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**Agenda item 3: Implementation of the 2023 MED QSR Roadmap**

**Issue Paper for 2023 MED QSR Development Approach and Structure**

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### **Note by the Secretariat**

In the framework of implementation of the Ecosystem Approach Roadmap adopted by the Contracting Parties at their COP 15 (Almeria, Spain, January 2008, Decision IG. 17/6), Decision IG. 22/7, adopted by COP 19 (Athens, Greece February 2016), provides for the development of six-yearly Assessment Reports of the Status of the Mediterranean Sea and Coast to demonstrate progress made towards Good Environmental Status and its related targets, as part of the Integrated Monitoring and Assessment Programme (IMAP).

In line with the above-mentioned decision, during the biennium 2016-2017 the UNEP/MAP system delivered the first ever Quality Status Report for the Mediterranean (2017 MED QSR). The 2017 MED QSR built on the structure, objectives and available data collected under IMAP, and provided an overview of the status of marine and coastal ecosystems in the Mediterranean, while also identifying knowledge gaps to be addressed. The 2017 MED QSR thus provided an important baseline for future assessments of the status of the Mediterranean Sea and Coast to be conducted based on further regular reporting of IMAP data by Contracting Parties.

COP 20 (Tirana, Albania, December 2017) endorsed the key findings of the 2017 MED QSR and requested the Secretariat to prepare, in cooperation with the Contracting Parties through the Ecosystem Approach governance structure, a Roadmap accompanied with a Needs Assessment identifying priority activities needed to successfully deliver the 2023 Mediterranean Quality Status Report (Decision IG.23/6).

The 2023 MED QSR Roadmap and Needs Assessment was developed during the 2018-2019 biennium and approved by COP 21 of the Contracting Parties to the Barcelona Convention in December 2019, Naples, Italy (Decision IG.24/4). It defined the vision for the successful delivery of the 2023 MED QSR, and outlined key IMAP-related processes, milestones and outputs to be undertaken in order to support it.

Based on the planning undertaken during the first semester of 2020 by the Secretariat in line with the 2023 MED QSR Roadmap, the work of the UNEP/MAP system in the 2020-2021 biennium focuses on the implementation of identified priority activities required for the successful delivery of the 2023 MED QSR. This includes support to the implementation of IMAP-based national monitoring programmes; harmonization and standardization of monitoring and assessment methods through agreement on scales of monitoring, assessment and reporting and on methodological tools and assessment criteria for integrated assessment of GES; full operationalization of the IMAP Info System; strengthening of regional partnerships for data sharing; and effective regional cooperation with the Contracting Parties to the Barcelona Convention.

In parallel, UNEP/MAP is initiating preparatory activities and consultations with the Contracting Parties regarding the development of the 2023 MED QSR. The present document proposes some preliminary elements for the methodological approach, outline, structure and contents of the 2023 MED QSR for review by the present meeting. The proposal will continue to be refined further, in consultation with the Contracting Parties and in line with a 2023 MED QSR Operational Implementation Plan, based on the results of the ongoing UNEP/MAP system work on monitoring, assessment scales and integrated assessment methodologies and tools.

## **List of Abbreviations / Acronyms**

<b>CI</b>	Common Indicator
<b>COP</b>	Conference of the Parties
<b>CORMON</b>	Correspondence Group on Monitoring
<b>DPSIR</b>	Driver-Pressure-State-Impact-Response
<b>EC</b>	European Commission
<b>EcAp</b>	Ecosystem Approach
<b>EO</b>	Ecological Objective
<b>GES</b>	Good Environmental Status
<b>GFCM</b>	General Fisheries Commission for the Mediterranean
<b>HELCOM</b>	Baltic Marine Environment Protection Commission - Helsinki Commission
<b>HOLAS</b>	Holistic Assessment of the Ecosystem Health of the Baltic Sea
<b>ICZM CRF</b>	Common Regional Framework for Integrated Coastal Zone Management
<b>IMAP</b>	Integrated Monitoring and Assessment Programme
<b>INFO/RAC</b>	Information and Communication Regional Activity Centre
<b>MAP</b>	Mediterranean Action Plan
<b>MEDPOL</b>	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
<b>MPA</b>	Marine Protected Area
<b>MSFD</b>	Marine Strategy Framework Directive
<b>NIS</b>	Non-indigenous Species
<b>OSPAR</b>	Convention for the Protection of the Marine Environment for the North-East Atlantic
<b>PAP/RAC</b>	Priority Actions Programme Regional Activity Centre
<b>PoW</b>	Programme of Work
<b>QSR</b>	Quality Status Report
<b>REMPEC</b>	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
<b>SDG</b>	Sustainable Development Goal
<b>SOx ECA</b>	SOx Emission Control Area
<b>SPA/RAC</b>	Regional Activity Centre for Specially Protected Areas
<b>SPAMI</b>	Specially Protected Areas of Mediterranean Importance

## **1. Vision, concept and elements for the methodological approach of the 2023 MED QSR**

### **a. Objective and Vision**

1. The objective of the 2023 MED QSR is to assess the status of the Mediterranean Sea and Coast and the progress towards its Good Environmental Status (GES), as a basis for informed decision-making and enhanced action.
2. As defined in the 2023 MED QSR Roadmap, the vision for the successful delivery of the 2023 MED QSR is: an integrated DPSIR-based GES assessment, developed on consolidated and quality-assured monitoring data sets, reported and processed through an effective IMAP Info System that is interoperable with national and other regional monitoring and reporting networks.

