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Agenda Item 5: Preparation of the 2023 MED QSR

2023 MED QSR draft table of contents of the socio-economic chapter and draft contents of the assessment chapters

UNEP/MAP
Athens, 2022

Note by the Secretariat

UNEP/MAP is following the planned activities for the preparation of the 2023 MED QSR and its methodological approach, outline, structure, and contents. The proposed contents and structure were discussed at the Integrated CORMON Meetings (1-3 December 2020) and further refined in consultation with the Contracting Parties and in line with the 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. The proposed contents and structure were reviewed and endorsed by the 8th Meeting of the Ecosystem Approach Coordination Group (9 September 2021, UNEP/MED WG.514/12, Annex II), further developed intersessionally with the EcAp Task Force.

The starting point for the chapter on the socio-economic characteristics of the Mediterranean is the 2023 Med QSR contents and structure endorsed by the 8th Meeting of the Ecosystem Approach Coordination Group (9 September 2021, UNEP/MED WG.514/12, Annex II). An outline of contents for the socio-economic chapter is proposed that has been developed in terms of the anticipated outcomes of the trans-boundary diagnostic analysis (TDA). This work is taking place in the framework of the Global Environment Facility (GEF) funded Mediterranean Sea Programme (MedProgramme). It will provide an update to the 2005 TDA baseline regarding transboundary issues that affect the state of countries' marine and coastal environments, analysing causes and impacts of identified/ prioritised issues, to recommend areas where adequate responses are needed to ensure attainment of good environmental status (GES).

The main assessment chapters of the 2023 Med QSR will be based on assessments of Common Indicators (CI) and some Candidate Common Indicators (CCI) within Ecological Objectives (EO). If feasible, CIs will be integrated within EOs and across EOs, where data permit. Table 1 below provides the details on the state of play per EO and CI, and the anticipated assessment for the 2023 MED QSR.

The timetable for delivery of the 2023 Med QSR presented to the 8th Meeting of the Ecosystem Approach Coordination Group (9 September 2021, UNEP/MED WG.514/5) is provided in Table 2, along with an update on progress against the Milestones/Steps.

List of Abbreviations / Acronyms

ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
BAC	Background Assessment Criteria
BC	Background concentrations
CI	Common Indicator
CCI	Candidate Common Indicator
CMCC	Copernicus Marine Service
CMEMS	Copernicus Marine Environment Monitoring Service
COP	Conference of the Parties
CORMON	Correspondence Group on Monitoring
DD	Data Dictionaries
DS	Data Standards
EAC	Environmental Assessment Criteria
EcAp	Ecosystem Approach
EEA	European Environment Agency
EMODnet	European Marine Observation and Data Network
EO	Ecological Objective
ESA	European Space Agency
ETC-UMA	European Topic Centre – University of Malaga
EU	European Union
GEF	Global Environment Facility
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
IMAP	Integrated Monitoring and Assessment Programme
IMO	International Maritime Organisation
MAP	Mediterranean Action Plan
MapX	UN open-source maps
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
NEAT	Nested Environmental status Assessment Tool
NIS	Non-indigenous Species
OSPAR	Convention for the Protection of the Marine Environment for the North-East Atlantic
OWG	Online Working Group
PT	Proficiency Tests
QSR	Quality Status Report
TDA	Transboundary Diagnostics Analysis

Table 1. *Proposed annotated content of the 2023 MED QSR.*
Update of the annotated contents approved by the 8th Meeting of the Ecosystem Approach Coordination Group (9 September 2021, UNEP/MED WG.514/12, Annex II). Progress and remarks for the consideration of the 9th EcAp CG in 2022 are shown in the third column.

Section	**Annotations** (8th EcAp CG)	**Progress and remarks**
Foreword (1 page)		
Acknowledgements 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	
Acronyms and abbreviations	For printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page	
Table of Contents	For printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR page	
Key findings or Executive Summary (1-2 pages)	*NEW* – (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	

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	infographic such as in HOLAS II). The Executive Summary will be prepared in English, French, Spanish, and Arabic.	
Introduction ("About the QSR") 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 0.4. Approach and methodology for the preparation of the 2023 Mediterranean QSR	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. 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).	

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	As an alternative, the approach and methodology can be presented in a stand-alone section after the Introduction, to give it more prominence.	
1. The Mediterranean Sea 1.1. Environmental characteristics 1.1.1. The Mediterranean marine and coastal environment Geography, physiography and landscapes Circulation and water masses Hydrological and climatic setting Water and nutrient characteristics Biodiversity 1.1.2. Climate change The Mediterranean region: a climate change hot-spot Sea level rise (SLR) Climate Change related risks, vulnerabilities and impacts	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. 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	

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Possible impacts on GES (*NEW*) 1.2. Socioeconomic characteristics of the Mediterranean Introduction Population and development Tourism Maritime transport Energy, gas and oil exploration and exploitation, mining and manufacturing Fisheries and aquaculture Land-based pollution sources. 1.3. Regional cooperation (*NEW*) Barcelona Convention and Protocols Other relevant regional policy frameworks (e.g., MSFD)	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. 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). 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	**1.2** Proposed title: "Socio-economic characteristics of the Mediterranean and their interactions in the Drivers-Pressures, State, Impact, Response (DPSIR) framework" 1 Introduction: unsustainable consumption and production patterns are the main drivers of environmental change in the Mediterranean 2 Population and development as multipliers of pressures on the marine environment 3 Analysis of activities that interact with the marine environment *[After an analysis of the main features of each activity – turnover, value added, employment, physical counts – a DPSIR diagram will be drawn up to situate each activity qualitatively within the DPSIR framework that allows to link the activities with the ecological objectives and IMAP indicators. The "R" of the DPSIR framework will not be subject of a full analysis; this will be captured in the EO-CI assessment chapter]*: 3.1 Tourism 3.2 Fisheries 3.3 Aquaculture 3.4 Marine transport 3.5 Energy (Oil and Gas and Renewable energy - offshore) 3.6 Marine mining 3.7 Water abstraction 3.8 Wastewater and waste disposal: overview of waste and wastewater-related infrastructure, including wastewater treatment plants and coastal landfills 3.9 Infrastructure: underwater cables and pipelines, ports, and marinas 3.10 Coastal development and artificialization of coastline ***** <u>Concerning the Methodology and sources of data:</u> This section of the QSR will be built based on existing and ongoing work conducted by the UNEP/MAP-system and from other reliable resources. The analysis of activities will mainly rely on work conducted in the framework of the GEF-funded MedProgramme, and in particular the elaboration

