

QSR 2023 Guidance Document

(Agreement 2019-02)¹

Guidance on the Production of the QSR 2023

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¹ English only. Update 2020 (see CoG(1) 20/7/1, Agenda Item 3.4), and 2021 (see OSPAR 21/13/1, §9.30)

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1. Objective of the QSR 2023

The objective of QSR 2023 is to assess the environmental status of the North East Atlantic against the objectives of the North East Atlantic Environmental Strategy 2010-2020 (NEAES 2020), evaluate any updated or additional objectives from NEAES 2020-2030, and identify the priority elements for actions to achieve OSPAR's objectives for a clean, healthy, biologically diverse sea, used sustainably. In addition, QSR 2023 may be used by Contracting Parties that are also EU Member States to support their reporting obligations under the Marine Strategy Framework Directive.

1.2 Background to the objective of the QSR 2023

The OSPAR Convention Article 6 sets out the obligation *"The Contracting Parties shall, in accordance with the provisions of the Convention, in particular as provided for in Annex IV:*

- (a) undertake and publish at regular intervals joint assessments of the quality status of the marine environment and of its development, for the maritime area or for regions or sub-regions thereof;*
- (b) include in such assessments both an evaluation of the effectiveness of the measures taken and planned for the protection of the marine environment and the identification of priorities for action.*

OSPAR Commission agreed in 2017 (OSPAR 17/19/1 §3.32) to prepare the next Quality Status Report (QSR) for publication at OSPAR 2023.

The assessment work undertaken by OSPAR is set out in the OSPAR Joint Assessment and Monitoring Programme 2014-2023 (JAMP, Agreement 2014-02²). The Joint Assessment and Monitoring Programme product A2 QSR 2023 summarises the agreement on the production of the QSR 2023. This Guidance Document provides detailed specifications for the A2 product by setting out arrangements and guidance for the production of the QSR 2023. This Guidance Document is intended to provide a common basis of understanding for the cooperation of all OSPAR subsidiary bodies in the production of the QSR 2023.

'Assessment' is defined in the JAMP as *"a statement of the whole or part of the current knowledge of the health of the environment of an area of the sea and its coastal margin, and of the human activities³ affecting it. The evaluation of the effectiveness of measures taken and planned for the protection of the marine environment and the identification of priorities for action should also form part of it."* The JAMP requires that assessments must answer the following broad questions:

- a. How can ecosystem health be assessed in order to determine the extent of human impact?
- b. What is the overall quality status of the OSPAR maritime area, and is it changing?
- b. How can we distinguish between anthropogenic effects and natural background variations in the marine environment and its biological communities?
- c. What changes in the OSPAR maritime area can be attributed to long-term climate change?
- d. What are the future threats to the marine environment and can improvements be made to our ability to foresee them?

The OSPAR strategy applies an ecosystem-based approach to management of human activities, which is defined as *"the comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity"*. The assessments of the JAMP are based on this approach.

² <https://www.ospar.org/work-areas/cross-cutting-issues/jamp>

³ Human activities include both sea-based and land-based activities.

2. Scope of QSR 2023

Through the QSR 2023, OSPAR aims to deliver an assessment of the overall status of the marine environment in the OSPAR Maritime Area. The main elements of the QSR 2023 will be:

- Assessment of the status of the ecosystems, main pressures and impacts, and evaluation of the changes since QSR 2010 and IA2017
- Assessment of progress on the NEAES 2010-2020 thematic strategies including⁴:
 - Biological Diversity and Ecosystems
 - Eutrophication
 - Hazardous substances
 - Offshore Oil and Gas Industry
 - Radioactive Substances
- Assessment of the effectiveness of OSPAR actions and measures
- Evaluation of the impacts of climate change & ocean acidification
- Identification and review of new and emerging issues.

On the basis of the above elements the QSR 2023 will identify knowledge gaps and priorities for improvement of the status of the marine environment and provide recommendations for measures to fill these gaps to ensure progress towards the achievement of OSPAR's strategic objectives and inform other relevant bodies about status and possible need to take actions. The QSR 2023 will produce assessments to inform the ecosystem-based approach to management and on evaluating the implementation of the OSPAR Strategies and their effectiveness in improving the quality of the marine environment in the five OSPAR Regions. This will be supported by the OSPAR Measures and Actions Programme (MAP).

The QSR 2023 will build on OSPAR joint monitoring and assessment work. It will also draw on relevant assessments and reports from Contracting Parties, regional organisations including the International Council for the Exploration of the Sea (ICES) the North-East Atlantic Fisheries Commission (NEAFC), the Arctic Council and the UN among others.

There is considerable overlap in the assessment topics between the QSR 2023 and the 2024 MSFD reporting of Contracting Parties who are EU Member States, particularly in relation to MSFD Article 8 updates. In order to avoid duplication of assessments and to maximise the use of QSR 2023, the QSR will, wherever possible, deliver outputs that are compatible with MSFD reporting requirements in order to minimise the reporting efforts of Member States in 2024. This will be done acknowledging the following aspects of QSR 2023:

- it will cover areas well beyond EU Member State marine waters and
- may not cover all aspects needed for MSFD reporting and
- may cover aspects beyond the topics relevant for the MSFD ⁵.

⁴ The assessment of progress on the NEAES 2010-2020 is outlined here in terms of the thematic strategies from the NEAES 2010-2020. The format of the thematic strategies could be reconfigured under NEAES 2020-2030, in the event of that outcome the listing here will be updated to reflect the new strategy and the issue of bridging between the two NEAES will have to be addressed by ICG QSR and clearly described in QSR 2023.

⁵ The QSR 2023 may contribute to MSFD needs, where possible, by:

- a. Providing a set of integrated and indicator assessments which are correlated with MSFD needs for assessments of pressures and impacts, and assessments of environmental status (MSFD Article 8 and criteria in Decision (EU) 2017/848) and thus also provide clarity to Member States on which aspects of MSFD reporting will not be addressed by the QSR 2023;
- b. Providing assessments for geographic areas covered by MSFD, and where possible at scales of assessment compatible with MSFD needs;

The QSR 2023 will aim to support the implementation of UN Sustainable Development Goals (SDG), that form the basis of the 2030 Agenda for Sustainable Development. For example, this will be done by linking OSPAR assessments to SDG indicators.

All assessments need to clearly communicate confidence. The approach to be used is described in Annex 1.

2.1 Spatial coverage and scales

The QSR 2023 will cover the five OSPAR Regions (Figure 1) of the North East Atlantic.

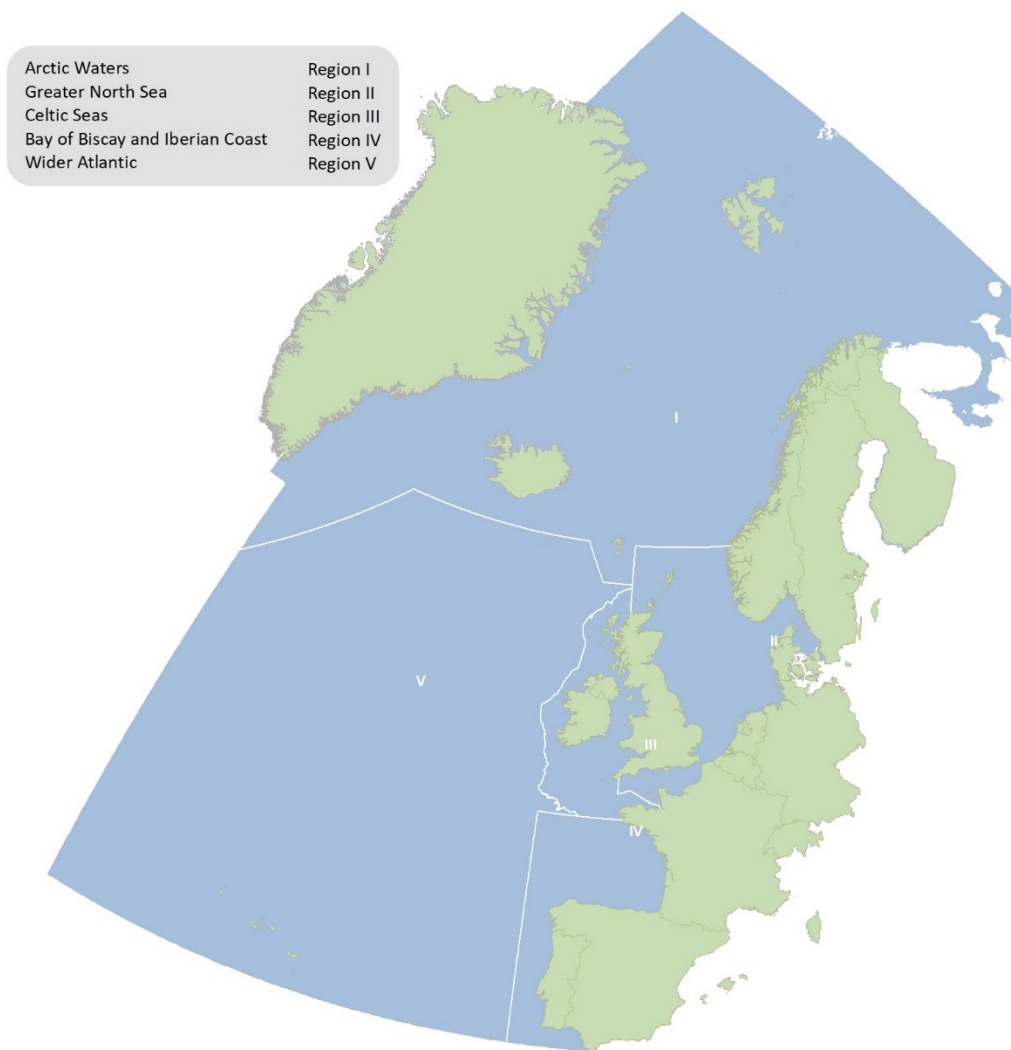


Figure 1. OSPAR Regions covered in the QSR 2023.

The QSR 2023 will provide statements of what is known about the quality status in each Region. Information on Regions should be collected and presented in a structured way. It is recognised that there is a sparsity of data and limited regular monitoring of many parameters in large proportions of Arctic Waters and Wider

- c. Enabling extraction of information from the integrated and indicator assessments to populate the Article 8 reporting schema (the MSFD 2018 Reporting Guidance, and its Annex II worked examples, provide details on reporting needs as specified in the GES Decision);
- d. Providing indicator assessments in a structure compatible with the Common Indicator Structure (Annex V of MSFD 2018 Reporting Guidance).

The possibility to prepare the QSR material (for Common Indicator Structure and Article 8 assessments) in electronic formats that could allow direct use in MSFD reporting will be investigated. This could facilitate visualisation of OSPAR indicator assessments via WISE Marine and population of the Article 8 schema on behalf of Member States prior to the start of their 2024 reporting.

Atlantic. In view of these facts it is envisaged that information will need to be collated and presented in a different manner for Arctic Waters and Wider Atlantic for example by drawing on data and assessment products from 'third party' organisations and utilising qualitative information rather than quantitative OSPAR monitoring data.

Some assessments that will be included in QSR2023 will also consider part of The Swedish / Danish Sound, Roskilde fjord and Isefjord, which are outside the OSPAR Maritime Area, but are connected to the Kattegat. The rationale for this is to align the OSPAR Region to the MSFD sub-region. This is beneficial for Sweden and Denmark when using the QSR2023 for updates of the initial assessment for the MSFD due in 2024; it is also sensible from a biological perspective because the biota and biological dynamics of The Sound are to some extent similar to conditions in the Kattegat.

See further details on the 'scales of assessment' and 'assessment units' for the synthesis report, thematic assessments and common indicator assessments in chapter 4. Guidance for the application of assessment units for the QSR2023, including resources for the GIS application of assessment units are made available through the [QSR 2023 Resources page on the OSPAR Website](#).

2.2 Temporal coverage

All assessments of the QSR 2023 must clearly state the time period assessed.

The QSR 2023 assesses the time period 2009-2021, assessing progress using data series that are as long and complete as possible (detailed deadlines for data are in section 7.1), The QSR 2023 aims to present information on long-term trends for topics where this is relevant and possible. The assessments produced for QSR 2023 will make comparisons to the QSR 2010 (1998-2008) and Intermediate Assessment 2017 (2009-2015) to assess progress made in line with the objectives of the QSR 2023. If feasible, assessments could also be compared with the QSR 2000 and evaluate the progress which has been made since this period.

It should be noted that the time period 2016-2021 corresponds to the six-year period for which Contracting Parties to OSPAR, that are also EU Member States, will assess progress since the second reporting in 2018 under the EU MSFD Article 8.

3. QSR 2023 General Structure and Presentation

3.1 Structure

The QSR 2023 will be made up of several components that bring together a large amount of information through a structure of increased integration in each level resulting in more concise and less technical language at the Synthesis Report stage (Figure 2).

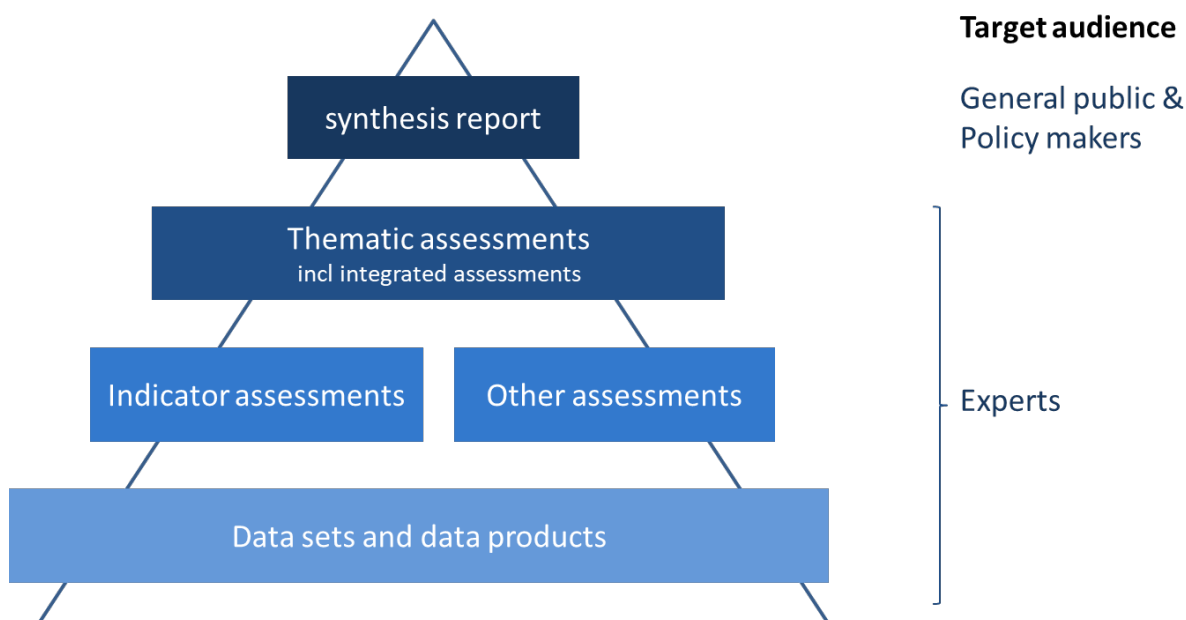


Figure 2. QSR 2023 structure.

