

QSR 2023 Guidance Document

(Agreement 2019-02)¹

Guidance on the Production of the QSR 2023

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¹ English only

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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?

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

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

The OSPAR strategy applies ecosystem 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. 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), 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

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.

order to minimise the reporting efforts of Member States in 2024. This will be done acknowledging the following aspects of QSR 2023:

- which 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.

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.

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

- a. Providing a set of thematic 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;
- c. Enabling extraction of information from the thematic and indicator assessments to populate the Article 8 XML 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.

2.1 Spatial coverage and scales

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

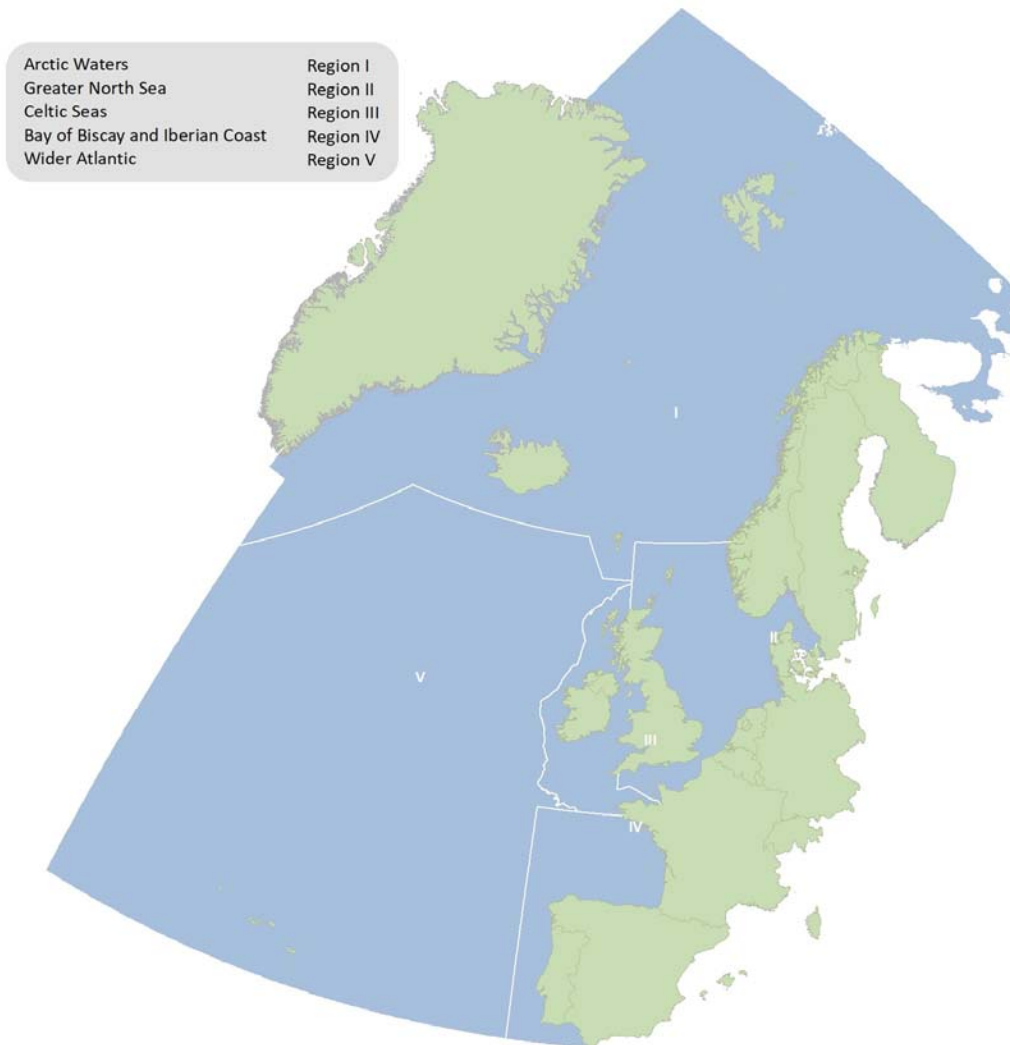


Figure 1. OSPAR Regions covered in the QSR 2023.