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	available global research if no regional analysis is available. This would make this part more integrated with the rest.	of relevant sections of the ongoing Transboundary Diagnostic Analysis (TDA), which investigates the same activities as those addressed by this section of the QSR. Therefore, this section of the QSR relies on the timely elaboration of the TDA. The elaboration of DPSIR diagrams per activity will be largely inspired by similar diagrams contained in the 2020 Report on the State of the Environment and Development in the Mediterranean (SoED).
2. Mediterranean Quality Status Assessment 2.1 Pollution and Litter Cluster 2.1.1 Eutrophication (EO5) - Key findings (introductory paragraph) - Background information on eutrophication/trends and sources of pressure - Methodology: Common Indicators used in the assessment (CI 13-14) and assessment methodology - Integrated GES Assessment for EO5 - Specific issues/trends per selected CI (possibly in the form of diagrams or figures, and maps if feasible) - Analysis and conclusions	For the 2023 edition of the QSR, a new approach is proposed by integrating CIs within specific Ecological Objectives (EO), and thereafter of EOs at the level of IMAP Clusters (rather than by individual CI which was the approach of the 2017 QSR). Each section corresponds to one of 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. In line with above, for each cluster, a final section is proposed providing elements towards integrated assessment within this cluster (across EOs) following the DPSIR approach, and possibly elements for integration with	**CI 13: Concentration of key nutrients in water column** **CI 14: Chlorophyll-a concentration in water column** **Criteria**: CORMONs Pollution (27 and 30 May 2022) approved Working Document UNEP/MED WG.533/4 "Assessment Criteria Methodologies for IMAP Common Indicator 13: Reference and Boundary Values for DIN and TP in the Adriatic Sea Sub-region", as revised during the Meeting by considering supplementary information provided by several participants. The revised document was approved in terms of using the values calculated for the reference conditions and G/M boundary values as annual G_Mean for TP and DIN in the Adriatic Sea Sub-region coastal and open (offshore) waters, as well the values of the G/M boundaries for Chl*a* in the Adriatic Sea Sub-region coastal waters as approved in IG.22/7 (COP 19) within the preparation of 2023 QSR. The assessment criteria for the reference and boundary values for total phosphorus (TP) and dissolved inorganic nitrogen (DIN) were approved for the Adriatic Sea Sub-region only due to the lack of data reported by the Contracting Parties for the calculation of the reference and boundary values for TP and DIN in other sub-regions/sub-areas. **Assessment methods**: There is ongoing work to set and apply the GES assessment methodology for the NEAT tool application in the Adriatic Sea Sub-region regarding CIs 13&14. There is also ongoing work to set the combination of applicable methodologies for assessment of CIs 13 and 14 in those areas of the Mediterranean where the application of NEAT GES assessment is not possible i.e., complementary application of NEAT, as GES assessment methodology when sufficient data are reported. Good/Moderate (G/M) threshold comparison based on limited Chl*a* data reported to IMAP Info System and remote sensing products of Copernicus. EQR Method 1 where full set assessment criteria for Chl*a*, DIN and TP are set and EQR Method 2 where data for Chl*a* are available *in situ* and from remote sensing.

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	other clusters; or, if the methodology for integrated GES assessment per cluster is not ready, this section could provide an update on progress on methodologies and recommendations for next assessment. Each section per EO will include the following core elements: - 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. - introduction to the issues associated with this Ecological Objective (trends, sources of pressure, targets, as feasible and applicable). - a presentation of Common Indicators used for the assessment and brief description of applied GES	*Scales of assessment*: the areas of assessment are defined in line with IMAP nested approach in the Adriatic Sea Sub-region based on the application of the NEAT GES assessment methodology. In the remaining part of the Mediterranean where spatial nesting is not possible for an application of the NEAT, the assessments will be based on the mathematical /statistical aggregation of the concentrations of Chl*a* measured at the monitoring stations in the Mediterranean sub-regions, along with the concentrations of Chl*a*, DIN and TP as available from the satellite products, by applying of one of the above-listed methods. **Data**: Data from 2015 onwards were included for the calculation of the reference and boundary values for TP and DIN in the Adriatic Sea Sub-region. Data gaps for other areas of the Mediterranean do not allow for the same calculation in other sub-regions. Namely, the level of data reported until 31 December 2021 was still less than 7 % of new data that were needed for the preparation of the 2023 MED QSR. EMODnet data sets were used as appropriate for the calculation of the reference and boundary values for DIN and TP for nutrients (CI13) in order to fill data gaps in the IMAP Info System, to the extent possible. Ongoing consultations are aimed at exploring the use of Copernicus eutrophication satellite products and *in situ* data for complementing limited in situ data collected for Chl*a* in the IMAP Info System. For example, the use of monthly data sets/products in the areas with insufficient *in situ* data reported in the IMAP Info System. **Expectation for QSR**: Spatially based integration and aggregation is ongoing within the assessment of CIs 13 and CI 14 based on the IMAP nested approach in the Adriatic Sea Sub-region, by application of the NEAT assessment. Integration and aggregation of CIs 13 and 14 with other indicators is impossible given delays in data reporting and setting of assessment methodologies for other IMAP Clusters.
2.1.2 Pollution (EO9) - Key findings (introductory paragraph) - Background information on	methodology, including use of the criteria of assessment within aggregation of assessment findings at optimally nested scales of	**CI 17: Concentration of key harmful contaminants measured in the relevant matrix (related to biota, sediment, seawater)** **Criteria**:

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pollution/contaminants, including trends and sources of pressure - Methodology: Common Indicators used in the assessment (CI 17-21) and assessment methodology - Integrated GES Assessment for EO9 - Specific issues/trends per selected CI (possibly in the form of diagrams or figures, and maps if feasible) - Analysis and conclusions	assessment, as well as visualization of the assessment findings by applying the tools as feasible within selected specific GES assessment methodology i.e., maps/ graphs/ infographics; - Integrated assessment for the EO using the DPSIR approach as far as possible, based on results of CI assessment; and if possible, comparison with 2017 QSR - Specific highlights for individual Common Indicators in case they need to be given particular attention (can be in boxes). - Analysis/conclusions on compliance and non-compliance with GES targets, along with the proposals of next steps to further measures/efforts to be put in place towards GES achievement 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 further efforts required to improve	CORMON Pollution (27 and 30 May 2022) approved Working Document UNEP/MED WG.533/3 "Adjusted Background (Assessment) Concentrations (BC/BAC) for Common Indicator 17 and Upgraded Approach for Environmental Assessment Criteria (EAC) for IMAP Common Indicators 17, 18 and 20", as revised during the Meeting by considering supplementary information provided by several participants. The revised document was approved in terms of using (a) upgraded BC and BAC values for IMAP Common Indicator 17 as well as EAC values for IMAP Common Indicator 20 for Good Environmental Status assessment within the preparation of the 2023 MED QSR; and (b) the approaches proposed for future upgrades of EAC values for IMAP Common Indicators 17, 18 and 20 that will take place as of 2024. The Meeting also agreed to continue applying the assessment criteria for biomarkers as set by Decisions IG. 22/7 (COP 19) and IG. 23/6 (COP 20) given a lack of data reporting for IMAP Common Indicator 18. An upgrade of EAC values undertaken from the OSPAR (IMAP and QSR Decisions) was not possible given IMAP does not foresee reporting of ecotoxicological data needed for the calculation of these threshold values. **Assessment methods**: CORMON Pollution (27 and 30 May 2022) approved Working Document UNEP/MED WG.533/5 "The Methodology and the Results of the NEAT Tool Application for GES assessment of IMAP Common Indicator 17 in the Adriatic Sea Sub-region", as revised during the Meeting by considering supplementary information provided by several participants. The revised document was approved in terms of applying the NEAT GES assessment methodology in the Adriatic Sea Sub-region, as well as in other sub-regions/sub-areas conditional to availability of data for application of the NEAT GES assessment, in line with a sound science-policy interface within the preparation of the 2023 MED QSR as requested by Decisions IG.23/6 (COP 20) and IG.24/4 (COP 21). The Meeting requested the Secretariat/MEDPOL to undertake final update of the assessment findings as provided in the Meeting document UNEP/MED WG.533/5 in line with the following: (a) the final update of the assessment criteria for IMAP CI 17 as agreed in the Meeting document UNEP/MED WG.533/3; (b) a possible use of lower boundary limit between moderate and poor classes; and (c) reporting of new data in the IMAP Info System no later than by October 2022. CORMON Pollution (27 and 30 May 2022) also approved Working Document UNEP/MED WG.533/6 "The pilot example for Marine Environment Assessment in the Areas with Insufficient Data: The Results of GES Assessment for IMAP Common Indicator 17 in the Levantine Sea Basin",

