UNITED NATIONS

EP

UNEP/MED WG.627/5/Rev.1

UN environment programme

Mediterranean Action Plan
Barcelona Convention

05 June 2025
Original: English

Meeting of the MED POL Focal Points

Athens, Greece, 17-19 June 2025

Agenda Item 5: **b.. Enhanced Integrated Monitoring and Assessment Programme (IMAP) (Pollution and Marine Litter cluster, Common Indicators updated fact sheets, assessment criteria/thresholds)**

Revised IMAP: Pollution, Litter and Noise Clusters

UNEP/MAP
Athens, 2025

Note by the Secretariat

The present document aims at proposing updates to the "Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP)" as adopted by Decision IG22/7 of COP 19 to reflect the developments in this field within UNEP/MAP Barcelona Convention since 2016. This document is focused on the Pollution and Litter sections of IMAP i.e., EO5, EO9, EO10 and EO11.

A first effort to update IMAP was made in Document UNEP/MED WG.595/Inf.4 "Revised Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria" prepared for consideration at the 11th Meeting of the Ecosystem Approach Coordination Group (EcAp CG) (Videoconference, 2 October 2024).

A more advanced version and consolidated proposal has been prepared under Working Document UNEP/MED WG.626/9 for consideration at the Joint Meeting of the Ecosystem Approach Correspondence Groups on Pollution and Marine Litter Monitoring (Anavyssos, Greece, 27 -28 May 2025), reflecting the agreed decisions by the Contracting Parties (EcAp CG, MAP, and COP) related to monitoring and assessment methodologies, assessment criteria, all tested and validated during the preparation of the 2023 Mediterranean Quality Status Report (2023 MED QSR).

This document contains an annex presenting the assessment criteria for pollution and marine litter as approved by COP 23 (Decision IG.26/3), with an addition for Common Indicator 24 which was reviewed by the Joint Meeting of the Ecosystem Approach Correspondence Groups on Pollution and Marine Litter Monitoring (Anavyssos, Greece, 27 -28 May 2025) and additional revision is required. In addition, the environmental targets (intermediate and final) for marine litter are included in Annex I (Part II – Table 18) as presented and approved by the Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring (Videoconference, 29 January 2025; Working Document UNEP/MED WG.601/5).
The current revision also incorporates the following corrections to the reference and boundary values for Chla included in Annex I, in comparison to the values provided in Decision IG.22/7 on Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (COP 19, 2016) and Decision IG.26/3 on 2023 MED QSR and a Renewed Ecosystem Approach Policy in the Mediterranean (COP 23, 2023):

- Gmean values corresponding to the reference and boundary values of Chla (expressed as the 90th percentile) are provided on the request of one country for Type II A FR SP and Type III W FR SP, along with the corrected calculation of Gmean value for Type I, compared to those included in Decisions IG.22/7 and IG.26/3.
- The value of 3.58 μg/L is corrected to 3.50 μg/L for Type II A FR SP in comparison to the values provided in Decisions IG.22/7 and IG.26/3, following the identification of an error by the Joint Meeting of CorMon on Pollution and Marine Litter Monitoring held on 27–28 May 2025 in relation to the boundary values used in the 2023 MED QSR.
- The value of 1.80 μg/L is corrected to 1.89 μg/L for type III W FR SP in comparison to the values provided in Decisions IG.22/7 and Decision IG.26/3, following the identification of an error by the Joint Meeting of CorMon on Pollution and Marine Litter Monitoring held on 27–28 May 2025 in relation to the boundary values used in the 2023 MED QSR.

These corrections were reviewed and approved in Working Document UNEP/MED WG.626/4/Rev.1 by the Joint Meeting of the Ecosystem Approach Correspondence Groups on Pollution and Marine Litter Monitoring (Anavyssos, Greece, 27–28 May 2025). They were subsequently incorporated into Annex I of document UNEP/MED WG.626/9 and are now included in the present document for consideration by the Meeting of MED POL Focal Points.

At the time of finalizing the documents for the MED POL Focal Points Meeting, the Joint Meeting of the Ecosystem Approach Correspondence Groups on Pollution and Marine Litter Monitoring was not yet held.

The revised version of this document includes the changes introduced and agreed by this meeting (shown in bold and yellow highlighted text). It is submitted to the MED POL Focal Points Meeting for review and endorsement with a view to its submission to the 12th EcAp Coordination Group and MAP Focal Points Meetings in September 2025.

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Monitoring and assessment of pollution and marine litter related common indicators

Eutrophication (EO5):

1. Eutrophication is a process driven by enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, leading to increased growth, primary production and biomass of algae; changes in the balance of nutrients causing changes to the balance of organisms; and water quality degradation.

2. Eutrophication related Common Indicators:

Common Indicator 13: Concentration of key nutrients in water column (EO5);

Common Indicator 14: Chlorophyll-a concentration in water column (EO5).

3. The monitoring of eutrophication under IMAP builds on the ~~existing~~ **monitoring system of** UNEP/MAP MED POL Monitoring programme**.** ~~and most of T~~**t**he Contracting Parties ~~already~~ have **IMAP-based** monitoring programmes in place for eutrophication all over the Mediterranean basin**.**~~, which however constitutes a greater~~**particular** ~~concern for the Adriatic than for the rest of sub-region.~~

4. The Contracting Parties, building on their ~~existing~~ national monitoring programmes**, the lessons learned during the initial phase of implementing the Integrated Monitoring and Assessment Programme** and previous MED POL experience **with** ~~on~~ eutrophication, ~~will~~ **update** ~~these~~ **updated their IMAP-based national monitoring** programmes. ~~during the initial phase of IMAP~~**since 2016**, ~~with~~ **T**~~t~~he overall aim **is to enhance harmony and coherence among the national monitoring programmes and** to establish coherent datasets at the entire regional sea level.

5. The methodologies, **monitoring protocols** and quality control and quality assurance measures are ~~have been made~~ available for **the** Contracting Parties ~~to consider during the update of and have been considered in~~ their ~~IMAP-based~~ national monitoring programmes are described, in **line with** the **Indicators'** ~~Integrated Monitoring and Assessment~~ Guidance **Factsheets**. ~~, noting the differences of needed techniques based on the level of the eutrophication problem in different sub-regions and countries as well as the numerous technical guidelines prepared by MED POL~~.

6. The geographical scale of monitoring for the assessment of GES for eutrophication ~~will~~ depend**s** on the hydrological and morphological conditions of an area, particularly the freshwater inputs from rivers, ~~the~~ salinity, ~~the~~ general circulation, upwelling, and stratification.