The structure of the QSR 2023 builds on the different types of assessment products detailed in the JAMP (§20) which include;

- assessment sheets for common indicators,
- other assessments based on OSPAR data and information collection,
- thematic assessments that integrate several types of information and data products and
- Peer reviewed Third Party / Other Assessments addressing environmental issues within OSPAR Maritime Area which evaluate areas / topics where OSPAR has limited data coverage.

The indicators, other assessments and datasets that form the base of QSR 2023 are products of a technical nature, relevant for an expert audience. The thematic assessments are comprehensive reports that integrate information from several indicators and other sources to underpin the conclusions on specific topics/themes. The synthesis report brings together the conclusions of the underlying assessments in an easily approachable manner for both a general public and policy maker audience.

3.2 Presentation and publication

The QSR 2023 will be an online publication of assessments through a dedicated section in the online OSPAR Assessment Portal (OAP). The QSR will make substantial use of hyperlinks, in order to allow access to the underlying detailed assessment reports, and furthermore the data managed through OSPAR Data and Information Management System (ODIMS). The further development of ODIMS and OAP will strive for

continued support of Contracting Parties in their efforts to streamline reporting under other policies and linking with data repositories and portals such as WISE-Marine. The version control system applied in ODIMS and OAP will ensure that the assessments are archived so that they remain unchanged and accessible also when updated assessments have been produced and uploaded. All components of the QSR will be downloadable.

3.2.1 Final presentation/publication

Coherent use of colours and symbols are needed throughout the QSR 2023. As far as possible, approaches developed and used in previous OSPAR assessments will be utilised to ensure coherence.

The map presentation will be standardised. Only geospatial information (e.g. coordinates specifying a monitoring station providing a measurement value) accessible through ODIMS will be included in the QSR 2023 as OSPAR maps. On a case-by-case basis, it may be considered and agreed to present maps based on third party assessments as images in the QSR 2023, given that this must not result in any copyright issues and that there is a valid reason for representing a map that looks different from the OSPAR maps.

The QSR synthesis report will be published in html format (OAP) and also as a laid-out glossy pdf-book, both in English and French. An executive summary of the synthesis report will be published as a hardcopy in a limited printing run and will be available at the launch of QSR 2023. As relevant, other promotional products may also be made produced, including video, graphical and communication products to promote QSR 2023.

Thematic assessments will be published on OAP with an option to export them as printable pdfs. Indicator assessments will be published on OAP with an option to export the brief sections as a printable pdf as well as to export the full indicator assessment as a printable pdf. The indicator assessments will be clustered in OAP so as to reflect where possible the NEAES 2020 – 2030 structure and help navigating through the indicator set, e.g. by aggregating the presentation of all biodiversity indicator assessments.

For the purposes of communication of the QSR 2023 and its findings, including for purposes of stakeholder engagement, other communication products may be needed. This could include for example brochures presenting specific topics, short films or material to be used in showcasing QSR 2023 at conferences.

3.3 Authorship and Referencing

The QSR 2023 synthesis report and thematic assessments will be publications which represent the considered views of the OSPAR Commission and should have a standard citation with the OSPAR Commission as the author. They will be assigned an ISBN and submitted to national record collections for archiving.

Assessment leads⁶, contributors⁷ and reviewers⁸ to the thematic assessment, indicator assessments and other assessments will be acknowledged for their input /work in the delivery of the QSR 2023. This acknowledgement will be in the form a listing of the leads, contributors and reviewers for the various assessments. However, scientific authorship citations will not be permissible.

Contracting Parties recognise that some assessment leads may wish to submit scientific papers, based on the work undertaken during production of QSR 2023, to scientific journals for publication. This will be possible where the use of the data and assessment outcomes is in accordance with the OSPAR Data Policy.

⁶ Lead: the person who managed the delivery of the assessment product

⁷ Contributors: those who fed into the development and delivery of the assessment product

⁸ Reviewers: those who carried out a review of the assessment product

4. QSR 2023 Detailed Components and Content

4.1 Synthesis report

For a concise definition of the Synthesis report please consult [Annex 4](#)

The QSR synthesis report will address the informed public and policy makers and will also be presented in the form of an executive summary. The synthesis report will present a narrative, easily approachable, read and understood.

An indicative structure and content of the synthesis report is presented in **Annex 2**, including main chapters and sub-chapters.

The main chapters of the synthesis report will be structured to reflect the components of the OSPAR North East Atlantic Strategy 2030 (NEAES 2030). Each chapter will reflect on key findings for each of the five OSPAR Regions through a chapeau text describing the status for each theme/chapter.

The sub-chapters will each cover a topic and aim to tell the whole story of that topic, including the key findings in relation to the relevant assessments of status, pressures, implemented measures and socio-economic aspects. Where relevant, sub-chapters can present a component of the cumulative effects assessment as a thematic case study.

The conclusions will cover the following information per Region, where appropriate, otherwise on an OSPAR-wide level.

- Status in relation to the NEAES objective; extent to which a good status is achieved (progress towards NEAES goals, where possible highlighting differences within OSPAR Regions)
- Direction of change in pressures or status
- Outlook for pressures / state change
- Confidence in the assessment of status and change (see [Annex 1](#))
- Evaluation of the effectiveness of OSPAR actions, and where appropriate taking into account actions and measures taken in other policy frameworks. Work on the evaluation for effectiveness will be guided by the outcome of discussions in several OSPAR work streams

The synthesis report will compare progress made since the publication of the QSR 2010, where main findings were presented in tables at the end of each chapter for each Region and key pressures were also summarised.

The structure outlined in this document ([Annex 2](#)) is indicative of the elements which are considered necessary for the QSR 2023 synthesis report.

4.1.1. Scales of assessment - Synthesis report

The synthesis report will be a qualitative assessment which will bring together information from the thematic assessments. The method of how this will be brought together is yet to be decided, expert judgment and qualitative methods are foreseen.

Information will be presented for the OSPAR Regions I-V. The entire OSPAR maritime area will be covered.

4.2 Thematic assessments, including integrated assessments

For a concise definition of a thematic assessment, and of an integrated assessment, please consult [Annex 4](#)

The function of the thematic assessments is to bring together integrated assessments, indicator assessments, other assessments (both OSPAR and third-party assessments), data products and other relevant information to present the evidence base for the key conclusions/statements which will be presented in the synthesis report. These conclusions will be presented in the form of a summary in each thematic assessment. The main body of thematic assessments are intended for an expert audience; this will be reflected in the level of technical detail included as well as the technical language used. The summaries of the thematic assessments are intended for policy makers.

Thematic assessments will present integrated assessment results, which combine the results of several indicator assessments. An example of an integrated assessment is the integrated status of a species based on information from one indicator on its abundance and a second indicator on breeding success, a further integration could be the status of a species group based on the status of the species. Another example of an integrated assessment is the eutrophication status of an assessment unit based on indicators of concentration of chlorophyll-a, nutrients and oxygen. (See [Annex 3](#) for these examples presented in more detail.)

The information and conclusions in the thematic assessments will support the statements on progress for status, pressures and implemented measures in the synthesis report and should to the extent possible be presented in line with the sub-chapter headings in the synthesis report. The thematic assessments will integrate several types of information of relevance for the theme. Each thematic assessment will be supported by several indicator assessments, reports on implementation and effectiveness of OSPAR measures and as relevant other data products such as spatial information on human activities. The thematic assessments also include socio-economic assessments as relevant to each theme. The thematic assessments can also build on relevant assessments from “third parties” organisations.

There will be differences in the scope and technical implementation of the thematic assessments. For some topics, such as eutrophication, quantitative integration is foreseen, whereas for other topics such as biodiversity, a more qualitative approach based on expert judgement may be needed.

Thematic assessments and links with MSFD reporting

The outputs of the thematic assessments will inform work in OSPAR. In addition, the thematic assessments, notably regarding the integrated assessments therein, will be developed with the intention of enabling use of information by Contracting Parties that are also EU Member States in MSFD Article 8 reporting. The template for developing the thematic assessments includes an excel based Addendum which compiles the specific result values needed for this purpose.

Where EU MSFD references occur in the assessment, the following caveat text should be included:

“Norwegian, Icelandic and United Kingdom marine areas are not covered by the MSFD.”

Where MSFD sub-regions have been used to define assessment units for integrated assessments, hatching is to be included on maps for national waters of non-EU Contracting Parties.

Templates and progress monitoring of the thematic assessments

The [QSR 2023 Resources](#) page on the OSPAR website provides the template for the thematic assessments, as well as a guidance on completing the template.

The list of thematic assessments as well as progress being made in developing and drafting the text is maintained and managed through the QSR 2023 Master Plan which is maintained on the QSR SharePoint site.

Interlinkage of information to support thematic assessments

Thematic assessments will bring together several information sources in order to inform the executive summary statements which are to feed into the synthesis report. Thus, the flow of information and clarity in which components will be delivered, by which group of experts to another and at what time, will be of importance.

4.2.1 Thematic assessment structure

The thematic assessments will answer the questions defined in the JAMP used in QSR 2010 whenever relevant. This approach is used with the aim of linking back to the QSR 2010 and evaluating progress against NEAES 2020 (*note the slight difference to synthesis report structure*).

Executive Summary

Each thematic assessment will reflect on key findings for each of the five OSPAR Regions. The questions used to structure the executive summary of the Thematic assessments respond to the questions in JAMP and are;

1. What are the problems? Are they the same in all OSPAR regions?
 - a. a summary of the current state of knowledge of the threats to the marine environment, which should:
 - i. include both threats to human health and to other aspects of the environment;
 - ii. bring out the links between the driving forces (uses and human activities) and pressures behind those threats, their actual and potential impacts *and their relation to economic benefits and costs of degradation*;
 - iii. refer back to QSR 2010 and consider developments likely to lead to new or changed threats in these fields;
 - iv. consider the differences between the OSPAR regions;
2. What has been done?
 - b. a brief description of the programmes and measures in place, under the OSPAR Convention or otherwise, for implementing the Strategies and the progress made with their implementation.
3. Did it work?
 - c. an evaluation, in the terms of the OSPAR Convention, of “the effectiveness and adequacy of the actions and measures taken and planned for the protection of the marine environment”. *The section would look at the objectives of NEAES 2010 – 2020 and give an estimation of whether the measures are sufficient for achieving the objectives of NEAES 2020 – 2030. (Guidance on this aspect of the evaluation is being developed by the TG-MAP reporting to CoG)*
4. How does this field affect the overall quality status?
 - d. an assessment of the effects of these driving forces, pressures, impacts and responses on the overall state of the marine environment;
 - e. *an evaluation of how far the status is from the NEAES quality objectives.*
5. What do we do next?

- f. an identification of the priorities for action (*linking up with the objectives of the NEAES 2020 – 2030*).

Table 1 below further outlines the relationship between each question in the QSR 2023, the QSR 2010 and the DAPSIR (drivers, activities, pressures, state, impacts, response) framework.

Table 1. Alignment of QSR 2010 Questions to be answered in the executive summary with DAPSIR Elements that structure the main body of text.

QSR 2010 Question	Text as per the QSR 2023	DAPSIR Element (Text in bold below are the DAPSIR Elements)
1. What are the problems? Are they the same in all OSPAR regions?	<p>a. summary of the current state of knowledge on the threats to (pressures on) the marine environment, which should:</p> <p>i. include both threats to human health and to the environment;</p> <p>ii. bring out the links between the driving forces (uses and human activities) and pressures behind those threats, their actual and potential impacts and their relation to economic benefits and costs of degradation;</p> <p>iii. refer back to QSR 2010 and consider future developments in uses and activities that are likely to lead to new or changed threats in these fields;</p> <p>iv. consider the differences between the OSPAR regions;</p>	<p>Pressure exerted on the marine environment which may present a threat to the health of the marine ecosystem or its components or to human health</p> <p>Driving Forces = Social or Economic Drivers of change</p> <p>Human Activities = Activities</p> <p>Actual and potential environmental impacts of pressures on state = State changes</p> <p>Cost = Impacts on Ecosystem Services (social, economic or environmental)</p>
2. What has been done?	b. a brief description of the programmes and measures in place, under the OSPAR Convention or otherwise, for implementing the Thematic Strategies and the progress made with their implementation.	<p>Programme of Measures = Responses</p> <p>(i.e. the actions taken and / or proposed to minimise Impact and improve State (management response))</p>
3. Did it work?	c. an evaluation, in the terms of the OSPAR Convention, of “the effectiveness and adequacy of the actions and measures taken and planned for the protection of the marine environment”. The section would look at the objectives of North-East Atlantic Environment Strategy (NEAES) 2010 – 2020 and give an estimation of whether the measures are sufficient for achieving the objectives of NEAES 2020 – 2030. (Guidance on this aspect of the evaluation is being developed by the TG-MAP reporting to CoG)	<p>Effectiveness of the management measures taken (Responses)</p> <p>How are Activities changing to reduce pressure / changes in the ecosystem?</p>
4. How does this field affect the	d. an assessment of the effects of these driving forces, pressures, impacts and	Changes in State , including environmental impacts

QSR 2010 Question	Text as per the QSR 2023	DAPSIR Element (Text in bold below are the DAPSIR Elements)
overall quality status?	responses on the overall state of the marine environment; e. an evaluation of how far the status is from the NEAES quality objectives.	
5. What do we do next?	f. an identification of the priorities for action (linking up with the objectives of the NEAES 2020 – 2030).	Response

4.2.2 Thematic assessment output

The headings used in the main body of the thematic assessments are not specified, and as long as the DAPSIR framework is applied, assessors are free to formulate appropriate headings. Each thematic assessment is foreseen to cover all elements of the DAPSIR framework; however, the amount of information to be presented for each element will differ between thematic assessments. It may be more relevant to address the information in a different order for a thematic assessment that focuses on a key pressure compared with an assessment focussing on a biodiversity element.