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	data availability. For each cluster, the assessment will be based on mandatory IMAP Common Indicators monitored and reported by Contracting Parties. 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).	as revised during the Meeting. The revised document was approved, in terms of applying CHASE+ methodology in the Levantine Sea Basin, as well as in other sub-regions/sub-areas characterized by the lack of sufficient data for application of the NEAT GES assessment with a view of preparation of the 2023 MED QSR. Ongoing work includes the application of the NEAT GES assessment approach in another area based on the results of its application in the Adriatic Sea Sub-region; and detailed comparison of NEAT and CHASE+ application in the Adriatic Sea Sub-region regarding CI 17 further to initial inter-comparison already undertaken to ensure balanced assessment approaches in the Adriatic and Levantine Seas *Scales of assessment*: the areas of assessment are defined in line with the IMAP nested approach in the Adriatic Sea Sub-region based on NEAT GES assessment methodology. There is ongoing work to replicate the same approach in another area with sufficient data for NEAT tool application. In the remaining part of the Mediterranean where spatial nesting will not be possible for an application of the NEAT, the assessments will be based on the mathematical aggregation of the concentrations of the contaminants measured at stations in the Mediterranean sub-regions by applying one of the above-listed methods. **Data**: Data from 2015 onwards were included for conducting an upgrade of the BAC values, even if they were used previously, in order to increase the number of data points for statistical elaboration. However, the level of data reported until 31 December 2021 was still less than 10 % of new data that are needed for the preparation of the 2023 MED QSR. EMODnet data were used for the upgrade of the BAC values (CI17), to fill data gaps in the IMAP Info System. However, the format of EMODnet data is different from data reported in the IMAP Info System resulting in limited use of EMODnet data. **Expectation for QSR**: Spatially based integration and aggregation within NEAT GES assessment of CI 17 will be possible as a pilot case-study in the Adriatic Sea Sub-region and most likely one more area, the selection of which is ongoing. Integration and aggregation of CI 17 with other indicators are impossible given delays in data reporting and setting of assessment methodologies for other IMAP Clusters.

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		CI 18: Level of pollution effects of key contaminants where a cause-and-effect relationship has been established **Criteria**: Given no monitoring data were reported by the Contracting Parties, it was not possible to update the criteria for CI 18. According to conclusion of CORMON Pollution (27 & 30 May), the application of the assessment criteria for biomarkers as set by Decisions IG. 22/7 (COP 19) and IG. 23/6 (COP 20) will continue. **Assessment methods**: There was no assessment product ready for consideration by the Meeting of CORMON Pollution (27 & 30 May 2022. There is ongoing work to apply the assessment approach for the marine environment in the Mediterranean regarding CI 18 that is based on the use of a few literature sources only. **Data**: No national data reported. Very limited data sources are available such as published literature, although these are not in line with IMAP requirements. **Expectation for QSR**: Further updated initial assessment of CI 18 in the Mediterranean, conditional to data reporting by Contracting Parties in the IMAP Info System, will be used as an input for 2023 MED QSR. **CI 19: Occurrence, origin (where possible), extent of acute pollution events (e.g., slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution** **Criteria**: Ongoing cooperation between OSPAR, HELCOM, and REMPEC regarding the definition of Significant (oil) spill, format of reporting systems and the determination of GES for significant acute pollution events. Notwithstanding, Contracting Parties agreed upon the appropriate threshold (i.e., 50 cubic metres) for reporting using existing reporting systems (i.e., POLREP and MEDGIS-MAR) **Assessment methods**: Pollution events are monitored using the following methods/protocols:

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		*Oil***:** - Expert human eye observation; - Aerial observation (human eye observation and/or remote sensing equipment); - Satellite imagery analysis; and - Sampling and analysis. Monitoring at sea will provide the following information: - Volume of oil: use ITOPF guidance based on oil type and appearance to assess thickness (mm) and volume of oil (m^3/km^2) at sea, or the guidance of the Bonn Agreement Oil Appearance Code (BAOAC) identifying the relations between oil appearances and oil volume On-shore monitoring will be used to assess the extent of impacted shorelines, type and degree of contamination as well as impact on habitats and wildlife casualties. *Hazardous and noxious substances (HNS)*: Detection of HNS pollution events and assessment of impacts are primarily achieved on-site by expert human eye observation, complemented with real time monitoring, sampling and analysis, as well as the use of modelling tools. Conclusions of any risk assessment for HNS will be based on a number of information including identification of incident circumstances and location; identification of the involved chemical, its properties/toxicity, and its form (packaged/bulk) as well as identification of sensitive neighboring areas and environment conditions **Data**: While Contracting Parties to the Barcelona Convention and to the 2002 Prevention and Emergency Protocol have a pollution monitoring and reporting obligation, data submitted to REMPEC are still scarce. Thus, the main aim during the initial phase of the IMAP will be to strengthen monitoring efforts towards this already existing obligation. Maintaining the Mediterranean Alerts and Accidents Database is a prerequisite and the condition for being able to measure Common Indicator CI19. Little information is available on the impact of pollution events caused by shipping on biota and habitat. This is due to the fact that ship-generated pollution impact is usually considered from a response perspective (protection of sensitive areas and facilities) and there is no obligation for countries to carry out environmental surveys of sea and shorelines affected by a spill. Following the

