assessment results have been used to apply to the national MRU.	Conditional (if assessment was undertaken in an area broader than the MRU)	<p>Enter one from List 'RegionalAssessmentArea'.</p> <p>Refers to regional assessment areas, such as used for RSC quality status reports and RFMO/ICES commercial stock assessments.</p> <p>The national MRU ('MarineReportingUnit') is the part of a Member State's marine waters that is addressed by the regional assessment. See Annex V for further details.</p>
OverallStatus	ComponentMRUs*	Component MRUs which have been aggregated to form the MRU given in 'MarineReportingUnit'.	Optional	<p>Provide the MRU codes for all component MRUs which make up the MRU reported in field 'MarineReportingUnit'.</p> <p>For some assessments, Member States may wish to provide a single report for a larger area ('MarineReportingUnit') which is composed of several smaller MRUs. For example, reporting for Descriptor 5 on a 'coastal water type' which consists of multiple WFD coastal water bodies, or aggregating several smaller MRUs in a nested MRU system to make a larger MRU for certain assessments. This field could also be used to report smaller assessment areas for which results are aggregated to report at the MRU level.</p> <p>The results of the assessment should be applicable to the aggregated MRU ('MarineReportingUnit') and not to the component MRUs individually (e.g., a result expressing 75% of the MRU is in a good state would not necessarily mean that 75% of each component MRU is in a good state, as the impacted areas may not be evenly distributed).</p>
OverallStatus	GEScomponent	Descriptor for which the assessment is reported	Required	<p>Enter corresponding 'Descriptor' code from List 'GESDescriptor'. Relevant 'Criteria' codes are to be reported in the 'CriteriaStatus' class.</p>
OverallStatus	Feature	Feature to which the assessment applies	Required	<p>Enter the code of the Feature that has been assessed (from List: 'FeatureGESstate' or FeatureGESpressure') for this Descriptor and MRU. The relevant Features for each Descriptor and criteria are given in Annex I and their use is illustrated in the worked examples in Annex III.</p> <p>The features reported under Art8_GES should also be included in the related GES determination (Art9_GES).</p> <p>Within a Descriptor assessment, a Feature should not be duplicated within an MRU, but may be repeated for different MRUs (e.g., reporting the Feature 'Eutrophication' in a coastal MRU and an offshore MRU for the D5 assessment). Also, the same Feature may be reported for different Descriptors (e.g., the Feature 'benthic broad habitats' may be reported for D2C3, D7C2, D8C4, D6C3 and D6C4/C5, as these are assessing benthic broad</p>

Schema class	Schema field	Description	Property	Guidance
				habitats for differing impacts and state). The Article 8 assessment report aims to give an assessment of the extent to which the Feature has achieved GES within the MRU. Consequently, the component elements, criteria and parameters reported for the Feature should be reported at the same scale (i.e., within the same MRU rather than spread across several MRUs), even though the parameters/indicators may not all cover the same area. Note that assessments for D2C2, D2C3, D4 and D7 do not necessarily lead to an assessment of GES extent achieved. Refer to Annex I regarding how elements contribute to assessment of Features for reporting 'GESextentAchieved'. Note in particular that the extent to which GES is achieved is reported at Feature level. Each Feature may comprise multiple elements (e.g., multiple species within a species group, all broad habitat types in the MRU, all contaminants within the Feature 'Contaminants – UBPT substances').
OverallStatus	IntegrationRuleTypeParameter	Integration rule type applied when more than one parameter is used to assess the criterion.	Required (when more than one parameter has been used per criterion)	Enter one from List: 'IntegrationRule'. Enter 'Not relevant' in cases where there is only one parameter used per criterion. If the 'IntegrationRuleType' used is not in the enumeration list, contact the MSFD HelpDesk.
OverallStatus	IntegrationRuleDescriptionParameter	Description of the rule applied	Required (where applicable)	Free text (max. 1000 characters) or provide URL or attach file (to be uploaded to the same folder as the XML).
OverallStatus	IntegrationRuleTypeCriteria	Integration rule type applied when more than one criterion is used to assess the element.	Required (when more than one criterion has been used per element)	Enter one from List: 'IntegrationRule'. Enter 'Not relevant' in cases where there is only one criterion used per element. Use also for D4 and D5 for the integration of elements to define overall status for a D4 ecosystem or for D5). If the 'IntegrationRuleType' used is not in the enumeration list, contact the MSFD HelpDesk.
OverallStatus	IntegrationRuleDescriptionCriteria	Description of how the rule has been applied	Required (where applicable)	Free text (max. 1000 characters) or provide URL or attach file (to be uploaded to the same folder as other text reports).
OverallStatus	SourceAssessmentFeature*	Indicate the source of the Feature assessment	Required	Enter one of the following from List 'SourcePolicy': a. 'WFD' b. 'HD' c. 'BD' d. 'HELCOM'



Schema class	Schema field	Description	Property	Guidance
				<ul style="list-style-type: none"> <li>e. 'OSPAR'</li> <li>f. 'UNEP/MAP'</li> <li>g. 'BSC'</li> <li>h. 'TWSC'</li> <li>i. 'MS in (sub)region'</li> <li>j. 'ICES'</li> <li>k. 'CFP'</li> <li>l. 'GFCM'</li> <li>m. 'National'</li> </ul> <p>If the source of the Feature assessment is not in the List 'SourcePolicy' contact the MSFD HelpDesk.</p> <p>Note: at parameter level 'RelatedIndicator' provides a link to the 'Indicator' schema which includes the field 'SourceAssessmentIndicator'.</p>
OverallStatus	ReportingMethodFeature*	General approach used for the integrated assessment at Feature level	Required	<p>Enter one of the following from List 'ReportingMethod':</p> <ul style="list-style-type: none"> <li>a. Type A (regional unchanged)</li> <li>b. Type B1 (regional, results for national MRU)</li> <li>c. Type B2 (regional at national/subnational scale)</li> <li>d. Type C (regional, supplemented with national information)</li> <li>e. Type D (national)</li> </ul> <p>See Annex V for a description of each approach.</p> <p>Note that a different approach can be reported for the indicator assessment (ReportingMethodIndicator in schema <a href="#">Indicator</a>).</p> <p>For Type B1, the values reported should be applicable to the MRU and not to the Regional Assessment Area on which the assessment was based.</p>
OverallStatus	AssessmentPeriod	Start and end date for the 6-year assessment period	Optional	<p>Start and end date (YYYY-YYYY) of the 6-year assessment period, reflecting the latest year for which the assessment is applicable (e.g., whether the assessment covers 2016-2021 data or 2017-2022 data when reported in 2024). The status conclusions at parameter, criterion, element and overall levels are applicable to this 6-year period. Note that a longer time series of data may be used in the assessment (which should be documented in the indicator assessment).</p>
OverallStatus	GESextentThreshold	Threshold defined for achievement of GES	Required (when GESextentAchieved is reported)	<p>Percentage (a number is applicable only for D2)</p> <p>For Features where a conclusion on whether GES has been achieved (as shown in <a href="#">Annex I</a>), the following fields report on that conclusion as follows:</p> <ul style="list-style-type: none"> <li>a. The proportion (%) of elements assessed for the Feature that must</li> </ul>

Schema class	Schema field	Description	Property	Guidance
				<p>be in good status for the Feature to be in good status is expressed in 'GESextentThreshold' (for example 75% of bird species must be in good status for the Feature 'Benthic-feeding birds' to be in good status);</p> <p>b. The actual proportion (%) of elements within the Feature that achieved good status is expressed in 'GESextentAchieved' (for example 85% of bird species assessed in the Feature 'Benthic-feeding birds' are in good status, and so the Feature is in good status);</p> <p>The overall conclusion of whether the Feature is in good status is expressed in 'GESachievedDate' (by reporting the date when GES was achieved or indicating it will be achieved at a future date or is unknown).</p>
OverallStatus	GESextentAchieved	Indicate, where relevant, to what extent GES has been achieved for a Feature	Required (where applicable)	Percentage (a number is applicable only for D2)
OverallStatus	GESextentUnit	Indicate the unit for GES extent	Required (when GESextentAchieved is reported)	<p>Enter one of the following from List 'GESextentUnit':</p> <ol style="list-style-type: none"> <li>'Proportion of species in good status within species group' (D1C1-C5)</li> <li>'Proportion of habitats in good status' (D1C6, D6C4-C5)</li> <li>'Number of newly introduced species' (D2C1)</li> <li>'Proportion of populations in good status' (D3)</li> <li>'Proportion of area in good status' (D5, D11)</li> <li>'Proportion of substances in good status' (D8C1, D9)</li> <li>'Proportion of litter categories in good status' (D10C1, D10C2, D10C3) OR</li> <li>'Not relevant'.</li> </ol> <p>Refer to Annex I for expected outcomes for each feature and criterion (i.e., whether a conclusion on GES is expected, or the assessment (of a pressure or adverse effect) feeds into another assessment (= Not relevant).</p>
OverallStatus	TrendFeature*	Trend in status of the Feature compared with previous 6-year reporting period	Required	<p>Enter one of the following from List 'Trend':</p> <ol style="list-style-type: none"> <li>'Improving' (status improving, pressure or impact reducing)</li> <li>'Stable'</li> <li>'Deteriorating' (status deteriorating, pressure or impact increasing),</li> <li>'Not assessed' – if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>'Unknown' – if the lack of knowledge (e.g., data, methodologies,</li> </ol>

Schema class	Schema field	Description	Property	Guidance
				<p>agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not, or there was no assessment in 2018</p> <p>f. 'Not Relevant'</p> <p>Indicate whether the status at Feature level ('GESextentAchieved') has improved, deteriorated or remained stable compared with the previous 6-year reporting period.</p>
OverallStatus	GESachievedDate	Date by when GES is achieved or expected to be achieved	Required	<p>Enter one of the following from List 'GESachievedDate':</p> <ol style="list-style-type: none"> <li>'GES achieved by 2012' (as reported in 2012)</li> <li>'GES achieved by 2018' (as reported in 2018)</li> <li>'GES achieved by 2024'</li> <li>'GES expected to be achieved later than 2024, no Article 14 exception reported'</li> <li>'GES expected to be achieved later than 2024, Article 14 exception reported'</li> <li>'Not assessed' – if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>'Unknown' – if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not.</li> </ol> <p>'Not relevant'</p>
OverallStatus	DescriptionOverallStatus	Description of or comment on the Overall Status assessment.	Optional	<p>Free text (max. 2500 characters).</p> <p>Whenever a schema prefilled with EU (WFD, CFP) or regional (RSC) information has been modified or not used, provide reasons here.</p>
OverallStatus	RelatedPressures	Pressures that are or may have an impact on the feature assessed	Required	<p>Enter one or more, from the List 'FeaturePressure'.</p> <p>It is suggested to limit the number of pressures to the main three pressures, and particularly to those pressures assessed by the indicators (which inform on the status of the Feature).</p>
OverallStatus	RelatedTargets	Target(s) defined under Article 10 which are relevant for the feature being assessed (i.e., addressing relevant pressures and impacts)	Required (where applicable)	<p>Enter as many target codes as relevant (as reported in the schema ART10_Targets.xml).</p>
ElementStatus	Element	Specific element of the Feature which is assessed (species, habitat,	Required (where applicable)	<p>Enter from the List 'Element' the name of the species (D1C1-C5, D2C1, D2C2, D3, D5C3, D8C2, D8C4, D10C4), habitat (D1C6, D2C3, D6C3-C5, D7C2, D8C2, D8C4), ecosystem/trophic guild (D4), eutrophication-related elements (D5),</p>