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 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.

QSR 2023 will aim to clearly outline the spatial assessments units used. The assessment units should reflect OSPAR Regions as far as possible, so that one Region may contain many assessment units and where relevant assessment units in two neighbouring Regions can be linked. Ideally consistency between assessment units used for different parameters is desirable for reporting. However, the delineation of spatial assessment units should also be appropriate to the spatial scale of the issue / parameter being assessed, take into consideration the relevant spatial scales of the ecological processes, as well as the value of comparing assessments with previous assessments and the spatial

assessment scale previously used. In areas covered by the MSFD, the assessment units should, where appropriate, also take into consideration compatibility with the MSFD Marine Reporting Units of EU Member States. Thus, it is recognised that flexibility in the assessment unit approach is needed. In some cases clearly defined spatial assessment unit may not be applicable. Furthermore it is recognised that flexibility will be needed in relation to spatial assessment units in relation to make use of 'third party' data and / or assessment information. For example, within the Greater North Sea it may be possible to use assessment units on a small spatial scale, whereas in Wider Atlantic it may be relevant to use assessment units on a larger spatial scale.

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.

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).

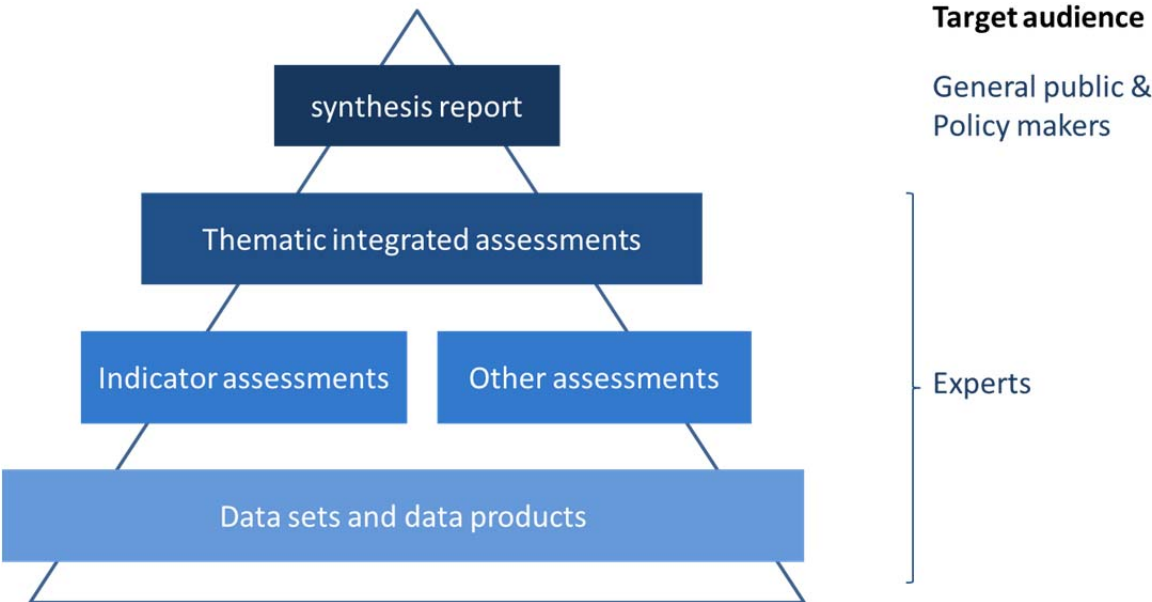


Figure 2. QSR 2023 structure.

The structure of the QSR 2023 builds on the different types of assessment products detailed in the JAMP (§20), these 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 and thematic reports will also be presented as laid out pdf (regular OSPAR publications layout). The executive summary, of Thematic Assessments, for policy makers will be presented as a 2-page pdf.