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		sinking of the product tanker Agia Zoni II, which was loaded with 2,194 metric tons of heavy fuel oil and 370 metric tons of marine gas oil, on 10 September 2017, a Study of the short- and medium-term environmental consequences of the sinking of the AGIA ZONI II tanker on the marine ecosystem of the Saronikos Gulf (REMPEC/WG.45/INF.7) was carried out, addressing a gap identified by the MED QSR 2017. The set-up of database gathering assessment of the impact on biota affected by acute pollution events should be considered in future updated of MEDGIS-MAR. Additional efforts should be undertaken towards the definition of sub-indicators under CI19, to assess the impact of oil spill on biota. Approaches are available (based e.g., on ecotoxicological, bioaccumulation and biomarkers data), under the EU Marine Strategy Framework Directive (Descriptor 9, Criterion 4), and could be capitalized and adapted to the Mediterranean context. (Source: Adverse effects of significant pollution events on species and habitats dataset in support of the Marine Strategy Framework Directive (MSFD) Descriptor 8 (D08C04, 2018 Reporting). The focus of IMO conventions and guidelines relating to prevention of marine pollution is on ships' compliance monitoring rather than on monitoring or measuring the state of the marine and coastal environment. The same can be noted with respect to reporting obligations. Reporting is required in the case of an accident-causing pollution or in case of an illegal pollution is discovered (operational discharges). This perspective is reflected in the 2002 Prevention and Emergency Protocol. Therefore, the information collected is related to specific pollution events and not always useful or compatible with the information needed to assess the status of the marine environment. Very little data is available regarding illicit discharges from ships. As these are illegal operations by nature (when not within the limits set by MARPOL), it is extremely difficult to get information on occurrences and extent of spills. Marine surveillance requires aerial means and equipment (planes, airborne radars and sampling sets) or special technology such as the use of satellite images. Despite the effort of the Secretariat to facilitate reporting obligation, the majority of 22 Contracting Parties with few exceptions of four (4) are still in non-compliance with their reporting obligation under Article 9 of the 2002 Prevention Protocol. A similar observation can be made with regard to the reporting obligation defined by IMO Circular MEPC/Circ.318. This has an impact on the monitoring of the CI19 and on the assessment of the progress made regarding EO9. To address the lack of reporting, the Compliance Committee under the Barcelona Convention and its Protocols, recommended through Decision IG.24/1:

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		(1) To foster the collection of data on pollution incidents a user friendly and simple online system for reporting should be in place. (2) To encourage Contracting Parties to report pollution incidents under the online Barcelona Convention Reporting System (BCRS). To support the Secretariat in carrying out (at international and regional level) a comparative exercise between already existing reporting procedures and formats. · Global Integrated Shipping Information System (GISIS) (http://gisis.imo.org) maintained by IMO, with a module on marine casualties and incidents. · Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response (MEDGIS-MAR) 2012 1977-2018 5 (http://medgismar.rempec.org/) provides data (private access) on offshore, marine incidents, oil handling facilities, and response equipment. · Emergency Communication and Information System for marine pollution incidents (CECIS Marine), the Union Maritime Information and Exchange System (SafeSeaNet) and CleanSeaNet · Lloyd's list intelligence database (https://www.lloydslistintelligence.com/incidents/), including a section on incidents with detailed reports for each event. MapX: Ocean Pollution (Shipping Lanes, Ports) Pressures 2013 **Expectation for QSR**: Content of MED QSR2017 has been updated with updated information collected from the Study on trends and outlook of marine pollution, maritime traffic, and offshore activities in the Mediterranean From MEDGIS-MAR, REMPEC can extract data per country, per sub-region, per pollution type (Oil/Chemical), per volume. Information on environmental impact of 2 incidents only can be provided (Agia Zoni II, Greece and 2020 Syrian Spill) **CI 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood**

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		Criteria: Based on the recommendations of the 2021 Meeting of CORMON Pollution, the CORMON Pollution held on 27 and 30 May 2022 approved Working Document UNEP/MED WG.533/3 "Adjusted Background (Assessment) Concentrations (BC/BAC) for Common Indicator 17 and Upgraded Approach for Environmental Assessment Criteria (EAC) for IMAP Common Indicators 17, 18 and 20", as revised during the Meeting. It also contains EAC values for IMAP Common Indicator 20 in terms of their use for Good Environmental Status assessment within the preparation of the 2023 MED QS; they are based on the concentration limits for the contaminants regulated in EU Commission Regulations (EC) No 1881/2006, (EC) No 835/2011 and EC No 1259/2011. There is ongoing preparation of the initial assessment for CI 20 in the Mediterranean by applying these assessment criteria. **Assessment methods**: MEDPOL is working on the assessment approach that is based on the use of the same data as for CI 17 (biota) and relevant scientific literature as available, along with the application of the EAC values as explained above. **Data**: One data set reported from one Contracting Party, which is being modified to comply with CI 20 DS and DD. CI 17 data and some scientific papers are used as the sources for preparation of the initial assessment of CI 20 in the Mediterranean. **Expectation for QSR**: Further updated initial assessment of CI 20 in the Mediterranean, conditional to data reporting by Contracting Parties in the IMAP Inf System, will be used as an input for 2023 MED QSR. **CI 21: Percentage of intestinal *enterococci* concentration measurements within established standards** **Criteria**: Given the relevance of the assessment criteria as provided in Decision IG.20/9 Criteria and Standards

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		for bathing waters quality in the framework of the implementation of Article 7 of the LBS Protocol, COP 17, Paris, 2012 (UNEP/MAP, 2012), they are used for preparing the initial assessment of IMAP CI 21 that was approved by the Meeting of CORMON Pollution (27 and 30 May 2022). An initial assessment of data reported in the IMAP Info System is based on the application of the microbial water quality assessment category related to Intestinal enterococci (cfu/100 mL) in bathing waters in the Mediterranean as provided in Decision IG.20/9. **Assessment methods**: CORMON Pollution (May 2022) approved the initial assessment of the marine environment in the Mediterranean regarding CI 21. Given the lack of data reported by the Contracting Parties in the IMAP Info System, the assessment findings of the European Environment Agency (EEA) on Bathing Water Quality from 2020 were integrated with the assessment of data reported by four Contracting Parties in the IMAP Info System by applying the assessment criteria as set in Decision IG.20/9. This implies the use of different assessment approaches that may bring certain discrepancies. Compared to the 2017 MED QSR, the current assessment includes four Contracting Parties instead of one, along with the Contracting Parties assessed within the EEA 2020 assessment of the state of bathing water quality. **Data**: Four years of data were reported by four Contracting Parties; two years of data by two Contracting Parties; and one-year data set from one Contracting Party. However, 16 data sets over four consecutive bathing seasons are needed to undertake assessment for CI 2. **Expectation for QSR**: Further updated initial assessment findings for IMAP CI 21, conditional to data reporting by Contracting Parties in the IMAP Info System, will be used as an input for 2023 MED QSR.
2.1.3 Marine Litter (EO10) - Key findings (introductory paragraph) - Background information on marine litter, including trends		**CI 22: Trends in the amount of litter washed ashore and/or deposited on coastlines** **Criteria**: The assessment criteria will consist of the updated/2021 Baseline Values (BV of 369 items / 100 m) and established Threshold Values (TV of 130 items / 100 m) as adopted by COP22 (Decision IG.25/9 – Annex IV). The 2016 Baseline Values (BV of 450-1400 items /100 m) will be also used for comparative purposes.