7. The spatial distribution of the monitoring stations should thus, prior to the establishment of the eutrophication status of the marine sub-region/area, be risk-based and proportionate to the anticipated extent of eutrophication in the sub-region under consideration, as well as its hydrographic characteristics aiming for the determination of spatially homogeneous areas. Consequently, each Contracting Party ~~would be required to determine~~**has determines**~~d~~ the **optimal spatial distribution** ~~frequency per year and optimum locations for their~~ **of** monitoring~~/sampling~~ stations.

8. ~~It is recommended that the Contracting Parties rely on the classification scheme on chl-a concentration (µg/l) developed by MEDGIG as an assessment method that is easily applicable by all Mediterranean countries, based on the indicative thresholds and reference values adopted therein (see Table 2, Appendix 2). In this context, water typology is a very important factor for the further development of classification schemes in a certain area regarding the definition of sub-regional thresholds for chlorophyll-a.~~

8.~~bis~~[1] **The Contracting Parties should use** r**eference conditions and boundary values for chlorophyll-a (Chl-a) and nutrients, as outlined in Annex I, developed and region-wide approved for major coastal water types in the Mediterranean, including their application in the GES/non-GES /environmental classifications. To this aim, further work is required to expand and upgrade the** r**eference conditions and boundary values for the four Mediterranean sub-regions, ensuring optimal GES assessment.**

9. ~~**Assessment criteria have been developed and region-wide agreed for the Mediterranean with regards to Common Indicators 13 and 14 (Decision IG.26/3 and Annex II to the present document), based on 5 major water typologies. The Contracting Parties are encouraged to use those assessment criteria while developing national assessments**~~

10. ~~In addition, countries, where **needed and** appropriate, may continue using the**alternative/** existing different eutrophication assessment methods such as**(e.g.,** TRIX, Eutrophication scale, EI, HEAT, etc. at sub-regional or national levels**), to complement the those developed under UNEP/MAP,** for assessing eutrophication trends.~~

11. **The Contracting Parties should use ~~T~~t**he assessment **methodologies~~y~~ as ~~is well~~ described** in the **Indicators'** ~~Integrated Monitoring and Assessment~~ Guidance **Factsheets** for eutrophication.~~ The final report of the Informal Online working group on eutrophication (UNEP((DEPI)/MED WG.420/Inf.11) contains assessment criteria regarding eutrophication which are presented in Appendix 2 of this document.~~

12. ~~During the initial phase of IMAP implementation, w~~ **W**ork **should** ~~will~~ be undertaken **to upgrade** ~~develop~~ GES ~~thresholds~~ **reference conditions and boundary values for Chl-a,** nutrients, transparency, and oxygen[2]**,** using an adequate geographical scale, as well as to harmonize existing assessment tools**.** ~~through workshops, dialogue, comparative exercises at regional/sub-regional/subdivision levels.~~

13. ~~In addition, taking into account sub-regional differences, work will be also undertaken to develop assessment fact sheets for eutrophication common indicator based on specifics described in the Integrated Monitoring and Assessment Guidance.~~

14. ~~**Moreover, IMAP Guidance Factsheets have been developed in 2019 for Common Indicators 13 and 14 (UNEP/MED WG.467/5), and Contracting Parties are encouraged to use them while implementing the IMAP-based national monitoring programmes.**~~

15. **Work should continue to further develope the assessment scales based on the monitoring scales, aiming for optimal integration of monitoring and assessment areas among the Ecological Objectives of IMAP.**

16. **The Contracting Parties should ensure that adequate interlaboratory quality assurance and quality control (QA/QC) procedures are established for IMAP-competent laboratories concerning Common Indicators 13 and 14, and to this aim intercalibration testing should be conducted, and the IMAP Info System should integrate data quality control categories. These efforts should be supported through greater harmonization of diverse data management systems at the international level.**

17. **The Contracting Parties should exchange experiences and strengthen their capacities in monitoring and conducting GES assessments at the national level, while also ~~as well as~~ contributinge to sub-regional and regional ~~levels~~ efforts for Common Indicators 13 and 14, based on the approved monitoring standards, assessment tools, and criteria within the framework of IMAP implementation.**

[1] ~~Paragraph 8bis is proposed to replace paragraph 8.~~
[2] ~~Meeting attention is drawn whether transparency and oxygen should be kept~~

Contaminants (EO9):

~~17.~~18. The monitoring ~~**concentrations of a range**~~ of chemical contaminants in water, sediments and biota **under IMAP builds on the monitoring system with ~~has~~** a long-standing history in the Mediterranean, under the auspices of the UNEP/MAP Barcelona Convention, its Land-Based Protocol, and UNEP/MAP MED POL monitoring programme**s**. ~~**The IMAP builds on these existing legislative bases, programmes.**~~

Contaminants related Common Indicators:

Common Indicator 17:	Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater);
Common Indicator 18:	Level of pollution effects of key contaminants where a cause-and-effect relationship has been established (EO9);
Common Indicator 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 (EO9);
Common Indicator 20:	Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9);
Common Indicator 21:	Percentage of intestinal enterococci concentration measurements within established standards (EO9).

~~18.~~19. All Mediterranean countries, building on their ~~**existing**~~ national monitoring programmes, ~~**the lessons learned during the initial phase of implementing the IMAP and previous MED POL experience with contaminants, update ~~have~~** programmes ~~**already in place**~~ ~~in relation to~~ **their IMAP-based national monitoring programmes for** contaminants. ~~**monitoring**~~., ~~however the~~**, ~~with varying~~** ~~scope and scale of this monitoring varies.~~**~~between the countries. The IMAP~~** ~~thus,~~ **The overall aim is to enhance** ~~build more~~ **~~builds~~ ~~developing~~** harmony ~~in~~ **and coherence ~~between~~ among** the **~~various~~** ~~existing~~ **national** monitoring programmes **and to establish coherent datasets at the entire regional sea level**. ~~**based on the agreed common indicators**~~.

~~19.~~20. Biological effects monitoring **has been progressively integrated ~~and~~** ~~is generally less widely established in both~~**~~part of~~ in the IMAP-based** national ~~and international~~ **monitoring** programmes**.**~~., and the number of countries undertaking such studies (and the intensity of the coverage) is much smaller. Therefore,~~ **I**~~it~~ **~~will~~ be is** essential ~~during the initial phase of IMAP~~ to further expand and develop the use of biological effects methods, **including the integration of chemical and biological effects monitoring and assessment,** to cover properly the EO9.