Information should be provided in a coherent/uniform way, following the DAPSIR framework (figure 3), with trend (arrow), status (colour code), confidence level (quantitative) throughout the thematic assessments. The thematic assessments follow agreed methodologies, including agreed assessment values/thresholds, list of elements, aggregation- and integration methods and regional or sub-regional variations. The agreed methods lead to (quantitative) statements of:

- the quality status of the North-East Atlantic and its Regions for the theme/topic
- the extent to which (quality) objectives and/or (management) targets have been achieved in the OSPAR Regions
- the trend and/or direction of change
- the trend in the long term, taking account of changing human activities, pressures and environmental factors
- outlook of change / direction; estimate by when achieving the objectives and/or targets is expected
- Evaluation of the effectiveness of OSPAR actions, and where appropriate non-OSPAR actions.

The DAPSIR framework allows assessors to decide whether to start from the ‘Activities’ or start from the ‘State’ element. In the final presentation of the thematic assessments in OAP, it is envisioned that each element could be accessed directly by the interested reader. The concept of this is illustrated in Figure 3. Figure 3 aligns with the guidance provided in [EU Staff Working Document \(2020\) 62 final SWD\(2020\) 062](#), on integrating drivers, activities, pressures, state and ecosystem services (through management, measures and monitoring).

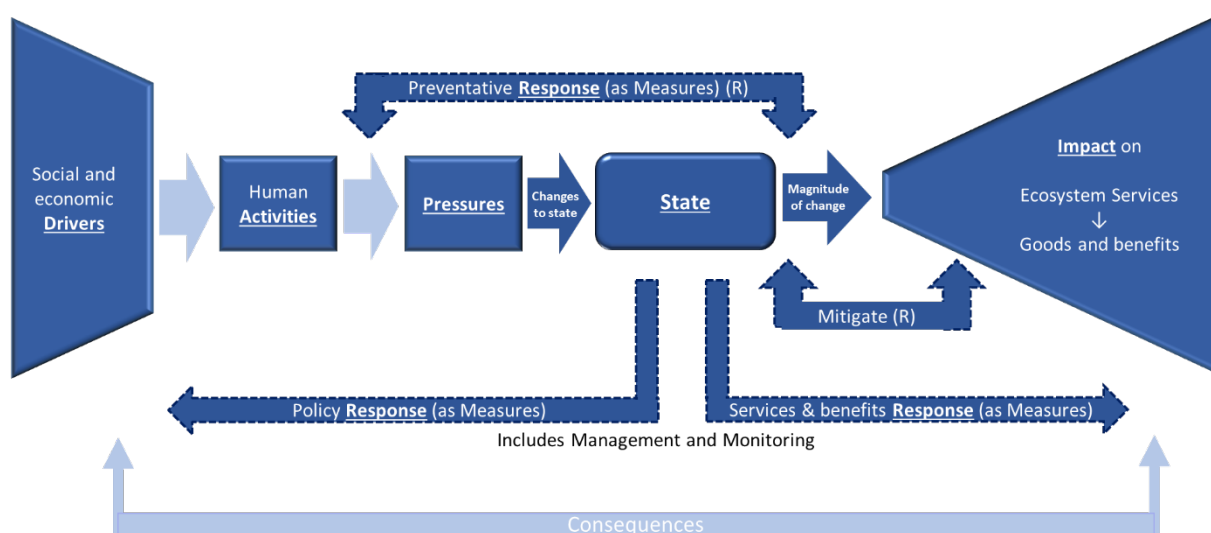


Figure 3: Framework to underpin thematic assessments, using DAPSIR. This schema is compatible with the European Commission Staff Working Document DAPSES-MMM (SWD(2020) 062) framework. (ICG-EcoC May 2021)

4.2.3. Scales of assessment and assessment units - Thematic assessments including integrated assessments

Scales of assessment can be understood as a general description of the spatial scale at which assessments are undertaken. Assessment units can be understood as assessment areas. Assessment units are a defined area for the purpose of carrying out an assessment. The shape and size of assessment units will vary by assessment.

All assessments must clearly specify which assessment units have been considered by defining these assessment units as a GIS Shapefile which is to be published on ODIMS. Guidance for the application of assessment units for the QSR2023, including resources for the GIS application of assessment units are made available through the [QSR 2023 Resources page on the OSPAR Website](#).

Assessors should read the guidance in this section on scales of assessment and assessment units in conjunction with the thematic assessment template and the thematic assessment template guidance which provide further technical detail on content to be included (available on the [QSR 2023 Resources page on the OSPAR Website](#)).

Thematic assessments will present summary information for each chapter at regional scale of assessment for each OSPAR Region I-V, whenever possible. In case it is not possible to present summary information per Region, for example for chapters on 'Drivers' or 'Impact on ecosystem services', then information can be presented as one result for the whole OSPAR Maritime Area. This summary should be based on the outputs of integrated assessments and other relevant assessment information, such as 'other assessments'.

For the Pressures and State chapters, thematic assessments may include several integrated assessments or indicator assessments. For example, the thematic assessment on mammals will include the integrated assessment results for small-toothed cetaceans and the integrated assessment result for seals (see Table 2, and [Annex 3](#) for details).

Table 2. Conceptual level examples of the relationship between the thematic assessment, integrated assessments and indicator assessment.

Thematic assessment	Integrated assessment	Indicator assessment
Mammals	Small-toothed cetaceans	Indicator X e.g. population abundance
		Indicator Y e.g. species distribution
	Seals	Indicator A e.g. population abundance
		Indicator B e.g. pup production
		Indicator C e.g. incidental bycatch
Eutrophication	Eutrophication	Indicator A e.g. Winter nutrient concentrations
		Indicator B e.g. Growing season concentrations of chlorophyll-a
		Indicator C e.g. Concentrations of dissolved oxygen near the seafloor

The chapters of the thematic assessments that are foreseen to contain the most substantive content (e.g. the ‘status’ chapter for biodiversity thematic assessments) are foreseen to include integrated assessment results (see Table 3). There can be several different integration results to present, for example the Birds thematic assessment would present an overall summary result for birds for OSPAR Regions I-V, and integrated assessment result for several species groups, such as grazing-birds, as well as integrated results based on several indicators for single species for specified assessment units.

The scales of assessment and assessment units for thematic assessments and integrated assessments as in Table 3 should be considered as high-level instructions. It is not possible to cover every aspect of the scales of assessment and assessment unit in this general guidance document. OSPAR subsidiary bodies and experts carrying out assessments are to discuss and agree on the most practicable and scientifically valid assessment units to be used on a case-by-case basis taking into account the general guidance provided in Table 3.

An assessment unit defined for an OSPAR integrated assessment is based on the ecologically relevant scales of assessment, and also takes into account policy and or jurisdictional aspects as relevant. If the scale of assessment is indicated as ‘Region’ (see Table 3.), then the assessment unit for the integrated assessment should follow MSFD sub-region boundaries, where relevant, and results should be presented using the caveat text presented in section 4.2.

Table 3: Spatial scales for thematic assessments and integrated assessments therein. The most substantive chapters of the thematic assessments, typically ‘status’ and ‘pressure’ should follow this high-level guidance. The column ‘integrated assessments topic’ lists topics which are foreseen to be quantitative indicator based integration outputs, as well as topics which are foreseen to be qualitative assessments outputs. Integrated assessment topics and scales of assessment and assessment units are indicative.

Thematic Assessment topic	Scale of assessment assessment units	Integrated assessments topic	Scale of assessment assessment units
Birds	Region OSPAR Regions I, II, III, IV, V	Grazing birds, Wading birds, Surface-feeding birds, Pelagic-feeding birds, Benthic-feeding birds	Region Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, Region V

Mammals	Region OSPAR Regions I, II, III, IV, V	Seals, Small toothed cetaceans Deep-diving toothed cetaceans, Baleen whales	Region Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, Region V Area whole OSPAR maritime area
Fish	Region OSPAR Regions I, II, III, IV, V	Coastal fish, Pelagic shelf fish, Demersal shelf fish Deep-sea fish	Region Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, Region V Area whole OSPAR maritime area
Food webs	Region OSPAR Regions I, II, III, IV, V	Coastal ecosystems, Shelf ecosystems, Oceanic/deep-sea ecosystems	Region Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, Region V Or Subdivisions of the Regions specified areas (e.g. to reflect biogeographic/hydrological characteristics of the subregion)
Pelagic habitats	Region OSPAR Regions I, II, III, IV, V	Variable salinity, Coastal, shelf and oceanic/beyond shelf	Subdivisions of the Regions specified areas (e.g. to reflect biogeographic/hydrological characteristics of the subregion)
Benthic habitats	Region OSPAR Regions I, II, III, IV, V	Littoral rock and biogenic reef, Littoral sediment, Infralittoral rock and biogenic reef, Infralittoral coarse sediment, Infralittoral mixed sediment, Infralittoral sand, Infralittoral mud, Circalittoral rock and biogenic reef, Circalittoral coarse sediment, Circalittoral mixed sediment, Circalittoral sand, Circalittoral mud, Offshore circalittoral rock and biogenic reef, Offshore circalittoral coarse sediment, Offshore circalittoral mixed sediment, Offshore circalittoral sand, Offshore circalittoral mud, Upper bathyal rock and biogenic reef, Upper bathyal sediment, Lower bathyal rock and biogenic reef, Lower bathyal sediment, Abyssal	Subdivisions of the Regions specified areas (e.g. to reflect biogeographic/hydrological characteristics of the subregion)
Non-indigenous species	Region OSPAR Regions I, II, III, IV, V	Non-indigenous species	Subdivisions of the Regions national waters (optional additionally also OSPAR Regions I, II, III, IV,V)
Litter	Region	Litter on the coastline	Subdivisions of the Regions

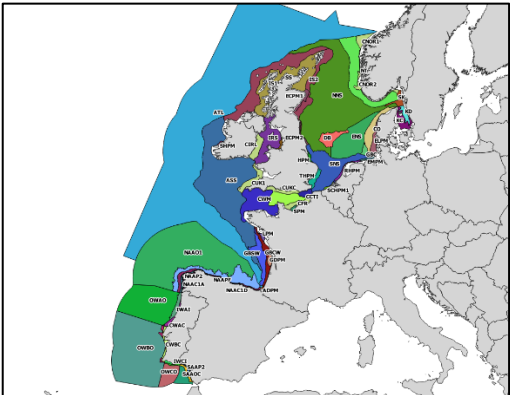
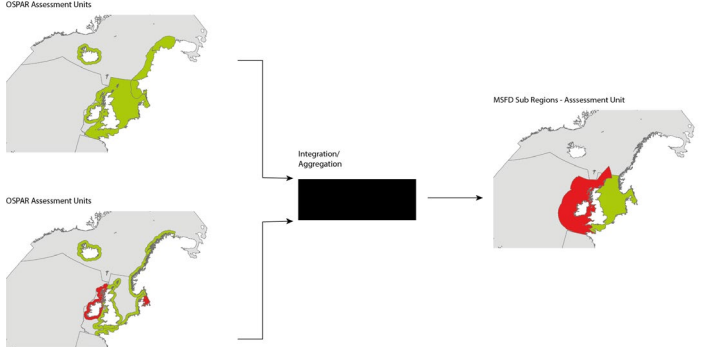
	OSPAR Regions I, II, III, IV, V	Litter in the water column Litter on the seabed Ingested litter	beach litter: national waters other: sub-divisions of the Regions
Noise	Region OSPAR Regions I, II, III, IV, V	Impulsive sound Continuous sound	Region Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, Region V
Eutrophication	Region OSPAR Regions I, II, III, IV, V	Eutrophication	Subdivisions of the Regions ICG-EUT/COMP assessment units (60+)
Hazardous substances	Region OSPAR Regions I, II, III, IV, V	Contaminants – UPBT substances Contaminants – non UPBT substances	Subdivisions of the Regions Subdivisions of OSPAR Regions (13)
Atmospheric and riverine inputs	Region OSPAR Regions I, II, III, IV, V	Riverine inputs Atmospheric inputs	Subdivisions of the Regions <i>Riverine</i> : inputs from selected major rivers <i>Atmospheric</i> : heavy metal inputs to subdivisions (grid) of OSPAR Regions; nutrient inputs to the larger ICG- Eut/COMP assessment units and OSPAR Regions
Radioactive substances	Region OSPAR Regions I, II, III, IV, V	Discharges from the nuclear sector Discharges from the non-nuclear sector Environmental concentrations of radionuclides	Subdivisions of the Regions RSC sub-regions (15)
Oil and gas	Region OSPAR Regions I, II, III, IV, V	Impacts of oil and gas activities	Area whole OSPAR maritime area
Human activities	Region OSPAR Regions I, II, III, IV, V	Fish and shellfish harvesting, Aquaculture, Agriculture, Shipping, Transport infrastructure, Extraction of oil and gas, Extraction of minerals, Renewable energy generation, Tourism and leisure activities, Production and consumption of plastics, Waste water treatment	Region OSPAR Regions I, II, III, IV, V
Climate change	Region OSPAR Regions I, II, III, IV, V	Physicochemical parameters, Impacts	Region OSPAR Regions I, II, III, IV, V

It is recognised that the boundaries of the assessment units for the summary information per OSPAR Region are not necessarily aligned or nested with underlying integrated assessments' assessment unit boundaries. Depending on the underlying assessments the thematic assessment may use quantitative or qualitative and expert judgement based considerations when presenting a summary result per OSPAR Region. For example the State chapter of the Mammals thematic assessment would present a summary result on the status of Mammals for OSPAR Region I, II, III, IV, V and would present a result for 'small-toothed cetaceans' for OSPAR

Region I, Greater North Sea, Celtic Seas, Bay of Biscay and Iberian Coast, Macaronesia, and the section of Region V not covered by MSFD sub-region units (see [Annex 3](#) for details).