Indicator assessments will be published on OAP with the key message presented as a 2-page 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 reports 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 reports indicator assessments and other assessments will be acknowledged for their input /work in the delivery of the QSR 2023. This

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

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.

4. QSR 2023 Detailed Components and Content

4.1 Synthesis report

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-chapter 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 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

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.

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

The structure outlined in this document is indicative of the elements which are considered necessary for the QSR 2023 synthesis report.

4.2 Thematic assessments

The function of the thematic assessments (**Annex 3**) is to bring together a large number of 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 report. The thematic assessments are intended for an expert audience, this will be reflected in the level of technical detail included as well as technical language used. The summaries are intended for policy makers.

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.

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*). Each thematic assessment will reflect on key findings for each of the five OSPAR Regions. The questions used to structure the content 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*).

4.2.2 Thematic assessment output

The summary is the main output of each thematic assessment.

Information should be provided in a coherent/uniform way 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.

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. The thematic assessment should describe, at least briefly, how indicators or different assessments have been integrated towards a holistic assessment of the respective theme and what consequences the integration has (e.g. in terms of confidence in the assessment).

4.3 Indicator assessments

The indicator assessments follow the development and publication approach of the Intermediate Assessment 2017. ICG-QSR will review the lessons learnt from the IA2017 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.

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-QSR2010 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. Indicators that were used in IA2017 and where these assessments are updated for QSR 2023, where applicable the updated status should be highlighted.

The detailed format and metadata sheet 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 North-East Atlantic and its Regions
- the extent to which the assessment and/or assessment values have been achieved in the OSPAR Regions
- 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 and/or target values is expected.
- confidence in the assessment approach and outcomes (building on the approach from the Intermediate Assessment 2017)

4.4 Other assessments

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

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

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
 - Economical and social analysis assessments, e.g. Uses of the marine environment and costs of degradation
 - Ecosystem outlook and Cumulative Effects Assessment
 - Effectiveness of measures

2. Third Party Assessments.

- 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;
- Evidence Reports prepared by Subject Matter Experts in the format of peer reviewed open access assessments.

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 publically 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;

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

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)).

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.

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 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 synthesis 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 IG 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 Secretariat. The Committees will be asked to verify the conclusions and recommendations in Chapter 6 and that chapter 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

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

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 a password-protected QSR webpage on Basecamp accessible to the entire OSPAR community (but limited to OSPAR Community).

All guidance documents for the QSR 2023 will be included in a guidance section of the password-protected QSR. 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 i.a;

- 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 3 below.

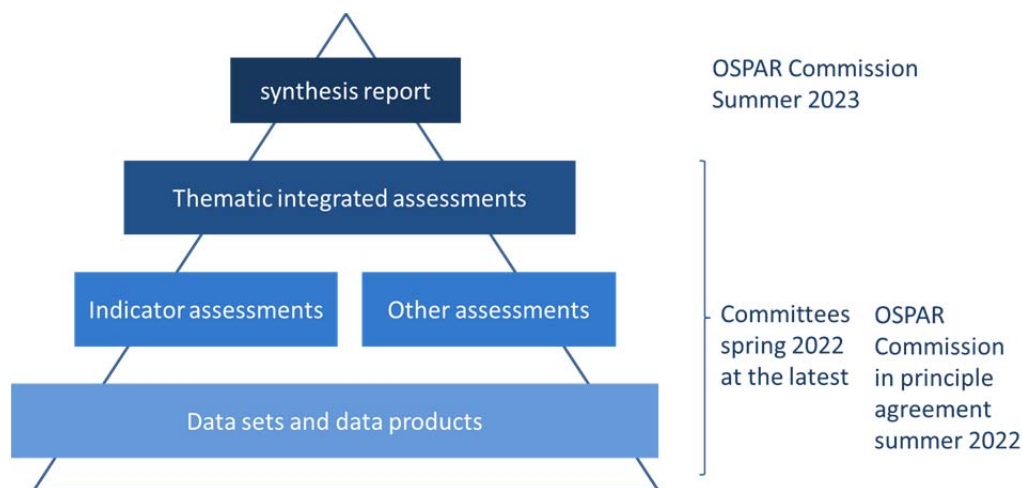


Figure 3. Key milestones, by which time at the latest, assessments to be part of the QSR 2023 need to be agreed.