Schema class	Schema field	Description	Property	Guidance
		contaminant...)		<p>contaminants (D8C1, D9) or litter category (D10C1-C3).</p> <p>The MSFD Reporting Reference List of Elements is available at <a href="http://cdr.eionet.europa.eu/help/msfd">http://cdr.eionet.europa.eu/help/msfd</a>. If the list does not contain the elements needed, contact <a href="mailto:msfd.helpdesk@eionet.europa.eu">msfd.helpdesk@eionet.europa.eu</a>.</p> <p>Elements are always linked to a Feature, excepting for D6C1, D6C2, D7C1, D8C3, D11C1 and D11C2 when an element is not reported (as it would be the same as the Feature).</p> <p>Elements should not be duplicated within a Feature report (for a particular Feature/MRU/Descriptor).</p> <p>For D1C6 (pelagic habitats), phytoplankton and zooplankton should be entered in field 'Element2', as they are components of a pelagic habitat, but not a habitat in themselves.</p> <p>For D4, follow the GES Decision guidelines and report on the default parameters required for the four criteria per trophic guild and criterion.</p> <p>For D3, D6C3-C5, D8C1, D9C1 and D10C1-C3, ensure that <u>all</u> elements relevant to the MRU are reported, even when it is not possible to make an assessment.</p>
ElementStatus	ElementExtent*	Extent of element (habitat) in MRU (km <sup>2</sup> )	If relevant	<p>Value in km<sup>2</sup>.</p> <p>An estimate of the extent of each habitat (broad and other habitat types reported) within the MRU. Value to be used in conjunction with ProportionValueAchieved to estimate proportion of habitat in MRU in good status.</p>
ElementStatus	Element2	Associated element of the element that is assessed (e.g., the species used to assess a contaminant (the Element) in biota, or the specific population (stock) of a commercial species (the Element).	Conditional: when 'GEScriteria' is D1C6, D3C1, D3C2, D3C3, D8C1, D9C1 or D10C3 and Element needs secondary specification	<p>Enter, from List 'Element', the name of the:</p> <ol style="list-style-type: none"> <li>Whether the bird species being assessed is a 'breeding' or 'non-breeding' population (D1)</li> <li>Phytoplankton/zooplankton/other component of the pelagic habitat (Element) being assessed (D1C6)</li> <li>population (stock) for the commercial species assessed (D3)</li> <li>species used to assess parameter 'Concentration in biota' (D8C1). Note other matrices (water or sediment) may also be reported for the same Element (contaminant)</li> <li>species used to assess the contaminant level (D9)</li> </ol>

Schema class	Schema field	Description	Property	Guidance
				<ul style="list-style-type: none"> <li>f. subtypes of Artificial Polymer (single-use plastics, fishing gear, other) (D10C1)</li> <li>g. species used for litter ingestion assessment (D10C3)</li> <li>h. species used for underwater noise assessment, if appropriate (D11C2)</li> </ul> <p>The MSFD Reporting Reference List of Elements is available at <a href="http://cdr.eionet.europa.eu/help/msfd">http://cdr.eionet.europa.eu/help/msfd</a>. If the list does not contain the elements needed, contact <a href="mailto:msfd.helpdesk@eionet.europa.eu">msfd.helpdesk@eionet.europa.eu</a>.</p> <p>Element2 should not be duplicated within an Element report (for a particular Feature/MRU/Descriptor).</p>
ElementStatus	SourceElementList	Source of the agreed list of elements used in the assessment.	Conditional (when the Element is provided)	<p>Enter one from List 'SourcePolicy': 'EU', 'HELCOM', OSPAR, UNEP-MAP', 'BSC', MS in (sub)region', 'ICES', 'GFCM', 'CFP', 'National', OR 'Other'.</p> <p>When 'Other' is selected, provide details of this in field 'DescriptionElement'.</p>
ElementStatus	ElementStatus	Indicate the status of the specific element (species, habitat, contaminant) based on the outcomes of the criterion used	Required (where applicable)	<p>Enter one of the following from List 'StatusElement':</p> <ul style="list-style-type: none"> <li>a. 'Good'</li> <li>b. 'Good, based on low risk'</li> <li>c. 'Not good'</li> <li>d. 'Not assessed' if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>e. 'Unknown' if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not.</li> <li>f. 'Not relevant'</li> </ul> <p>If 'Good, based on low risk' is selected, provide a justification in 'DescriptionElement'.</p> <p>When a single criterion is reported for an element (or Element/Element2 combination), no integration rules are needed at criteria level and the status of the element should normally match the 'CriteriaStatus' value (e.g., 'CriteriaStatus' = Good, 'ElementStatus' = Good). If an opposing value is reported for 'ElementStatus', a reason should be provided in 'DescriptionElement'.</p> <p>Refer to Annex I regarding how elements contribute to assessment of Features for reporting 'GESextentachieved'.</p>
ElementStatus	TrendElement*	Trend in status compared with previous 6-year	Optional	<p>Enter one of the following from List 'Trend':</p> <ul style="list-style-type: none"> <li>a. 'Improving' (status improving, pressure or impact reducing)</li> </ul>

Schema class	Schema field	Description	Property	Guidance
		reporting period		<ul style="list-style-type: none"> <li>b. 'Stable'</li> <li>c. 'Deteriorating' (status deteriorating, pressure or impact increasing)</li> <li>d. 'Not assessed' – if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>e. 'Unknown' – if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not, or there was no assessment in 2018</li> <li>f. 'Not Relevant'</li> </ul> <p>Indicate whether the status at element level ('ElementStatus') has improved, deteriorated or remained stable compared with the previous 6-year reporting period.</p> <p>Trend is particularly important in cases where the element status (Good or Not good) is not yet available. It is also particularly relevant given that environmental status can be slow to respond to measures and so a trend can give an indication that progress is being made towards GES, even if not yet reached.</p>
ElementStatus	DescriptionElement	Description of the element assessment outcomes, when needed	Optional	<p>Free text (max. 2500 characters).</p> <p>Provide details here if 'Other' is selected for 'SourceElementList', when 'Directional trends' and 'Pressure-based proxy' has been used and when 'ElementStatus' or 'CriteriaStatus' is 'Good, based on low-risk'.</p>
CriteriaStatus	Criteria	Criterion for which the assessment is reported	Required	<p>Enter one code from List 'GEScriteria'.</p> <p>Criteria are always linked to an element, excepting for D6C1, D6C2, D7C1, D8C3, D11C1 and D11C2 where an element is not reported and the criterion is linked directly to the Feature.</p> <p>A criterion should not be duplicated within an Element report (or Element/Element2 combination) (for a particular Feature/MRU/Descriptor).</p>
CriteriaStatus	CriteriaStatus	Indicate the status of the criteria based on the outcomes of the parameters used	Required (where applicable)	<p>Enter one of the following from List 'StatusCriteria':</p> <ul style="list-style-type: none"> <li>a. 'Good'</li> <li>b. 'Good, based on low risk'</li> <li>c. 'Not good'</li> <li>d. 'Contributes to assessment of another criterion'</li> <li>e. 'Not assessed'— if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>f. 'Unknown'— if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold</li> </ul>

Schema class	Schema field	Description	Property	Guidance
				<p>value or GES is achieved or not</p> <p>g. 'Not relevant'</p> <p>If 'Good, based on low risk' is selected, provide a justification in 'DescriptionCriteria'. When "CriteriaStatus" is 'Not assessed', then the class CriteriaValues does not need to be reported. See Annex I and Annex III for information on which criteria are considered as 'Contributes to assessment of another criterion' (i.e., not contributing to a Feature that requires a conclusion on GES status).</p> <p>When a single parameter is reported for a criterion, no integration rules are needed at parameter level and the status of the criterion should normally match the ParameterAchieved value (e.g., ParameterAchieved = Yes; CriteriaStatus = Good). If an opposing value is reported for CriteriaStatus, a reason should be provided in DescriptionCriteria.</p>
CriteriaStatus	DescriptionCriteria	Description of the criteria assessment outcomes, when needed	Optional	<p>Free text (max. 2500 characters).</p> <p>If 'Good, based on low risk' is selected in 'CriteriaStatus', provide a justification here.</p>
CriteriaValues	Parameter	Parameter assessed	Required	<p>Enter one code from List 'Parameter'.</p> <p>If the parameter used is not in the enumeration list, contact the MSFD Help Desk.</p> <p>Parameter is always linked to a criterion.</p> <p>A parameter should not be duplicated within a criterion report (for a particular Element/Feature/MRU/Descriptor).</p> <p>For reporting on contaminants (D8, D9) ensure the matrix is reported (water, sediment or biota) and for biota, also report the tissue (fat, liver, muscle, other) as 'Parameter' (e.g., 'Concentration in biota – liver') and the species sampled as 'Element2'.</p>
CriteriaValues	ThresholdValueUpper	Value defined as threshold. Whenever the threshold has been defined as a range: upper value.	Conditional: required when a threshold value is provided or when the threshold value is a range	<p>Number.</p> <p>In cases where the value representing a good state lies <u>between</u> an upper and lower value (e.g., population size for some bird and fish species), report these values as 'ThresholdValueUpper' and 'ThresholdValueLower'. For ALL other cases, where the value representing a good state lies above or below a single threshold value, report that value in 'ThresholdValueUpper'.</p> <p>To ensure the Article 8 reports are complete and self-contained, ensure the values used are reported here and do not rely on a reference to where the values can be found, such as threshold values taken from other sources (e.g.,</p>

Schema class	Schema field	Description	Property	Guidance
				WFD Decisions for D8 substances, Foodstuffs Regulation for D9 substances). The values used in 2018 reports will be provided prefilled for 2024 reports. For D6, use this field only for <u>quality</u> threshold values (D6C3, D6C5); use the 'ProportionThresholdValue' field to report on the maximum allowable extent of habitat loss and adverse effect (D6C4, D6C5).
CriteriaValues	ThresholdValueLower	Whenever the threshold has been defined as a range: lower value.	Optional (where available) required only when the threshold value is a range	Number. For use when the value to be achieved should be between the upper and lower threshold values entered.
CriteriaValues	ThresholdValueOperator*	Indicator if ValueAchieved should be above or below ThresholdValueUpper or between ThresholdValueUpper and ThresholdValueLower	Required	Enter one operator from the following: a. '≥' – for a good state, the value achieved should be greater than or equal to the value in 'ThresholdValueUpper'; b. '↔' – for a good state, the value achieved should be between (including equal to) the values in 'ThresholdValueUpper' and 'ThresholdValueLower'; c. '≤' - for a good state, the value achieved should be less than or equal to the value in 'ThresholdValueUpper'.
CriteriaValues	ThresholdQualitative	Definition of the threshold if ever it is not quantitative	Optional (where available)	Free text (max. 250 characters). Text description of a qualitative threshold value, for cases where a quantitative value is not yet available. Also, use this field to: a. explain why reported threshold values ('ThresholdValueUpper', 'ThresholdValueLower') differ to those agreed at EU, regional or subregional level for element/criterion being reported; b. Indicate if 'Directional trends' or 'Pressure-based proxy' (when selected in 'ThresholdValueSource') are agreed nationally or (sub)regionally.
CriteriaValues	ThresholdValueSource	Provide the source of the threshold value, e.g., taken from other legislation or policies, or defined through regional processes or nationally	Conditional (when ThresholdValueUpper is provided)	Enter one code from List 'SourcePolicy'. If the source of the threshold value used is not in the enumeration list, contact the MSFD Help Desk.
CriteriaValues	ValueAchievedUpper	Value resulting from monitoring and assessment.	Conditional: required if a value is provided under	Number. For multiple samples/sites in the MRU, provide the upper (this field) and



Schema class	Schema field	Description	Property	Guidance
		Whenever the value has to be provided as a range: upper value.	ValueAchievedLower.	lower (next field) values in the dataset. The proportion of values achieving the threshold value should be expressed in 'ProportionValueAchieved'.
CriteriaValues	ValueAchievedLower	Whenever the value has to be provided as a range: lower value.	Optional (where available).	Number
CriteriaValues	ValueUnit	Unit in which the value is expressed	Conditional: required when ValueAchievedLower is provided	Enter one code from List 'Unit'. If the unit used is not in the enumeration list, contact the MSFD Help Desk.
CriteriaValues	ProportionThreshold Value	Proportion of MRU area, or of the species group or habitat type within the MRU, over which the threshold value set is to be achieved	Conditional (where relevant)	Percentage. GES Decision Recital 15 states that Member States need to define the extent to which the threshold values are to be achieved (bearing in mind Recital 14 which states that threshold values may not be achieved in all areas). This requirement is expressed in the reporting as the proportion value for the MRU. It was reported in 2012 under the Art. 9 schema. This proportion value is therefore an important part of the GES determination and should be entered, where relevant (Annex III worked examples provide an indication of relevance). When reporting on species (D1, D3, D8, D9 and D10), when the proportion threshold value and its assessment apply to the entire population within the assessment area (MRU), enter 100% and use '% of population achieving threshold value' in field 'ProportionThresholdValueUnit'. For D6, use this field to report maximum allowable extent of habitat loss or adverse effect (D6C4, D6C5).
CriteriaValues	ProportionValueAchieved	Proportion of MRU area, or of the species group or habitat type within the MRU, over which the threshold value set has been achieved, OR extent of adverse effect (not achieving threshold values)	Optional (where available)	Percentage. For D6, use this field for extent of loss, disturbance and adverse effect (all D6 criteria). Report as % (not km <sup>2</sup> ) for consistency of results across Member States.
CriteriaValues	ProportionThreshold ValueUnit	Unit for proportion/extent	Conditional: required when Proportion ThresholdValue is provided	Enter one of the following from List 'ProportionThresholdValueUnit': a. '% area of habitat achieving threshold value' b. '% area of habitat adversely affected' c. '% area of MRU achieving threshold value'