### **b. Data sources**

3. In line with Decision IG. 22/7 adopted by COP 19 (Athens, Greece February 2016), the IMAP assessment products produced by the UNEP/MAP Secretariat, including the 2023 Mediterranean Quality Status Report, should be mainly based on the Common Indicators and monitoring data provided by Contracting Parties as part of IMAP implementation. In areas of scientific and/or data gaps, the assessment products can also build on relevant scientific projects, pilot outcomes, and comparable data of other regional organizations and in case these are not available, on scientific literature. In addition, they should analyze trends, drivers and build on available socio-economic data.
4. The 2023 MED QSR will be based on the IMAP Ecological Objectives, Common Indicators, Targets and Good Environmental Status descriptions. In consultation with the Contracting Parties, additional key emerging issues may be identified for inclusion in the 2023 MED QSR.
5. The primary sources of data for the 2023 MED QSR will be data reported by the Contracting Parties into the IMAP Info System as part of the implementation of IMAP-based national monitoring programmes. The IMAP Info System is currently supporting the reporting of 11 IMAP Common Indicators (CI 1, 2, 6, 13, 14, 15, 16, 17, 21, 22 and 23), and will be upgraded in the 2020-2021 biennium to include all mandatory IMAP Common Indicators (CI 3, 4, 5, 18, 19, 20).
6. A call for mandatory data submission into the IMAP Info System has been launched in June 2020, requesting Contracting Parties to systematically report all new monitoring data, as well as data collected prior to 2020, which will be both used for the purposes of the 2023 MED QSR assessment. It is expected that the Contracting Parties will be able to report a minimum of 3 new sets of data for IMAP Common Indicators related to the Pollution and Marine Litter cluster (EO5, EO9, EO10), a minimum of 1 new data set for IMAP Common Indicators related to the Biodiversity and Non-indigenous Species (NIS) cluster (EO1, EO2) and 1 data set for IMAP Common Indicators related to the Coast and Hydrography cluster (EO7 and EO8). In addition, cooperation will be ensured with the General Fisheries Commission for the Mediterranean (GFCM-FAO) for data and assessment related to the Common Indicators under Ecological Objective 3 (Harvest of commercially exploited fish and shellfish) (CI 7-12). The monitoring and reporting will be done in line with available standardized methods, guidance factsheets, monitoring protocols and data standards and data dictionaries, which will ensure the comparability of data reported and their subsequent assessment.
7. Where data gaps have been identified, IMAP-generated data will be complemented by other available data sources to be defined and agreed in consultation with the Contracting Parties based on the mapping of relevant scientific projects and institutions, currently undertaken by the UNEP/MAP Secretariat for the 2023 MED QSR and for a strengthened science-policy interface in the Mediterranean (see Annex II for preliminary list of sources). This relates in particular to data related to Candidate Common Indicators (24, 25, 26 and 27), Ecological Objectives 4 and 6 which are under development, as well as data related to emerging issues to be addressed in the 2023 MED QSR.

### **c. Methodological approaches for assessment**

8. The assessment for the 2023 MED QSR will be done at regional level, based, as appropriate, on data and information coming from IMAP implementation at national level, as part of the implementation of the UNEP/MAP Programme of Work and ongoing projects (including the EU-

funded IMAP-MPA, EcAp MED III and ML MED II projects; and the GEF-funded MedProgramme relevant child projects). Where available, results of sub-regional assessments may also be presented for specific Common Indicators.

9. Based on the progress to be achieved on the integrated assessment methodologies, the assessment of the status of the Mediterranean Sea and Coast, will be done in an integrated manner within and to the extent possible across the two or three IMAP clusters (Pollution and Marine Litter; Biodiversity and Non-Indigenous Species; Coast and Hydrography), and will address interrelations of pressures and impacts.

10. In line with the progress to be achieved by the UNEP/MAP system in the next two biennia as part of the implementation of the 2023 MED QSR Roadmap, the 2023 MED QSR methodology will be based on:

- Optimal DPSIR methodological approach;
- Methodologies for integrated assessment identified and tested by the UNEP/MAP system as part of the IMAP implementation;
- The UNEP Guidelines for Conducting Integrated Environmental Assessments (2019);
- Regular consultations with Contracting Parties, key regional experts and stakeholders.

11. The UNEP/MAP system is currently implementing activities identified in the 2023 MED QSR Roadmap as priority activities to be implemented in order to propose, refine and agree on the scales of assessment and integrated assessment methodologies to support the development of the 2023 MED QSR. The proposals for scales and integrated assessment methodologies will be refined and proposed for CORMON consideration and subsequently tested throughout 2021 and 2022. On their basis, a concrete methodology for assessment to be used for the purposes of the 2023 MED QSR will be agreed and adopted for the development of assessment products to be developed for the QSR preparation.

#### **d. Process and governance**

12. The development of the 2023 MED QSR is a participatory, joint effort of the entire MAP System, and its successful delivery will depend on the timely support and contributions of each Contracting Party, MAP Component, Secretariat and Partners to the monitoring, reporting and assessment in line with IMAP.

13. The process of developing the 2023 MED QSR will primarily be guided through the existing EcAp/IMAP governance structure. An effective and regular consultative and coordination process will be ensured with the Contracting Parties through the Ecosystem Approach Coordination Group and the CORMONs, as well as sub-regional expert meetings, as appropriate. Meetings with Contracting Parties will be held at least once every biennium at MAP Focal Points, EcAp Coordination Group, and MAP Component Focal Points levels, who will review and approve the progress, proposed operational implementation plan, methodological approaches and content at all key stages of the 2023 MED QSR development process. Intersessional work will be supported through Online Working Groups as necessary and under the scope and concrete modalities to be agreed by the Contracting Parties. Any issues, delays, and requirements for adjustment of the 2023 MED QSR implementation plan and contents will be reported to the relevant governance bodies in a timely manner.

14. At the national level, Contracting Parties have been encouraged to establish National IMAP Committees or similar structures ensuring the participation of key institutions and experts involved on IMAP implementation in order to support the timely implementation of national IMAPs, - on which the 2023 MED QSR will be based. The Ecosystem Approach Coordination Group members and designated national IMAP users will play a key role in the process, ensuring the timely contributions of Contracting Parties, including reporting of monitoring data into the IMAP Info System and preparation of national assessments. Each Contracting Party will be expected to develop national assessment factsheets for all or selected Indicators of the national IMAP, which will then be aggregated by the Secretariat at the regional (and possibly sub-regional) level to produce the 2023 MED QSR.

15. At the level of UNEP/MAP Secretariat, the development of the 2023 MED QSR will be coordinated by the Coordinating Unit with the technical support of the IMAP Task Force. MED POL, SPA/RAC, PAP/RAC and REMPEC will be responsible for the coordination and delivery of substantive work and chapters for the Pollution and Marine Litter, Biodiversity and NIS, and Coast and Hydrography clusters, respectively. Plan Bleu will contribute to the socio-economic analysis and to the mobilization of relevant expertise through the science-policy interface. INFO/RAC will support data management, visualization and communication components.

#### e. Presentation of results

16. The 2023 MED QSR will be published in a printed and online version, in two languages (English and French). The printed version will follow the structure approved by the Contracting Parties (an initial proposal is presented in Section 2 below) and will include maps, graphs and illustrations.

17. Visualizations will be done using latest technologies and innovations available with INFO/RAC, GRID-Geneva and other partner structures to be identified as part of the mapping of sources and partners to be undertaken by the Secretariat in 2021. Graphic designers may be involved from the very beginning of the process of the assessment to produce more advanced infographics (including interactive infographics for online publication). Examples of visualizations (e.g. infographics illustrating status per Common Indicator) used by HELCOM for HOLAS II (see Annex III) and other partners for similar assessments may be considered.