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and sources of pressure - 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 - Integrated GES Assessment for EO10 - Specific issues/trends per selected CI (possibly in the form of diagrams or figures, and maps if feasible) - Analysis and conclusions		**Assessment methods**: Based on the 2016 and 2021 BVs, including the establishment of the 2021 TV, an assessment will be undertaken to evaluate the reduction achieved since 2016, as well as an analysis against the agreed TV towards achieving GES. The envisaged assessment will be based on aggregated litter types (i.e., plastic, metal etc.), as well as on specific litter items towards updating the top-item list and list of single-use plastic items (Decision IG.25/9 – Appendix I). In terms of data treatment, a statistical analysis should be undertaken with possibly mean/median values, focusing in identifying the top-item recorded in the region/sub-regions/country levels. Examples of NEAT and CHASE+ tool application may be considered at sub-regional level. The CORMON Marine Litter Meeting of 31 May 2022 approved the application of the NEAT GES assessment methodology in the Adriatic Sea Sub-region, as well as in other sub-regions/sub-areas subject to data availability for application of the NEAT GES assessment for IMAP EO10 Marine Litter, taking into account integration rules and thresholds for the assessments. **Data**: 738 surveys are already available from Algeria, France, Italy, Malta, Morocco, Spain, Greece, Italy, Libya, Italy, Slovenia, Montenegro, Albania, Croatia, Cyprus, Israel; for the years 2016-2018. Additional data will be considered based on data availability focusing on the years 2018-2021 (data submission is undergoing). **Expectation for QSR**: Quantitative/Qualitative assessment including trends analysis and initial GES assessment, and temporal/spatial analysis where possible. Integrated assessments will be made available only at the level of specific sub-regions (e.g., Adriatic Sea) focusing mainly on the available data for the years 2016-2018. **CI 23: Trends in the amount of litter in the water column including microplastics and on the seafloor** **Criteria**: Updated Baseline Values (BV) and the establishment of Threshold Values (TV) are under preparation for IMAP CI 23 focusing on seafloor macro-litter and floating microplastic, which are

Section	Annotations (8th EcAp CG)	Progress and remarks
		expected to be presented at the next CORMON Marine Litter Meeting (Q4 2022, tbc). The 2016 Baseline Values will be also used for comparative purposes. **Assessment methods**: Based on the 2016 and 2022 (tbc) BV, including the establishment of the 2022 TV an assessment can be undertaken to evaluate the reduction achieved since 2016 for seafloor macrolitter and floating microplastic, as well as an analysis against the agreed TV towards achieving GES. In terms of data treatment, a statistical analysis should be undertaken with possibly mean/median values, focusing in identifying the areas around the MED (regional/sub-regional/country levels) where seafloor and floating marine litter are mostly found and/or accumulating. **Data**: Data sets from Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, France, Greece, Israel, Italy, Lebanon, Malta, Montenegro, Morocco, Slovenia, Spain, Tunisia, Turkey for the years 2016-2021 are available and uploaded to Info System. Process is still open, and the final number of datasets and data series will be determined in June/July 2022 (tbc). Datasets from ACCOBAMS will be also considered for floating macro-litter deriving from aerial surveys (process for data exchange is ongoing). GFCM data on ADLFG may be also considered based on their availability. **Expectation for QSR**: Quantitative/Qualitative assessment including trends analysis and initial GES assessment, and temporal/spatial analysis. **Candidate CI 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles** **Criteria**: An attempt to update Baseline Values (BV) and to establish Threshold Values (TV) is undergoing by MED POL (tbc) which will mainly depend on data availability (a data inventory is under development) focusing on ingestion and entanglement.

Section	Annotations (8th EcAp CG)	Progress and remarks
		Assessment methods: Statistical analysis focusing and ingestion and entanglement will be offered (tbc) **Data**: Data from the EU-funded INDCIT I and II and the Interreg-MED Plastic Busters MPA Projects, supplemented by national data from Lebanon and Tunisia (and from other countries – tbc) will be considered. **Expectation for QSR**: While an assessment cannot yet be secured depending to a great extent on data availability, efforts are undergoing to deliver a basic assessment on ingestion and entanglement, in conjunction with the BV-TVs under development (tbc).
2.2 Biodiversity and NIS Cluster 2.2.1 Biodiversity (EO1) - Key findings (introductory paragraph) - Background information on Habitats and Species, including trends and sources of pressure - Methodology: Common Indicators used in the assessment (CI 1-5) and assessment methodology - Integrated Assessment for EO1 - Specific issues/trends	See explanation above of structure per cluster and per EO sub-section. Section 2.2.1 (EO1) will include background information on habitats and species, which should refer to trends and sources of pressure, the status of knowledge on every concerned habitat / species group across Mediterranean countries/sub-regions. Section 2.2.1 should present one integrated assessment per component of biodiversity (e.g., one assessment for habitats, one	**CI 1: Habitat distributional range to also consider habitat extent as a relevant attribute** **CI 2: Condition of the habitat's typical species and communities** **Criteria**: *Benthic habitats*: Work on the assessment criteria, thresholds, and baseline values for the IMAP CIs 1 and 2 related to benthic habitats is ongoing in close collaboration with the informal OWG on benthic habitats. Results will be presented to the Biodiversity CORMON meeting (autumn 2022, tbc) for discussion and endorsement of their use for the purpose of the 2023 Med QSR. **Assessment methods**: Development of monitoring and assessment scales for CIs 1 and 2 related to benthic habitats is ongoing in close collaboration with the informal OWG on benthic habitats. **Data**: Three countries have submitted data to the Info System, but none have yet been validated. Data produced in the framework of the MedKeyHabitat II project (July 2017 - December 2019) by Algeria, Cyprus, Malta, Tunisia, Turkey and Morocco. Data produced in the framework of the MAVA funded project Kuriat (Tunisia) (July 2017-December 2019).

Section	**Annotations** (8th EcAp CG)	**Progress and remarks**
per selected CI/taxa/main species (possibly in the form of box) - Analysis and conclusions	for marine mammals, one for seabirds, one for marine turtles)	Data produced under the GEF Adriatic project (September 2017 – June 2021) by Albania and Montenegro. Data to be collected in the framework of the IMAP-MPA project by the seven beneficiary southern Mediterranean countries. Data to be collected in Tunisia and Montenegro from the monitoring points installed during MAVA Medkeyhabitats Habitat I & II (Summer 2022). VMEs Species Data produced in the framework of the MAVA funded MedBycatch project in Croatia, Italy, Morocco, Tunisia and Turkey (Bycatch database hosted by GFCM) if we will consider offshore areas. All Bycatch data available in literature related to the Incidental catch of vulnerable species (including VMEs Species) in Mediterranean and Black Sea fisheries is already published (with SPA/RAC support): https://www.fao.org/gfcm/publications/studies-reviews/101/en/. High resolution satellite imagery on benthic habitats to be requested from EEA. **Expectations for QSR**: With the support of SIDA funds these common indicators will be analysed/assessed using the NEAT (if possible, otherwise another adequate assessment tool will be proposed and tested). Results should be available by autumn 2022. If possible, the method and results will be replicated for the whole Mediterranean region. Integration within CIs, EO and cluster will be tested when possible. **CI 3: Species distributional range (related to marine mammals, seabirds, marine reptiles)** **CI 4: Population abundance of selected species (related to marine mammals, seabirds, marine reptiles)** **CI 5: Population demographic characteristics (e.g., body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)** **Criteria**: Definitions of GES and targets and review of the definition of GES to be conducted.