The key milestones and delivery deadlines for QSR 2023 from this point forward are outlined in Table 1 below.

Table 1: 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 of 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

The confidence statements developed for the OSPAR Intermediate Assessment 2017 will be further developed to incorporate Thematic Assessments. These should be:

- Based on expert judgement of data availability and consensus of methods;
- Qualitative; and
- Clear, transparent and easy to communicate.

Guidance will need to be provided to ensure consistency in applying the criteria across OSPAR assessments and how to present the confidence assessments in the QSR 2023. Peer review of the QSR 2023 will provide an additional level of confidence.

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 QSR 2023 thematic assessments

The indicative list of the thematic assessment reports foreseen in QSR 2023 are as follows;

1. Eutrophication;
2. Contaminant pollution (Hazardous Substances, Radioactive Substances);
3. Key pressures (Litter, Noise, Non Indigenous Species);
4. Biodiversity Assessments (Birds, Mammals, Reptiles, Fish; and Benthic Habitats, Pelagic Habitats);
5. Climate Change and Ocean Acidification;
6. Human Activities Assessments (Offshore Industry & human activities causing pressures on the marine environment);
7. Ecosystem outlook (Cumulative Assessment case studies).

It should be noted that each thematic assessment report will contain several thematic assessments and that the level of integration may differ between topics.

The function of the thematic assessments is to integrate information from several datasets, indicators, other assessments and third party information into information which provides the input for the synthesis report. The output of the thematic assessments will serve the requirements of the synthesis report, for example presenting outputs per OSPAR Region.

The correlation of these Thematic Assessments with the Chapters in the Synthesis report are as follows:

- Thematic reports 1-3 support Chapter 3
- Thematic report 4 supports chapter 4
- Thematic reports 6 and 7 support Chapter 5.

Not all reports above are directly / specifically linked to a Chapter of the synthesis report, and the synthesis report may require additional thematic integrated assessments not reflected in the indicative list of reports (for example food-webs and economic social analysis).

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 a biodiversity, a more qualitative approach based on expert judgement may be needed.

The outputs of the thematic assessments 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. However, it needs to be clearly noted that MSFD reporting (xml schema) requires specific integrated values to be presented, and such values may not become available in the thematic assessments.

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 component will be delivered by which group of experts to another and at what time will be of importance.

As an example the below tables describe the information flow in the human activities and ecosystem outlook assessments, which is an example of highly interconnected assessments. Note the different content of the table for the synthesis report compared to other assessments.

1. The Synthesis Report/summary

Relevant chapters for human activities and cumulative impacts information	What is provided?
Chapter 2 – The North East Atlantic <i>“Human activities and benefits from protecting marine ecosystems (humans and their relationship with the sea, both beneficial and non-beneficial)”</i>	ICG-ESA will provide information on key human activities in the maritime area based on gross added value and employment (mainly based on uses of marine env report 2019) ICG-ESA provides examples of benefits in terms of provision of ecosystem services, measures EIHA provides text on new and emerging activities
Chapter 5 – Ecosystems used sustainably 5.1 Human activities 5.2 Ecosystem outlook cumulative effects on the North East Atlantic 5.3 Impacts on ecosystem services	5.1 JAMP Bz provides an assessment of the extent and intensity of [a selection of] human activities contributing to the key pressures on the marine environment in the OSPAR maritime area. 5.2 ICG-EcoC provides an Ecosystem Assessment Outlook (cumulative effects assessment), showing cumulative pressures and effects of higher risk human activities through bow-tie analysis for selected case studies responding to a set of selected questions. 5.3 ICG-ESA provides trend information (via JAMP Bz). ICG-ESA provides an assessment of how cumulative pressures influence changes in selected ecosystem services.