~~20.~~21. In addition, **it is** important ~~development areas during the initial phase IMAP will include harmonization of~~ **~~steps have been undertaken~~ to further harmonize** monitoring of **contaminants ~~targets (determinants and~~ in different matrices in order to optimize ~~within~~** assessment**s at regional**, sub-regional**~~s~~**, and national levels, **as well as to enhance ~~development of suites of~~** assessment criteria and **apply** integrated chemical and biological assessment methods**.**~~., and review of the scope of the monitoring programmes to ensure that those contaminants which are considered to be important within each assessment area are included in monitoring programmes.~~

~~21.~~22. ~~Noting the above, the Contracting Parties will update their existing contaminants-related monitoring programmes by building on their existing sampling station networks, existing methodologies and statistical tools, existing data sets, and existing time series as the basis of monitoring against a "no deterioration"~~

~~objective, aiming to cover the monitoring of all contaminants related common indicators.~~

~~22.~~23. While ~~most~~ monitoring stations ~~already exists~~ **are well defined in the IMAP-based national monitoring programmes**, there is also a need for **the** Contracting Parties to **strengthen** ~~include in their monitoring programme~~ **consider** ~~areas beyond the coastal areas in a representative and efficient way, where risks warrant coverage, in line with the Integrated Monitoring and Assessment Guidance~~ **and stations towards monitoring in offshore areas**.

~~23.~~24. The methodologies, **monitoring protocols and,** quality control and quality assurance measures, ~~**and reference methods**~~ **are** available for **the** Contracting Parties ~~**to consider during the update of their national monitoring programmes, are described**~~ in **line with** the **Indicators'** ~~IMAP~~ Guidance **Factsheets.** ~~**as well as the numerous technical guidelines**~~.

~~24.~~25. Regarding acute pollution events, while **the** Contracting Parties already have ~~an~~ existing monitoring obligations under Article 9 of the Prevention and Emergency Protocol, the efforts of which need to be strengthened, it is also foreseen that further analysis of the links between acute pollution events and effect on biota ~~and the development of specific assessment criteria for this latter~~ should ~~occur~~ **be enhanced**.

~~25.~~26. **IMAP-based ~~M~~m**onitoring of contaminants in biota used for human consumption also builds on **previous ~~existing~~** monitoring requirements and ~~only~~ **measures contaminants in foodstuffs** ~~in fish and other seafood~~ **for which the maximum regulatory limits** have been set **as outlined in Annex I.** ~~in national and international regulations for public health reasons.~~

~~26.~~27. ~~National monitoring Programmes in this regard should at least consider the following contaminants for which regulatory levels have been laid down: Heavy metals (lead, cadmium, and mercury), polycyclic aromatic hydrocarbons, and dioxins (including dioxin-like PCBs),~~**~~also considered in line~~** ~~with the species selection considerations described in the Integrated Monitoring and Assessment Guidance.~~

~~27.~~28. Regarding **the** percentage of intestinal enterococci**,** ~~concentration measurements within established standards), the Revised Mediterranean guidelines for bathing waters of 2007 based on the WHO guidelines for "Safe Recreational Water Environments" and on the EC Directive for "Bathing Waters" serve as a basis for monitoring~~ **threshold values ~~assessment criteria~~ are developed and region-wide** ~~values~~ agreed for the Mediterranean ~~region in COP 17~~ **through** Decision IG.20/9 on **"**Criteria and Standards for bathing waters quality in the framework of the implementation of Article 7 of the LBS Protocol**"**~~,~~ (**COP 17, 2012)** ~~UNEP/MAP, 2012) will be built on~~**~~26/3 and Annex II~~** to **ensure** ~~further define~~ GES **assessment of bathing water quality.** ~~for the indicator on pathogens in bathing waters during the initial phase of IMAP.~~**~~the present document).~~**

~~28.~~29. ~~Regarding assessment, the Report UNEP(DEPI)MED WG.394/Inf.3 on the development of assessment criteria for hazardous substances and the final report of the Informal Online working group on contaminants (UNEP((DEPI)/MED WG.420/Inf.12) present key recommendations which will be followed to establish a forward procedure for monitoring the achievement of GES for contaminants during the initial phase of IMAP (Appendix 2 of this Annex).~~

~~29.~~30. ~~Until EACs are defined under this follow-up, a two-fold approach could be adopted to support monitoring for the assessment of GES:~~

- ~~a) a threshold value for GES(BAC), to be set using concentrations from relatively unpolluted areas on a sub-regional level and~~
- ~~b) a decreasing trend should be observed from baseline values representing the actual level of contaminants concentrations.~~

~~30.~~31. ~~Thus, GES can be defined for toxic metals (Hg, Cd, Pb), chlorinated organic compounds, and PAHs, for which monitoring data exist as a result of running monitoring programmes, already during the~~

~~initial phase of IMAP, and UNEP/MAP will conclude its relevant common indicator-based assessment in light with the above.~~

~~31.~~32. ~~In addition, during the initial phase of IMAP, UNEP/MAP will also prepare an adapted manual establishing the BAC and, when possible, the formulation of EAC for selected biomarkers in Mediterranean species.~~

~~32.~~33. ~~**Assessment criteria have been developed and region-wide agreed for the Mediterranean with regards to Common Indicators 17, 18 and 20 (Decision IG.26/3 and Annex II to the present document). The Contracting Parties are encouraged to use those assessment criteria while developing national assessments.**~~

33. ~~**bis**~~[3] **The Contracting Parties should use the Background Criteria (BC), Background Assessment Criteria (BAC) and Environmental Assessment Criteria (EAC) values, as outlined in Annex I, developed and region-wide approved for IMAP Common Indicators 17, 18 and 20 in the Mediterranean, including their application in the GES/non-GES /environmental classifications. To this aim, further work is required to regularly upgrade BC and BAC values, and to develop or upgrade the EAC values for IMAP Common Indicators 17, 18, and 20 by using data relevant to the specific ecological characteristics of the four Mediterranean sub-regions, ensuring optimal GES assessment.**

~~33.~~34. **The Contracting Parties should use the assessment methodologies as described in the Indicators' Guidance Factsheets for Ecological Objective 9.**

~~34.~~35. **Work should continue in developing the assessment scales based on the monitoring scales, aiming for optimal integration of monitoring and assessment areas among the Ecological Objectives of IMAP.**

~~35.~~36. **The Contracting Parties should ensure that adequate interlaboratory quality assurance and quality control (QA/QC) procedures are enhanced for IMAP-competent laboratories concerning Common Indicators 17, 18 and 20, and to this aim intercalibration testing should be conducted, and the IMAP Info System should integrate data quality control categories.**

~~36.~~37. **The Contracting Parties should exchange experiences and strengthen their capacities in monitoring and conducting GES assessments at the national level, while also ~~as well as~~ contributinge to sub-regional and regional ~~levels~~ efforts for Common Indicators 17, 18, 19, 20 and 21, based on the approved monitoring standards, assessment tools and criteria within the framework of IMAP implementation.**

[3] ~~Paragraph 33bis is proposed to replace paragraphs 30, 31, 32 and 33.~~

Marine litter (EO10):