Section	Annotations (8th EcAp CG)	Progress and remarks
		Seabirds: list of indicator species approved, consisting of 11 seabird species *sensu lato* covering 6 functional groups. For CI 3, 4 & 5 on seabirds the approaches for establishing the assessment criteria, baselines, thresholds (except for Malta that indicated it is not in a position to confirm the applicability of the thresholds) were agreed by CORMONs Biodiversity (March 2022, 22WG.520/04). *Marine mammals*: Approaches for establishing the assessment criteria, baselines and thresholds were agreed by the CORMON biodiversity and presented to the EcAp Coordination Group as information document (September 2021, UNEP/MED WG.514/Inf.11). *Marine reptiles*: Approaches for establishing the assessment criteria, baselines and thresholds were agreed by the CORMON biodiversity and presented to the EcAp Coordination Group as information document (September 2021, UNEP/MED WG.514/Inf.12). **Assessment method**: *Seabirds*: spatial and temporal scales of monitoring and scales of assessment of the 11 seabird species for CI 3, 4 & 5 were agreed by CORMONs Biodiversity (March 2022, 22WG.520/04). *Marine mammals*: Spatial and temporal scales of monitoring and assessment of the CI 3, 4 & 5 were agreed by CORMON Biodiversity and presented to the EcAp Coordination Group as information document (September 2021, UNEP/MED WG.514/Inf.11). *Marine reptiles*: Spatial and temporal scales of monitoring and assessment of the CI 3, 4 & 5 were agreed by CORMON Biodiversity and presented to the EcAp Coordination Group as information document (September 2021, UNEP/MED WG.514/Inf.12). **Data**: DSs and DDs for the three CIs on species are still under development. They were discussed and reviewed by the CORMON Biodiversity (June 2021 and March 2022), and it was agreed that further work need to be done within the OWG. Data produced in the framework of the MAVA funded - project “Marine Turtles” in Tunisia, Libya, Egypt, Lebanon, and other Western Mediterranean Countries. Data produced under the GEF Adriatic project (September 2017 – June 2021) by Albania and Montenegro for the 3 groups of species. Bycatch of vulnerable species Data produced in the framework of the MAVA funded MedBycatch project in Croatia, Italy, Morocco, Tunisia, and Turkey (Bycatch database hosted by GFCM). All Bycatch data available in literature related to the Incidental catch of vulnerable species in Mediterranean and Black Sea fisheries is already published (with SPA/RAC support): https://www.fao.org/gfcm/publications/studies-reviews/101/en/.

Section	Annotations (8th EcAp CG)	Progress and remarks
		Seabirds: Data to be collected in the framework of the IMAP-MPA project by the seven beneficiary countries. *Marine mammals*: Data collected by Tunisia in the framework of the INTERMED project (March-June 2022). Data to be collected in the framework of the EcAp Med III project by the seven beneficiary southern Mediterranean countries. *Marine reptiles*: Data collected in the framework of the MAVA project (June 2017 – May 2020) by Albania, Egypt, Greece, Lebanon, Libya, Tunisia, Turkey and Spain, available in the Mediterranean Biodiversity Platform. Data to be collected in the framework of the IMAP-MPA project. ACCOBAMS Survey Initiative (ASI) marine mammals & turtles' data on distribution and abundance: use ASI data as a baseline (these will be analysed (not raw) data); ACCOBAMS can share the maps and shapefiles. **Expectations for QSR**: With the support of SIDA funds these common indicators will be analysed/assessed using the NEAT (if possible, otherwise another adequate assessment tool will be proposed and tested). Results should be available by autumn 2022. If possible, the method and results will be replicated for the whole Mediterranean region. Integration within CIs, EO and cluster will be tested when possible.
2.2.2 Non-indigenous Species (EO2) - Key findings (introductory paragraph) - Background information on NIS, including trends and sources of pressure - Methodology: Common Indicators used in the assessment (CI 6)	Section 2.2.2 (EO2) will be based mainly on the results of the baseline assessment of NIS and the national lists shared by the Contracting Parties, with possible contribution from the results of sub-regional pilots. The geographical scope of the data and scales used will be clearly presented in the	**CI 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (in relation to the main vectors and pathways of spreading of such species)** **Criteria**: CORMON Biodiversity endorsed the assessment criteria of the CI6 (June 2021) and the refined baseline inventories at national, sub-regional and regional levels (March 2022). Approaches on how to set thresholds were presented during the CORMON biodiversity (June 2021). However, no values were proposed as the current situation does not allow setting thresholds, further work needs to be done.

Section	Annotations (8th EcAp CG)	Progress and remarks
and assessment methodology - Integrated Assessment for EO2 - Specific issues/trends per species/main sources/hotspots/most vulnerable areas to NIS (possibly in the form of box) - Analysis and conclusions	methodology sub-section. A special box could be added to describe the sub-regional pilots and joint monitoring efforts. The section on specific issues/trends may provide trends per taxonomic group or eco-functional group of species, and will include a focus on main sources, hotspots, and most vulnerable areas to NIS, as well as a reference to the establishment of regional and sub-regional list of invasive species to be monitored.	**Assessment method**: Spatial and temporal scales of monitoring and assessment of the CI 6 on NIS were agreed by CORMON Biodiversity (June 2021). **Data**: Three countries have submitted data to the Info System, but none are compliant or valid Data produced under the GEF Adriatic project (September 2017 – June 2021) by Albania and Montenegro. National data will be collected in the framework of the IMAP-MPA and EcAp Med III projects by the seven beneficiary countries. GFCM will upload data to the respective platforms (Data Collection Reference Framework, DCRF) - the 7 agreed non-indigenous fish species monitoring activity is ongoing in the concerned countries. GFCM will upload data to the respective platforms (DCRF). **Expectations for QSR**: With the support of SIDA funds these common indicators will be analysed/assessed using the NEAT (if possible, otherwise another adequate assessment tool will be proposed and tested). Results should be available by autumn 2022. If possible, the method and results will be replicated for the whole Mediterranean region. Integration within CIs, EO and cluster will be tested when possible.
2.2.3 Harvest of commercially exploited fish and shellfish (EO3) - Key findings (introductory paragraph) - Background information on commercial fisheries and trends - Methodology: Common Indicators used in the assessment (CI 7-	Section 2.2.3 (EO3) will be prepared with support from GFCM based on their database. A clear link will be provided between CI 12 (By-catch of vulnerable and non-target species) to CI 2 (Condition of the habitat's typical species and communities) and CI 5 (Population demographic characteristics). The conclusions will include	**CI 7: Spawning stock Biomass** **CI 8: Total landings** **CI 9: Fishing Mortality** **CI 10: Fishing effort** **CI 11: Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy** **CI 12: Bycatch of vulnerable and non-target species (EO1 and EO3)** GFCM to develop the assessment on EO3 related to fisheries. During Q3-Q4 2022 GFCM will prepare a report on the status of fisheries resources in the Mediterranean and Black Seas, for publication in early December. Subsequently GFCM will prepare a summary of this assessment and provide it for the 2023 QSR, with a link in the summary report to the full GFCM report.