18. The online version will be published on a dedicated website which will include more interactive features such as interactive and customizable maps and graphs, dashboards, story-telling features and other functionalities depending on available resources. The 2023 MED QSR website will be linked with the 2017 MED QSR content, and interoperability with other key web-platforms will be ensured to the extent possible, in particular the IMAP Info System, the UNEP World Environment Situation Room (WESR) and the European WISE Marine platform.

19. A 2023 MED QSR Communication and Visibility Strategy will be developed as part of the EU-funded EcAp MED III project, which will define priority activities and opportunities for a wide dissemination of the 2023 MED QSR at regional and global levels.

#### f. Timeline

20. A preliminary timeline for the preparation of the 2023 MED QSR has been prepared by the Secretariat in line with the 2023 MED QSR Roadmap and taking into consideration the workplan of the EcAp MED III, which will be instrumental in supporting the process. Key milestones and provisional timeline for the preparation of the 2023 MED QSR are presented in Table 1 below.

**Table 1.** 2023 MED QSR preparation milestones and timeline

<b>Milestones/steps</b>	<b>Expected delivery</b>
Methodology, outline, planning process refined/agreed in a revised Operational Implementation Plan and Concept Note (including through CORMONS)	April 2021
Data sources, partners and requirements for expertise, data sharing and consultancies defined and necessary arrangements for implementation made	August 2021
EcAp Coordination Group updated on progress and issues; 2023 MED QSR updated Operational Implementation Plan, Concept Note and Communication and Visibility Strategy presented for CPs' review	September 2021
First draft of 2023 MED QSR prepared and presented for review by CORMON based on available data and assessment	April 2022
Additional data reported/collected and assessment methodologies tested	September 2022

Second draft prepared/updated based on new data sets and updated assessment methodologies	December 2022
Peer review conducted and contents revised; graphs, maps and visualizations finalized	March 2023
Final draft presented to the CORMON	March 2023
2023 MED QSR online platform developed with interactive visualizations	July 2023
2023 MED QSR submitted to EcAp Coordination Group and MAP Focal Points meetings	September 2023
2023 MED QSR submitted to the COP 23	December 2023
2023 MED QSR printed version published in two languages	December 2023-January 2024
Dissemination, communication and visibility activities	December 2023-February 2024

## 2. Proposed elements for 2023 MED QSR contents

21. The table below presents a draft annotated proposal for the contents of the 2023 MED QSR for review and consideration by the Contracting Parties. This proposal has been developed taking into account the structure of the 2017 MED QSR previously approved by the Contracting Parties, as well as the structure of other similar reports from other Regional Sea Programmes (please refer to Annex I).

**Table 2.** Proposed draft annotated content of 2023 MED QSR

Section	Annotations
<b>Foreword</b> (1 page)	
<b>Acknowledgements</b> Advisory Board Authors/consultants List of experts consulted	For printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page
<b>Acronyms and abbreviations</b>	For printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page
<b>Table of Contents</b>	For printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page
<b>Key findings or Executive Summary</b> (1-2 pages)	<i>NEW</i> – (see examples of HOLAS II and 2010 OSPAR QSR) for a more visual and shorter overview of key findings/conclusions of 2023 MED QSR for each Ecological Objective and other thematic (emerging topics) sections, as well as results of integrated assessment and DPSIR (possible through visual infographic such as in HOLAS II)
<b>Introduction (“About the QSR”)</b>  0.1. UNEP/MAP and the Barcelona Convention: vision, goals, and Ecological Objectives  0.2. Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast  0.3. Other key global and regional assessment processes	Presenting briefly EcAp and IMAP process in the Mediterranean, key decisions, links to SDGs and other global processes, progress on implementation and methodology for this QSR. Could use similar structure as 2017 MED QSR (copied here). The section on IMAP can present an update on national IMAP implementation per CI.  The integrated assessment methodology and specificities of DPSIR analysis at MAP level would be presented here in detail.

<p>0.4. Approach and methodology for the preparation of the 2023 Mediterranean QSR</p>	<p>The full list of IMAP EOs and CIs could either be presented in a table here, or as an annex at the end of the publication (for online version, as a separate page/tab).</p> <p>As an alternative, the approach and methodology can be presented in a stand-alone section after the Introduction, to give it more prominence.</p>
<p><b>1. The Mediterranean Sea</b></p> <p>1.1. Environmental characteristics</p> <p>1.1.1. The Mediterranean marine and coastal environment</p> <ul style="list-style-type: none"> <li>Geography, physiography and landscapes</li> <li>Circulation and water masses</li> <li>Hydrological and climatic setting</li> <li>Water and nutrient characteristics</li> <li>Biodiversity</li> </ul> <p>1.1.2. Climate change</p> <ul style="list-style-type: none"> <li>The Mediterranean region: a climate change hot-spot</li> <li>Sea level rise (SLR)</li> <li>Climate Change related risks, vulnerabilities and impacts</li> <li>Possible impacts on GES (<i>NEW</i>)</li> </ul> <p>1.2. Socioeconomic characteristics of the Mediterranean</p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Population and development</li> <li>Tourism</li> <li>Maritime transport</li> <li>Energy, gas and oil exploration and exploitation, mining and manufacturing</li> <li>Fisheries and aquaculture</li> <li>Land-based pollution sources.</li> </ul> <p>1.3. Regional cooperation (<i>NEW</i>)</p> <ul style="list-style-type: none"> <li>Barcelona Convention and Protocols</li> <li>Other relevant regional policy frameworks (e.g. MSFD)</li> </ul>	<p>Section providing an overview of the Mediterranean regional context in terms of environmental and socio-economic characteristics, similar to the 2017 MED QSR. In the printed version, this should come as the first section after the introduction to set the background/context for the quality assessment.</p> <p>Compared to the 2017 MED QSR, a new sub-section (1.3) is proposed to provide the regional policy and cooperation context in the Mediterranean under the Barcelona Convention. While the Introduction above will include a brief overview of the Barcelona Convention process and the implementation of the Ecosystem Approach, this sub-section could provide more in-depth information on relevant regional policy frameworks and regional cooperation efforts towards assessing and achieving GES. It could also explain the links to the MSFD.</p> <p>Section 1.1 (Environmental characteristics) or 2 (Socioeconomic characteristics) could briefly address ecosystem services and benefits (as part of the argument of why it is important to preserve ecosystems).</p> <p>The section on climate change (which was also included in 2017 MED QSR) should capitalize on MedECC results and be brief, if possible highlighting relevance and possible influence of climate change on aspects/indicators covered by IMAP (e.g. possible impacts of CC on eutrophication, habitats, species, NIS, coastal erosion). This can be a simple analysis relying on available global research if no regional analysis is available. This would make this part more integrated with the rest.</p>
<p><b>2. Mediterranean Quality Status Assessment</b></p> <p>2.1 Pollution and Litter Cluster</p>	<p>For the 2023 edition of the QSR, a new approach is proposed by EO (rather than by individual CI which was the approach of the 2017 QSR). Each section corresponds to one of</p>