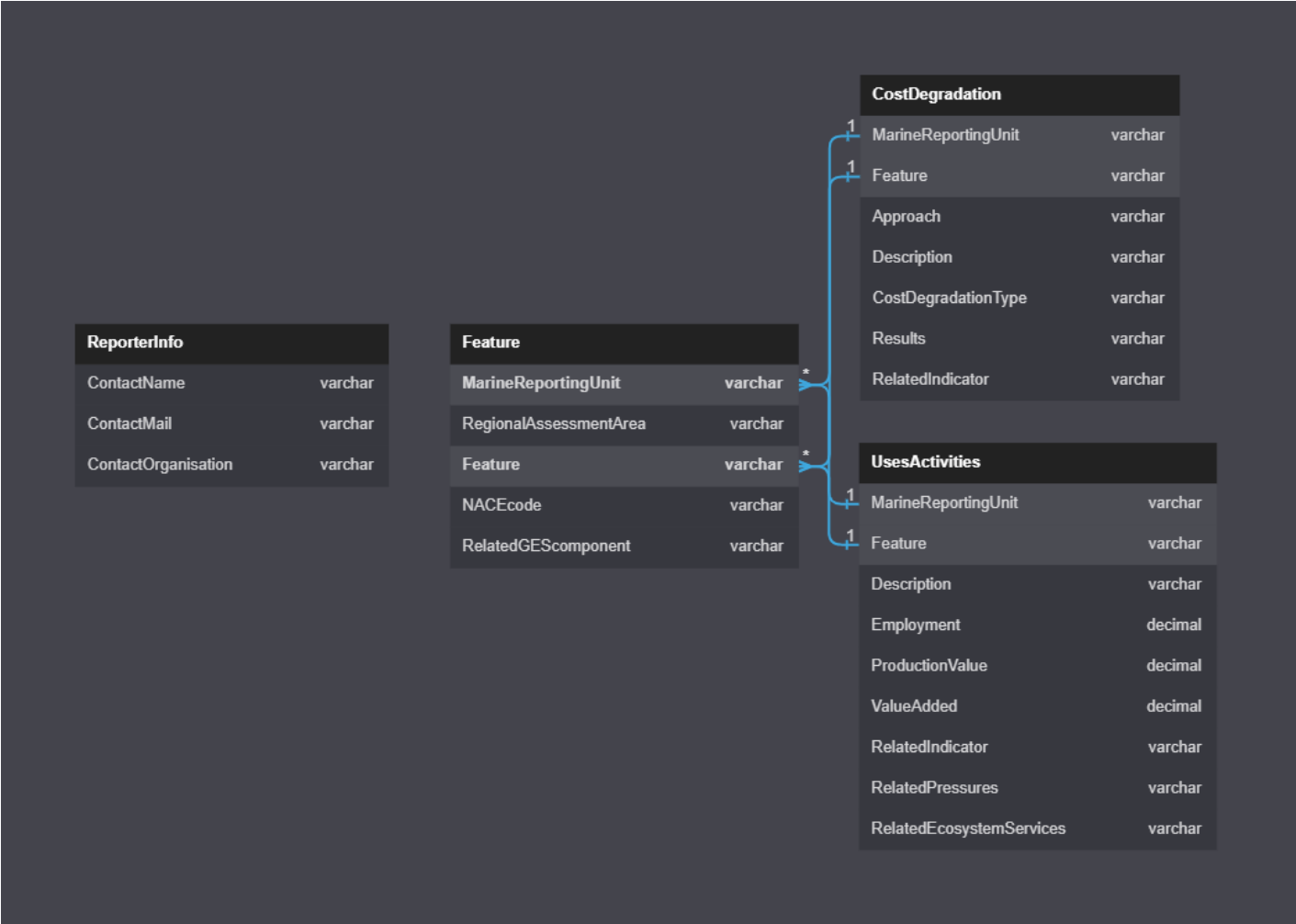
Schema class	Schema field	Description	Property	Guidance
				<ul style="list-style-type: none"> <li>d. '% of population achieving threshold value'</li> <li>e. '% of samples achieving threshold value'</li> <li>f. '% of species group adversely affected'</li> <li>g. '% of individuals adversely affected'</li> <li>h. '% of species achieving threshold value'</li> <li>i. '% of stations achieving threshold value'</li> <li>j. 'extent in km<sup>2</sup> of MRU adversely affected'</li> <li>k. 'extent in km<sup>2</sup> of habitat adversely affected'</li> <li>l. 'extent in km<sup>2</sup> of pressure'</li> </ul> <p>'Adversely affected' indicates values are below the threshold value.</p> <p>For D6C3 use (b) '% area of habitat adversely affected' and for D6C4 and D6C5 use (a) '% of stations achieving threshold value' (for consistency of units reported across Member States).</p>
CriteriaValues	TrendParameter	Trend in status compared with previous 6-year reporting period	Required	<p>Enter one of the following from List 'Trend':</p> <ul style="list-style-type: none"> <li>a. 'Improving' (status improving, pressure or impact reducing)</li> <li>b. 'Stable'</li> <li>c. 'Deteriorating' (status deteriorating, pressure or impact increasing)</li> <li>d. 'Not assessed' – if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>e. 'Unknown' – if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not, or the parameter assessed is new and there was no assessment in 2018</li> <li>f. 'Not Relevant'</li> </ul> <p>Indicate whether the status at parameter level ('ParameterAchieved' value) has improved, deteriorated or remained stable compared with the previous 6-year reporting period; 'trend' is not used to reflect long-term changes in the underlying data for the parameter (indicator).</p> <p>Trend is particularly important in cases where a threshold value is not yet available. It is also particularly relevant given that environmental status can be slow to respond to measures and so a trend can give an indication that progress is being made towards GES, even if not yet reached.</p>
CriteriaValues	ParameterAchieved	Indicate whether the threshold value has been achieved or not (over the required proportion of the	Required	<p>Enter one of the following from List 'StatusParameter':</p> <ul style="list-style-type: none"> <li>a. 'Yes'</li> <li>b. 'Yes, based on low risk'</li> <li>c. 'No'</li> </ul>

Schema class	Schema field	Description	Property	Guidance
		assessment area)		<ul style="list-style-type: none"> <li>d. 'Not assessed'– if the lack of assessment is based on a decision to not assess the aspect at stake</li> <li>e. 'Unknown' - if the lack of knowledge (e.g., data, methodologies, agreed values) does not allow a conclusion whether a threshold value or GES is achieved or not</li> </ul> <p>'Yes and 'No' responses should be based on 'ThresholdValue' AND, where appropriate, 'ProportionValue'.</p>
CriteriaValues	DescriptionParameter	Description of the parameter assessment outcomes, when needed	Optional	<p>Free text (max. 2500 characters).</p> <p>Describe here the metric that has been used to get the 'ValueAchieved' (e.g., annual average; winter average; 90<sup>th</sup> percentile; etc.).</p>
CriteriaValues	RelatedIndicator	Indicator/s from which the assessment has been extracted	Required (where available)	<p>Enter as many indicator codes as necessary (as reported by MS under the schema 'Indicator').</p> <p>For new indicators, firstly enter the indicator into the 'Indicator' schema, using the following code structure: sub(region) code <u>plus</u> RSC/MS code <u>plus</u> defined alpha-numeric code (e.g., ABI-OSPAR-Nutrients2017). Once in the Indicator schema, the indicator will be available to select here.</p> <p>In cases where there is no indicator for the assessment, select 'No indicator'.</p>

### C. ART8\_ESA

According to what has been described in section 3.5, Figure 4 represents the structure of the schema.

Figure 4. Diagram of the schema 'ART8\_ESA'.



Based on the schema, Table 8 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.

Table 8. Fields of the schema 'ART8\_ESA'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the organisation	Required	Email address (max. 100 characters).
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
Feature	MarineReportingUnit	Area where the Assessment applies	Required	Enter a Marine Reporting Unit (as reported by MS in schema <a href="#">MRU</a> ).
Feature	RegionalAssessmentArea*	Area of the marine region or subregion where the assessment was originally undertaken and for which the assessment results have been used to apply to the national MRU.	Conditional (if assessment was undertaken in an area broader than the MRU)	Enter one code from List 'RegionalAssessmentArea'. Refers to regional assessment areas, such as used for RSC quality status reports and RFMO commercial stock assessments. It can also refer to the entire area of marine waters of a Member State (e.g., when national data are used for the Article 8(1c) assessment and cover more than one (sub)region). A list of areas used needs to be available for selection in the schema [Need to prepare a list with RSCs/RFMOs/ICES]. The national MRU is the part of an MS marine waters that is addressed by the regional assessment. See Annex VI for further details.
Feature	Feature	Feature to which the assessment applies	Required	Enter one from List 'FeatureActivity, 'FeatureEcosystemService' or 'FeaturePressure'. Pressure codes would be expected when the cost-based approach is done by 'degradation theme', instead of by 'human activity' (in the cost of degradation assessment).
Feature	NACEcode	Enter the NACE codes relevant to the Use/activity	Required (where applicable)	Enter the relevant NACE codes from List 'NACECodes'. If the sector is not in the list, enter the corresponding NACE code (2, 3 or 4-digit codes are