Section	**Annotations** (8th EcAp CG)	**Progress and remarks**
12) and assessment methodology - Integrated Assessment for EO3 - Specific issues/trends per selected CI/species (possibly in the form of box - tbc) - Analysis and conclusions	focus on commercial species that are listed in Annex III of the Barcelona Convention Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean ("Species whose exploitation is regulated").	GFCM and SPA/RAC can discuss EO3 in early 2023 and the draft summary report to be reviewed by CORMONs Biodiversity in spring 2023. **Data**: Monitoring of fish species in the eastern Mediterranean sub-region within the EcAp-MED III project GFCM DCRF. GFCM SOMFI 2020: https://www.fao.org/gfcm/publications/fr/. GFCM SOMFI 2022 (under development to be ready by December 2022)
2.2.4 Elements for Marine Food Webs (EO4) and Sea-floor integrity (EO6) (*NEW*) - EO4 - Key issues and sources of pressure - State of the art on data, monitoring and assessment - Preliminary assessment for EO4 and conclusions - EO6 - Key issues and sources of pressure - State of the art on data, monitoring and assessment - Preliminary assessment for EO6 and conclusions	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, available technologies and techniques for monitoring, 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	**Marine Foodwebs** Bottom-trawling information is only available for some fisheries. GFCM contribution is unlikely to be in time for the 2023 QSR. Therefore, SPA/RAC will engage a consultant in liaison with GFCM to develop indicators. Deliverable related to Fisheries will be discussed during the GFCM Scientific Advisory Committee (SAC) and the CORMON.

Section	Annotations (8th EcAp CG)	Progress and remarks
	for measures based on identified key issues/pressures related to these EO). Explore the possibility for including seafloor integrity, recognizing the EO6 is under development, with clear links between the common indicator fact sheet, to undertake assessment for the biodiversity component, i.e., for species.	
2.3 Coast and Hydrography Cluster 2.3.1 Hydrography (EO7) - Key findings (introductory paragraph) - Background information on Hydrography, including trends and sources of pressure - Methodology: Common Indicators used in the assessment (CI 15) and assessment methodology - Specific issues/trends per habitat or type of pressure	See explanation above of structure per cluster and per EO sub-section. A box on innovative coastal products and data collection and assessment methods and technologies could be added (e.g., Copernicus, EMODnet, Marinomica) Strengthen the link between hydrography and biodiversity, particularly regarding habitats Due to the high complexity of this Common Indicator, a baseline assessment may be conducted at this stage.	**CI 15: Location and extent of the habitats impacted directly by hydrographic alterations** **Criteria**: Some progress has been made with the preparation of the baseline situation for the CI 15 on hydrography with the support of EcAp MED III and IMAP-MPA. The common approach has been applied for both projects, using similar instructions/contents for the reports, however one focused on pilot sites the other on national level. In this way at least an overview of the baseline status will be identified for the EcAp MED III eligible countries and for those that have used voluntarily this approach and provided information. In coordination with the Science-Policy Interface (SPI) component of EcAp MED III the situation on this indicator is being analysed in Morocco. This work should provide a detailed insight into the difficulties with the implementation of the indicator according to the Guiding Factsheet, including several scientific gaps and policy constraints/difficulties such as for the modelling/EIA etc. Based on these results and taking wider context into account (such as the revision of the MSFD of the EU) a proposal on how to tackle hydrography in the future will be presented to the next CORMON meeting on coast and hydrography. **Assessment methods**: The assessment criteria should allow for determining whether hydrographic alterations caused by various installations in marine environment have caused impacts on marine habitats. This is clear for

Section	Annotations (8th EcAp CG)	Progress and remarks
(possibly in the form of box - tbc) - Analysis and conclusions		the very footprint of the installation itself. However, for the areas around these structures it is first, difficult to assess the scale of the impact and second, what is more important, what is the impact, i.e., scale of deterioration of habitats in a wider area where hydrographic conditions have changed. There are a lot of scientific uncertainties and gaps for the assessment of such deteriorations/impacts as some types of habitats could be damaged but could recover in time, other habitats could be severely destroyed but replaced with other habitats. Therefore, the assessment will be made based on general hydrographic changes in the last decades (increase of temperature, salinity, power/hight of waves) by using satellite images provided by the scientific partners. Some integration with their impacts to EO8 indicators, i.e., coastal areas will be provided at least in general terms. **Data**: Seven countries (for EcAp MED III project) have submitted reports on baseline situation (one provided examples of EIA) as well as eight other Mediterranean countries. These narrative reports will enable presentation of the general situation regarding monitoring of this indicator that is country specific and will be complemented by the general information on changes of hydrographic conditions that may impact marine habitats and coastal areas provided by the scientific partners. Mercator Ocean has provided: - Summary of hydrographic conditions/ changes that cover the Mediterranean as a whole that may potentially impact marine habitats, - Information on waves and currents in the Med, temporal evolution of the mean vertical temperature and salinity anomalies, as well as info related to climate change, i.e., Sea Level Trend and Ocean Heat Content, - Correlations between individual parameters and changes of hydrography conditions. CMCC has offered, but not yet provided: general information with regard to hydrography at the Mediterranean level as far as currents and general information on hydrographic conditions; and correlations between the changes of various hydrographic parameters and their impacts to marine habitats. **Expectation for QSR**: Supported by SIDA funds CI15 is being analysed/presented for the Adriatic Sea sub-region. Results will be available by end June 2022. The method and results will then be replicated for the whole Mediterranean region. Integration with CCI 25 will be tested and hopefully some correlations

Section	Annotations (8th EcAp CG)	Progress and remarks
		provided, as well as between EO8 and EO7, namely hydrography (note: having scientific gaps and uncertainties in mind).
2.3.2 Coastal ecosystems and landscapes (EO8) - Key findings (introductory paragraph) - Background information on Coastal ecosystems, including trends and sources of pressure (a box on climate change and coastal erosion could be added) - 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	See explanation above of structure per cluster and per EO sub-section. A box on innovative coastal products and data collection and assessment methods and technologies could be added (e.g., Copernicus, EMODnet, Marinomica) Strengthen the link between hydrography and biodiversity, particularly regarding habitats Due to the high complexity of this Common Indicator, a baseline assessment may be conducted at this stage.	**CI 16: Length of coastline subject to physical disturbance due to the influence of human-made structures** **Criteria**: CORMON Coast and Hydrography (25 November 2021) provided comments and approved conclusions on the draft document on assessment criteria and of the related Guiding document for the application of assessment criteria for CI 16. The Guiding document was finalised and currently it is being tested in Morocco. Note that this indicator requires country-specific definition of GES. **Assessment method**: The method of assessment is provided in the Guiding document (see CI 15 above) and will be effective once the second and further sets of monitoring data will be provided (6-year cycle). For the 2023 QSR the baseline situation will be presented and only with the second and further sets of monitoring data will allow for determining the change and the application of the assessment criteria. In between countries will define their own GES. The scale of assessment will include the total length of the coastline. **Data**: 13 countries have submitted one set of data, partially (not for the whole country) 1 country. Not all have been uploaded yet to the IMAP Info system. For some countries technical training is organised on how to do the monitoring and report to IMAP Info system, whereas some other are reporting that the work is in progress. ESA has offered, but not yet provided, coastal erosion at the Mediterranean level and information related to soil sealing. ETC-UMA has provided an assessment of Med coastal wetland ecosystem condition, caused by various pressures (due to hydrographic changes but also pressures from the land); maritime transport in the Mediterranean document; an updated map of marine ports around the Mediterranean and pressures due to marine moorings.