<p><b>2.1.1 Eutrophication (EO5)</b></p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on eutrophication/trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 13-14) and assessment methodology</li> <li>- Integrated Assessment for EO5</li> <li>- Specific issues/trends per selected CI (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul> <p><b>2.1.2 Pollution (EO9)</b></p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on pollution/contaminants, including trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 17-21) and assessment methodology</li> <li>- Integrated Assessment for EO9</li> <li>- Specific issues/trends per selected CI (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul> <p><b>2.1.3 Marine Litter (EO10)</b></p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on ML, including trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 22-23) and assessment methodology; CCI24 could be presented in a separate box to update on its status</li> <li>- Integrated Assessment for EO10</li> <li>- Specific issues/trends per selected CI (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul>	<p>the 11 IMAP Ecological Objectives; sections are grouped by clusters (Pollution and Litter; Biodiversity and NIS; Coast and Hydrography) in the same order as 2017 QSR.</p> <p>In addition, for each cluster, a final section is proposed providing elements towards integrated assessment within this cluster (across EOs), and possibly elements for integration with other clusters; or, if the methodology for integrated assessment per cluster is not ready, this section could provide an update on progress on methodologies and recommendations for next assessment.</p> <p>Each section per EO will include the following core elements:</p> <ul style="list-style-type: none"> <li>- a short paragraph with the key findings for this Ecological Objective (3-4 sentences max), which can be presented as a chapeau like in HOLAS II or in a box similar to OSPAR.</li> <li>- introduction to the issues associated with this Ecological Objective (trends, sources of pressure, targets).</li> <li>- a presentation of Common Indicators used for the assessment and brief description of methodology/approach for assessment, scales, criteria (the use of boxes to focus on specific aspects – e.g. on definition of criteria or thresholds levels - can be considered to improve readability of the main text), as well as geographical coverage if data was not available for all countries.</li> <li>- Integrated assessment for the EO based on results of CI assessment; including level of confidence in assessment; maps/graphs/infographics; if available, overview of situation by sub-region (see example of HOLAS II for eutrophication), and if possible, comparison with 2017 QSR</li> <li>- Specific highlights for individual Common Indicators in case they need to be given particular attention (can be in boxes).</li> <li>- Analysis/conclusions (what are the impacts of this pressure/status on the habitats, species and ecosystems overall?; what does the assessment show in relation to overall trends, and as appropriate effectiveness of measures, and further measures/efforts to be put in place?; what is the future outlook and what are the risks, challenges to look out for?). This last sub-section could also highlight data gap issues and</li> </ul>
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	<p>further efforts required to improve data availability.</p> <p><b>For each cluster, the assessment will be based on mandatory IMAP Common Indicators monitored and reported by Contracting Parties.</b> Where possible, information/update will also be provided for Candidate Common Indicators as part of relevant chapters/sections based on available data (CCI24, 25, 26 and 27).</p> <p>[For the Pollution cluster, section 2.1.4 on EO11 relates to Candidate Common Indicators CCI26 and CCI27 currently not part of mandatory IMAP monitoring and assessment. It will therefore be based on available data from external sources and will be prepared in partnership with ACCOBAMS and other partners; its approach will therefore be to some extent different from other sections, and the proposed outline for this section may change based on available data and methods.]</p>
<p><b>2.2 Biodiversity and NIS Cluster</b></p> <p><b>2.2.1 Biodiversity (EO1)</b></p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on Habitats and Species, including trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 1-5) and assessment methodology</li> <li>- Integrated Assessment for EO1</li> <li>- Specific issues/trends per selected CI (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul> <p><b>2.2.2 Non-indigenous Species (EO2)</b></p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on NIS, including trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 6) and assessment methodology</li> <li>- Integrated Assessment for EO2</li> <li>- Specific issues/trends per species (possibly in the form of box - tbc)</li> </ul>	<p>See explanation above of structure per cluster and per EO sub-section.</p> <p>Section 2.2.2 (EO2) may be predominantly based on the results of sub-regional pilots, and the geographical scope of the data and scales used should be clearly presented in the methodology sub-section. A special box could be added to describe the sub-regional pilots and joint monitoring efforts.</p> <p>Section 2.2.3 (EO3) will be prepared with support from GFCM based on their database.</p> <p>Section 2.2.4 (EO4 and EO6) relates to Ecological Objectives for which Common Indicators have not been developed yet, and will be advanced during the 2020-2021 and 2022-2023 biennia. In the absence of IMAP monitoring data for these two EOs, the section could build on and reflect available data sources identified and approved through CORMONs, provide a preliminary assessment to the extent possible, and draw conclusions and recommendations for further monitoring and assessment of EO4 and EO6 (and if possible, recommendations for measures based on identified key issues/pressures related to these EO).</p>

<ul style="list-style-type: none"> <li>- Analysis and conclusions</li>   <li>2.2.3 Harvest of commercially exploited fish and shellfish (EO3)</li> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on commercial fisheries and trends</li> <li>- Methodology: Common Indicators used in the assessment (CI 7-12) and assessment methodology</li> <li>- Integrated Assessment for EO9</li> <li>- Specific issues/trends per selected CI (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul>   <li>2.2.4 Elements for Marine Food Webs (EO4) and Sea-floor integrity (EO6) (NEW)</li> <ul style="list-style-type: none"> <li>- EO4                             <ul style="list-style-type: none"> <li>- Key issues and sources of pressure</li> <li>- State of the art on data, monitoring and assessment</li> <li>- Preliminary assessment for EO4 and conclusions</li> </ul> </li> <li>- EO6                             <ul style="list-style-type: none"> <li>- Key issues and sources of pressure</li> <li>- State of the art on data, monitoring and assessment</li> <li>- Preliminary assessment for EO6 and conclusions</li> </ul> </li> </ul> </ul>	
<p>2.3 Coast and Hydrography Cluster</p> <p>2.3.1 Hydrography (EO7)</p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on Hydrography, including trends and sources of pressure</li> <li>- Methodology: Common Indicators used in the assessment (CI 15) and assessment methodology</li> <li>- Specific issues/trends per habitat or type of pressure (possibly in the form of box - tbc)</li> <li>- Analysis and conclusions</li> </ul>	<p>See explanation above of structure per cluster and per EO sub-section.</p> <p>A box on innovative coastal products and data collection and assessment methods could be added (e.g. Copernicus, EMODnet)              Due to the high complexity of this Common Indicator, a baseline assessment may be conducted at this stage.</p>