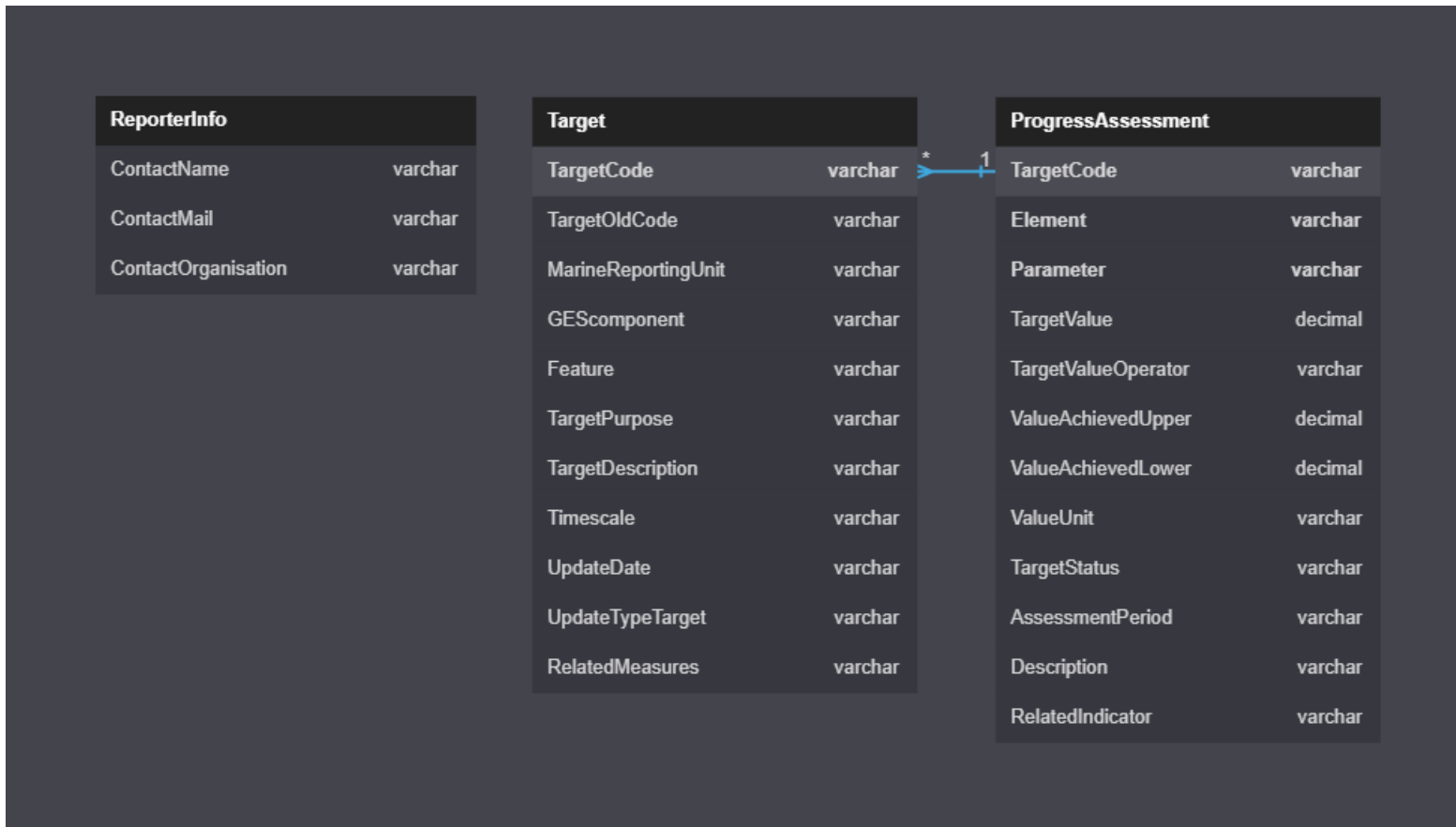
Schema class	Schema field	Description	Property	Guidance
		(from which the socio-economic data are derived)		allowed).
Feature	RelatedGEScomponent	Descriptors or criterion to which the assessment is related	Optional	Enter as many Descriptor or Criterion codes as necessary from Lists: 'GESDescriptor' and 'GESCriteria'.
UsesActivities	Description	Description of the use/activity (e.g., its characteristics in the area reported), of the approach to the analysis and of the assessment outcomes, including the results of the assessment when the ecosystem services approach is used	Optional	Free text (max. 2500 characters).
UsesActivities	Employment	Direct employment (*1000 FTE) under the activity	Optional	Number
UsesActivities	ProductionValue	Production value (€ million) of the activity	Optional	Number
UsesActivities	ValueAdded	Value-added (€ million) by the activity	Optional	Number
UsesActivities	RelatedIndicator	Indicators used for the assessment	Required (where applicable)	Enter as many indicator codes as necessary (as reported under the schema 'Indicator').
UsesActivities	RelatedPressures	Pressures that are produced by the activity	Required (where applicable)	Enter as many codes from List 'FeaturePressure' as necessary (suggest up to three pressures). If there are no clear pressure relationships, enter 'Unknown'.
UsesActivities	RelatedEcosystemServices	Ecosystem services that the activity is dependent on	Optional	Enter as many codes from List 'FeatureEcosystemService' as necessary.
CostDegradation	Approach	Indicate which approach has been used for the calculation of the cost of degradation	Required	Enter one of the following from List 'CostDegradationApproach': a. 'Cost-based' b. 'Ecosystem services' c. 'Thematic' OR d. 'Other' (to be explained in the field Description)

Schema class	Schema field	Description	Property	Guidance
CostDegradation	Description	Describe main costs or changes due to degradation and, where relevant, provide details on the importance or value of the theme, or on the benefits derived from it, and details on what aspects have been included.	Optional	Free text (max. 2500 characters).
CostDegradation	CostDegradationType	Cost of degradation type	Optional	Enter as many of the following as needed from List 'CostDegradationType': <ul style="list-style-type: none"> <li>a. 'monitoring and information costs'</li> <li>b. 'preventing and avoidance costs'</li> <li>c. 'enhancement costs'</li> <li>d. 'transaction costs'</li> <li>e. 'opportunity costs'</li> <li>f. 'mitigation costs'</li> <li>g. 'residual impacts, with reference to the current legislation objectives'</li> </ul>
CostDegradation	Results	Provide estimated costs or qualitative or quantitative indication of the value of the changes or consequences to the human well-being	Required	Free text (max. 2500 characters). Indicate any residual impacts that may be generated.
CostDegradation	RelatedIndicator	Indicators used within the assessment	Required (where applicable)	Enter as many indicator codes as necessary (as reported by MS in the schema 'Indicator').

## D. ART10\_Targets

According to what has been described in section 3.6, Figure 5 represents the structure of the schema.

Figure 5. Diagram of the schema 'ART10\_Targets'.



Based on the schema, Table 9 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.



Table 9. Fields of the schema 'ART10\_Targets'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the organisation	Required	Email address (max. 100 characters).
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
Target	TargetCode	Unique identifier for the Target	Required	For targets reported in 2018, enter either: <ul style="list-style-type: none"> <li>a. target code reported in 2018, or</li> <li>b. a modified target code. In cases where the code has been modified since 2018, enter the code(s) from the corresponding 2018 target(s) in the field 'TargetOldCode'.</li> </ul> All targets reported in 2018 must be reported in 2024. In cases where the target is withdrawn or fully implemented, and therefore no longer needed in the third cycle, enter 'Target no longer needed' in field 'UpdateType'. For new targets in 2024, use MS code plus MS-defined alpha-numeric code (e.g., IT-D08-T007).
Target	TargetOldCode*	Old code(s) of the environmental target(s) reported under Article 10 in 2018	Conditional (on 2024 code being different to 2018 code)	Enter the old (2018) target code(s) corresponding to the single 2024 code given in field 'TargetCode'.
Target	MarineReportingUnit	Area where the Target applies	Required	Enter a Marine Reporting Unit (as reported by MS in schema <a href="#">MRU</a> ).
Target	GEScomponent	Descriptor or Criteria to which the target applies	Required (more than one value is allowed)	Enter as many codes as necessary from Lists 'GESDescriptor' and 'GESCriteria'.
Target	Feature	Feature(s) to which the Target applies	Required	Enter as many Features as needed from Lists: <ul style="list-style-type: none"> <li>a. 'FeatureGESstate' - when the target relates to reducing impacts on ecosystem components</li> </ul>

Schema class	Schema field	Description	Property	Guidance
				<ul style="list-style-type: none"> <li>b. 'FeaturePressure' - when the target relates to reducing further inputs of pressures to the marine environment</li> </ul>
Target	TargetPurpose*	Indicates the main purpose(s) of the target	Required	<p>Select one or more of the following from List 'TargetPurpose':</p> <ul style="list-style-type: none"> <li>a. DirectlyPreventFurtherPressure - Directly aims to prevent further inputs of a pressure</li> <li>b. DirectlyReduceExistingPressureInSea - Directly aims to reduce existing levels of the pressure in the marine environment (e.g., removal of litter or oil spill clean-up)</li> <li>c. IndirectlyPreventFurtherPressure - Indirectly aims to prevent further inputs of a pressure (e.g., by governance mechanisms, financial incentives, awareness campaigns)</li> <li>d. DirectlyRestoreSpecies/Habitat - Directly aims to restore a species or habitat(s)</li> <li>e. ImproveKnowledge - Aims to improve knowledge base (e.g., by research or one-off surveys)</li> <li>f. Art11Monitoring - Aims to establish Article 11 monitoring programmes (of relevant activities, pressures or impacts)</li> <li>g. Art8ImproveMethods - Aims to improve methodologies for Article 8 assessments (e.g., development of indicators)</li> <li>h. Art9DeterminationGES - Aims to improve Article 9 determinations of GES (e.g., development of threshold values)</li> <li>i. Not known</li> </ul> <p>Note that options e, f, g and h are more focused on implementation of other MSFD Articles than strictly focused on the purpose of Article 10, but if reported under Article 10 (e.g., because they were also reported in 2012 or 2018), they should be classified here. These categories should only be used when they are the main focus of the reported 'target' (i.e., not if they are a component of a target focused on categories a-d).</p>
Target	TargetDescription	Description of the Target	Required	<p>Free text (max. 2500 characters).</p> <p>The target should define the gap, or part of the gap, between current state and GES, i.e., the amount of reduction in pressure or impact that is needed to achieve GES. Targets should not define aspects of a GES determination, but what needs to be done (through reducing pressures and impacts) to achieve the GES determination.</p>

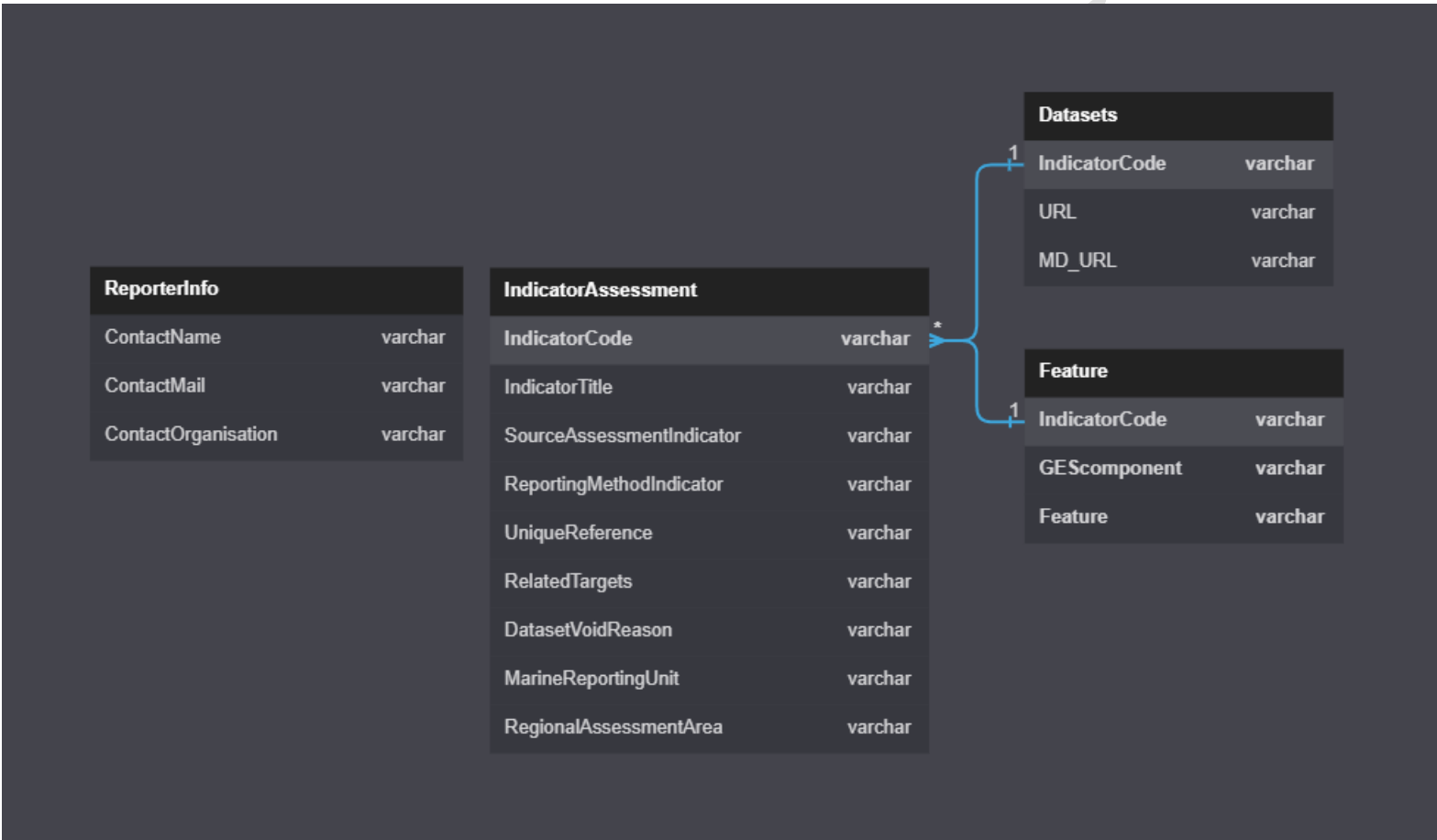
Schema class	Schema field	Description	Property	Guidance
				Include any key changes, if the target is modified since the 2018 report. Add here specific points from other fields that may require an explanation.
Target	Timescale	Timescale for achievement of the Target	Required	YYYYMM
Target	UpdateDate	Date when the Target has been officially adopted	Required	YYYYMM
Target	UpdateTypeTarget	Report on whether the Target reported under TargetDescription is as per 2018, modified from the 2018 definition, new or no longer needed	Required	Select one of the following from List 'UpdateTypeTarget': <ul style="list-style-type: none"> <li>a. 'Target same as 2018 definition'</li> <li>b. 'Target modified from 2018 definition'</li> <li>c. 'Target new in 2024'</li> <li>d. '2018 target no longer needed'. For latter option, explain the reason for this under ProgressAssessment: Description</li> </ul> Use 'Target same as 2018 definition' when the target remains essentially the same (i.e., it has the same purpose, spatial and temporal scope and implementation method, or has only minor changes, such as a change in the target code or temporal scope). If these aspects are modified use 'Target modified from 2018 definition' and provide an explanation of the changes in 'TargetDescription'.
Target	RelatedMeasures	Measure(s) codes that have been defined to achieve the target	Required applicable (where applicable)	Enter as many Measure codes as necessary (as reported by MS under the Article 13 Programmes of Measures reporting in 2022). In the case of new targets, if they are not related to any reported measure, enter 'NotApplicable'.
ProgressAssessment	Element	Specific element covered (species, habitat, contaminant...) by the target	Required applicable (where applicable)	Enter, from the List of 'pressure inputs to the marine environment'.
ProgressAssessment	Parameter	Parameter assessed	Required	Enter one code from List 'Parameter'. If Parameter is not available in the enumeration list, contact <a href="mailto:msfd.helpdesk@eionet.europa.eu">msfd.helpdesk@eionet.europa.eu</a> .
ProgressAssessment	TargetValue	Value defined as Target (for quantified targets)	Optional (where available)	Number
ProgressAssessment	TargetValueOperator*	Indicator if ValueAchieved should be above or below	Required	Enter one operator from the following: d. '≥' – for the target to be achieved, the value achieved should be