~~38.~~39. Marine litter monitoring ~~of IMAP is based~~ **builds on the monitoring requirements of the** Regional Plan on Marine Litter Management in the Mediterranean (Decision IG.~~ 20/10, the MLRP~~**25/9, COP 22),** on the UNEP Guidelines for Comprehensive Beach Litter Assessment and on the Guidance on Monitoring of Marine Litter in Seas surrounding Europe and on the following agreed common ~~and candidate~~ indicators:

Common Indicator 22:	Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10);
Common Indicator 23:	Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);
~~Candidate~~ **Common** Indicator 24:	**Trends in the amount of litter ingested by marine organisms and in the number of individuals entangled in marine litter (EO10).**
Common Indicator 28 ~~23 (bis)~~[4]:	**Trends in the amount of litter coming from riverine sources (EO10)**
~~Candidate **Common** Indicator 24:~~	~~Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10).~~

~~39.~~40. ~~In addition, as marine litter monitoring is a new area for the Mediterranean, IMAP greatly builds on the UNEP Guidelines for Comprehensive Beach Litter Assessment and on the Guidance on Monitoring of Marine Litter in European Seas.~~

~~40.~~41. **All** Contracting Parties ~~will establish~~ **have established since 2016** national **IMAP-based** monitoring programmes ~~during the initial phase of IMAP~~ in relation to ~~the two~~ **C**ecommon **I**~~i~~ndicators **22 and 23 (in particular on beach macro-litter, seafloor macro-litter, and floating microplastics). The Contracting Parties** ~~encouraged to also consider~~ **should include** in their monitoring programmes ~~the~~ **Common**~~Candidate~~ Indicator **24** related to ~~ingested~~ **ingestion and entanglement of marine** litter **from sea turtles** and to undertake pilot monitoring activities on the latter**. ~~In this regard, a number of countries (e.g., Tunisia, Lebanon, Morocco etc.) have piloted the establishment of IMAP-based national monitoring programmes also for IMAP Candidate Indicator 24~~**.

~~41.~~42. ~~Furthermore, is strongly recommended that Contracting Parties, which currently have plans to monitor only in a subset of environmental compartments, start with small pilot research or development projects in other compartments. This would provide baseline data to make an informed decision about future, full-scale monitoring programmes. Without information on trends and amounts in all the marine compartments, a risk-based approach to litter monitoring and measures is not possible.~~

~~42.~~43. **The methodologies, monitoring protocols and quality control and quality assurance measures are available for the Contracting Parties in line with the Indicators' Guidance Factsheets.**

~~43.~~44. **The Contracting Parties should use the agreed Baseline Values (BV) and Threshold Values (TV[5]) for Common Indicators 22, 23 and 24 of IMAP EO10 as presented in Annex I – Part II. GES/nonGES assessment classification scales builds on the Threshold Values.**

~~44.~~45. **The Contracting Parties should encourage** ~~A considerable number of~~ citizens, communities

[4] ~~**Proposal for inclusion of a new common indicators. Discussion to be held regarding the numbering for this Indicator.**~~

[5] **Threshold Values are subject to update for the third iteration of the MED QSR.**

(NGOs, civil society initiatives), and environmental protection associations and institutes across the Mediterranean ~~are already taking~~ **to take** part in activities **related** to ~~tackle~~ marine litter **monitoring**. ~~Contracting Parties are encouraged to enable~~**further engage** ~~them in the implementation of IMAP and empower them to help improve the evidence base needed for marine litter monitoring.~~

~~45.~~46. Regarding beach **macro**-litter **(Common Indicator 22)**, cost-efficient and easy to follow monitoring and sampling methodologies and techniques are well established, as described in the **Indicator** ~~Integrated Monitoring and Assessment~~ Guidance **Factsheets**, with at least two surveys per year in spring and autumn recommended and ideally 4 surveys per year in spring, summer, autumn and winter.

~~46.~~47. **The Contracting Parties should establish their national monitoring programs for IMAP EO10 based on a** ~~A reduced~~ master list of litter categories and items ~~is~~ **as presented in** the **respective** ~~Integrated Monitoring and Assessment~~ **Indicator**-Guidance **Factsheets.** ~~with the most frequent items found in Mediterranean beaches.~~ **Further work is needed to update within IMAP EO10 ~~with regards to~~ for beach macro-litter, the minimum size of recorded marine litter items which need to be considered as of** ~~increase from 0.5cm to~~ **2.5cm.**

~~47.~~48. ~~The Contracting Parties can build on this~~ reduced list as ~~a reference approach which is compatible with other lists, in relation to marine litter monitoring, and it~~ can be ~~used also as a practical guide for the field work, enabling a coordinated harmonized monitoring (including when operated by NGOs, as appropriate).~~

~~48.~~49. Regarding monitoring **of marine** litter at the sea (Common Indicator ~~17~~**23**), due to the low occurrence of litter in midwater, the common indicator focuses on surface **floating** and seafloor litter**, including microplastics.** Due to the observation methodology (observation from ships), the type of marine macro-litter objects can only be noted during very short visual observation. Therefore, in contrast to beach litter, only rough litter categories can be determined, even though monitoring size categories should also include relevant small items, in line with the Integrated Monitoring and Assessment Guidance.

~~49.~~50. **The Contracting Parties are encouraged to apply the approved regional Guidelines detailing** the **monitoring** of **floating microplastics.** ~~will develop a specific Monitoring of floating litter protocol, on a regional level.~~

~~50.~~51. ~~Regarding m~~**Monitoring of** seafloor macro-litter (Common Indicator ~~17~~**23**), **focuses on** opportunistic monitoring **which** is **a** ~~the most~~ cost- efficient method ~~for sea-floor monitoring, building on~~ **, being jointly implemented with national/regional fish-stock assessment survey programmes (e.g.,** the Mediterranean International Bottom Trawl Surveys (MEDITS~~) and~~**), including the use of** compatible professional trawling operations**.** ~~to couple monitoring efforts may be the best approach to monitor litter on the sea-floor.~~ There may be other opportunities to couple marine litter surveys with other regular surveys (**e.g.,** monitoring in marine reserves, ~~offshore platforms,~~ **passenger ships for visual monitoring,** etc.) or programmes on biodiversity, with methodologies and technical requirements prescribed in the **Indicator** ~~Integrated Monitoring and Assessment~~ **Indicator** Guidance **Factsheets**.