<p>2.3.2 Coastal ecosystems and landscapes (EO8)</p> <ul style="list-style-type: none"> <li>- Key findings (introductory paragraph)</li> <li>- Background information on Coastal ecosystems, including trends and sources of pressure (a box on climate change and coastal erosion could be added)</li> <li>- Methodology: Common Indicators used in the assessment (CI 16) and assessment methodology, CCI25 could be presented in a separate box to update on its status</li> </ul>	
<p>2.4 Towards an integrated assessment of GES in the Mediterranean</p>	<p>Depending on level of progress on UNEP/MAP integrated assessment methodologies, this section could propose a brief DPSIR-based integrated GES assessment of the Mediterranean Sea and Coast and cumulative pressures and impacts; or describe current efforts and status of progress on developing these methodologies, and summarize key pressures, overall state and impacts based on the assessments provided in sections 2.1-2.3.</p>
<p><b>3. UNEP/MAP Actions and Measures to Address Pressures and Protect the Mediterranean Sea and Coast</b></p>	<p><i>(NEW)</i> This section could include an analysis of existing measures and actions undertaken at the regional level in the Mediterranean as part of MAP Barcelona Convention, to address specific pressures and improve the status of the Sea and Coast in relation to the Ecological Objectives and Common Indicators under IMA. An analysis of the effectiveness of the measures could be proposed (at least briefly).</p> <p>Boxes could focus on specific achievements to be highlighted (e.g. SPAMI, SOx ECA, Pollution and Marine Litter Regional Plans, Key Species and Habitats Regional Action Plans, ICZM/CRF). This section could highlight in particular efforts for integrated ecosystem management.</p>
<p><b>4. Conclusions and ways forward/future outlook</b></p> <p>4.1 Key issues, risks and priorities</p> <p>4.2 Recommendations for priority actions/measures</p> <p>4.3 Recommendations for future monitoring and assessment</p>	<p>This section could provide a summary of main issues identified in the QSR through the assessment, and an analysis of overall status and trends based on the assessment, as well as possible future risks, if no action is taken.</p> <p>It should then include recommendations on possible priority areas of action and measures to be developed to address key pressures and drivers. This part can also highlight some ongoing and planned efforts identified as particularly effective (e.g. SOx ECA).</p> <p>Finally, it should identify key challenges and provide recommendations in relation to data</p>

	gaps to be addressed for the next QSR (2029) and monitoring and assessment methods.
<b>Annexes</b>  List of IMAP EOs and CIs Species list Marine habitats list Sub-regional case studies Other Annexes tbd	The Annexes will include any additional useful information, such as the list of IMAP EOs and CIs, if not included in the introduction; list of key species and habitats considered; specific case studies (if not included in boxes inside the thematic chapters) etc.
<b>Glossary</b>	For the printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page.
<b>References</b>	For the printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page, or at bottom of each section/page.
<b>Illustrations/photo credits</b>	For the printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page, or at bottom of each section/page.

**Annex I**  
**Outlines of similar reports**

<p><b>UNEP/MAP 2017 MED QSR</b> <a href="https://www.medqsr.org/">https://www.medqsr.org/</a></p>	<p><b>HELCOM – HOLAS II (2018)</b> <a href="http://stateofthebalticsea.helcom.fi/">http://stateofthebalticsea.helcom.fi/</a></p>	<p><b>OSPAR QSR 2010</b> <a href="https://qsr2010.ospar.org/en/media/chapter_pdf/QSR_complete_EN.pdf">https://qsr2010.ospar.org/en/media/chapter_pdf/QSR_complete_EN.pdf</a></p>
<p><b>Introduction</b></p> <p>1.1. UN Environment/MAP and the Barcelona Convention: Vision, Goals, and Ecological Objectives</p> <p>1.2. Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast</p> <p>1.3. Other key global and regional assessment processes</p> <p>1.4. Approach and Methodology for the preparation of the Mediterranean 2017 QSR</p> <p><b>1) Quality Status Report (Pollution and Litter)</b></p> <p>EO5 CI13</p> <p>Basic info</p> <p>Rationale/Methods</p> <p>    Background</p> <p>    Assessment methods</p> <p>Results and Status, including trends</p> <p>Conclusions</p> <p>    Key messages</p> <p>    Key knowledge gaps</p> <p>List of references</p> <p>EO5 CI14</p> <p>EO9 CI17</p>	<p><b>Executive summary</b></p> <p><b>1. Our Baltic Sea</b></p> <p>1.1. Physical description of the Baltic Sea</p> <p>1.2. Climate and hydrology</p> <p>1.3. Environmental management and the ecosystem approach</p> <p>1.4. Regional cooperation</p> <p><b>2. Overview of the holistic assessment</b></p> <p><b>3. Human welfare and ecosystem health</b></p> <p>3.1. Links between activities and environment</p> <p>3.2. Economic benefits from the protection and use of the Baltic Sea</p> <p><b>4. Pressures</b></p> <p>4.1. Eutrophication</p> <p>Trends/Reduction targets</p> <p>Indicators included in the assessment</p> <p>Integrated status assessment</p> <p>Changes in comparison to the previous assessment</p> <p>Longer term changes in the indicators</p>	<p><b>Key Findings</b></p> <p><b>1. The Quality Status Report 2010</b></p> <p><b>2. The North East Atlantic</b></p> <p><b>3. Climate Change</b></p> <p><b>4. Eutrophication</b></p> <p>What are the problems?</p> <p>What has been done?</p> <p>Did it work?</p> <p>How does this affect the quality status?</p> <p>What happens next?</p> <p><b>5. Hazardous Substances</b></p> <p><b>6. Radioactive Substances</b></p> <p><b>7. Offshore Oil and Gas Industry</b></p> <p><b>8. Use of Living Marine Resources</b></p> <p>Fishing</p> <p>Mariculture</p> <p>Hunting of Marine Mammals</p> <p><b>9. Other Human Uses and Impacts</b></p> <p>Shipping</p> <p>Tourism and Recreational Activities</p> <p>Wind Farms</p>