Section	Annotations (8th EcAp CG)	Progress and remarks
		ETC-UMA has offered, but not yet provided, an assessment of urban soil sealing in coastal regions (to complement the LCLU maps by the EEA) and consequences; and correlations between changes of various hydrographic parameters and their impacts to marine habitats, and those close to the coastline, coastal wetlands as they are important for LSI. MapX has coastal surface built (%) in 2015. **Expectation for QSR**: Supported by SIDA funds CI 16 is being analysed/presented for the Adriatic Sea sub-region. Results will be available by end June 2022. The method and results will then be replicated for the whole Mediterranean region. Integration with CCI 25 will be tested and hopefully some correlations provided, as well as between EO8 and EO7, namely hydrography (note: having scientific gaps and uncertainties in mind). **Candidate CI 25: Land use change** **Criteria**: The Guiding Factsheet was adopted by the EcAp Coordination Group meeting in September 2019. It is being tested and with the support of the GEF MedProgramme it will be also upgraded so to include some relevance for climate change. Assessment criteria have not yet been defined. Similar to CI 16 on coastline GES for CCI 25 is country-specific **Assessment method**: Assessment will be on trends and will include the whole Mediterranean coastal areas, as well as analysis of changes for the belts up to 300m, from 300m to 1km and 1-10km. This is currently being carried out for the Adriatic Sea sub-region. Results will be available by end June 2022 and the method and results will then be replicated for the whole Mediterranean region. The assessment at this point will show the areas that have undergone significant changes of land classes with the focus on the increase of land take by urbanisation, in particular in the belt up to 300 m from the coastline (link to Article 8 of the ICZM Protocol). This will be done by overlaying data from 2012 and 2018. **Data**: Satellite images (available open-source that satisfy the requirements of the Guiding Factsheet) are available, so there is no need for the countries to report individually on this indicator. As far as

Section	Annotations (8th EcAp CG)	Progress and remarks
		possible, data for this CCI 25 will be provided in close cooperation with the EEA (monitoring results for 2012 and 2018) for the EU member states plus four Mediterranean EIONET member states, and/or from the open sources for the rest of the countries. EEA Land Cover Land Use (LCLU) maps for all EU Mediterranean states and four EIONET partners for 2012 and 2018 – offered but not yet provided. Satellite based, open-source data are available for the whole Mediterranean (corresponding to the requirements of the Guiding Factsheet) and will be used for the assessment. **Expectation for QSR**: Supported by SIDA funds CCI 25 is being analysed/presented for the Adriatic Sea sub-region. Results will be available by end June 2022. The method and results will then be replicated for the whole Mediterranean region. Integration with CCI 25 will be tested and hopefully some correlations provided, as well as between EO8 and EO7, namely hydrography (note: having scientific gaps and uncertainties in mind).
2.4 Towards an integrated assessment of GES in the Mediterranean	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.	
3. UNEP/MAP Actions	(*NEW*) This section could	

Section	Annotations (8th EcAp CG)	Progress and remarks
and Measures to Address Pressures and Protect the Mediterranean Sea and Coast	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 IMAP. An analysis of the effectiveness of the measures could be proposed (at least briefly). 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.	
4. Conclusions and ways forward/future outlook 4.1 Key issues, risks and priorities	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	

Section	Annotations (8th EcAp CG)	Progress and remarks
4.2 Recommendations for priority actions/measures 4.3 Recommendations for future monitoring and assessment	assessment, as well as possible future risks, if no action is taken. 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). Finally, it should identify key challenges and provide recommendations in relation to data gaps to be addressed for the next QSR (2029) and monitoring and assessment methods.	
Annexes 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.	
Glossary	For the printed publication – online this can be replaced by the menu or tabs on the landing 2023 MED QSR	

Section	Annotations (8th EcAp CG)	Progress and remarks
	page.	
References	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.	
Illustrations/photo credits	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.	

***Table 2**: 2023 MED QSR preparation milestones, timelines, and progress*

Update of the timetable presented at the 8th Meeting of the Ecosystem Approach Coordination Group (9 September 2021, UNEP/MED WG.514/5)

Milestones/steps	Expected delivery	Progress
Methodology, outline, planning process refined/agreed in a revised Operational Implementation Plan and Concept Note (including through CORMONs)	April 2021	Completed
Data sources, partners and requirements for expertise, data sharing, and consultancies defined and necessary arrangements for implementation made	August 2021	Scientific partners consultation meeting was held 2 September 2021. There is ongoing bilateral engagement of scientific partners directly with the MAP Components
EcAp Coordination Group updated on progress and issues; Progress in 2023 MED QSR Roadmap implementation, 2023 MED QSR methodology, outline, structure, and contents, and 2023 MED QSR Communication and Visibility Strategy presented for CPs' review and endorsement	September 2021	Progress reported to 8th EcAp Coordination Group Meeting in September 2021

Milestones/steps	Expected delivery	Progress
Annotated draft contents of 2023 MED QSR prepared and presented for review by CORMON based on available data and assessment	April 2022	Presented in Table 1, above
IMAP Info System fully operational to support submission of data for all IMAP Common Indicators	June 2022	Ongoing. The IMAP Info System contained data flows for the initial set of 11 CIs (12 modules) and the work in 2021/2022 focused on the upgrade and delivery of a fully operational IMAP Info System. Seven new CIs are going to be integrated into the IMAP reporting system, bringing the total to 18 CIs. The finalisation of these DS and DDs will enable the hosting of the new data submitted for all other CIs by summer 2022, besides the data related to already existent CIs Data Standards. By Q4 2022 all new datasets should be available in the System to support the elaboration of the draft 2023 MED QSR DSs and DDs for IMAP Common Indicators 3, 4, 5, 18, 19, 20 and candidate indicator 24 have been developed and are under finalisation. By June 2022, the available final version approved in the CORMONs meetings will be available to implement the correspondent data flows in the IMAP Info System. In particular IMAP Common Indicators 3, 4 & 5 have been revised with the support of ACCOBAMS and the online working group (OWG) on marine mammals, marine reptiles and marine birds. The final version integrating inputs by BCs was adopted by the 2022 CORMON biodiversity meeting (UNEP/MED WG.520/6, UNEP/MED WG.500/7, UNEP/MED WG.500/8). OWG meetings will be organised ahead of the next CORMON meeting (October 2022, tbc) for final tuning. DSs and DDs for CIs 18 and 20 were submitted and approved by CORMON Pollution (27-31 May 2022). In 2022 INFO/RAC started the development of CI 19 together with REMPEC that needs full completion for the part related to impacts in close cooperation with SPA/RAC. A “preData Standard” template was adopted during CORMON on Marine Litter (31 May 2022) and will be proposed as an information document in its final version compatible with the IMAP Info System by October at the next CORMON on Marine Litter.

Milestones/steps	Expected delivery	Progress
		Fine-tuning of the Info System is taking place in view of the implementation of the new data flows for CIs 3, 4, 5, 18, 19, 20 and 24. The migration of data from MED POL database into the IMAP Info System was fully completed in April 2022, except for new Montenegro historical data to be resent by the country to be compliant with IMAP Info System
Additional data reported/collected, and assessment methodologies tested	September 2022	In progress as presented in Table 1 above per Common Indicator and Candidate Common Indicator
Second draft of 2023 MED QSR 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 of 2023 MED QSR 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	