~~51.~~52. **Riverine litter is considered as part of IMAP EO10. The Contracting Parties should/are encouraged to apply the approved region-wide Guidelines for Monitoring Riverine inputs of Marine Litter.**

~~52.~~53. ~~Regarding ingested litter (Candidate Indicator 18), due to the limited availability of protocols and the state of knowledge, the candidate indicator's focus during the initial phase of IMAP is on sea turtle Caretta caretta. UNEP/MAP thus will develop during the initial phase of IMAP a monitoring protocol for marine litter in sea turtles with focus on relevant parameters for application in the Mediterranean.~~

~~53.~~54. **It is important to note that while micro-litter and in particular microplastics are considered in IMAP-EO10, further work is still necessary at regional level, recognizing that the understanding of the potential impact on organisms and in the environment is still under development. Contracting**

Parties are encouraged ~~also~~ to undertake pilots monitoring, further research and work in this area (e.g., microplastics and mesoplastic on beaches, microplastics on sediment, pellets on beaches etc.).

~~54.~~55. **The Contracting Parties should monitor the ingestion and entanglement of marine litter from biota, in particular from sea turtles (Common Indicator 24[6]) considering that the most representative species are identified; in line with the approved and available region-wide monitoring protocols addressing ingestion and entanglement; They are encouraged to consider taking into account the Regional Operational Strategy and apply the approved Baseline Values (BV) and Threshold Values (TV) (Annex I – Part II).**

~~55.~~56. ~~**Further to the above-stated information, the Secretariat finds that there is sufficient ground to elevate this** ingested litter is a candidate common indicator, **into a common indicator, and a relevant request from the** Contracting Parties are not obliged to include its monitoring in their national integrated monitoring programmes during the initial phase of IMAP, but they are encouraged however to undertake pilots, further research on this **consultation process indicator should has been initiated**.~~

~~56.~~57. The ~~Integrated Monitoring and Assessment Guidance includes~~ **In designing, upgrading their national monitoring programme, and undertaking the respective assessment for EO10, the Contracting parties are encouraged to use the Indicators' Guidance Factsheets that detail technical specifications on assessment** methodologies~~,~~ **and** scales ~~, and technical considerations, programme's ma~~rine ~~component. The report of the Informal Online working group on Marine Litter (UNEP((DEPI)/MED WG.420/Inf.13) present recommendations related to baselines (Appendix 2).~~

~~[6] Trends in the amount of litter ingested by or entangling marine organisms, particularly selected mammals, marine birds, and marine turtles~~

Energy including Underwater Noise (EO11):

57.58. **EO 11 is introduced in this part of IMAP has been prepared, thanks to with** the support of experts **of from** the Joint ACCOBAMS/ASCOBANS/CMS Working Group on Noise.

58.59. The two C**c**a**andidate C**c**ommon I**ndicators related to energy including underwater noise are:

Candidate Common Indicator 26:	Proportion of days and geographical distribution where loud, low, and mid-frequency impulsive sounds exceed levels that are likely to entail significant impact on marine animals;
Candidate Common Indicator 27:	Levels of continuous low frequency sounds with the use of models as appropriate.

59.60. Compared to **MSFD** Descriptor 11 related indicators (MSFD), C**c**a**andidate Common I**ndicators 26 and 27 are more closely related to the acoustic biology of key marine mammal species of the Mediterranean which are known to be sensitive to noise, i.e., the fin whale, the sperm whale and the Cuvier's beaked whale. The **proposed** monitoring strategy of these two candidate indicators, **as spelled out is set** in the Integrated Monitoring and Assessment **Indicators'** Guidance **Factsheets, represents a basis for further work during the initial stage of IMAP towards ensuring** an effective and widely agreed monitoring of underwater noise at a regional scale.

60.61. In line with the above, **the Contracting Parties should consider includinge these two Candidate C**c**ommon I**ndicators in **their IMAP-based national** monitoring programmes and undertake activities on **implementing** these two common indicators**. on a pilot basis during the initial phase.**

61.62. **Work should continue** during the initial phase of IMAP to further developed these **C**candidate **I**ndicators, **towards C**common **I**ndicators, **by developing monitoring and assessment methodologies along with Threshold Values and GES/non-GES boundary values applied for continuous and impulsive noise.**

62.63. For GES assessment related to EO11, **the Contracting Parties should use** three thresholds need to be established: a spatial and a temporal threshold concerning **the approved threshold levels and applied to the percentage of habitat occupied by noise-sensitive species affected by impulsive noise events** concerning C**c**a**andidate Common** Indicator 26**, following a risk-based approach,** and a **single noise T**threshold **Value developed and applied to the percentage of habitat of noise-sensitive species affected by continuous noise** concerning C**c**a**andidate Common** Indicator 27.

63.64. During the initial phase of IMAP, the ACCOBAMS Secretariat in coordination with the competent MAP components will carry out the following tasks with a view to further develop technical aspects of the candidate indicators in particular:

a) Reviewing what spatial and temporal thresholds have been selected by European Member States for implementing impulsive noise indicator of D11
b) Fulfilling action CA 2b1 of the 2014-2016 Work Plan ("Identifying Noise Hotspots for cetaceans in the ACCOBAMS area which is relevant to the Mediterranean Sea Area as provided for in the Barcelona Convention"), in order to provide the necessary baseline information on space-time distribution of impulsive noise sources across the Mediterranean
c) Reviewing ambient noise data available for the Mediterranean Sea as a follow up of the present work in order to identify the threshold for continuous noise indicator 11.1.2.

64 bis[7]. Work should continue to improve the quality and availability of underwater noise data, as well as monioring and assessment practices.

[7] Paragraph 64bis is proposed to replace paragraph 64.

Annex I

IMAP Assessment Criteria for Nutrients, Contaminants and Marine Litter[8]

[8] The Assessment Criteria for Nutrients, Contaminants and Marine Litter have been approved by COP23 (Decision IG.23/3, Annex II), **with the exception for Common Indicator 24**

Annex I: IMAP Assessment Criteria for Nutrients, Contaminants and Marine Litter

PART I: Pollution (IMAP EO5 and EO9)

1. The assessment criteria for Common Indicators 13 and 14[9]

Table 1. Major coastal water types in the Mediterranean

	Type I	Type II-A, II-A Adriatic	Type III-W	Type III-E	Type Island-W
σt (density)	<25	25<d<27	>27	>27	All ranges
S (salinity)	<34.5	34.5<S<37.5	>37.5	>37.5	All ranges

Note: With the view to assess eutrophication, the classification scheme on Chl a concentration (in µg/l)is optimal in coastal waters as a parameter easily applicable by all Mediterranean countries based on the indicative thresholds and reference values presented in Table 3.
Note: The major coastal water types are also indicative of the part of offshore waters next to coastal waters; however, it should be used with caution in the offshore (open) areas.

Table 2. Coastal water types reference conditions and boundary values in the Mediterranean, along with the new and updated values for coastal and open (offshore) waters in the Adriatic Sea Sub-region[10].
(Reference conditions and boundary (Good/Moderate status) values, expressed as G_mean annual values, are based on long time series (>5 years) of monthly sampling at least, which differ from type to type on the sub-regional scale, and therefore, were built with different strategies).