EO9 CI18	Impacts and future perspectives	Cables
EO9 CI19	4.2. Hazardous substances	Land Reclamation, Coastal Defence and Other Structures
EO9 CI20	4.3. Marine litter	Artificial Reefs
EO9 CI21	4.4. Underwater sound	Mineral Extraction
EO10 CI22	4.5. Non-indigenous species	Dredging and Dumping
EO10 CI23	4.6. Species removal by fishing and hunting	Dumped Munitions
<b>2) Quality Status Report (Biodiversity and Fisheries)</b>	4.7. Seabed loss and disturbance	Microbiological Contamination
EO1 CI1 and CI2	<b>5. Biodiversity</b>	Underwater Noise
Basic info	5.1. Benthic habitats	Marine Litter
Rationale/Methods	5.2. Pelagic habitats	Non-Indigenous Species
Background	5.3. Fish	Towards Integrated Management
(Key pressures and drivers)	5.4. Marine mammals	<b>10. Protection and Conservation of Biodiversity and Ecosystems</b>
Policy context and targets	5.5. Waterbirds	<b>11. Towards Ecosystem Assessment</b>
Assessment methods	5.6. Summary and food web aspects	<b>12. Regional Summaries</b>
Results and Status, including trends	<b>6. Cumulative impacts on the marine environment</b>	<b>Abbreviations</b>
Conclusions	6.1. Method overview	<b>Glossary</b>
Key messages	6.2. Cumulative pressures on the Baltic Sea marine area	<b>Species List</b>
Key knowledge gaps	6.3. Cumulative impacts in the Baltic Sea marine area	<b>Bibliography</b>
List of references	6.4. Cumulative impacts on benthic habitats	<b>Photographic Credits</b>
EO1 CI3 (Marine reptiles)	<b>7. HELCOM actions to improve the Baltic Sea</b>	
EO1 CI3 (sea birds)		
EO1 CI4 (marine mammals)		
EO1 CI4 (marine turtles)		



<p>EO1 CI4 (sea birds) EO1 CI5 (marine mammals) EO1 CI5 (marine reptiles) EO1 CI5 (sea birds) EO2 CI6 EO3 CI7 EO3 CI8 EO3 CI9</p> <p><b>3) Quality Status Report (Coast and Hydrography)</b></p> <p>EO7 CI15 EO8 CI16</p> <p><b>4) Quality Status Report (QSR) Cross-cutting and horizontal issues</b></p> <p>1. Environmental characteristics</p> <p>1.1. The Mediterranean marine and coastal environment</p> <p style="padding-left: 20px;">Geography, physiography and landscapes. Circulation and water masses. Hydrological and climatic setting. Water and nutrient characteristics. Biodiversity.</p> <p>1.2. Climate change</p> <p style="padding-left: 20px;">The Mediterranean region: a climate change hot-spot.</p>	<p>7.1. Progress in achieving the objectives of the Baltic Sea Action Plan</p> <p>7.2. Examples of achievements related to the Baltic Sea Action Plan</p> <p><b>8. Conclusions and future outlook</b></p> <p>8.1. Key priorities for a healthy Baltic Sea</p> <p>8.2. Are we moving in the right direction?</p> <p>8.3. What does the future hold for the Baltic Sea?</p> <p><b>References</b></p> <p><b>Acknowledgments</b></p>	
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<p>Sea level rise (SLR). Climate Change related risks, vulnerabilities and impacts.</p> <p>2. Socioeconomic characteristics of the Mediterranean</p> <p>Introduction Population and development. Tourism. Maritime transport. Energy, Gas and Oil exploration and exploitation, Mining and Manufacturing Fisheries and aquaculture Land-based pollution sources.</p> <p><b>5) Annexes</b></p> <p>List of Case Studies for the Ecological Objectives 5 (Eutrophication), 9 (Contaminants) and 10 (Marine Litter)</p>		
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## **Annex II**

**Possible complementary data sources for 2023 MED QSR (preliminary list)**

- General Fisheries Commission for the Mediterranean (FAO-GFCM)
- MAVA foundation (Mediterranean programme)
- ACCOBAMS (QuietMed-II project)
- Hellenic Centre for Marine Research (HCMR) (MEDREGION project)
- EMODnet
  - o EMODnet Bathymetry
  - o EMODnet Biology
  - o EMODnet Chemistry
  - o EMODnet Geology
  - o EMODnet Human Activities
  - o EMODnet Physics
  - o EMODnet Seabed Habitats - EUSeaMap (seabed habitat maps)
- Copernicus Marine Environment Monitoring Service (CMEMS)
- Copernicus Land Monitoring Service (CLMS) – coastal products
- EUROSION (data on coastline)
- MEDAM (artificial occupation/coastal infrastructures)
- REMPEC database for historical data on pollution and other related sources (MEDGIS-MAR, Lloyd List Intelligence and Clarksons Research Databases)

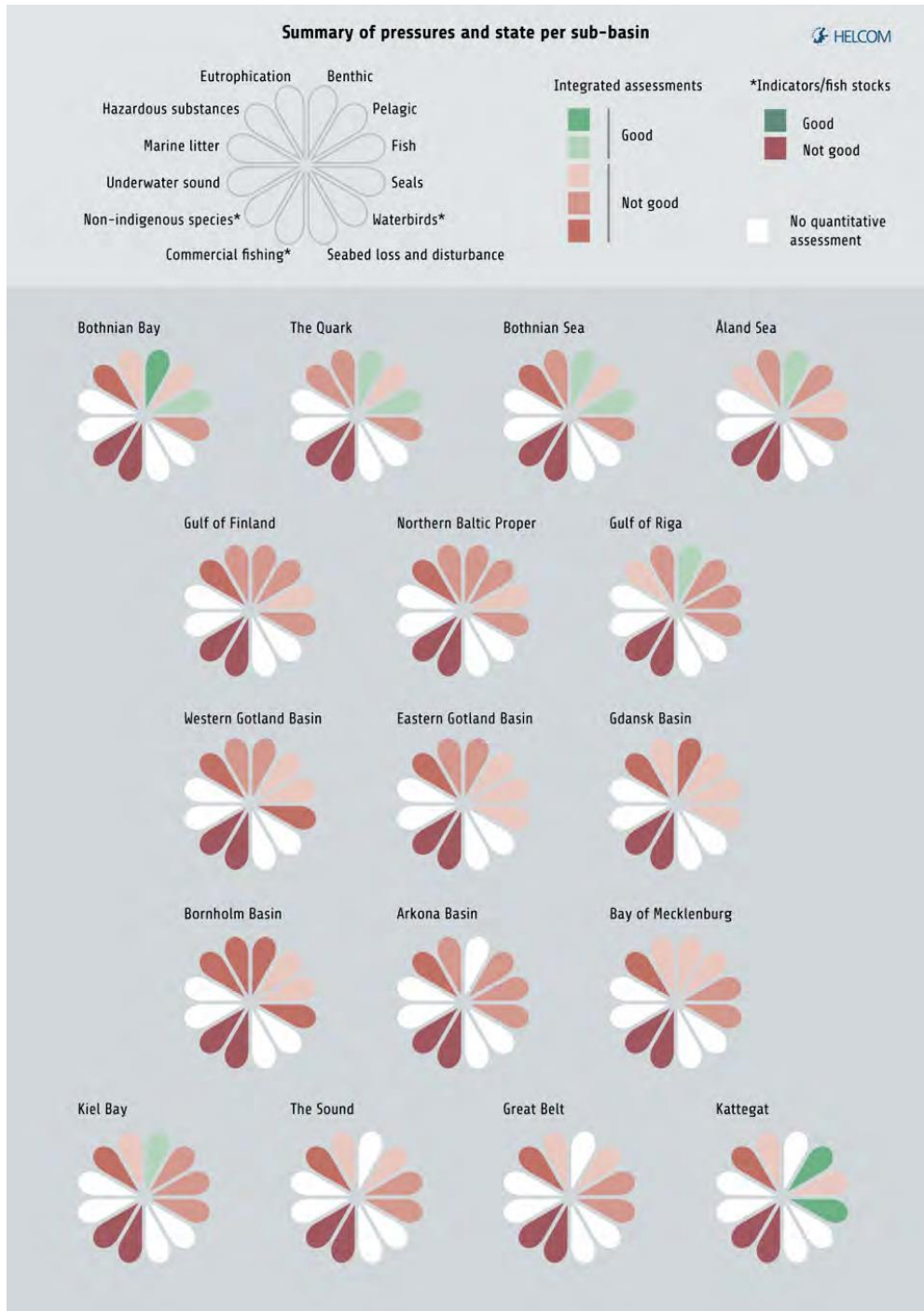
Research institutions identified for Mediterranean SPI and for IMAP implementation, national institutes and ministries of physical/spatial planning (non-exhaustive, to be updated further based on CP recommendations and further mapping):