2. Thematic assessments (generic)

What input is required?	What is the output?
Input from individual indicator assessments Input from other OSPAR assessments (e.g. POSH status assessments) Input from [validated] third party assessments (e.g. ICES) Contextual socio-economic information, e.g. trends/business as usual scenario [or should this all be picked up in the integrated assessment part?] Pressure data, including pressure layers where available and appropriate (e.g. shipping, fishing) Guidance on how to interpret and present information on risk assessment in relation to the theme Guidance on assessing effectiveness of measures ¹²	Information on the status Information on links between driving forces (human uses and activities) and pressures affecting status Information on measures taken and planned (both OSPAR measures and other national and international), and their effectiveness to extent available - This information can be fed into the human activities work (JAMP Bz) - Information on causes and consequences for validation(?) of bow tie analyses Where detailed information is available it could be used for cost-effectiveness analysis

¹² POSH guidance is an example

3. [Example: specific thematic assessment -] Human activities (JAMP)

What input is required?	What is the output?
<p>Provisional list of human activities for which key data need to be provided - an indicative list includes extraction of living resources(fishing), transport (shipping), production of energy (renewable energy generation, non-renewable energy generation), extraction of non-living resources (sand and gravel extraction, mining), and tourism¹³</p> <p>The final selection of human activities to be presented will be informed by the key pressures and impacts identified in the QSR 2023 status and pressure assessments,</p> <p>Extraction of pressure information from indicator [and other thematic] assessments; OSPAR-collected activity data on certain human activities; ICG-POSH metadatabase on national information on human activities and pressures; acquisition of external data on other selected human activities (e.g. EMODnet national, Eurostat); socio-economic data on uses of marine environment and business as usual scenario from ICG-ESA, identification of human activities resulting in main pressures through ICG-EcoC, human activity and pressure categorisation in EU MSFD Annex 3</p> <p>Funding to support coordination and delivery of final product</p>	<p>A thematic report summarising for each significant human activity:</p> <ul style="list-style-type: none"> - pressures on marine environment; - scale and distribution of activity; - economic and social value; - historic and future activity trends; - current and planned management measures. <p>Presentation of information would include tables, graphs and maps</p> <p>Early provision of key data to support thematic assessments and extended bow-tie assessment</p>

4. [Example: specific thematic assessment -] Ecosystem/cumulative effects assessment

What input is required?	What is the output?
<p>In 2019/20; validation of individual indicator bow-ties, including detail on causes, consequences and management measures for Common Indicators</p> <p>In 2021/22; thematic assessments including bow-tie assessment of issues under consideration, including detail on causes, consequences and management measures (assisted by EcoC)</p> <p>Validation of extended bow-tie case studies based on key questions to link different analyses</p> <p>Key human activity information from JAMP human activities</p> <p>Advice from ICG-ESA on mapping information on consequences onto an ecosystem services framework</p>	<p>Guidance and advice to thematic assessors</p> <p>Report describing approach and [five] case studies providing extended bow tie assessments across a range of pressures and status indicators</p> <p>Summary information for synthesis report, including consideration of additive, antagonistic and synergistic effects</p> <p>Input to ecosystem services assessment</p>

¹³ Taken from JAMP human activities– to be further developed

5. Example: specific OSPAR non-indicator other assessment - Economic and social analysis

What input is required?	What is the output?
<p>National data on gross-value added (GVA) and employment (received); national data on tourism and recreation</p> <p>National and international data/positions on trends in key human activities (workshop, taking JAMP human activities indicative list)</p> <p>Agreement on common framework to be used in the QSR2023 for describing ecosystem services</p> <p>Support from Eco-C on cumulative effects</p>	<p>Summary data on GVA and employment for high value activities, including tourism and recreation</p> <p>Examples of benefits of ecosystem services and economic and social benefits from marine protection [but not a total figure for cost of degradation in the OSPAR maritime area]</p> <p>Summary data or qualitative information on trends in those key activities (input to thematic assessments and JAMP human activities)</p> <p>Linking of cumulative effects information to ecosystem services framework (table for inclusion in QSR)</p>