	Coastal waters					
	Reference conditions of *c*(Chl*a*) (µg/L)		Boundaries of *c*(Chla) (µg/L) for G/M status		Reference conditions of *c*(TP) (µmol/L)	Boundaries of *c*(TP) (µmol/L) for G/M status
Water Typology	*G_mean*	90% percentile	*G_mean*	90% percentile		
Type I	1.19 ~~1.4~~	3.33[b]	4.1 ~~6.3~~	10		
Type I Adriatic	1.40	3.94	5.0[a]	14.1	0.19[a]	0.55[a]
Type II-A-FR-SP[d]	0.78[11]	1.9	1.48	3.50~~8~~[12]	-	-
Type II-A Adriatic	0.33	0.87	1.5	4.0	0.16[a]	0.48[a]
Type II-A[e] Tyrrhenian	0.32	0.77	1.2	2.9	-	-
Type III-W Adriatic[c]	-	-	0.64[f]	1.7[f]	-	0.26
Type III-W Tyrrhenian	-	-	0.48	1.17	-	-

[9] For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 (COP 19) and IG. 23/6 (COP 20) which are shown in shaded cells.
[10] The new values are calculated based on data as available by December 2022.
[11] Gmean values corresponding to the reference and boundary values of Chla (expressed as the 90th percentile) are provided for Type II A FR SP and Type III W FR SP, along with the corrected calculation of Gmean value for Type I, compared to those included in Decisions IG.22/7 and IG.26/3, shown in blue shaded cells.
[12] The value of 3.58 µg/L is corrected to 3.50 µg/L for Type II A FR SP in comparison to the values provided in Decision IG.22/7 on Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (COP 19, 2016) and Decision IG.26/3 on 2023 MED QSR and a Renewed Ecosystem Approach Policy in the Mediterranean (COP 23, 2023), following the identification of an error by the Joint Meeting of CorMon on Pollution and Marine Litter Monitoring held on 27–28 May 2025 in relation to the boundary values used in the 2023 MED QSR.

Type III-W-FR-SP	0.37	0.9	0.74[f]	1.89~~0~~[13]	-	-
Type III-E		0.1		0.4		
Type Island-W		0.6		1.2-1.22		

Water Typology	Open (offshore) waters in the Adriatic Sea Sub-region					
	Reference conditions of *c*(Chl*a*) (µg/L)		Boundaries of *c*(Chl*a*) (µg/L) for G/M status		Reference conditions of *c*(DIN) (µmol/L)	Boundaries of *c*(DIN) (µmol/L) for G/M status
	G_mean	90 % percentile	*G_mean*	90 % percentile		
Type I Adriatic	0.15[g]; 0.29[h]	0.42[f]; 0.81[g]	3.1	8.7	0.21[g]; 0.66[h]	22.3
Type II-A Adriatic	0.11	0.29	-	-	-	-
Type III-W Adriatic [c]	-	-	0.64	1.7	-	-

[a] *From Giovanardi et al, 2018*
[b] *Applicable to Golf of Lion Type I coastal waters*
[c] *The ecological classification scheme would not be suitable for proper and safe classification, and therefore the boundary values for WT III-W Adriatic waters are based on the H/G values for WT II-A Adriatic in coastal waters i.e. 0.64 µg/L for Chla and 0,26 µmol/L for TP*
[d] *Correction of error included to ensure consistency with the classification as provided in Commission Decision 2013/480/EU i.e. Type II -FR-SP, as included in Decision IG.22/7, replaced with Type II -A-FR-SP*
[e] *Correction of error included to ensure consistency with the classification as provided in Commission Decision 2013/480/EU i.e., Type II-A Tyrrhenian replaced Type II-B Tyrrhenian, as included in Decision IG.22/7, since the latter does not exist in the Tyrrhenian Sea*
[f] *values based on the H/G values for WT II-A*[c] *The ecological classification scheme would not be suitable for proper and safe classification, and therefore the boundary values for WT III-W Adriatic waters are based on the H/G values for WT II-A Adriatic in coastal waters i.e. 0.64 µg/L for Chla and 0,26 µmol/L for TP*
[g] *for ME;* [h] *for HR, IT*
[h] *No pressure – effect relationship was found, and therefore RC for DIN and boundary G/M values for Chla and DIN could not be proposed.*

2. The assessment criteria for IMAP Common Indicator 17[14][15]

2.1 The BC and BAC values for IMAP Common Indicator 17

Table 3. The BC and BAC values for trace metals in sediments. The units of concentration are given in µg/kg dry wt, as requested by IMAP.

The BC and BAC values for trace metals in sediments					
The BC values in sediments, µg/kg dry wt					
TM	MED	WMS	ADR	CEN	AEL
Cd	107	140	120	#	78.9
Hg	50.0	90.0	50.0	#	31.5
Pb	15000	16000	15700	1805	15674
The BAC values in sediments, (µg/kg dry wt)					

[13] **The value of 1.80 µg/L is corrected to 1.89 µg/L for type III W FR SP in comparison to the values provided in Decisions IG.22/7 and Decision IG.26/3, following the identification of an error by the Joint Meeting of CorMon on Pollution and Marine Litter Monitoring held on 27–28 May 2025 in relation to the boundary values used in the 2023 MED QSR.**
[14] **For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 0F (COP 19) and IG. 23/6 (COP 20) which are shown in shaded cells.**
[15] **The new values are calculated based on data as available by December 2022**

	Med	WMS	ADR	CEN	AEL
Cd	161	210	180	#	118
Hg	75.0	135	75.0	#	47.3
Pb	22500	24000	23550	2708	23511
*#All data points for Cd are **BDL** as well as 72% of the Hg data points.*					

Table 4. The BC and BAC values for Polycyclic Aromatic Hydrocarbons **(**PAHs) in sediments. The units of concentration are given in µg/kg dry wt, as requested by IMAP.