Schema class	Schema field	Description	Property	Guidance
		TargetValue		greater than or equal to the value in 'TargetValue'; e. '≤' - for the target to be achieved, the value achieved should be less than or equal to the value in 'TargetValue'.
ProgressAssessment	ValueAchievedUpper	Value(s) resulting from monitoring. Where applicable, provide a range.	Optional (where available)	Number
ProgressAssessment	ValueAchievedLower	Whenever the value has to be provided as a range: lower value.	Optional (where available).	Number
ProgressAssessment	ValueUnit	Unit in which the value is expressed	Conditional: required when ValueAchieved is provided	Enter one code from List 'Unit'. If the Unit required is not available in the enumeration list, contact <a href="mailto:msfd.helpdesk@eionet.europa.eu">msfd.helpdesk@eionet.europa.eu</a> .
ProgressAssessment	TargetStatus	Indicate whether the Target value has been achieved or not	Required applicable (where applicable)	Enter one on the following from List 'StatusTarget': a. 'Target achieved' b. 'Target not yet achieved'
ProgressAssessment	AssessmentPeriod	Start and end date of the 6-year assessment	Required	YYYY-YYYY
ProgressAssessment	Description	Description or comment on the assessment outcomes	Optional	Free text (max. 2500 characters). When 'Target no longer needed' is entered under 'UpdateTypeTarget', provide an explanation here.
ProgressAssessment	RelatedIndicator	Indicator(s) used to assess progress towards target	Required applicable (where applicable)	Enter as many indicator codes as necessary (as reported by MS in schema <a href="#">Indicator</a> ).

# E. Indicator

According to what has been described in section 3.7, Figure 6 represents the structure of the schema.

Figure 6. Diagram of the schema 'Indicator'.



Based on the schema, Table 10 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.

Table 10. Fields of the schema 'Indicator'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the organisation	Required	Email address (max. 100 characters).
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
IndicatorAssessment	IndicatorCode	Unique identifier for the indicator	Required	Use sub(region) code <u>plus</u> RSC/MS code <u>plus</u> defined alpha-numeric code (e.g., ABI-OSPAR-Nutrients2017) (max. 50 characters). When a regional indicator that is published is used, enter the regional code. If the regional indicator has not been published and there is a national indicator, enter the national code.
IndicatorAssessment	IndicatorTitle	Title of indicator	Required	Free text (max. 250 characters).
IndicatorAssessment	SourceAssessmentIndicator	Indicate the source of the indicator assessment	Required	<p>Enter one of the following from List 'SourcePolicy':</p> <ul style="list-style-type: none"> <li>n. 'WFD'</li> <li>o. 'HD'</li> <li>p. 'BD'</li> <li>q. 'HELCOM'</li> <li>r. 'OSPAR'</li> <li>s. 'UNEP/MAP'</li> <li>t. 'BSC'</li> <li>u. 'TWSC'</li> <li>v. 'MS in (sub)region'</li> <li>w. 'ICES'</li> <li>x. 'CFP'</li> <li>y. 'GFCM'</li> <li>z. 'National'</li> </ul> <p>If the source of the Indicator assessment is not in the List 'SourcePolicy'</p>

Schema class	Schema field	Description	Property	Guidance
				contact the MSFD HelpDesk.
IndicatorAssessment	ReportingMethodIndicator*	General approach used for the indicator assessment at parameter/criterion/element level	Required	<p>Enter one of the following from List 'ReportingMethod':</p> <ul style="list-style-type: none"> <li>a. Type A (regional unchanged)</li> <li>b. Type B1a (regional, results for national MRU)</li> <li>c. Type B2 (regional at national/subnational scale)</li> <li>d. Type C (regional, supplemented with national information)</li> <li>e. Type D (national)</li> </ul> <p>See Annex V for a description of each approach.</p> <p>Note that a different approach can be reported for the integrated assessment of overall status (ReportingMethod_Feature).</p> <p>For Type B1, the values reported should be applicable to the MRU and not to the 'RegionalAssessmentArea' of the original assessment.</p>
IndicatorAssessment	UniqueReference	Citable reference unique to resource	Required	Provide the URI or DOI as unique reference for the indicator (max. 250 characters).
IndicatorAssessment	RelatedTargets	Target to which the indicator is linked	Conditional: required when the indicator is applicable to Article 10	Enter the relevant target code (as reported by MS in schema 'ART10_Targets') (max. 50 characters).
IndicatorAssessment	DatasetVoidReason	Given reason not to report any dataset	Conditional: required when dataset is not reported	<p>Enter one of the following from List 'DataVoidReasons':</p> <ul style="list-style-type: none"> <li>a. 'Data-InPrep' - Data being prepared for publication</li> <li>b. 'Data-NotPublic' - Data not publicly accessible</li> <li>c. 'Data-NotElectronic' - Data not in an electronic format</li> </ul>
IndicatorAssessment	MarineReportingUnit	Area(s) of MS marine waters where the indicator applies	Required	Enter all relevant Marine Reporting Units to which the Indicator applies (as reported by MS in schema <a href="#">MRU</a> ).
IndicatorAssessment	RegionalAssessmentArea*	Area of the marine region or subregion where the assessment was originally undertaken and for which the assessment results have been used to apply to the national MRU.	Conditional (if assessment was undertaken in an area broader than the MRU)	<p>Select one from List 'RegionalAssessmentArea'.</p> <p>Refers to regional assessment areas, such as used for RSC quality status reports and RFMO commercial stock assessments.</p> <p>The national MRU is the part of a Member State's marine waters that is addressed by the regional assessment. See Annex V for further details.</p> <p>This field can also be used for Article 8(1c) assessments where the data are derived at national level and thus span several subregions.</p>
Feature	GEScomponent	Descriptor or Criteria relevant to	Required	Enter corresponding 'Descriptor' OR 'Criteria' from Lists 'GESDescriptor'

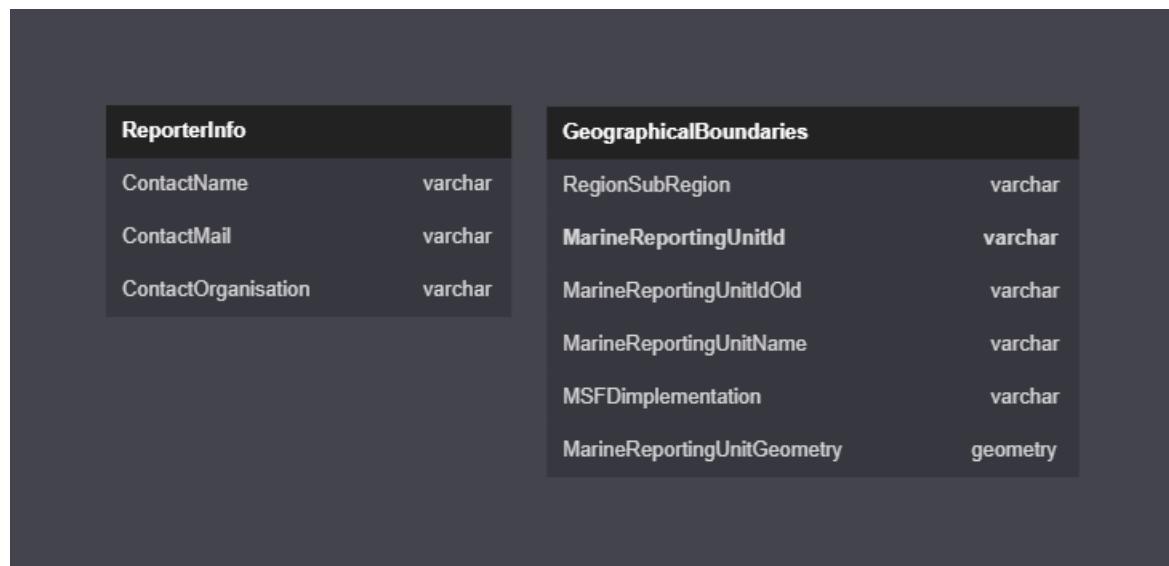
Schema class	Schema field	Description	Property	Guidance
		the indicator		and 'GESCriteria'.
Feature	Feature	Feature(s) to which the indicator applies	Required	Enter as many Features as needed from Lists 'FeatureActivity', 'FeatureEcosystemService', 'FeatureGESpressure', 'FeatureGESstate', 'FeaturePressure'.
Datasets	URL	Unique reference identifier of the dataset	Required	Report a URL or DOI for each dataset (maximum 2000 characters). Provide the URL or DOI where each dataset or web service can be accessed. Link to the relevant data from Article 11 monitoring programme and to the dataset used for the Article 8 indicator assessment. See GD15 for further guidance.
Datasets	MD_URL	Unique resource locator for the metadata	Optional	URL (maximum 2000 characters). URL of the XML file where the metadata of the dataset or web service are accessible. See GD15 for further guidance.



## F. MRU

Figure 7 represents the structure of the schema.

Figure 7. Diagram of the schema 'MRU'.

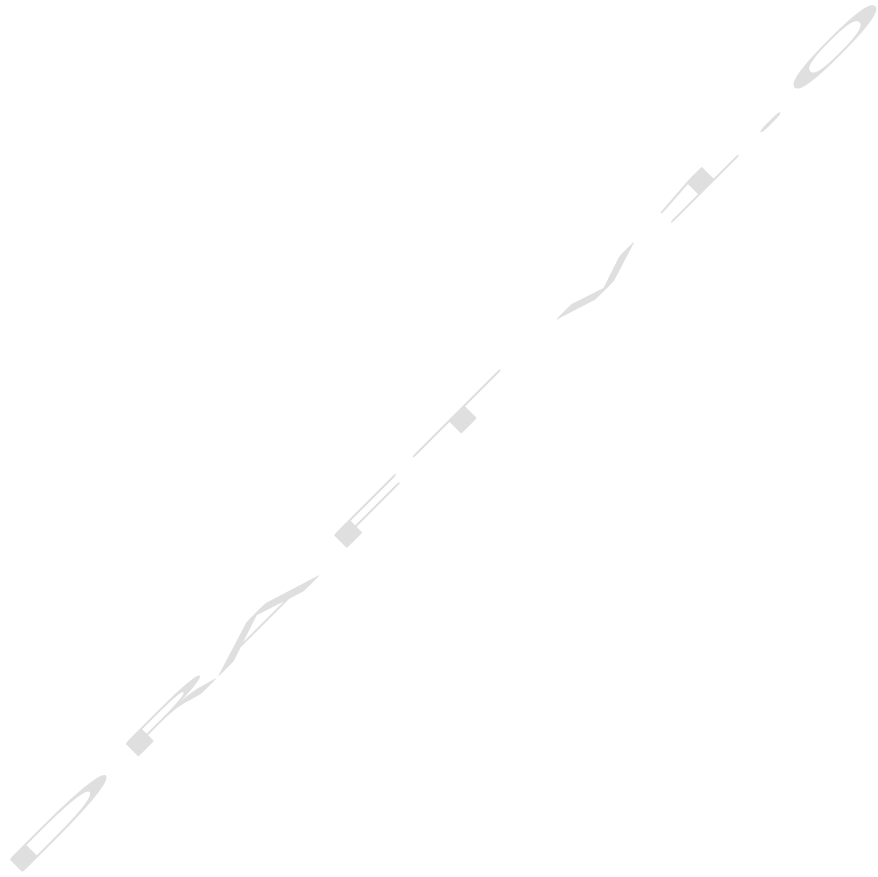


Based on the schema, Table 11 provides the details of the schema fields. Listed options in the guidance-column are examples, as the enumeration lists are not final and could be updated.