Recognising that some indicator assessment units are not fully nested within the proposed assessment units for integrated assessments, experts carrying out the integration need to document for each assessment unit which indicator assessment units have been aggregated and integrated to produce the integrated result for the assessment unit, i.e. a record of the spatial integration methodology. Annex 3 provides some further examples of this issue, which is briefly presented in Table 4. The thematic assessment should describe briefly how indicators or different assessments have been integrated towards an integrated assessment of the respective theme and what consequences the integration has (e.g. in terms of confidence in the assessment). Detailed technical descriptions of the integration methods that have been used should be presented in separate technical documents describing the methodology (for example CEMP Guidelines).

Table 4. Examples of combining indicator assessment units in integrated assessment units.

<p>ICG-EUT</p> <p>example where assessment units are the same for common indicators and the integrated assessment</p> 	<p>Biodiversity</p> <p>example where indicators for the same species have different assessment units to the assessment units that would probably be used for the integrated assessment of the species group.</p> 
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In agreeing the methodologies for integrating and presenting results, the needs of the Contracting Parties that are also EU Member States in reporting against the MSFD, as well as other national needs, of Contracting Parties are taken into account. It is important to those Contracting Parties that are EU Member States that the integrated assessment is done to the relevant scale of assessment for MSFD purposes, as reflected in Table 3. The integrated assessments are equivalent to the ‘feature level’ of the MSFD. For EU MSFD reporting purposes, the integrated assessment results per assessment unit will be transferred into the EU reporting requirements. Flexibility is needed, in particular for the scale ‘Region’ on how integrated assessments are presented, and the caveat text from section 4.2 should be applied. For the concerned thematic assessments, a summary per OSPAR Region shall be presented and integrated assessments shall use the MSFD sub-regions.

4.3 Common indicator assessments and candidate indicator (pilot assessments)

For a concise definition of indicator assessments please consult [Annex 4](#)

The indicator assessments follow the development and publication approach of the Intermediate Assessment 2017. ICG-QSR will review the lessons learnt from the IA 2017 process and consider whether any adjustments are needed to the indicator assessment template, taking into account various policy needs. The indicator

assessments are intended for an expert audience, which is reflected in the level of technical detail included as well as technical language used.

The template for developing the indicator as well as guidance for completion of the assessment, are made available through the QSR 2023 Resources page on the [OSPAR website](#).

In the final drafting of the indicator assessment, focus should be placed on ensuring that the key finding and conclusion of the indicator is clear, concise and consistent with the associated technical content. Whenever possible, indicator assessments should compare status and trends against assessments of the QSR 2010. As many of the indicators have been developed post-QSR 2010 it is recognised that this will not be possible in many cases. For indicators based on parameters that have been included in OSPAR Common Environmental Monitoring Programme for a long period of time, it may be possible to compare trends and progress even from a period before QSR 2010. For indicators that were used in IA 2017 and where these assessments are updated for QSR 2023, where applicable the updated status and trend should be highlighted.

The detailed format and metadata sheets of the indicator assessments will be kept under continued review to ensure consistency with the EU MSFD, where possible, and INSPIRE Compliant to support Contracting Parties that are also EU Member States, and facilitate compatibility between OSPAR assessment work and MSFD requirements.

The indicator assessments will include information on:

- short description about assessment method and reasoning for the chosen threshold
- the status of the elements that the indicator assesses in the selected assessment units
- whether the threshold has been achieved in the assessment unit
- the trend and/or direction of change between the assessment periods
- the trend in the long-term taking account of changing human activities and environmental factors
- outlook of change / direction; estimate by when achieving the assessment threshold and/or target values is expected.
- confidence in the assessment approach and outcomes (building on the approach from the Intermediate Assessment 2017, also detailed in [Annex 1](#))

4.3.1. Scales of assessment - common indicators and candidate indicators

The scale of assessment varies widely between indicators. The experts leading the development and maintenance of the indicators are to apply the indicator to whichever spatial scale is considered scientifically and ecologically appropriate, bearing in mind the scales to be used for the associated integrated assessment.

4.3.2. Assessment units – common indicators and candidate indicators

Assessment units can be understood as assessment areas. Assessment Units are a defined area for the purpose of carrying out an assessment. The shape and size of assessment units will vary by assessment.

All assessments must clearly specify which assessment units have been considered by defining these assessment units as a Shapefile which is to be published on ODIMS. Guidance for the application of assessment units for the QSR2023, including resources for the GIS application of assessment units are made available through the [QSR 2023 Resources page on the OSPAR Website](#).

An assessment unit defined for an OSPAR indicator should be based on the ecologically relevant scales of assessment for the features concerned but can also take into account the nature of the data and its

ographic coverage. One indicator may include many assessment units, which may differ in size and shape. Another may use a regular grid pattern. The area defined by an assessment unit is dependent on the most appropriate scale and coverage based on scientific and ecological input, as decided by the experts responsible for analysis of the data. See examples of assessment units used for common indicators in Table 5.

There is no restriction on how the indicator assessment units are defined in terms of size or shape. Assessment units need to be defined as explicit boundaries on a map. Where possible, indicator assessment units should be defined bearing in mind the integrated assessment units to which the indicator result will contribute by, for example, using the same assessment units (e.g. as for the ICG-EUT assessments) or splitting the units within the integrated assessment unit.

ture OSPAR assessments could consider moving towards higher coherence by considering nested assessment units, meaning that the spatial extent of assessment units for an indicator would be fully included within an assessment unit of an integrated assessment.

Table 5. Examples of variation in indicator assessment un

[illegible]

4 Other assessments

For a concise definition of an other assessment please consult [Annex](#)

QSR 2023 aims to provide a comprehensive assessment of the status of the marine environment in the North Atlantic. In order to facilitate this objective, where available and applicable, other assessments should be considered and utilised in the production of QSR 2023.

Other Assessments which have potential to feed into the QSR 2023 are to be considered in the following categories, and are reflected by, but not limited to the examples listed below:

1. OSPAR Non Indicator Assessments:

- Status assessments of threatened and/or declining features, as detailed in 'Guidance on the Development of Status Assessments for the OSPAR List of Threatened and/or Declining Species and Habitats (Agreement 2019-05);
- MPA biennial status assessment and annual assessment sheet;
- Dumping of waste or other matter at sea;

- Effect of dumped chemical and conventional munitions on the marine environment;
- Integrated biological effects approach;
- Ocean acidification;
- Trends and status of persistent chemicals in marine mammals;
- Economic and social analysis assessments, e.g. Uses of the marine environment and costs of degradation;
- Ecosystem outlook and Cumulative Effects Assessment;
- Effectiveness of measures; and
- Case studies of a topic in a spatially restricted area.

Other assessments should be completed using a standardised template which details the content of the cover page on details and the summary components of the report. The template and guidance for completing it is available through the QSR 2023 Resources webpage.

2. Third Party Assessments.

Third party assessments are reports and/or assessments produced by a third party, intended for use in the OSPAR QSR 2023. The material should comprise major sources of information from well-renowned sources that have gone through rigorous quality control (i.e. not contentious in nature).

In the OSPAR regions or sub-regions with relatively lower coverage of indicators and monitoring, third party assessments can fill gaps in OSPAR's data and information. Third party assessments can be used directly as stand-alone or supporting products.

OSPAR Recognises that third party assessments may not follow the QSR 2023 style guide, but will be identified with a standardised cover page.

3. Referencing information from third parties in QSR 2023 assessments

OSPAR will refer to information by third parties as relevant to ensure the QSR 2023 is a comprehensive assessment. Third party assessments can be used as further supporting references and/or to improve the knowledge base without duplicating work produced elsewhere. Wherever used these should be appropriately cited using the format prescribed in the QSR 2023 style guide.

Referenced information could include:

- Arctic Council Assessments and Reports, of particular relevance to Arctic Waters where there is limited OSPAR data and assessment products;
- ICES Assessments, Reports and data products which may help support evaluation of the status of the marine environment across the OSPAR Maritime Area; and
- Evidence Reports prepared by Subject Matter Experts in the format of peer reviewed open access assessments.

To facilitate the use of information from third party information ICG-QSR will maintain a list of available reference material. The list of possible assessments by third parties which could provide relevant information to be cited, for example in thematic assessments, will be a live document maintained in the QSR 2023 Team. All entries to the list should include detailed information on which part of the assessments/reports are relevant to the production of the corresponding thematic report (see Figure.2 QSR structure). The use of the information provided is under the prerogative of the authors of the thematic assessment in the first instance and would follow standard quality control and contracting party approval as described elsewhere in this document. This is necessary because the thematic assessments are comprehensive reports that integrate

information from several indicators and other sources to underpin the conclusions on specific topics/themes, however it would be an impossible task for the lead authors of the thematic reports to digest all reports and extract relevant information if the list of third party assessments is extensive.

4.4.1. Scales of assessment - Other assessments

If possible, information could be presented for the OSPAR Region I-V to facilitate inclusion of the information in thematic assessments but is no strict guidance on scales of assessment for 'other assessments'. The assessments are very different and no consistent guidance can be drafted. In any case, the spatial area and the scale which is considered should be clearly described.

5. Data policy and management

The QSR 2023 will be developed in accordance with the OSPAR data policy⁹. Operational data streams and regular OSPAR data collection activities will form the basis for the QSR 2023 assessments. The data products underlying the assessments will be made publicly available. These data product will not consist of raw-data but will provide a data package which is ready to be used for analysis, i.e. quality checked data, where obvious mistakes are removed, as well as outliers or other unwanted variation which might have an unproportioned high influence on the result.

As needed, OSPAR will complement the main data sources with ad-hoc data calls. Timing of the data calls will, where possible, be coordinated with respective ICGs and deadlines should be published by the end of 2019 at the latest for the whole assessment period.

Ad-hoc data calls will include as relevant calls for data, information and/or assessments from third parties. The quality, confidence and suitability in relation to the OSPAR data policy in data, information and/or assessments received in this manner will be the main issue in determining whether to include the information in the QSR 2023¹⁰. The following general steps are proposed to be followed when considering inclusion of third party data/information;

1. identify if the data/information covers a gap in an identified OSPAR data need, if this is the case whether it is relevant to consider bringing it into QSR;
2. confirm that the data/information represents the time period, or part of the time period, assessed by the QSR 2023;
3. if the information covers a regional data gap, compare it to existing common OSPAR indicators/assessments in other Regions, if the data/information being brought in is similar/measures a comparable parameter then compare spatial extent, assessment classes and criteria and quality consideration;
4. if there are no comparable assessments in other regions as in step 3, then the relevancy needs to be considered on a case-by-case basis (e.g. an existing polar bear assessment for Arctic Waters (Region I) could be relevant but there would be a need to cross compare with criteria used in other OSPAR species assessment).

Datasets underpinning the assessments of the QSR 2023 will be managed through the OSPAR Data and Information Management System (ODIMS). The ODIMS portal will be used to archive and disseminate data and data products, including geospatial data. The ongoing work to maintain and further develop ODIMS will continue to aim for INSPIRE compatibility (see also EU MSFD Art. 19(3)).

⁹ <https://www.ospar.org/work-areas/cross-cutting-issues/data-and-information>

¹⁰ JAMP B3 guidance for using 3rd party assessments in ICG-POSH could be considered as a basis if it is agreed to develop more detailed overall guidance for using 3rd party data/assessments in QSR 2023

6. QSR 2023 delivery

6.1 Roles of OSPAR subsidiary bodies

CoG will conclude on the concept, procedures and all contents and presentations in preparation for final endorsement by the OSPAR Commission. In that role, CoG will seek to resolve all issues around the concept, content and drafting procedures of the QSR. This includes policy issues where they arise, e.g. acceptance of thresholds after recommendation from committees. If in exceptional circumstances CoG agrees that an issue needs to be referred to a meeting of OSPAR Commission for resolution, CoG should agree how to prepare the discussion at that meeting of the OSPAR Commission.

ICG-QSR is responsible for the planning, production and delivery of the QSR 2023 and coordination of thematic and indicator assessments according to its Terms of Reference. In this capacity ICG-QSR will take an overview of assessments being produced to ensure consistency, linkages and cross-coordination within OSPAR on behalf of CoG. ICG-QSR will provide a first review of assessment products contributing the QSR 2023 however, CoG is the approving body. ICG-QSR has the mandate to guide the Committees in the delivery of products and assessments to the format and standard required for the QSR 2023. Where outputs from Committees are not of the quality and standard as detailed in this guidance and the instructions that the ICG-QSR will provide regarding the format and the standard, ICG-QSR will return these outputs to the Committees for revision and updating within specific timelines, to ensure the timely delivery of QSR 2023. ICG-QSR will focus on ensuring that all assessments are of an appropriate standard for inclusion in QSR 2023. ICG-QSR has the mandate to reject an assessment where it considers that the assessment does not comply with the agreed specifications or will not do so in time for inclusion in QSR 2023. ICG-QSR should be consulted where a committee is unable to reach an agreement on technical issues. ICG-QSR will advise the drafting of cross-cutting integrated assessments, such as cumulative effects/ecosystem outlook assessments from the view of delivering the overall vision of OSPAR and will communicate with respective communities in order to keep them apprised of progress on these issues. ICG-QSR may recommend to CoG the organisation of workshop(s) to facilitate the development of the synthesis report of the QSR 2023.

ICG-QSR will provide editorial guidance / style guidance to Committees and the science writer. The style guidance will be based on similar guidance produced for QSR2010 and IA2017 and will include details on tone, language, length of contributions, graphic standards, text boxes, case studies, nomenclature for units, drafting of conclusions and key messages. This guidance will be made available through the QSR 2023 Resources page on the [OSPAR website](#).

Committees, supported by their **expert groups**, are responsible for carrying out indicator-, other- and thematic assessments, including where possible and acceptable the definition of suitable environmental targets and threshold values. Committees are responsible for ensuring that the assessments meet the standards and formats required for the QSR 2023 as set out in this guidance or guided by ICG-QSR, within the timelines required for QSR 2023. Chairs of committees should keep track of the development of their Committees assessments and should regularly (at least every 3 months) inform ICG-QSR or the project coordinator of the progress. If there are assessments which may not be able to be finalised by the agreed deadline, committees should communicate this as early as possible and present possible solutions to ICG-QSR and CoG. Committees are responsible for resolving any scientific and technical issues within their remit. Committees may propose organising workshop(s) to facilitate the delivery of thematic assessments of the QSR 2023.