The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments					
	The BC values in sediments, µg/kg dry wt				
PAH compounds	MED	WMS	ADR	CEN	AEL
Naphthalene	2.00	8.0	2.0	#	2.3
Acenaphthylene	(1.0)#	#	#	0.4	#
Acenaphthene	(2.0)#	#	#	*	#
Fluorene	(2.0)#	#	#	0.4	#
Phenanthrene	3.10	14.9	3.5	0.8	3.1
Anthracene	(2.2)#	#	#	#	#
Fluoranthene	5.00	#	7.0	0.1	2.7
Pyrene	6.20	24.8	8.0	0.4	3.0
Benzo[a]anthracene	3.38	19.7	4.1	*	1.8
Chrysene	2.70	35.9	4.6	1.6	1.6
Benzo(b)fluoranthene	5.00	8.7	15.0	*	2.6
Benzo(k)fluoranthene	4.00	#	3.0	*	#
Benzo[a]pyrene	(4.0)#	#	4.0	#	1.0
Benzo[g,h,i]perylene	(4.2)#	#	5.7	*	1.8
Dibenz[a,h]anthracene	(1.0)#	7.0	#	*	#
Indeno[1,2,3-c,d]pyrene	(4.0)#	#	4.4	*	2.1
Sum PAHs	27.4	160	41.0	6.3	21.4
	The BAC values in sediments, µg/kg dry wt				
PAH compounds	MED	WMS	ADR	CEN	AEL
Naphthalene	3.0	12.0	3.0	#	3.5
Acenaphthylene	(1.5)#	#	#	0.6	#
Acenaphthene	(3.0)#	#	#	*	#
Fluorene	(3.0)#	#	#	0.5	#
Phenanthrene	4.7	22.4	5.3	1.2	4.7
Anthracene	(3.3)#	#	#	#	#
Fluoranthene	7.5	#	10.5	0.2	4.1
Pyrene	9.3	37.1	12.0	0.6	4.5
Benzo[a]anthracene	5.1	29.6	6.2	*	2.7
Chrysene	4.0	53.9	6.9	2.4	2.4
Benzo(b)fluoranthene	7.5	13.0	22.5	*	3.8
Benzo(k)fluoranthene	6.0	#	4.5	*	#
Benzo[a]pyrene	(6.0)#	#	6.0	#	1.5
Benzo[g,h,i]perylene	(6.3)#	#	8.6	*	2.7
Dibenz [a,h]anthracene	(1.5)#	10.5	#	*	#
Indeno[1,2,3-c,d]pyrene	(6.0)#	15.0	6.5	*	3.2
Sum PAHs	41.0	240	61.5	9.5	32.0

*#most data (>50%) below detection limit, * no data reported*

Table 5. The BC and BAC values for trace metals in mussel (*M. galloprovincialis*) and fish (*M. barbatus*) . The units of concentration are given as requested by IMAP.

The BC and BAC values for trace metals in mussel soft tissue (*M. galloprovincialis*), µg /kg dry wt					
The BC values					
TM	**MED**	**WMS**	**ADR**	**CEN**	**AEL**
Cd	710	1030	629	*****	942>
Hg	77.9	85.0	75.4	*****	110>
Pb	1100	1260	1000	*****	2300>
The BAC values					
TM	**MED**	**WMS**	**ADR**	**CEN**	**AEL**
Cd	1065	1545	944	*****	1413>
Hg	117	128	113	*****	165>
Pb	1650	1890	1500	*****	3450>

** Only a few data points were available for the CEN. The calculated BCs were lower than in other sub-regions, however, the few data are not representative of the CEN.*

> Since new data were not available in the AEL to update BC/BAC values for M. galloprovincialis, it was approved to use the values calculated in 2019.

The BC and BAC values for trace metals in fish muscle *(Mullus barbatus*), µg/kg wet wt					
The BC values					
TM	**MED**	WMS	ADR	CEN	AEL
Cd	3.9	*	5.3	*	3.6
Hg	40.6	*	120	*	33.7
Pb	18.3	*	40.8	*	13.5
BAC values					
	MED	WMS	ADR	CEN	AEL
Cd	7.8	*	10.6	*	7.2
Hg	81.2	*	240	*	67.4
Pb	36.6	*	81.6	*	27.0

** Given the lack of data, it was not possible to propose values for BC in these sub-regions, therefore it was approved to use the regional MED BC values for the GES assessment*

Table 6. The BC and BAC values for Polycyclic Aromatic Hydrocarbons **(**PAHs) in mussel (*M. galloprovincialis)* . The unit of concentration is given in µg/kg dry wt, as requested by IMAP. No data were available for the CEN and the AEL Sub-regions.

The BC and BAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in mussel (*M. galloprovincialis)*, µg/kg dry wt			
BC values			
	MED	WMS	ADR
Naphthalene	0.56	0.52	#
Acenaphthylene	(0.05)[#]	#	#
Acenaphthene	(0.50)[#]	#	#
Fluorene	2.50	7.87	#
Phenanthrene	5.35	19.9	2.25
Anthracene	1.12	0.94	#
Fluoranthene	4.83	10.0	#
Pyrene	2.50	5.54	#
Benzo[a]anthracene	0.60	0.69	#
Chrysene	2.54	2.98	#
Benzo(b)fluoranthene	1.00	1.36	#
Benzo(k)fluoranthene	1.00	0.73	#
Benzo[a]pyrene	(1.00)[#]	0.94	#
Benzo[g,h,i]perylene	1.00	0.67	#
Dibenz[a,h]anthracene	(0.10)[#]	#	#
Indeno[1,2,3-c,d]pyrene	(0.63)[#]	0.29	#
Sum 16 PAHs.[16]	5.80	5.60	6.60
The BAC values			
	MED	WMS	ADR
Naphthalene	0.84	0.79	#
Acenaphthylene	(0.08)[#]	#	#
Acenaphthene	(0.75)[#]	#	#
Fluorene	3.75	11.8	#
Phenanthrene	8.03	29.8	3.38
Anthracene	1.68	1.40	#
Fluoranthene	7.25	15.0	#
Pyrene	3.75	8.31	#
Benzo[a]anthracene	0.90	1.04	#
Chrysene	3.81	4.46	#
Benzo(b)fluoranthene	1.50	2.04	#
Benzo(k)fluoranthene	1.50	1.09	#
Benzo[a]pyrene	(1.50)[#]	1.42	#
Benzo[g,h,i]perylene	1.50	1.01	#
Dibenz[a,h]anthracene	(0.14)[#]	#	#
Indeno[1,2,3-c,d]pyrene	(0.94)[#]	0.43	#
Sum 16 PAHs	8.70	8.40	9.90

[#]*most data (>50%) below detection limit;*

[16] Data dictionary gives 2 additional categories: Sum 4 PAHs Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene) and Sum 5 PAHs (Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene). It is suggested that they be considered for use in the future data reporting.

Table 7. The BAC values for organochlorinated contaminants (PCBs and pesticides) in sediments and mussel (*M. galloprovincialis*). The unit of soncentrations is given in µg/kg dry wt, as requested by IMAP. For sediments, very limited data were available for the CEN sub-region, while for biota no data were available for the CEN and AEL sub-regions. When most (>50%) of the data points were below the detection limit for the sub-regions, BACs were not calculated.