Table 11. Fields of the schema 'MRU'.

Schema class	Schema field	Description	Property	Guidance
ReporterInfo	ContactName	Name of the reporter	Optional	Free text (max. 100 characters).
ReporterInfo	ContactMail	Email of the reporter or functional email of the	Required	Email address (max. 100 characters).

Schema class	Schema field	Description	Property	Guidance
		organisation		
ReporterInfo	ContactOrganisation	Name of the reporter's organisation and address	Required	Free text (max. 500 characters).
GeographicalBoundaries	RegionSubregion	MSFD region or subregion in which the MRU is placed	Required	Select one from List 'RegionSubregion'. For North-East Atlantic Ocean and Mediterranean Sea regions, enter the information at subregion level only.
GeographicalBoundaries	MarineReportingUnitId	Unique code for the Marine Reporting Unit	Required	Unique EU code for the marine reporting area. To be constructed as follows: Region/subregion code-MS ISO code-AreaTypecode-Sequential number or alphanumeric Eg., ANS-NL-AA-001; MWE-ES-SD-Alboran  Each MRU must sit within a region/subregion and not extend beyond its boundary. Each MRU must: <ul style="list-style-type: none"> <li>a. either equate to the Member State marine waters' part of a marine region/subregion or sit within the borders of the Member State's marine waters</li> <li>b. not extend beyond the border of the marine waters or the boundary of the marine region/subregion</li> </ul>
GeographicalBoundaries	MarineReportingUnitIdOld	Previous code(s) for the Marine Reporting Unit	Conditional (on 2024 code being different to 2018 code)	Enter the old (2018) MRU code(s) corresponding to the single 2024 code given in field 'MarineReportingUnitId'.
GeographicalBoundaries	MarineReportingUnitName	Name of the Marine Reporting Unit	Required	Free text (max. 250 characters)
GeographicalBoundaries	MSFDImplementation	Indicates whether MSFD is implemented in both the water column and seabed of the MRU or only on the seabed	Required	Select one from the list 'MSFDImplementation': <ul style="list-style-type: none"> <li>a. 'Water column+seabed' – MSFD applies to the water column and seabed of the MRU</li> <li>b. 'Seabed' – MSFD applies only to the seabed of the MRU</li> </ul>
GeographicalBoundaries	MarineReportingUnitGeometry	Spatial data that delimitates the MRU	Required	Spatial data that delimitates the MRU



## ANNEX III: ILLUSTRATIVE EXAMPLES OF E-REPORTING OUTPUTS

This annex provides some concrete examples to show how the e-reporting has been developed and structured via an underlying data model, covering all descriptors.

### Article 8 assessments outputs – examples for all descriptors

Worked examples are presented in the embedded spreadsheet:

- a. The examples demonstrate how the requirements of the GES Decision can be expressed in the reporting schemas and aim to cover a variety of possible scenarios for reporting (e.g., use of regional or national information, use of primary and/or secondary criteria, various different outcomes from the assessments).
- b. Example information for every criterion is provided, using information which is as realistic as possible (taken in many cases from existing assessments), but is provided for illustrative purposes only.
- c. Cells where no information is needed for a particular descriptor are greyed out (dark grey – not needed, light grey not needed depending on previous entries).
- d. The examples cannot cover all possible reporting needs of Member States but provide further testing of the schemas and demonstrate their flexibility to cover all the Descriptors and multiple ways in which Member States can report their information. Further, some information is still under development (e.g., threshold values at regional and EU levels) and national alternatives may not be available.

Version 20230419:



MSFDguidance\_2024  
reporting\_Art8-9-10\_

## ANNEX IV: COMMON INDICATOR STRUCTURE

### A. Common Indicator Structure<sup>43</sup>: XML elements annotated

Table 12. XML elements of the Common Indicator Structure.

Common indicator structure		XML Schema			
ID	Category and relevant fields	Schema Class	Schema Element	Property	Guidance
<b>Access and use</b>					
1	Conditions applying to access and use	AccessAndUse	ConditionsApplying	Required	Text, URL
<b>Assessment findings</b>					
2	Key assessment	AssessmentFindings	KeyAssessment	Required	Text
3	Key messages	AssessmentFindings	KeyMessage	Required	Text, URL
4	Results and Status	AssessmentFindings	ResultsAndStatus	Required	Text, URL
5	Trend	AssessmentFindings	Trend	Optional	Text, URL
<b>Assessment methods</b>					
6	Indicator Definition	AssessmentMethods	IndicatorDefinition	Required	Text
7	Methodology for indicator calculation	AssessmentMethods	IndicatorMethodology	Required	Text, URL
8	Methodology for monitoring	AssessmentMethods	MonitoringMethodology	Optional	Text, URL
9	Indicator units	AssessmentMethods	IndicatorUnits	Optional	Text, URL
10	Concept and target setting method	AssessmentMethods	ConceptAndTarget	Optional	Text, URL
<b>Assessment purpose</b>					
11	Indicator purpose	AssessmentPurpose	IndicatorPurpose	Required	Text, URL
12	Policy relevance	AssessmentPurpose	PolicyRelevance	Optional	Text, URL
13	Relevant publications (policy, scientific etc)	AssessmentPurpose	RelevantPublications	Optional, Unbounded	Text, URL
14	Policy Targets	AssessmentPurpose	PolicyTargets	Optional	Text
<b>Contact and responsibility</b>					
15	Contributing countries	Contact	ContributingCountries	Optional, Unbounded	ISO 3166-1 alpha-2 Country Code
16	Citation	Contact	Citation	Required	Text, URL
17	Point of contact	Contact	PointOfContact	Required	Text

<sup>43</sup> From MSFD [Guidance Document 13](#).

Common indicator structure		XML Schema			
ID	Category and relevant fields	Schema Class	Schema Element	Property	Guidance
<b>Data inputs and outputs</b>					
18	Data sources	DataInputOutput	DataSources	Required	Text, URL, DOI
19	Assessment dataset	DataInputOutput	AssessmentDataset	Required	URL
20	Assessment result	DataInputOutput	AssessmentResult	Required	Text, URL
21	Assessment result- map	DataInputOutput	AssessmentResultMap	Optional	Text, URL
<b>Geographical scope</b>					
22	Assessment/Reporting unit	GeographicalScope	AssessmentReportingUnit	Optional, Unbounded	Text, URL
23	Countries	GeographicalScope	Countries	Required, Unbounded	ISO 3166-1 alpha-2 Country Code
24	Other geographical unit	GeographicalScope	OtherGeographicalUnit	Optional	Text
37	Assessment area (context)		AssessmentArea	Optional	Text
<b>Labelling and classification</b>					
25	DPSIR	LabellingClass	DPSIR	Optional	DPSIR Type
26	MSFD criteria	LabellingClass	MSFDCriteria	Required	Text
27	Indicator title	LabellingClass	IndicatorTitle	Required	Text
28	INSPIRE topics	LabellingClass	INSPIRETheme	Required	Inspire Theme
<b>Quality aspects</b>					
29	Data confidence	QualityAspects	DataConfidence	Required	Text
30	Indicator methodology confidence	QualityAspects	IndicatorConfidence	Optional	Text
31	GES – confidence	QualityAspects	GESConfidence	Optional	Text
<b>Temporal scope</b>					
32	Temporal Coverage	TemporalScope	TemporalCoverage	Required	Date Range
<b>Version control</b>					
33	Last modified date	VersionControl	LastModifiedDate	Optional	Date
34	Published date	VersionControl	PublishedDate	Required	Date
35	Unique reference	VersionControl	UniqueReference	Optional	Text, URL
36	Version linkage	VersionControl	VersionLinkage	Optional	URL

## B. Mapping between schema 'Indicator' and the 'Common Indicator Structure'

Table 13. Correspondence between fields of the schema 'Indicator' and those of the 'Common Indicator Structure'.

MSFD reporting schema: Indicator		Common Indicator Structure: relevant field	
Schema class	Schema field	Field Label name	Schema field name
MarineUnit	MarineUnit	22. Assessment/Reporting unit	AssessmentUnit
Feature	Feature	26. MSFD Criteria	MSFDCriteria
Feature	GEScomponent	26. MSFD Criteria	MSFDCriteria
IndicatorAssessment	IndicatorCode	Not mapped	
IndicatorAssessment	IndicatorTitle	27. Indicator title	IndicatorTitle
IndicatorAssessment	SourceIndicator	16. Citation	Citation
IndicatorAssessment	URL	35. Unique reference	UniqueReference
Datasets	URL	19. Assessment dataset	AssessmentDataset
Datasets	MD_URL	19. Assessment dataset	AssessmentDataset

## **ANNEX V: USING REGIONAL ASSESSMENTS FOR MSFD REPORTING PURPOSES**

### **A. Introduction**

This annex reviews the relationship between the Article 8 report and regional QSRs, including how reuse of the regional assessments for MSFD purposes is facilitated through having compatible structures and content. As Member States are responsible for reporting under the MSFD on the state of their national marine waters, this annex then considers the practicalities of using the QSR assessments for MSFD reporting purposes.

The MSFD and GES Decision require regional coordination in undertaking Article 8 assessments, firstly to yield results which are consistent and compatible between countries in a region or subregion, and secondly, to ensure the assessments are undertaken at ecologically or hydrologically relevant scales. This has led to the development of regional QSRs which, in addition to fulfilling the Convention's needs, can fulfil, at least in part, the needs of Member States for MSFD Article 8 reporting. On the other hand, it is the responsibility of Member States to report to the Commission on the status of its waters under Article 8. This section aims to clarify how this regional process and national responsibility can be achieved.

The use of RSC assessments for MSFD reporting has raised the following issues:

- a. how to report assessments undertaken at scales which span several Member States (i.e., assessments done at regional, subregional or subdivision scale);
- b. whether RSC assessments can include results that are directly relevant to a Member State's national waters (e.g., to reflect a situation that is better or worse than at a wider regional scale. This has relevance for links to environmental targets and measures under MSFD Articles 10 and 13);
- c. how in practice can RSC assessment results be used for MSFD e-reporting.

### **B. Approaches to reporting regional assessments**

This section demonstrates possible approaches to reporting RSC assessments for MSFD, based on a hypothetical (sub)region with several Member States and a non-EU state (Figure 8), and also a 'national' approach.



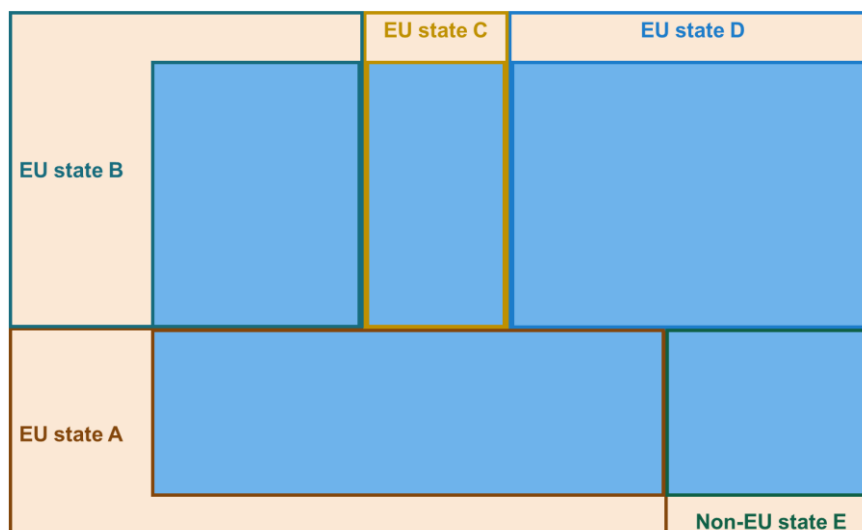


Figure 8. Hypothetical MSFD (sub)region showing marine waters of EU and non-EU states.