ICG-Data will support work on QSR 2023 related to questions and technical issues around data management. This may include and is not limited to issues around re-publishing data or data products from third party assessments, metadata requirements for datasets or data need specifications etc.

TG-MAP (task group on evaluation of the implementation and effectiveness of OSPAR measures as part of the OSPAR measures and action programme) should advise the committees that are producing the thematic assessments in order to include an evaluation of the OSPAR measures as part of those thematic assessments for the QSR 2023.

ICG-EcoC and **ICG-ESA** will develop the ecosystem outlook and/or cumulative effects assessments and socio economics assessment cross-cuttingly supporting other groups as relevant.

ICG-MSFD will provide advice, to ICG QSR on the developing QSR 2023 in relation to MSFD needs.

All other ICGs communicate with the ICG-QSR through their Committees.

6.2 Drafting the QSR 2023

The QSR 2023 is a collective effort across OSPAR subsidiary bodies.

ICG-QSR will provide editorial guidance / style guidance to Committees and the science writer. The style guidance will be based on similar guidance produced for QSR2010 and IA2017 and will include details on tone, language, length of contributions, graphic standards, text boxes, case studies, nomenclature for units, drafting of conclusions and key messages.

OSPAR Committees, through their expert groups and lead countries/experts with the support of the Secretariat, will develop the thematic assessments, indicator assessment sheets and any supporting material and data products including metadata descriptions. To ensure consistency between thematic assessments, a drafting person/group in each committee will lead the work in close collaboration with the Committee chairs and with Secretariat support. Where third party assessment are being used to inform QSR 2023 the appropriate Committee, and relevant task leads, will identify the main findings and convey the information to the person drafting the thematic assessments.

The QSR 2023 synthesis report will be drafted by a science writer, building on the thematic reports. The science writer will also develop an executive summary of the synthesis report. The science writer will work closely with the Committee drafting persons and Chairs in compiling the content of the synthesis report based on Draft Thematic Assessments as they are developed and produced by the Committees. The role of ICG-QSR will be to support the science writer in compiling the synthesis report and reviewing the content. The role of the science writer is the production of the Synthesis Report and associated Executive Summary (Non-Technical Summary) based on the technical assessments and direction provided by ICG-QSR. The Science Writer shall extract relevant information and conclusions from thematic assessments and third-party assessments and synthesise this into the sub-headings in the relevant Chapters 2-5. This will be carried out in co-operation with the Committees¹¹, and the Secretariat. ICG-QSR through its Chair or a sub-group (nominated by ICG-QSR) will with the help of the Secretariat oversee the Science Writers work and progress to ensure the process is delivering a report which reflects the underlying assessments. While work on Chapters 2-5 are under way the science writer will start to produce Chapters 1 and 6, The Quality Status Report 2023 and Conclusions and future outlook respectively, with help and guidance from ICG-QSR and the

¹¹ Chairs, or lead person for assessments as nominated by the Committee

Secretariat. The Committees will be asked to verify the conclusions and recommendations in Chapter 6 and that chapter will be sent to CoG for comments.

ICG-QSR will ensure that the draft text of the synthesis report will be presented to the Committees for comments. Feedback from Committees will be limited to technical issues. The form of language will be agreed between ICG-QSR and the Science Writer with guidance from the Secretariat. The final text will be presented by ICG-QSR to the Committees for information.

The Secretariat will support all groups involved in drafting activities to ensure timely and coordinated delivery of products and JAMP implementation, management of budget, documents and activities.

6.3 Roles for approving the QSR 2023 components

Committees are responsible for reviewing and approving the indicator- and thematic assessments under their mandate, including the technical approval of thresholds. If thresholds are relevant for the MSFD, ICG MSFD should be informed and as far as possible thresholds should be coordinated for those elements where MSFD demands thresholds. Committees will be involved in reviewing and approving cross-cutting assessments relevant to their mandate, e.g. sections of assessments on climate change, cumulative effects, natural capital accounting and cost of degradation. Any disputed issues within the Committee review and approval step will be clearly identified, explained and options for solutions proposed.

ICG-QSR will review and approve the synthesis report to CoG. ICG-QSR will also review thematic assessments from a managerial point of view during the drafting phase of the thematic assessments with the view of providing guidance on coverage, structure and drafting of key statements. Once Committees have agreed quality assured assessment products under their mandate, ICG-QSR will review the products to ensure that they are complete, consistent and live up to the required standards and format. If the assessments do not meet the standards, ICG-QSR will provide guidance to Committees on the standards and corrections required within a specified timeframe or decide that the assessment product will not be included in the QSR 2023. ICG-QSR will review and approve any integrated assessments that cut across committees, such as the cumulative effects assessment.

When ICG-QSR finds the assessments meet standards and formats, it will recommend them to **CoG** for agreement from a coordination and policy perspective. ICG-QSR will consider any disputed issues and options for resolving them, in conjunction with the relevant Committee Chair. Where a solution is not agreeable, ICG-QSR will prepare a briefing for CoG who will make a final binding decision.

CoG will endorse and forward the assessment products for adoption by the **OSPAR Commission**.

6.4 Quality assurance of the QSR 2023

ICG-QSR will provide guidance on quality assurance. The guidance will be made available at a later date.

6.4.1 Peer Review of the QSR 2023

The QSR 2023 will be peer reviewed at the scientific level by an independent scientific organisation(s) with the relevant competence. This review will be undertaken on the thematic assessments which will form the basis for the QSR Synthesis report. To ensure that this fits with the timeline for the production of the QSR synthesis report, this review will be done as and when each assessment is produced.

The peer review process, similar to that carried out for QSR 2010, is proposed as the most appropriate way to review QSR 2023. QSR 2010 was peer reviewed by an ICES led panel process. As the QSR 2023 will be a multi-disciplinary product, a panel of experts would be preferable to individual reviewers and could work on themes or topics. The process of selecting the reviewers needs to be as transparent as possible to

demonstrate that peer reviewers are independent. They should be selected as early as possible and be engaged in major milestones and allow for sufficient time to incorporate any comments. Any peer reviewer may need reimbursement, either financially or reciprocal review.

Options for leading the peer review process include ICES, JRC and HELCOM as these organisations have the relevant competences and are not directly involved in undertaking the Thematic Assessments for QSR 2023.

6.5 Consultation process

Any input received through the consultation process will feed into the quality control process.

OSPAR intends to undertake a consultation process by direct engagement with relevant stakeholders. This consultation is envisaged before the final publication of the QSR 2023 and could take place in either Q3 or Q4 of 2022 and the comments fed into the synthesis Report.

It is envisaged that the consultation will be structured around the following approach. Stakeholders from the relevant industries and NGO sectors will be invited to engage in the consultation process. The consultation will take place via either a physical meeting at a central location, or via a series of web-based discussion and information sessions. The consultation will be structured around a presentation of QSR 2023 work and question / answer sessions around topics and themes. To ensure transparency of the process there will be a review of all comments and inputs received during the consultation with feedback being provided to participants after the event.

6.6 Tracking Progress and QSR resource documentation

Progress will be tracked through Microsoft Teams, using Microsoft SharePoint as a repository for documents. Access will be by invitation only.

Publicly available guidance documents for the QSR 2023 will be published on the [OSPAR Website](#) under the [QSR 2023 Resources Page](#). This OSPAR Agreement guidance document will be accompanied with 'living' documents, e.g., timeline, which will be updated as necessary.

High priority will be given by the Secretariat to keeping the contents up-to-date, including;

- Extended QSR 2023 structure and associated JAMP and OSPAR subsidiary body contributions
- Latest ICG-QSR overview documents on state of play
- Latest (regularly updated) detailed time plan for the production of the QSR 2023
- Work plans of Committees for the thematic/integrated assessments
- Link to web test environments for assessment products (indicator assessments, QSR synthesis report) and to the latest versions of the thematic/Integrated assessments

7. Timeline milestones

This guidance document only describes the major milestones for the delivery of QSR 2023. The key milestones for when assessments need to be agreed at the latest to form a part of QSR 2023 are outlined in Figure 4 below.

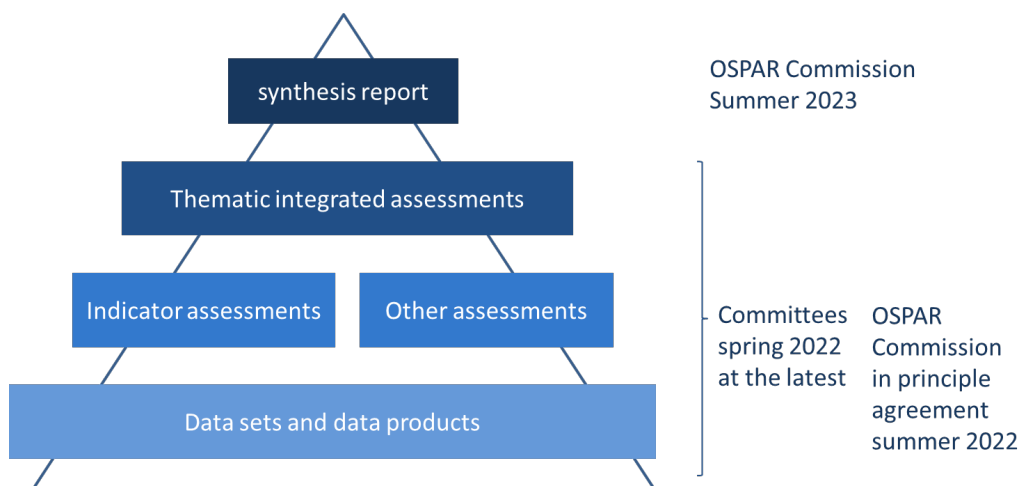


Figure 4. Key milestones, by which time at the latest, assessments to be part of the QSR 2023 need to be agreed.

The key milestones and delivery deadlines for QSR 2023 from this point forward are outlined in Table 6 below.

Table 6: QSR 2023 Delivery milestones

Element	Time by which element is to be completed at the latest
Agree Concept and Format of QSR	Spring 2019
Start Production & Assessment work, unless on-going	as soon as possible
Data Calls	December 2021
Agree Finalised Indicator Assessments	Committees Spring 2022
Agree Draft Thematic Assessments	Committees Spring 2022
Third Party Assessments	OSPAR Summer 2022
Indicator Assessments and Thematic Assessments adopted in principle	OSPAR summer 2022
First Draft Cumulative Assessment	Summer 2022
First Draft Synthesis Report	Summer 2022
Adopt Synthesis Report	OSPAR summer 2023

7.1 Data Calls

All Committees should develop data call timelines to ensure that the data is available to produce Assessments and Data products to meet the deadlines set in the following sections. It is highly recommended that data call processes are completed by the end of 2021 at the latest.

7.2 Common indicator, candidate indicator and 'other Non Indicator' assessments

Common indicator, candidate indicator and OSPAR other non indicator assessments shall be agreed at the latest by Committee meetings in spring of 2022.

Considering the numbers of assessments that will need to be delivered in Spring 2022, Committees are encouraged to program assessment finalisation to ensure that adequate resources are available to deal with the substantial work load foreseen.

7.3 Third Party Other Assessments

Third Party Assessments shall be utilised to inform the preparation to the Synthesis Report and thematic assessments up until the agreement of the Draft QSR 2023 at the OSPAR Commission meeting in 2022.

7.4 Thematic assessments and cumulative effects assessment

A final draft of the thematic assessments shall be agreed by Committee meetings in spring of 2022.

The thematic assessments and cumulative effects assessment will build on common indicator assessments, other non indicator and other third party assessments, data products and additional information as relevant, for example including information on implementation of measures or economic- and social information. The development of the thematic- and cumulative effects assessments will be undertaken in parallel with the indicator- and other non indicator assessments.

Compilation phase: During the 2021/2022 period the QSR 2023 will be compiled in final draft form for agreement at OSPAR 2022.

7.5 Synthesis report

An initial draft of the synthesis report which substantiates the outline structure as in Annex 3 will be presented for comments to OSPAR 2022. The synthesis report will be developed based on the final draft thematic assessment reports in the meeting cycle 2022/2023. The final version will be agreed at OSPAR 2023.

The executive summary of the synthesis report will be prepared for the CoG / HOD meeting in Autumn 2022.

7.6 Publication phase of the QSR 2023

OSPAR 2022 will agree the draft QSR 2023 in principle. The meeting cycle 2022/2023 will be used to prepare the QSR 2023 for publication. This will include finalisation of components as relevant, translation into French, uploading material for publication on the OSPAR Assessment Portal and preparing the layout of the pdf-publications.

Annex 1 Confidence statements Guidance for QSR 2023

For the QSR 2023 there is a need to establish the confidence in assessments at all levels including in the Synthesis Report, Thematic Assessments and Indicator Assessments. This annex outlines the guidance to authors in undertaking confidence assessments and is based on, *inter alia*, guidance developed for OSPAR Intermediate Assessment 2017 and the IPCC¹² Guidance for Lead Authors.

General Guidance

- Consider the confidence assessment early in the process of drafting assessments and determine areas of uncertainty.
- When making expert judgment provide a traceable account through a description in the assessment text outlining type, amount, quality and consistency of evidence and degree of agreement amongst experts.
- At indicator level the data/numbers and/or statistical methods on which the confidence assessment are based should be provided, and the lead author should consider the within-assessment comparability of data sources.
- Be aware of the tendency of a group to converge on an expressed view and become overconfident in it. If possible, do independent assessment of confidence and then compare the results and discuss differences.

Indicator Confidence Assessments

In IA2017 a straightforward approach was undertaken where the confidence was qualitatively assessed for both the data and methodologies using the criteria outlined in Tables 1. This is possible for the indicator assessments as they generally focus on one parameter and are supported by monitoring data. The results are then presented separately without an attempt to integrate them into a single assessment in order not to lose the detail of the assessment. This approach will be used again for indicator assessments in the QSR 2023.