- L'Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER), France
- the Spanish Institute of Oceanography, Spain
- the Italian National Institute for Oceanography and Experimental Geophysics (OGS), Italy
- the Croatian Institute of Oceanography and Fisheries based in Split (IOR), Croatia
- Institute for Marine and Coastal Research, University of Dubrovnik
- Public Health Institute, Croatia
- the Hellenic Centre for Marine Research (HCMR), Greece
- the Italian National Research Council (CNR), Italy
- the Italian National Institute for Environmental Protection and Research (ISPRA), Italy
- the Joint Research Center of European Commission (JRC), European Union
- the Italian National Institute of Geophysics and Volcanology (INGV), Italy
- the European Environment Agency (EEA), European Union
- the European Space Agency (ESA), European Union
- the Euro-Mediterranean Center on Climate Change (CMCC), Italy
- the Joint Programming Initiative Healthy and Productive Sea and Oceans (JPI Ocean), intergovernmental platform, open to all EU Member States and Associated Countries who invest in marine and maritime research
- the Italian National Agency for New Technologies (ENEA), Italy
- the Mediterranean Science Commission (CIESM)
- the International Oceanographic Data Exchange, European Multidisciplinary Seafloor and Water-Column Observatory (EMSO-ERIC)
- the International Council for the Exploration of the Sea (ICES)
- the National Fisheries Research Institute of Morocco (INRH), Morocco
- Laboratoire National des Études et de Surveillance de la Pollution (LMESP), Morocco
- National Fisheries Research Institute (INRH), Morocco
- Observatoire National de l'Environnement et du Développement Durable (ONEDD), Algeria,
- Laboratoire de Protection, Valorisation des Ressources Marines Littorales et Systématique Moléculaire, Université de Mostaganem, Algeria
- Laboratoire d'Océanographie Biologique et Environnement Marin (LOBEM), Université Houari Boumediène, Algeria
- Ecole Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral (ENSSMAL), Algeria
- Laboratoire de Géo-Environnement, Université Houari Boumediène, Algeria
- Laboratoire Bioressources Marines, Université Badji-Mokhtar, Algeria
- Laboratoire Ecosystèmes Marins et Aquacoles Université de Béjaïa, Algeria
- National de Recherche et de Développement de la Pêche et de l'Aquaculture, Algeria

- Laboratoire de Géo-Environnement Université des Sciences et des Technologies, Université Houari Boumediène, Algeria
- L'Agence de Protection et d'Aménagement du Littoral (ci-après dénommé (« APAL »))
- Institut Supérieur de Biotechnologie Sidi Thabet (ISBST), Tunisia
- Institut Supérieur de Biotechnologie de Monastir, Tunisia
- Institut National des Sciences et Technologies de la Mer (INSTM), Tunisia :  
Centre La Gabes, Centre de Kheireddine, Centre La Goulette, Centre de Monastir, Centre de Sfax,  
Centre de Salammbô
- Marine Biology Research Centre, Libya
- The Environment General Authority (EGA)
- The Egyptian Environment Affairs Agency (EEAA)
- **Department of Oceanography, University of Alexandria, Egypt**
- National Institute of Oceanography and Fisheries (NIOF), Egypt
- **National Institute of Oceanography, Israel Oceanographic and Limnological Research (IOLR), Israel**
- **Morris Kahn Marine Research Station, University of Haifa, Israel**
- National Centre For Marine Sciences, Lebanon
- National Council for Scientific Research (“CNRS”), Lebanon
- **High Institute of Marine Research, University of Tishreen, Syria**
- Department of Hydrobiology, University of Sinop, Akliman, Turkey
- Institute of Marine Sciences, Erdemli, Turkey
- Marine Science Department, University Iskenderun, Turkey
- Institute of Marine Sciences and Management, University of Istanbul, Turkey
- Turkish Marine Research Foundation (TUDAV), Istanbul, Turkey
- Institute of Marine Sciences and Technology, University of Dokul Eylul, Izmir, Turkey
- Marine Ecology Research and Application Centre, University of Karadeniz, Trabzon, Turkey
- **Albanian Center for Marine Research, Butrint, Albania**
- **University of Tirana, Albania**
- **National Environmental Agency, Albania**
- **Institute of Marine Biology, University of Montenegro**
- **Nature and Environmental Protection Agency, Montenegro**
- **Center for Ecotoxicological Researches, Montenegro**
- **Faculty of Mathematics and Natural Sciences, department for Biology, University of Montenegro**
- Faculty of Technology, Department for Environmental Protection, University of Montenegro
- Institute for Public Health of Federation of Bosnia and Herzegovina, Bosnia and Herzegovina
- Hydro-Engineering Institute Sarajevo, Bosnia and Herzegovina