The possible approaches to assessment and reporting are outlined in Table 14, and further explained in the following sections. This section describes the type of assessment scale methodology used at indicator (parameter/criterion/element) or integrated (Feature) level.

Table 14. General approaches to undertaking assessments of indicators and integrated assessments at 'regional'<sup>44</sup> and 'national'<sup>45</sup> level for MSFD reporting.

Reporting method	Level methodology defined	Scale/area for assessment	Data used	Reporting under MSFD
A	(Sub)regionally agreed	Region, subregion or subdivision <sup>46</sup> assessment area (ecologically/hydrologically relevant), following GES Decision	'Regional' dataset for the 'regional' assessment area	'Regional' results reported unchanged, but applied to a national or subnational MRU
B1	(Sub)regionally agreed	National or subnational MRU	'National' subset of the 'regional' dataset, applicable to the 'national' assessment area	'National' results reported for the national or subnational MRU
B2	(Sub)regionally agreed	National or subnational MRU	'Regional' dataset assessed at national or subnational level	'Regional' results reported unchanged, for national or subnational MRUs
C	(Sub)regionally agreed	National or subnational MRU	Subset of the 'regional' dataset, applicable to the 'national' assessment area, supplemented with national data	'National' results reported for the national or subnational MRU (result could differ to method B due to differing dataset)
D	National	National or subnational	'National' dataset, applicable to the 'national'	'National' results reported for the national

<sup>44</sup> 'Regional' includes MSFD subregion or subdivision, and is an assessment or dataset extending beyond a Member State's waters.

<sup>45</sup> 'National' include subnational, and is an assessment or dataset not extending beyond a Member State's waters.

<sup>46</sup> This can include national or subnational assessment areas, e.g., for D2C1 or D10C1-C3.

Reporting method	Level methodology defined	Scale/area for assessment	Data used	Reporting under MSFD
		MRU	assessment area (data may not be harmonised/compatible with other MS in (sub)region)	or subnational MRU (result not compatible with other MS results)

### B.1 Reporting method A: 'regional' assessment reported without change

In this approach, assessments are undertaken at ecologically/hydrologically relevant scales in which the assessment area spans several national waters. The assessment follows a regionally agreed methodology and uses a data set compiled for the 'regional' scale of the assessment. For MSFD reporting, the Member State presents the results unchanged from the 'regional' assessment, signifying that the result is relevant to its national waters (i.e., a Marine Reporting Unit covering all or part of its marine waters). This is illustrated in Figure 9.

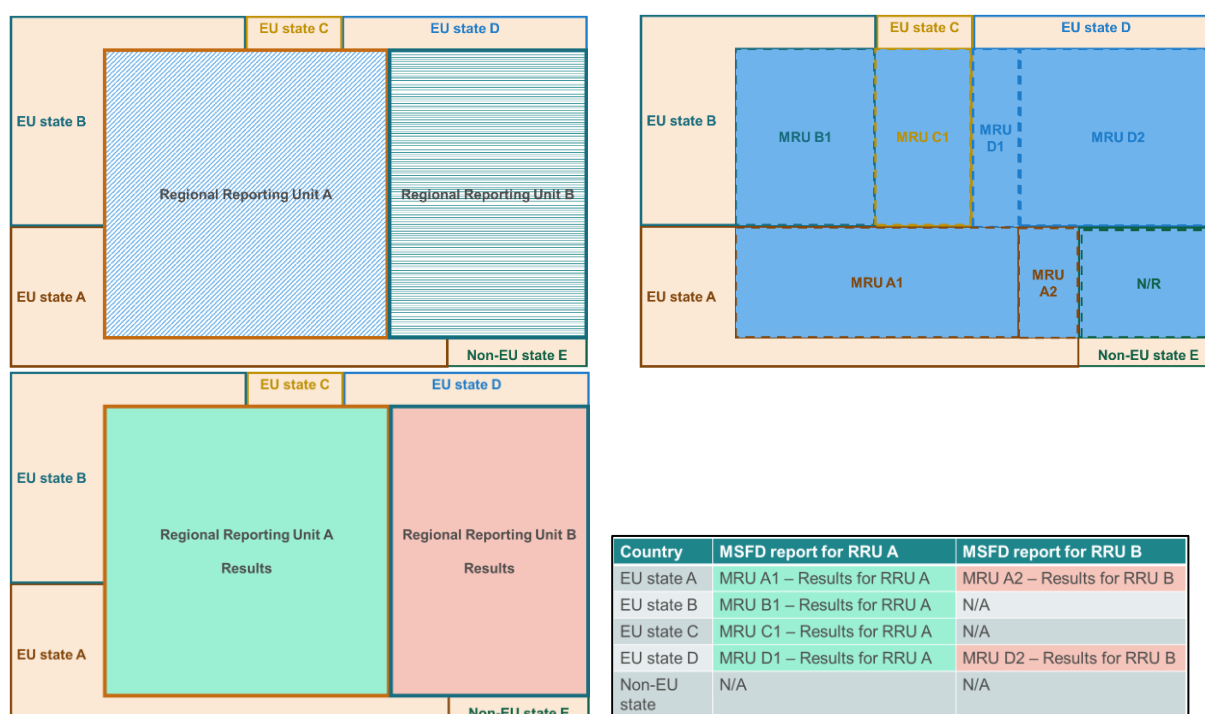


Figure 9. Reporting method A – 'Regional' assessment reported without change.

Top left: regional assessment areas (subdivisions of subregion); top right: corresponding national MSFD reporting areas (Marine Reporting Units – MRUs); bottom left: regional assessment results; bottom right: corresponding SAME national MSFD reports.

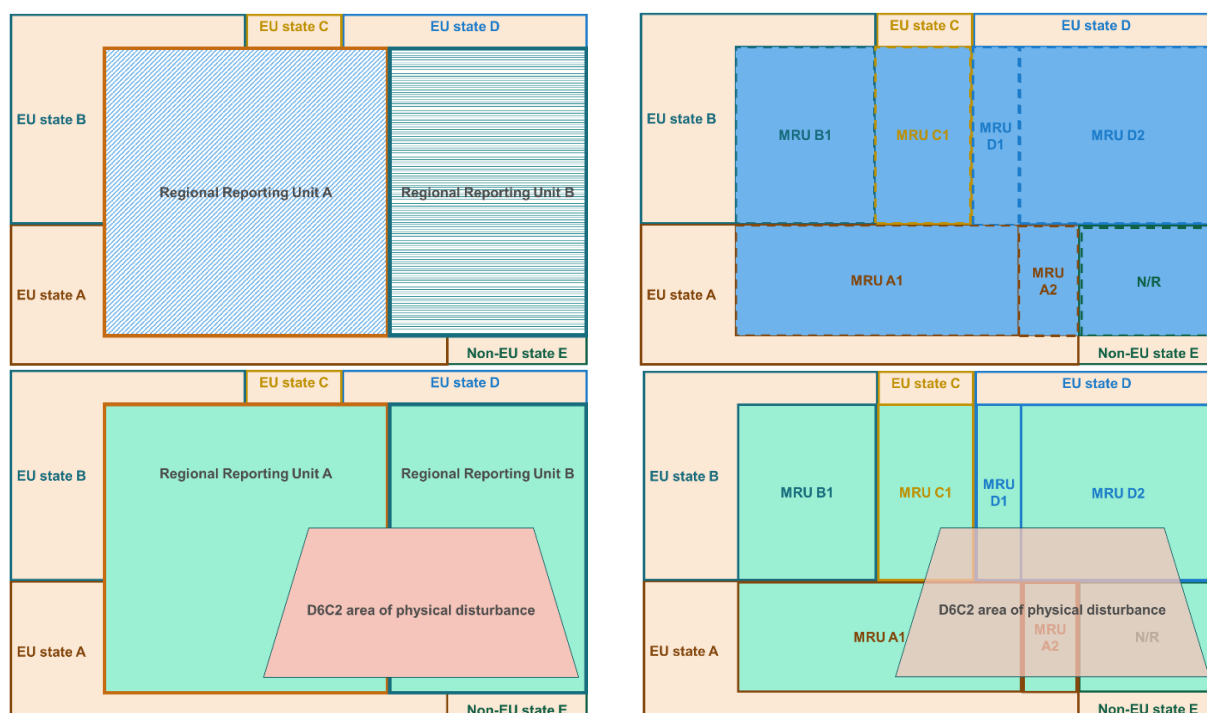
This approach is particularly suited to assessments of wide-ranging mobile species, where assessments are undertaken per species or population and aggregated up to species group level, and for assessments focused on pelagic ecosystems, where spatial differentiation per country is less appropriate:

- Descriptor 1 species groups (birds, mammals, reptiles, fish, cephalopods)
- Descriptor 3 commercial fish and shellfish
- Descriptor 9 contaminants in seafood (relating to fish populations)

- Descriptor 1 pelagic habitats
- Descriptor 4 food webs
- Descriptor 5 eutrophication (when the methodology for integrating data and criteria leads to a ‘whole area’ result without spatial differentiation per country)

**B.2 Reporting method B1: ‘regional’ assessment, reported at national level**

In this approach, assessments are undertaken at ecologically/hydrologically relevant scales in which the assessment area spans several national waters. For MSFD reporting, the Member State only presents results that are relevant to its national waters (i.e., a Marine Reporting Unit covering all or part of its marine waters), thereby indicating specifically the state of the assessment in its own waters. This is illustrated in Figure 10.



Country	Regional report for RRU A Extent of disturbance = 30%	Regional report for RRU B Extent of disturbance = 50%
EU state A	MRU A1 – Results for subnational part of RRU A = 40%	MRU A2 – Results for subnational part of RRU B = 80%
EU state B	MRU B1 – Results for national part of RRU A = 0%	N/A
EU state C	MRU C1 – Results for national part of RRU A = 15%	N/A
EU state D	MRU D1 – Results for subnational part of RRU A = 20%	MRU D2 – Results for subnational part of RRU B = 30%
Non-EU state	N/A	– Results for national part of RRU B = 70%

Figure 10. Reporting method B1 – ‘Regional’ assessment at subregion/subdivision scale but reported at national level.

Example uses assessment for D6C2 on physical disturbance. Top left: regional assessment areas (subdivisions of subregion); top right: corresponding national MSFD reporting areas (Marine Reporting Units – MRUs); middle left: regional assessment results; middle right: regional assessment results in relation to national MRUs; bottom: corresponding national MSFD reports.