¹² [Guidance note for lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties](#)

Table 1 Description of high, moderate and low data availability

Data availability (spatially and temporally)	Description
High	<p>There are no significant data gaps identified, for example:</p> <ul style="list-style-type: none"> • The assessment is undertaken using data with sufficient spatial coverage within the area being assessed. • The assessment is undertaken using sufficient temporal data collected over a period pertinent to the assessment.
Moderate	<p>Some data gaps are evident, but this does not impact the overall outcome of the assessment, for example:</p> <ul style="list-style-type: none"> • The assessment is undertaken using data with a mostly sufficient spatial coverage for the area assessed, but gaps are apparent in certain areas. • The assessment is undertaken using data with a mostly sufficient temporal coverage collected over a period pertinent to the assessment. Although some gaps are apparent.
Low	<p>Significant data gaps have been identified (both spatially and temporally), for example:</p> <ul style="list-style-type: none"> • The assessment is undertaken using limited data with poor spatial coverage within the area assessed. • The assessment is undertaken using limited data collected over a period that is limited (and therefore not pertinent to the assessment) or the assessment is largely informed by expert judgement.

Table 2 Description of high, moderate and low consensus in methodology / maturity of methodology

Consensus in methodology / maturity of methodology	Description
High	<p>The assessment methodology requires only limited further development and updating for future assessments, for example:</p> <ul style="list-style-type: none"> • The methodology used is widely accepted and is used in published international assessments. The methodology has been in use for a number of years. • There is a strong consensus within the scientific community regarding this methodology / approach to assessment.
Moderate	<p>The assessment methodology could benefit from some further development for future assessments, for example:</p> <ul style="list-style-type: none"> • The methodology presented is often used to assess this indicator and has been used previously in published assessments, but it is acknowledged that one or two aspects require further development. • There is consensus within the scientific community regarding this methodology, but there remain some questions around the methodology.
Low	<p>The assessment methodology requires further development for future assessments, for example:</p> <ul style="list-style-type: none"> • The methodology used has been developed specifically for this assessment and has not been used in a previously published assessment. • There is limited consensus within the scientific community regarding this methodology.

Statistical significance

For indicators where it is possible to quantify the statistical significance of the results this should be clearly stated in the brief results and outlined in more detail in the extended results, as it provides a higher level of rigour than a qualitative confidence assessment. Where it is possible to explain a specific result or outcome in probabilistic terms outcomes the language outlined in table 1 of the IPPC guidance should be used as a guide to express the outcome.

Term	Likelihood of the Outcome
Virtually certain	99-100% probability
Very likely	90-100% probability
Likely	66-100% probability
About as likely as not	33 to 66% probability
Unlikely	0-33% probability
Very unlikely	0-10% probability
Exceptionally unlikely	0-1% probability

Thematic Confidence assessments

For the Thematic assessments a different approach will be needed from the indicator assessments as they will integrate data from a number of sources (e.g. indicator assessments, other OSPAR assessments, other third party assessments, expert judgement, etc.). Therefore, it will not be possible to undertake a confidence assessment for methodology and data in the same way. Where possible the confidence assessment will need to be broken down by OSPAR region as well so this information can be presented in the synthesis report.

For the thematic assessments the confidence assessment will be based upon the IPCC guidance on communicating the degree of uncertainty in key findings. This uses two criteria on the level of evidence and degree of agreement of the underlying assessments. These are outlined and expanded upon in the Table 2 below.

Table 3 Description of robust, medium and limited evidence

Type, amount, quality and consistency of evidence	Description
Robust	<p>There are multiple, consistent, independent lines of high quality evidence</p> <ul style="list-style-type: none"> there are multiple lines of evidence (indicator assessments, other assessments or third party assessments) with appropriate spatial and temporal scale providing suitable evidence
Medium	<p>There is some high quality evidence but gaps remain</p> <ul style="list-style-type: none"> there are multiple lines of evidence (indicator assessments, other assessments or third party assessments), but the spatiotemporal coverage of those is limited <p>OR</p> <ul style="list-style-type: none"> There are few lines of evidence (indicator assessments, other assessments or third party assessments), but they do have appropriate spatial and temporal scale providing suitable evidence
Limited	<p>Evidence is limited</p> <ul style="list-style-type: none"> there are few lines of evidence (indicator assessments, other assessments or third party assessments), and the spatiotemporal coverage of those is limited

Table 4 Description of the degree of agreement

Degree of Agreement	Description
High	<p>There is good consensus in the results of the assessments</p> <ul style="list-style-type: none"> the lines of evidence (indicator assessments, other assessments or third party assessments) all agree
Medium	<p>The results of the assessments are mostly in consensus but with some deviation</p> <ul style="list-style-type: none"> the lines of evidence (indicator assessments, other assessments or third party assessments) mostly agree, although a minor proportion show some deviation
Low	<p>The results of the different assessments do not agree</p> <ul style="list-style-type: none"> the lines of evidence (indicator assessments, other assessments or third party assessments) present differing results

As the Thematic Assessments and the Synthesis reports are aimed at policy makers it is preferable to have a single measurement of confidence rather than the two parameter approach used for the Indicator Assessments, which are aimed at a more technical audience. Therefore, the two criteria above should be combined using the matrix in Figure 1 below resulting in a single 5 point confidence scale using the descriptors very low, low, medium, high to very high.

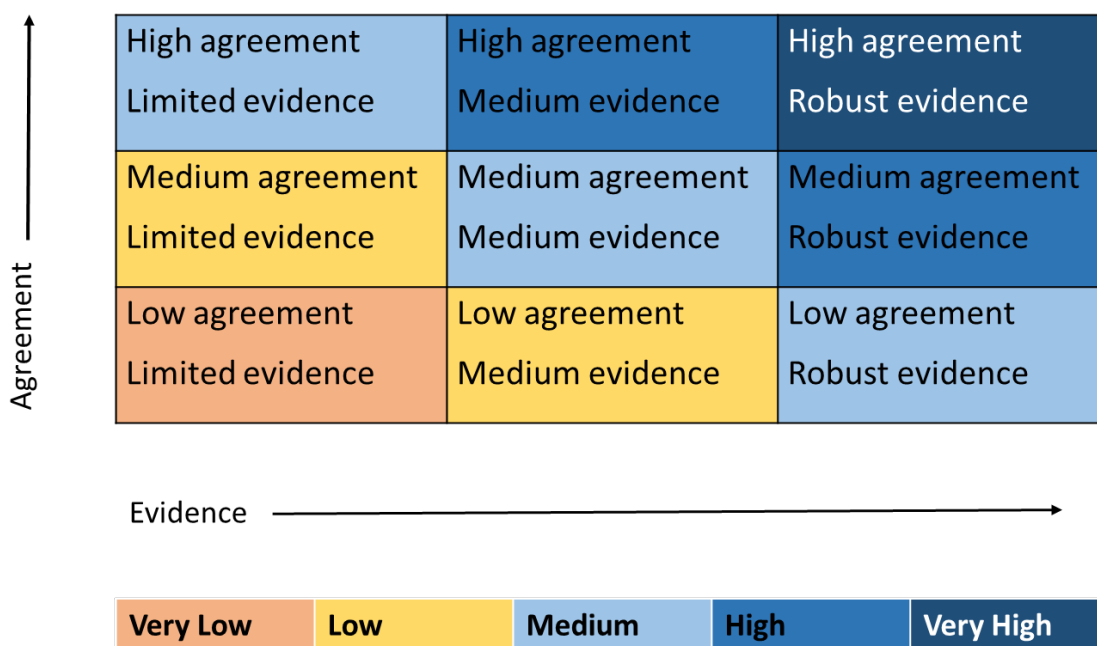


Figure 1: A depiction of the evidence and agreement statement and their relationship to the confidence criteria.

There should be flexibility in the application of this approach as the boundaries are not clearly defined and therefore some judgment will be needed as to the application of categories. However, increasing levels of evidence and degrees of agreement are related to increasing confidence. Presentation of findings with low or very low confidence should have the reasons for the score carefully explained.

For the Thematic Assessments the aim should be to give a confidence score for each OSPAR region as these could vary significantly, particularly in relation to the amount of evidence available, as outlined in the example below.

OSPAR Region	I	II	III	IV	V
Confidence	Low	Medium	Medium	Very High	High

Review of Confidence Assessments

In order to ensure consistency across different indicator and thematic assessments all confidence assessments will be reviewed by ICG-QSR prior to their agreement for inclusion on the QSR 2023.

Annex 2 Draft structure of the QSR 2023 synthesis report

Key Findings

Short, strong messages. Presenting information per OSPAR Region.

1. The Quality Status Report 2023

Max 3 pages setting the scene on;

- Objective
- NEAES 2020 & NEAES 2030 (defines the topics to be covered)
- Coverage (geographical, temporal)
- Assessment process
- Regional cooperation

2. The North-East Atlantic

Sub-chapters to present information in a regional context

- Physical description of OSPAR Regions
- Climate and ocean acidification, prevailing conditions (including hydrographical changes)
- Human activities and benefits from protecting marine ecosystems (humans and their relationship with the sea, both beneficial and non-beneficial)

3. Clean seas

The main chapter heading reflects the goal and sub-chapters where we are in reaching it

Strong linkages between chapters 3 and 4 need to be indicated and cross-referenced

- Eutrophication
- Contaminant pollution (Hazardous substances, Offshore oil and gas industry, Radioactive substances)
- Marine litter
- Underwater noise
- Introduction of non-indigenous species

4. Biologically diverse and healthy seas

Presents status, pressures and measures of relevance for each topic per Region;

- Marine birds
- Marine mammals
- Marine Reptiles
- Fish and cephalopods
- Benthic habitats (including benthic communities, and seabed disturbance)
- Pelagic habitats (including plankton communities)
- Food webs (*could be moved to Chapter 5 as this component is likely to be cross-cutting and provides a framework for interpretation of Chapter 4 assessments*)

5. Ecosystems used sustainably

Brings together information from previous chapters. Per Region;

- Human activities (assessment based on main pressures and impacts in chapters 3 and 4)
- Ecosystem outlook cumulative effects on the North East Atlantic (selected case studies)

- Impacts on ecosystem services

6. Conclusions and future outlook

Max 7 pages presenting overall and per Region;

- Quality status
- Successes and ongoing concerns
- Emerging issues
- Priorities for measures and actions to achieve a healthy NEA

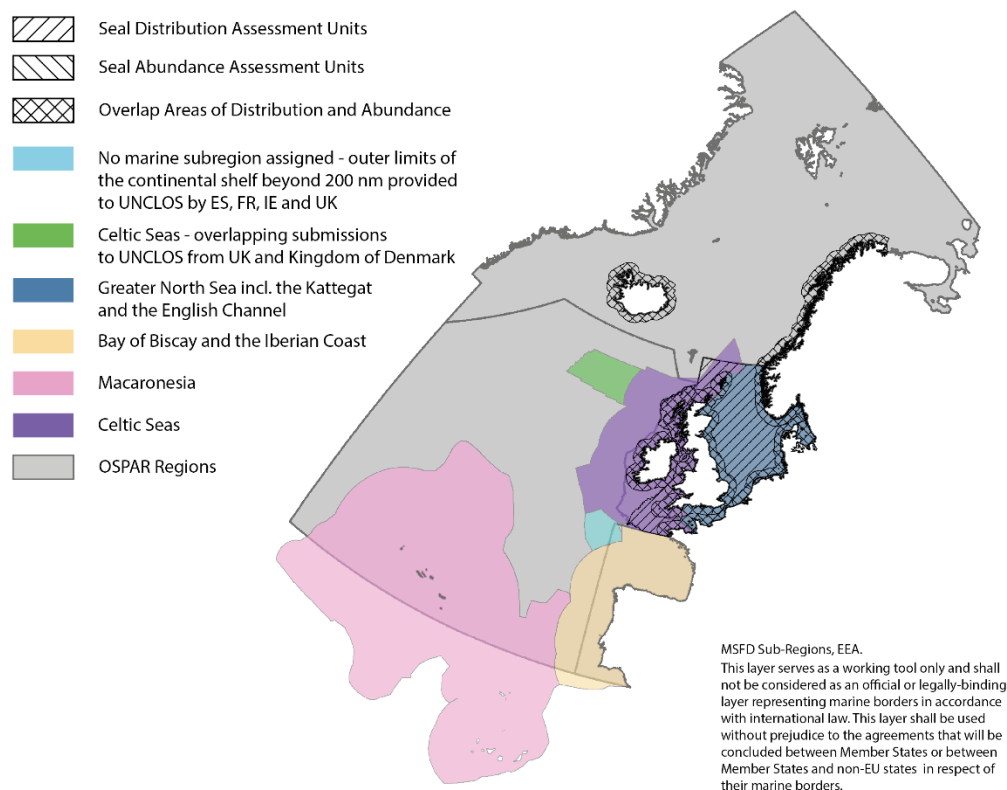
Annex 3 Dealing with assessment units when integrating indicators to an integrated assessment: challenges, with illustrative examples

This annex provides an illustration of the flow of information from indicators (common as well as candidate) to integrated assessments presented in thematic assessments. The focus of this annex is to illustrate some of the remaining challenges in defining integration methodology in particular as they relate to the use of different assessment units for the different integration steps.

Assessment units in indicators are not always fully nested within the assessment units proposed to be used for integrated assessments (Annex 3 Figure 1). A pragmatic integration approach is needed to address this issue and it is important that the pragmatic rules that are developed and followed are clearly documented. This is important not only for users of the results (for example in reporting for the MSFD) but also for future reference. The integration methods and rules will need to be developed by the leads (after discussion with the relevant OSPAR expert group or ICG) for the integrated assessments. Documented integration methods and rules should be published as separate technical documents, for example as an OSPAR Publication or as a CEMP Guideline which would be referred to in the thematic assessment published on OAP.

Some examples of challenges where indicator assessment units are not nested within the assessment unit of the integrated assessment, and which would need to be resolved by assessors:

- Document to which integrated assessment unit each indicator assessment unit is assigned to avoid that monitoring results are incorporated multiple times in the QSR thematic assessments.
- When an indicator assessment unit extends beyond an integrated assessment unit, it is likely it will also overlap with the neighbouring integrated assessment unit. The leads developing the integrated assessment could agree that:
 - an indicator assessment unit is considered in the integrated results for an integrated assessment unit output only where there is full spatial overlap or only in the integrated assessment unit where the indicator unit has the majority spatial area overlap;
 - alternatively, the leads could decide to take the same indicator assessment unit result into account in several integrated assessment units and for example to add a weighting component to halve the contribution of the indicator to the integrated result.