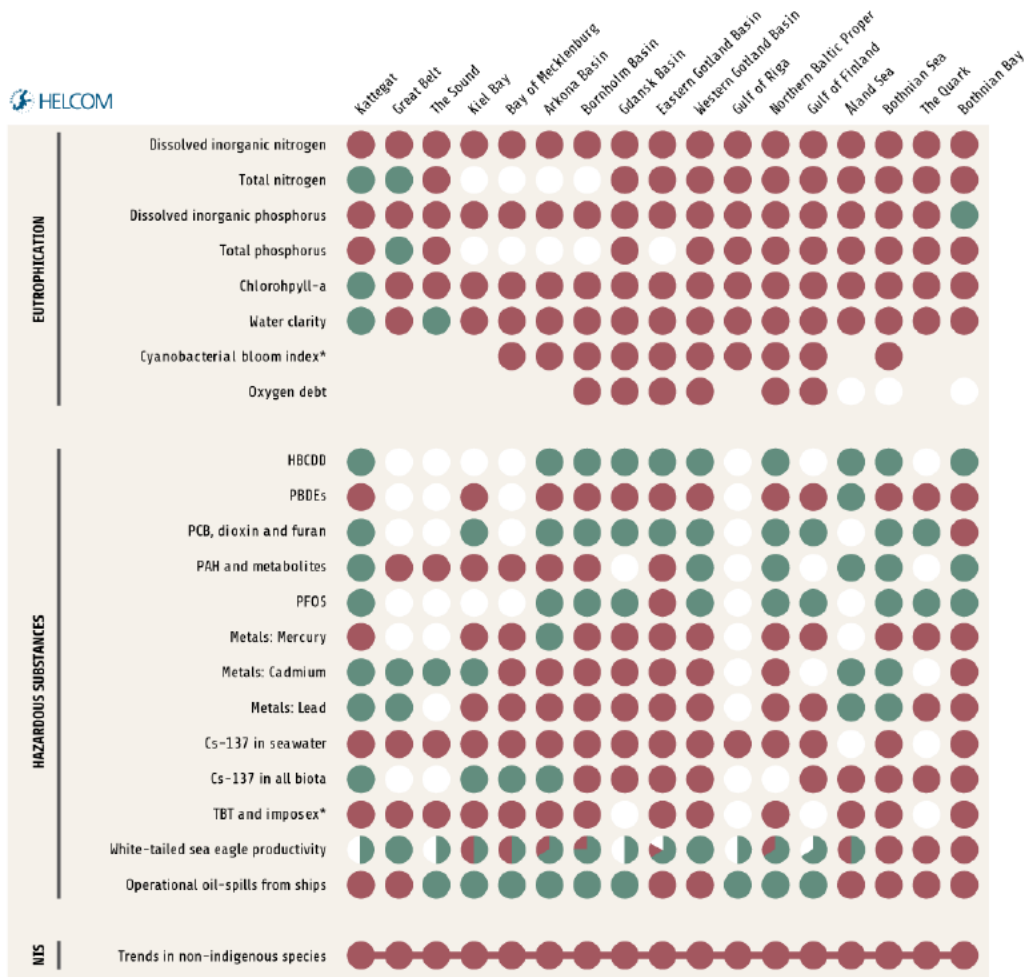
### **Annex III**

**Examples of infographics developed by HELCOM for HOLAS II**



**Example 1 - Summary of the assessment of pressures and status by sub-basins the Baltic Sea.**

Source: HELCOM (2018): State of the Baltic Sea – Second HELCOM holistic assessment 2011-2016. Baltic Sea Environment Proceedings 155, p.5.

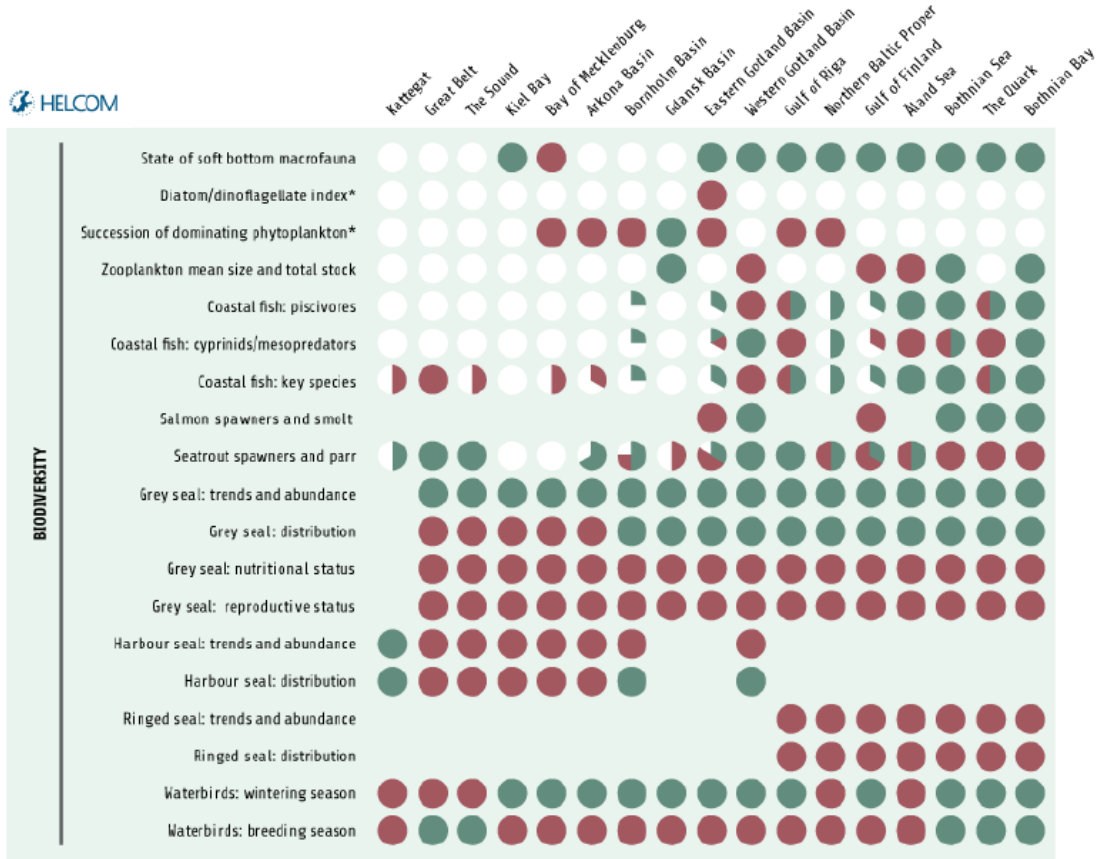


\* Included as test

**Example 2 - Status of pressure-based core indicators for eutrophication, hazardous substances and NIS by sub-basin the Baltic Sea.**

Source: HELCOM (2018): State of the Baltic Sea – Second HELCOM holistic assessment 2011-2016. Baltic Sea Environment Proceedings 155, p.8.





\* Included as test

**Example 3 - Status of biodiversity core indicators by sub-basin the Baltic Sea.**

Source: HELCOM (2018): State of the Baltic Sea – Second HELCOM holistic assessment 2011-2016. Baltic Sea Environment Proceedings 155, p.10.