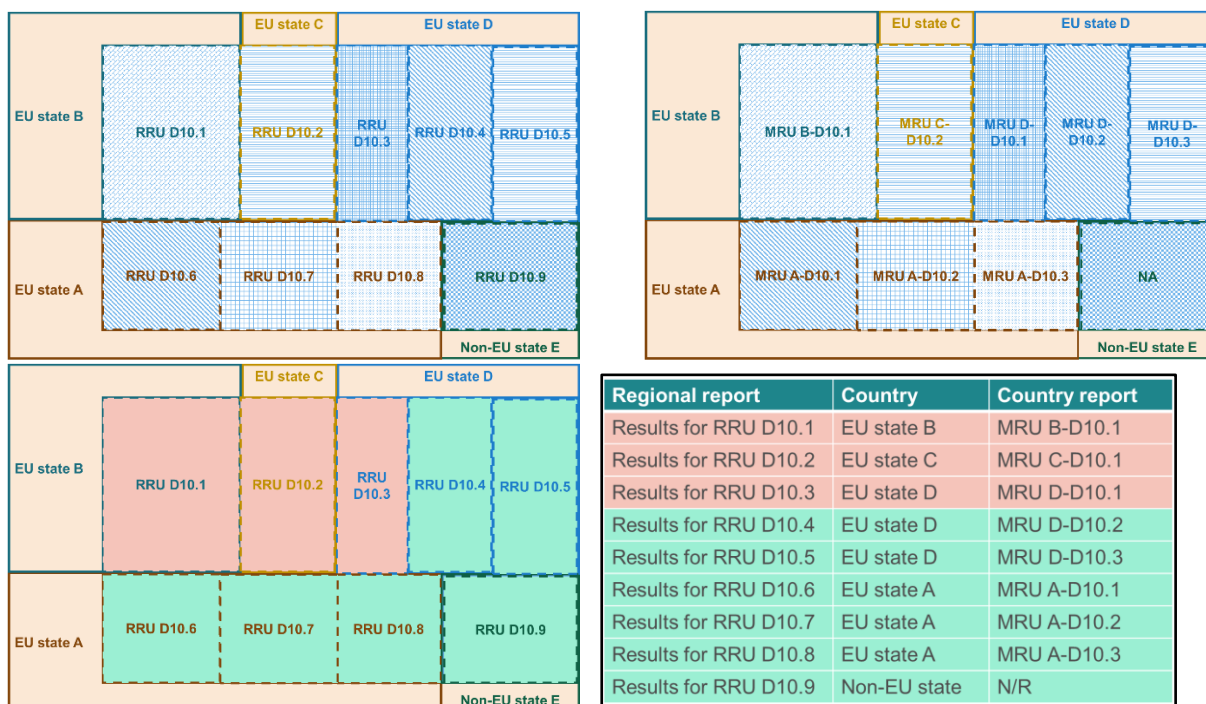
This approach is particularly suited to assessments where the pressure/impact/state can be expressed spatially and thus attributed to each country within the broader area of the assessment:

- Descriptor 2 non-indigenous species (established NIS and impacts)
- Descriptor 5 eutrophication (when the methodology for integrating data and criteria can be attributed spatially, such as by using a grid method, or for criteria D5C3-D5C8 relevant to the seabed)
- Descriptor 6 sea-floor integrity
- Descriptor 7 hydrographical changes
- Descriptor 11 underwater noise

This approach allows for an ecologically relevant scale of assessment, but also to distinguish at national level the extent of good status, adverse effects or pressure. Reporting the national situation can be more relevant for management purposes (i.e., for environmental targets and measures).

### B.3 Reporting method B2: ‘regional’ assessment, undertaken at national or subnational scale

In this approach, assessments are undertaken at national or subnational scale, according to a common regional methodology, and can therefore be reported by the Member State as one or several Marine Reporting Units covering all or part of its marine waters. This is illustrated in Figure 11.



*Figure 11. Reporting method B2 – ‘Regional’ assessment at national/subnational scale, reported without change.*

*Top left: regional assessment areas (national or subnational areas of subregion); top right: corresponding SAME national MSFD reporting areas (Marine Reporting Units – MRUs); bottom left: regional assessment results; bottom right: corresponding SAME national MSFD reports.*

This approach is particularly suited to pressure-based assessments that are sampled at specific locations:

- Descriptor 2 non-indigenous species (new introductions D2C1)
- Descriptor 8 contaminants (including acute pollution events?)
- Descriptor 10 litter (D10C1-C3)

#### ***B.4 Reporting method C: ‘regional’ assessment, supplemented with national information***

In this approach, the assessment is undertaken through a ‘regional’ process (as described in approaches A and B), using a regionally agreed methodology and data set, and undertaken at the appropriate ‘regional’ scale (i.e., regional, subregional, subdivisional, national or subnational scales depending on the feature). However, the Member State supplements the ‘regional’ assessment with additional information to produce its ‘national’ MSFD assessment. This additional information could take the form of:

- a. Adding national indicators (leading to updating of the integrated assessment result);
- b. Adding national data for regional indicators (i.e., redoing the indicator assessment and amending the values reported);
- c. Removing parts of the regional results (e.g., those not considered relevant for national waters, such as where a species in the regional assessment does not occur in the national waters).

This approach would lead to a ‘national’ assessment that could have a different result to the ‘regional’ result, even if the latter is undertaken at national or subnational level (approach B2).

#### ***B.5 Reporting method D: ‘national’ assessment***

In this approach, the assessment is undertaken through a ‘national’ process using a nationally agreed methodology and data set, and undertaken at a national or subnational scale, depending on the feature. There may be some compatibility with other countries in the region or subregion, achieved through regional, subregional or bilateral cooperation, but the assessment and its outcomes are delivered independently of other countries.

## **C. Using regional assessment results for MSFD e-reporting**

The reporting for MSFD Article 8 can be considered to fall broadly into two parts:

- a. Indicator assessment results for a given parameter/criterion and multiple elements
- b. Integrated assessment results for a Feature

The main fields of information needed are shown in Table 15 and Table 16, drawn from [Annex II](#). Fields in yellow require values/results from the outcomes of the assessment, while all other fields

can generally be prefilled at an earlier stage on the basis of the methodology defined for the assessment.

*Table 15. Main fields for reporting an indicator assessment for a parameter/criterion and multiple elements in schema 'Art8\_GES'.*

*Note that the first three fields – MRU, GES component and feature – are included to facilitate use of indicator results at the integrated feature level.*

Schema class	Schema field	Description
OverallStatus	MarineReportingUnit	Area where assessment of the feature applies
OverallStatus	RegionalAssessmentAreaIndicator	Area where regional assessment of the Indicator applies
OverallStatus	GEScomponent	Descriptor (e.g., D2)
OverallStatus	Feature	Feature (e.g., seals, eutrophication, litter)
ElementStatus	Element	Element of the Feature which is assessed (species, habitat, contaminant...)
ElementStatus	ElementExtent	Area of the habitat (broad, other) in the (regional) assessment area
ElementStatus	Element2	For D3, D9, D10C3 only - associated element (e.g., stock for commercial species, species used for assessing contaminant in seafood)
ElementStatus	SourceListElement	Source of the list of elements (e.g., HELCOM, or EU list)
CriteriaStatus	Criteria	GES Decision criterion (e.g., D6C1)
CriteriaValues	Parameter	Parameter assessed (e.g., concentration in water, species abundance)
CriteriaValues	ThresholdValueUpper	Value defined as threshold (for the parameter/indicator assessment) (upper value for some bird and fish indicators)
CriteriaValues	ThresholdValueLower	Lower value defined as threshold (for the parameter/indicator assessment) (for some bird and fish indicators)
CriteriaValues	ThresholdValueOperator	Indicates if value to be achieved is above or below ThresholdValueUpper (or between ThresholdValueUpper and ThresholdValueLower)
CriteriaValues	ThresholdValueSource	Source of the threshold value (e.g., from EU policy, or defined through regional processes)
CriteriaValues	ValueAchievedUpper	Upper value resulting from the indicator assessment
CriteriaValues	ValueAchievedLower	Lower value resulting from the indicator assessment
CriteriaValues	ValueUnit	Unit in which the value is expressed
CriteriaValues	ProportionThresholdValue	Proportion of MRU over which the threshold value set is to be achieved (e.g., extent of permissible adverse effect on habitat)
CriteriaValues	ProportionValueAchieved	Proportion of MRU area over which the threshold value set has been achieved
CriteriaValues	ProportionThresholdValue Unit	Unit for proportion value
CriteriaValues	TrendParameter	Trend in status (of the indicator) compared with previous 6-year reporting period
CriteriaValues	ParameterAchieved	Yes/No (threshold value achieved or not over the required proportion of the MRU)
CriteriaValues	DescriptionParameter	Description of the parameter assessment outcomes
CriteriaValues	RelatedIndicator	Indicator used for the assessment (e.g., HELCOM indicator – URL link)

*Table 16. Main fields for reporting an integrated assessment for a Feature in the schema 'Art8\_GES'.*

Schema class	Schema field	Description
OverallStatus	MarineReportingUnit	Area where assessment of the feature applies
OverallStatus	RegionalAssessmentArea	Area where regional assessment of the Feature applies
OverallStatus	GEScomponent	Descriptor (e.g., D2)
OverallStatus	Feature	Feature (e.g., seals, eutrophication, litter)

Schema class	Schema field	Description
OverallStatus	IntegrationRuleTypeParameter	Integration rule type applied when more than one parameter is used to assess the criterion
OverallStatus	IntegrationRuleTypeCriteria	Integration rule type applied when more than one criterion is used to assess the element
OverallStatus	SourceAssessmentFeature	Source of the assessment of the feature (e.g., RSC, other Directive)
OverallStatus	AssessmentPeriod	Start and end date for the 6-year assessment period
OverallStatus	GESextentThreshold	Threshold defined at feature level for achievement of GES
OverallStatus	GESextentAchieved	Extent to which GES has been achieved for the Feature (e.g., proportion of species/habitats/substances in good state)
OverallStatus	GESextentUnit	Unit for GES extent
OverallStatus	TrendFeature	Trend in status (of the feature) compared with previous 6-year reporting period
OverallStatus	GESachievedDate	Date by when GES has/will be achieved (categories)
OverallStatus	DescriptionOverallStatus	Description of the Overall Status outcomes
OverallStatus	RelatedPressures	List of pressures (from standard list in MSFD Annex III)
ElementStatus	Element	Element of the Feature which is assessed (species, habitat, contaminant...)
ElementStatus	ElementExtent	Area of the habitat (broad, other) in the (regional) assessment area
ElementStatus	Element2	For D3, D9, D10C3 only - associated element (e.g., stock for commercial species, species used for assessing contaminant in seafood)
ElementStatus	SourceListElement	Source of the list of elements (e.g., HELCOM, or EU list)
ElementStatus	ElementStatus	Good/Not good - status of the element (species, habitat, contaminant) based on the outcomes of the criterion used
ElementStatus	TrendElement	Trend in status (of the element) compared with previous 6-year reporting period
ElementStatus	DescriptionElement	Description of the element assessment outcomes, when needed
CriteriaStatus	Criteria	GES Decision criterion (e.g., D6C1)
CriteriaStatus	CriteriaStatus	Good/Not good - status of the criteria, based on the outcomes of the parameters used
CriteriaStatus	DescriptionCriteria	Description of the criteria assessment outcomes

From Table 15 and Table 16 it can be seen that the more detailed information of an indicator assessment is important as it provides the basis on which GES is assessed, while the integrated assessment provides the valuable higher-level information on the extent to which GES has been achieved. These Article 8 results are complemented by the text-based indicator and thematic assessment reports (with graphics, photos, tables etc) prepared at regional and national level, where the ‘narrative’ of the assessment can be fully presented.

## D. Finalisation of MSFD e-reporting

On the basis that the results of QSRs are prepared by the RSCs according to the MSFD reporting structure (Table 15 and Table 16), as described in previous sections, and made available to the EEA for ingestion into the ReportNet schema structure, Member States would need to consider how they would use these reports in their MSFD e-reporting.

The MSFD results coming from the QSR, RFMO and WFD processes will need to be checked and possibly amended by each Member State, before submission as their MSFD report. This could involve one or more of the following, which may apply to all or parts of the results stemming from these sources:

- a. Check the results and make no further changes (such as for Reporting method A);
- b. Add assessments for descriptors and features that are not addressed by these other assessments;

- c. Amend the assessment results from these other assessments for a descriptor/feature (Reporting method C) by:
- i. Adding national indicators (leading to updating of the integrated assessment result);
  - ii. Adding national data for regional indicators (i.e., redoing the indicator assessment and amending the values reported);
  - iii. Removing parts of the regional results (e.g., those not considered relevant for national waters, such as where a species in the regional assessment does not occur in the national waters).

**NOTE:** the regional QSR and RFMO results (Reporting methods A and B) should be used as far as possible, as these provide regionally consistent results. The Commission is NOT advocating the amendment of these (point c) but recognises that the QSR/RFMO results may not fully meet the needs of Article 8 and so Member States have possible options (i-iii) to follow after receiving the prefilled results and before submitting their MSFD report. Some of these options imply alterations to the regional assessment results that may lead to incoherence between countries for the same assessments.



## **ANNEX VI: ENUMERATION LISTS**

Enumeration lists are available on the CDR [2024 MSFD reporting resources](#) web page and are managed centrally across all reporting stages.