Annex 3 Figure 1. The assessment units for the indicator ‘seal distribution’ and ‘seal abundance’ shown using hatches are not fully nested within the assessment units of the integrated assessment of ‘seals’ shown using different coloured areas.

From indicator to integrated assessment to regional summary

This annex presents information in the order of flow of information through the QSR 2023 process, from an indicator, through an integrated assessment and up to the summary statement per OSPAR Region/OSPAR Maritime Area of the thematic assessment. An example for marine mammals and eutrophication is presented below. The information is presented with a view of clarifying the expected outputs, for example if one indicator assesses 2 species for 6 assessment units this will result in 12 calculated outputs. The assessed feature and assessment units in this example are indicative and subject to change. The assessment units used in this example match the scales of assessment and assessment unit guidance as provided in section 4.2.3 and Table 3 therein.

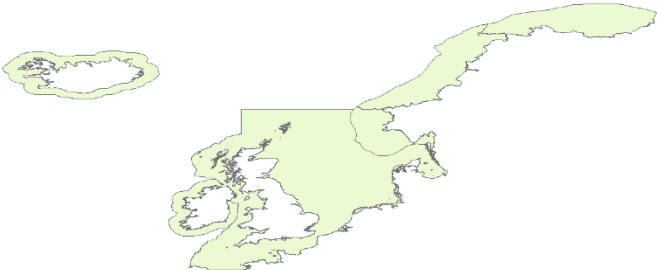
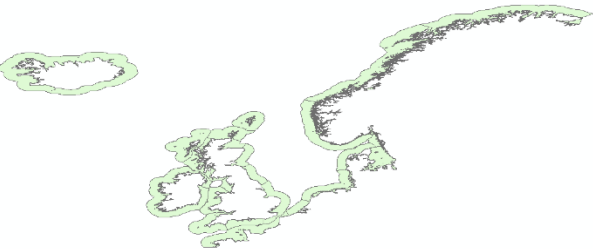
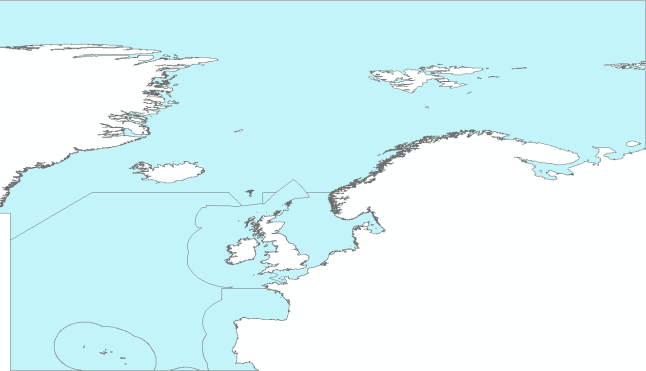

All indicator assessments will be completed by the population of the indicator template, including the Addendum 1 excel based template which captures MSFD results. Once the indicator assessment has been completed, it will be published in the OSPAR Assessment Portal.

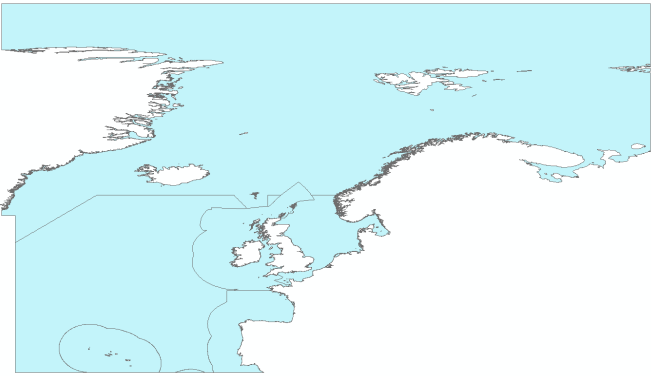
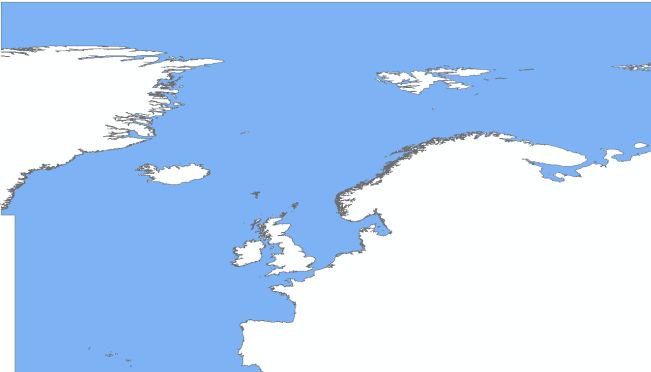
Integrated assessment results will be published as a sub-section of the relevant thematic assessment chapter in the OSPAR Assessment Portal. A separate OSPAR Publication/CEMP Guideline will be published as a reference document that describes the integration rules and method used. The integrated assessment results will be completed in the Addendum 1 excel based template which captures MSFD results.

The thematic assessment summary result per OSPAR Region will be published at the beginning of the relevant chapter of the thematic assessment in the OSPAR Assessment Portal. This summary would take into account information from indicators and integrated assessments as well as from other assessments; however, other assessments are not represented in this annex.

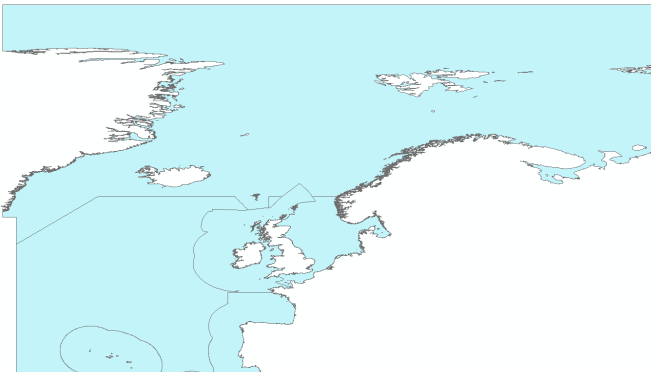
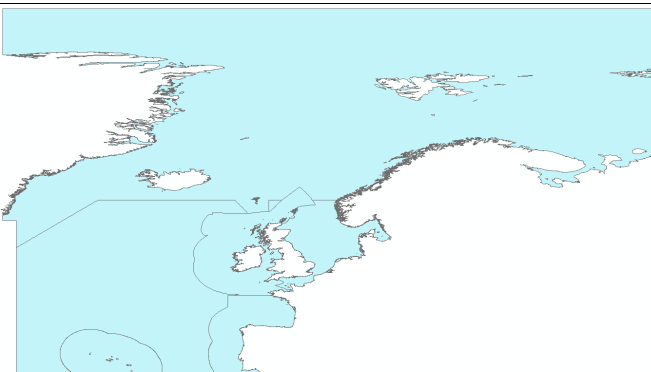
Marine Mammal example

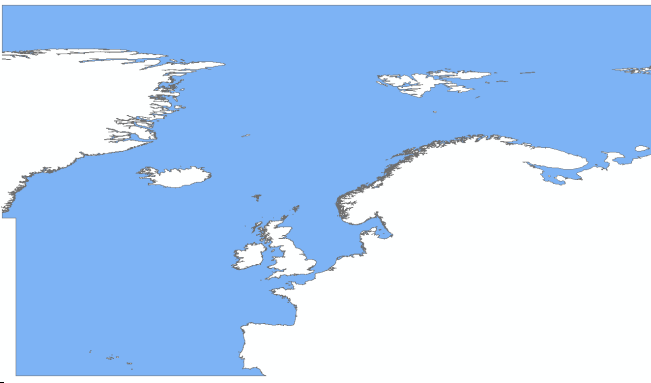
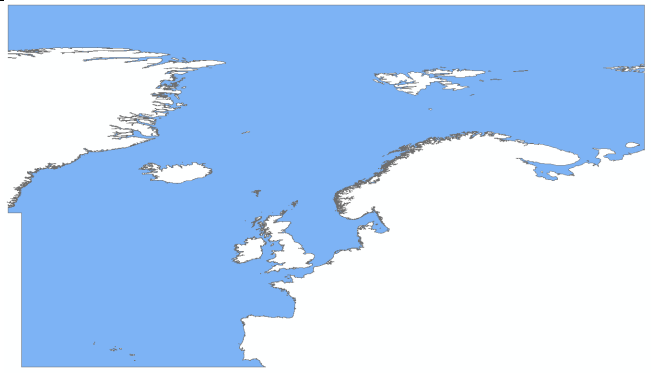
Indicator assessments

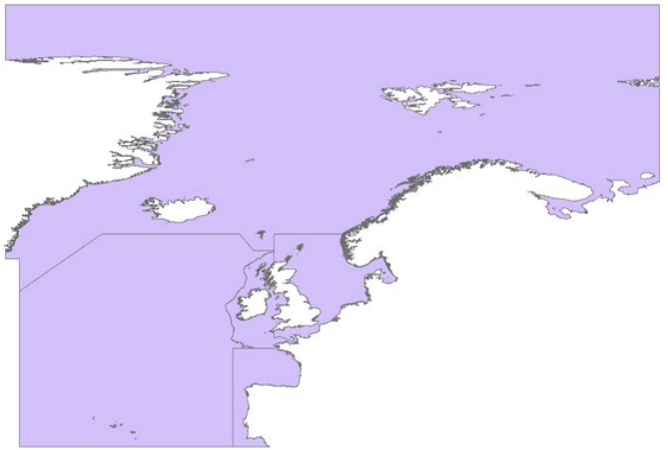
Indicator	Assessed feature Assessment units	Illustration of assessment unit boundaries
Seal Abundance and Distribution (M3) cf. D1C2	Species x2 (Grey seal and Harbour seal) Assessment units x 6	
Grey seal pup production (M5) cf. D1C3	Species x1 (Grey seal) Assessment units x25	
Marine mammal bycatch (M6) cf. D1C1	Species x 3 (Grey seal + harbour porpoise + common dolphin) Assessment units (x 6)	
Abundance and distribution of marine mammals (M4) cf. D1C2	Species x 1 (coastal bottlenose dolphin) Assessment units (x 10 coastal)	

	<p>Species x 2 (harbour porpoise, common dolphin)</p> <p>Assessment units (x 6)</p>	
	<p>Species x9 (killer whale, offshore-bottlenose dolphin, minke whale, white-beaked dolphin, striped dolphin, fin whale, pilot whale, beaked whales, sperm whale)</p> <p>Assessment units (x1)</p>	

Marine Mammals thematic assessment

Integrated assessment	Assessed feature Assessment units	Illustration of assessment unit boundaries
Seals	<p>Species group 'seals' (grey seal, harbour seal)</p> <p>Assessment units (x6)</p>	
Small toothed cetaceans	<p>Species group 'small toothed cetaceans' (harbour porpoise, common dolphin, bottlenose dolphin (coastal and offshore), white-beaked dolphin, white-sided dolphin, striped dolphin, killer whale)</p> <p>Assessment units x6</p>	

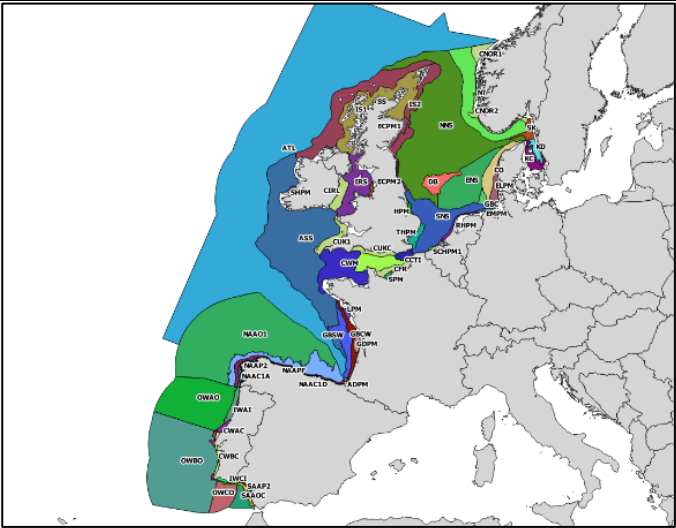
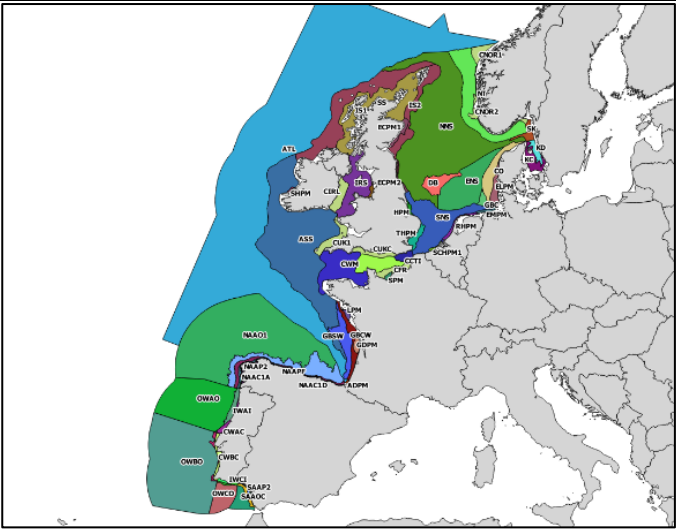
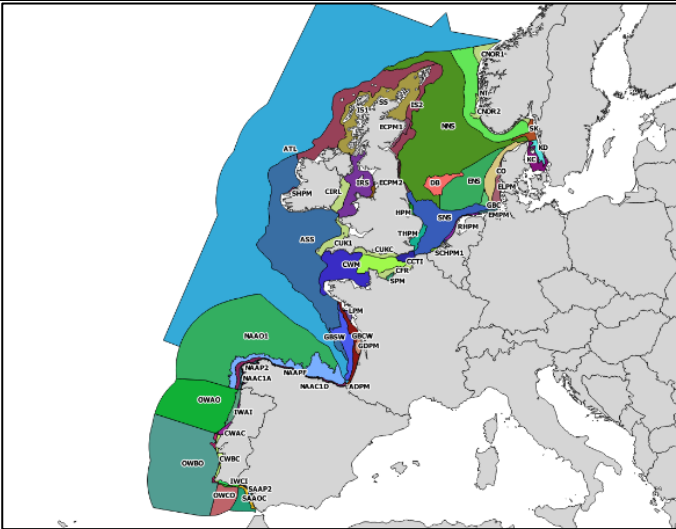
Integrated assessment	Assessed feature Assessment units	
Deep-diving toothed cetaceans	Species group 'deep-diving toothed cetaceans' (sperm whale, long-finned pilot whale, short-finned pilot whale, Risso's dolphin, beaked whales) Assessment units x1	
Baleen whales	Species group 'baleen whales' (minke whale, fin whale) Assessment units x1	

Overall summary result	Assessed feature Assessment units	Illustration of assessment unit boundaries
Marine mammals	Marine mammals Assessment units x 5	

Eutrophication example

Indicator assessments

Indicator	Assessed feature Assessment units	Illustration of assessment unit boundaries
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Winter nutrient concentration cf. D5C1	Parameter 'nitrogen' 'phosphorous' Assessment units 60+	
Growing season concentration of chlorophyll-a cf. D5C2	Parameter 'chlorophyll concentration' Assessment units 60+	
Concentrations of dissolved oxygen near the seafloor cf. D5C5	Parameter 'dissolved oxygen' Assessment units 60+ (NB not all units will have data to support an assessment)	

Eutrophication – Thematic Assessment

Integrated assessment	Assessed feature Assessment units	Illustration of assessment unit boundaries
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<p>Eutrophication</p> <p>(OSPAR Agreement 2013-08 (TG COMP working on a revision foreseen to become Agreement 2022-0x))</p>	<p>Feature 'eutrophication' (integration of 3 indicators)</p> <p>Assessment units 60+</p>	
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Overall summary result	Assessed feature Assessment units	Illustration of assessment unit boundaries
Eutrophication	Eutrophication Assessment units x 5	

Annex 4 Definitions of the main QSR products

Objective: Clarifying the vocabulary used in the guidance document to ensure clarity and consistency

<i>Synthesis report</i>	
Definition	A document that provides a synthesis of the findings of the QSR 2023 process.
Context	<p>The main chapters of the synthesis report will be structured to reflect the components of the OSPAR North-East Atlantic Strategy 2030 (NEAES 2030). Each chapter will reflect on key findings for each of the five OSPAR Regions through a chapeau text describing the status for each theme/chapter.</p> <p>The sub-chapters will each cover a topic and aim to tell the whole story of that topic, including the key findings in relation to the relevant assessments of status, pressures, implemented measures and socio-economic aspects. Where relevant, sub-chapter can present a component of the cumulative effect assessment as a thematic case study.</p> <p>The conclusions will cover the following information per Region, where appropriate, otherwise on an OSPAR-wide level.</p> <ul style="list-style-type: none"> – Status in relation to the NEAES objective; extent to which a good status is achieved (progress towards NEAES goals, where possible highlighting differences within regions, based on assessment areas used in the indicator assessments) – Direction of change in pressures or status – Outlook for pressures / state change – Confidence in the assessment of status and change – Evaluation of the effectiveness of OSPAR actions, and where appropriate taking into account actions and measures taken in other policy frameworks. Work on the evaluation for effectiveness will be guided by the outcome of discussions in several OSPAR work streams <p>The synthesis report will compare progress made since the publication of the QSR 2010, where main findings were presented in tables at the end of each chapter for each Region and key pressures were also summarised.</p> <p>The structure outlined in this document is indicative of the elements which are considered necessary for the QSR 2023 synthesis report.</p>
Different from	Not relevant
Translation in French	<p><i>Rapport de synthèse / Bilan</i></p> <p>Source: https://unterm.un.org/unterm/search?urlQuery=synthesis%20report</p>
Target audience	Informed public and policy makers
OAP	Tbc

Link with MSFD	No interplay with MSFD
Sources	19-02e_qsr_2023_guidance_document

<p><i>Thematic assessment</i></p> <p>Thematic assessment template and guidance to populate it are available on the QSR 2023 Resources page on the OSPAR Website</p> <p>Leads to a thematic assessment</p>	
Definition	<p>A thematic assessment is an intermediate step/product of the QSR process, which brings together, sometimes via an integrated assessment, a number of indicator assessments, other assessments, data products and other relevant information to present the evidence base for the key conclusions/statements which will be presented in the synthesis report.</p> <p><i>N.B: Thematic assessment templates have been defined and are available on the OSPAR website.</i></p>
Context	<p>The structure of the thematic assessment is two-fold:</p> <p><i>Thematic assessments will follow the DAPSIR framework. DAPSIR is a way to assess cumulative impacts at an ecosystem level and includes all types of information needed to take a holistic ecosystem-based approach to assessing a specific topic.</i></p> <ul style="list-style-type: none"> - The first part is the executive summary, which will answer the questions defined in the JAMP used in QSR 2010 whenever relevant, in order to link back to the QSR 2010 and evaluate progress against NEAES 2020. - The second part is the main body of the thematic assessment, which should apply the DAPSIR framework, with flexibility regarding the headings used. <p>There will be differences in the scope and technical implementation of the thematic assessments. The amount of information under each “chapter/element” of the DAPSIR structure will differ between thematic assessments. For example, biodiversity thematic assessments are foreseen to include the majority of the content, including results from integrated assessments, under the chapter ‘Status’, whereas a hazardous substances thematic assessment would include the majority of content under the chapter ‘Pressures’.</p> <p><i>In some cases, integrated assessments will be prepared, and results reflected under the appropriate chapter heading (for more information on integrated assessments, please see definition below).</i></p>
Different from	<p>Integrated assessment</p> <p>Indicator assessment</p> <p>Other assessment</p> <p>A pilot assessment</p>
Translation in French	<i>‘évaluation thématique’</i>

	source: IPBES https://unterm.un.org/unterm/display/record/unon/na/688a4d90-4a47-43ae-b879-65077aa8e13d
Target audience	Policy makers for the executive summaries. Experts for the main body of the thematic assessment applying the DAPSIR framework.
OAP	Thematic assessments will be published on OAP as full electronic products. The aim is to also make thematic assessments available as printable pdfs.
MSFD	Some relationship with MSFD descriptors
Sources	19-02e_qsr_2023_guidance_document BiTA(2) 21/30/01 for the definitions of Integration/Aggregation

<i>Integrated assessment</i>	
Part of a thematic assessment	
Definition	An integrated assessment is where multiple indicators are brought together in a structured manner (e.g. via defined integration rules) to provide an assessment of a broader topic. The topic may be a reporting 'feature' under MSFD (e.g. eutrophication, UPBT substances, seals). For biodiversity assessments, the indicators are first integrated to species level (e.g. grey seal) before integration to species group level (e.g. seals).
Context	Integrated assessments are not standalone OSPAR products; they will not be published as such and will always be used as information products to fill some parts of the thematic assessment. <i>In some cases, integrated assessments will be prepared, and results reflected under the appropriate chapter heading.</i> For some topics, such as eutrophication, quantitative integration is foreseen, whereas for other topics such a biodiversity, a more qualitative approach based on expert judgement may be needed to complete the integrated assessments, for cases where integration methods are not yet available. <i>To give a concrete example, for the 'Marine Birds' thematic assessment, the results of several common indicator assessments (i.e. 'Marine bird abundance' and 'Marine bird breeding success') will be integrated, to provide assessments for 'grazing birds, wading birds, surface-feeding birds, pelagic-feeding birds, benthic-feeding birds'. These integrated assessment results are comparable to the EU MSFD features. In the case of the marine bird thematic assessment, these integrated results would be presented under the 'Status' chapter of the DAPSIR framework. In other cases, such as the 'Eutrophication' thematic assessment, several common indicators (i.e. 'Winter nutrient concentrations', 'Growing season concentrations of chlorophyll-a' and 'Concentrations of dissolved oxygen near the seafloor') will be integrated to assess 'eutrophication' for each assessment unit.</i>
Different from	Aggregated assessment (EU MSFD)

	<p>Aggregation is understood under EU MSFD to mean combining <u>the same type of data</u>, for example the abundance estimates of the same bird species from different monitoring stations.</p> <p><i>Note: aggregated assessment could be used as information products to fill some parts of the thematic assessment.</i></p> <p>Other assessment – That category includes OSPAR non-indicator assessments and third-party assessments. See below.</p>
Translation in French	<p>'évaluation intégrée'</p> <p>https://unterm.un.org/unterm/search?urlQuery=integrated%20assessment</p>
Target audience	Experts
OAP	Integrated assessments will be published on OAP as part of thematic assessments.
MSFD	Integrated assessments, included in the thematic assessments, are equivalent to MSFD Article 8 'feature' assessments. The excel based Addendum 1 of the thematic assessment template requires assessors to prepare information on the integrated assessments in a format that can support electronic reporting under the MSFD Article 8 process. The information in the Addendum 1 will be associated to polygon-based shapefiles of the assessment units that will be held in ODIMS. This information will allow those Contracting Parties that are also EU Member States to directly use the integrated assessment outputs for their EU MSFD Article 8 reporting if they choose to do so. The aim is that regionally produced integrated assessments will be made available to Member States as prefilled information in the national reporting templates which can be used for reporting if a Member State chooses to use it.
Sources	- 19-02e_qsr_2023_guidance_document

<p><i>Common indicator assessment</i></p> <p>Common indicator assessment template and guidance to populate it are on the QSR 2023 Resources page on the OSPAR Website. Candidate indicators should use the same template as far as possible.</p> <p>Leads to a common indicator assessment</p> <p><i>Synonym: indicator</i></p> <p><i>Synonym: OSPAR indicator</i></p>	
Definition	<p>Indicators are single, measurable components which reflect the overall condition of the marine environment (definition from IA 2017).</p> <p><i>N.B: Indicator assessment templates have been defined and are available on the OSPAR website.</i></p>
Context	Indicators are being assessed in the framework of QSR 2023 and will serve as the foundation of the QSR 2023 pyramid (see figure 2 of the QSR guidance document).

	<p>The indicator assessments will include information on:</p> <ul style="list-style-type: none"> – short description about the assessment method and the rationale for the threshold (detailed method descriptions are documented in CEMP Guidelines, typically indicator specific guidelines which are published as OSPAR Agreements) – the status of the element(s) that the indicator assesses in the assessment units (i.e. spatial assessment areas) – whether a threshold has been achieved or failed in the assessment units – the trend and/or direction of change between the assessment periods – the trend in the long-term taking account of changing human activities and environmental factors – confidence in the assessment approach and outcomes (using methodology described in the QSR 2023 guidance document)
Different from	<p>Candidate indicator. A candidate indicator is a common indicator in development. It follows as much as possible the common indicator assessment template, but something is lacking, and/or the candidate indicator has not been agreed at OSPAR level. The assessment of a candidate indicator leads to a pilot assessment.</p> <p>Other assessment – That category includes OSPAR non-indicator assessments and third-party assessments. See below.</p>
Translation in French	<i>‘Indicateur commun’</i>
Target audience	Experts
OAP	Common indicator assessments will be published on OAP as full electronic products. The aim is to also make brief-sections, as well as the full indicator assessment available as printable pdfs.
MSFD	<p>Common indicators have been linked to MSFD criteria, where appropriate. Each indicator covers one or more ‘elements’ (e.g. nitrogen, chlorophyll a, grey seal, harbour seal). Integration of one or more indicators (criteria) allows the overall assessment of each element; integration of the elements leads to the integrated assessment of a ‘feature’ (e.g. eutrophication, seals).</p> <p>The excel based Addendum 1 of the common indicator template requires indicator assessors to prepare information in a format that can support electronic reporting under the MSFD Article 8 process. The information in the Addendum 1 will be associated to polygon-based shapefiles of the assessment units that will be held in ODIMS. This information will allow those Contracting Parties that are also EU Member States to directly use the common indicator assessment outputs for their EU MSFD Article 8 reporting if they choose to do so. The aim is that regionally produced common indicator assessments will be made available to Member States as prefilled information in the national reporting templates, which can be used for reporting if a Member State chooses to use it.</p>
Sources	- 19-02e_qsr_2023_guidance_document

<i>Other assessment</i>	
Definition	<p>An “other” assessment is based on an element which is not an OSPAR indicator, but which could prove useful to support the delivery of QSR 2023.</p> <p>Two main categories of ‘other assessments’ have been identified:</p> <ul style="list-style-type: none"> - OSPAR non-indicator assessments: An OSPAR non-indicator uses OSPAR data but does not follow at all the structure that would allow this indicator to be considered a common indicator or a candidate indicator. <p><i>Examples:</i></p> <ul style="list-style-type: none"> ✓ <i>Feeder Reports produced by EIHA;</i> ✓ <i>Various case studies that do not follow the indicator templates, and typically could present results from a spatially limited study e.g. of a single station that has been sampled in every which way.</i> - Third Party Assessments are reports and/or assessments <u>specifically produced by a third party for OSPAR</u>, intended for use in the OSPAR QSR 2023. It is therefore different from simply quoting external sources for example. Few Third Party Assessments are expected to be delivered for QSR 2023. <p>NOTE:</p> <p>It is also recognised that assessments coming from third parties but not specifically produced for OSPAR can be used as further supporting references and/or to improve the knowledge base without duplicating work produced elsewhere. Wherever used these should be appropriately cited using the format prescribed in the QSR 2023 style guide.</p> <p>Referenced information could include:</p> <ul style="list-style-type: none"> • Arctic Council Assessments and Reports, of particular relevance to Arctic Waters where there is limited OSPAR data and assessment products; • ICES Assessments, Reports and data products which may help support evaluation of the status of the marine environment across the OSPAR Maritime Area; and • Evidence Reports prepared by Subject Matter Experts in the format of peer reviewed open access assessments.
Context	For more information and notably a list of examples for the two main categories of other assessments, see section 4.4 Other assessments of the QSR guidance document.
Different from	<p>An indicator assessment</p> <p>A thematic assessment</p>
Translation in French	Would depend on what is assessed.
Target audience	Experts
OAP	The QSR 2023 portal in OAP will include links to the other assessments as pdf publications as a minimum. Some other assessments will be published as full electronic products, for example the EIHA feeder reports.

Link with MSFD	not relevant
Sources	19-02e_qsr_2023_guidance_document