The BAC values for organochlorinated contaminants (PCBs and pesticides) in sediments and mussel (*M. galloprovincialis*)					
SEDIMENTS, µg/kg dry wt	MED	WMS	ADR	CEN	AEL
PCBs					
PCB28	0.10	#	#	#	0.09
PCB52	0.07	0.10	0.09	#	0.04
PCB101	0.10	0.16	0.16	*	#
PCB118	0.10	0.46	0.18	#	0.01
PCB138	0.11	0.26	0.24	#	#
PCB153	0.14	0.40	0.28	#	0.02
PCB180	0.09	0.13	0.13	#	#
Sum 7 PCBs	0.40	1.60	0.21	#	0.19
Pesticides					
γ-HCH (Lindane)	(0.1)#	#	#	*	0.02
DDE(p,p')	(0.1)#	0.23	#	#	*
Hexachlorobenzene	(0.1)#	#	#	#	*
Dieldrin	(0)#		#	#	#
BIOTA – MG, µg/kg dry wt	MED	WMS	ADR	CEN	AEL
PCBs					
PCB28	0.20	0.07	1.38	*	*
PCB52	0.38	0.3	0.5	*	*
PCB101	1.20	1.1	1.4	*	*
PCB118	1.23	1.5	1.4	*	*
PCB138	2.31	2.4	3.3	*	*
PCB153	3.45	4.6	4.6	*	*
PCB180	0.50	0.3	0.5	*	*
Sum 7 PCBs	18.4	28.6	17.3	*	*
Pesticides					
γ-HCH (Lindane)	(1.0)#	#	#	*	*
DDE(p,p')	3.05	3.05	*	*	*
Hexachlorobenzene	(0.5)#	#	#	*	*
Dieldrin	(1.0)#	#	*	*	*

*# most data (>50%) below detection limit. * no data reported*

2.2 The Environmental Assessment Criteria (EAC) values for IMAP CI 17

Table 8. The Mediterranean EAC values for trace metals in sediments and biota, as endorsed by Decision IG.23/6

The Mediterranean EAC values for trace metals in sediments and biota			
TM	**MedEAC***	**#MedEAC**	**#MedEAC**
	Sediments, µg/kg dry wt	***M. galloprovincialis*, µg/kg dry wt**	***Mullus barbatus*, µg/kg wet wt**
	IG.23/6	IG.23/6	IG.23/6
Cd	1200	5000	50
Hg	150	2500&	1000
Pb	46700	7500	300

** Med EAC values equal to ERL (Effects Range Low, Long et al. 1995, idem OSPAR values). # Med EAC values equal to the maximum regulatory levels for contaminants in foodstuffs as provided in EC/EU 1881/2006 and 629/2008 Directives*
& Not included in EU directives, but adopted by OSPAR

Table 9. The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons **(**PAHs) in sediments and biota, as endorsed by Decisions IG.23/6 and IG.22/7, along with a few updated values to ensure consistency with ERL Long et al., and OSPAR EAC values

The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments and biota				
	Sediments, µg/kg dw		**Biota Mussels, µg/kg dw**	
PAH compounds	**EAC* IG.22/7 and IG.23/6 - OSPAR and ERLs**	**ERL Long et al, 1995[#]**	**EAC** IG.22/7 and IG.23/6 - OSPAR**	**OSPAR[#]**
Naphthalene		160		340
Acenaphthylene		44		
Acenaphthene		16		
Fluorene		19		
Phenanthrene	240		1700	
Anthracene	85		290	
Fluoranthene	600		110	
Pyrene	660		100	
Benzo[a]anthracene	261		80	
Chrysene	384			
Benzo(b)fluoranthene				
Benzo(k)fluoranthene			260	
Benzo[a]pyrene	430		600	
Benzo[g,h,i]perylene	85		110	

The Mediterranean EAC values for Polycyclic Aromatic Hydrocarbons (PAHs) in sediments and biota				
	Sediments, µg/kg dw		Biota Mussels, µg/kg dw	
PAH compounds	EAC* IG.22/7 and IG.23/6 - OSPAR and ERLs	ERL Long et al, 1995#	EAC** IG.22/7 and IG.23/6 - OSPAR	OSPAR#
Dibenz [a,h]anthracene		63.4		
Indeno[1,2,3-c,d]pyrene	240			
Sum 16 PAHs		4022		

** Med EAC values equal to ERL (Effects Range Low, Long et al. 1995, idem OSPAR values)*
*** Med EAC values equal to OSPAR values*
 # Med EAC values equal to ERL (Effects Range Low, Long et al., 1995) which were not included in Decisions IG.22/7 and IG.23/6.

Table 10. The Mediterranean EAC values for for organochlorinated contaminants (PCBs and pesticides) in sediments and biota, as endorsed by Decisions IG.23/6 and IG.22/7 along with the one updated value**.**

The Mediterranean EAC values for for organochlorinated contaminants (PCBs and pesticides) in sediments and biota					
	Sediments			Mussel	Fish
PCBs	EAC# IG.22/7 (µg/kg dry wt) – updated	EAC* IG.22/7 (µg/kg dry wt)	EAC** IG.23/6 (µg/kg dry wt)	EAC** IG.22/7 and IG.23/6 (µg/kg dry wt)	EAC** IG.22/7 and IG.23/6 (µg/kg lipid)
CB28			1.7	3.2	64
CB52			2.7	5.4	108
CB101			3	6	120
CB118			0.6	1.2	24
CB138			7.9	15.8	316
CB153			40	80	1600
CB180			12	24	480
Sum 7 PCBs	67,9				
Pesticides					
γ-HCH (Lindane)		3		1.45	11 µg/kg ww
DDE(p,p')		2.2		5-50	
Hexachlorobenzene		20			
Dieldrin		2		5-50	

** ERL (Effects Range Low, (Long et al., 1995) or used by OSPAR (2009)*
*** From OSPAR (2009)*
#The EAC value of 11.5 µg/kg dry wt in Decision IG 22/7 originated probably from Long et al, 1995 as explained in document UNEP/MED 427/Inf.3. However, Long et al.,1995 present the ERL value of 22.7 µg/kg dry wt for Total PCBs in sediments but do not specify which congeners were considered. Moreover, OSPAR has not adopted an EAC value for the sum of 7 PCBs in sediments. Therefore, further to experience related to the preparation of the assessments within the 2023 MED QSR, the EAC value of 67,9 is included to present the sum of 7 individual IMAP PCB congeners.

3. The Environmental Assessment Criteria (EAC) related to IMAP Common Indicator 20

Table 11. The Mediterranean EACs values for CI 20 related to trace metals based on the maximum regulatory levels for trace metals in foodstuffs for the protection of human health, as provided in EC/EU Directives1881/2006 and its amendments 488/2014 and 1005/2015. The concentrations are presented in mg/kg wet wt.

The EAC CI 20 for trace metals- EU 1881/2006 directive and its amendments 488/2014 and 1005/2015			
	TM, mg/kg wet wt		
matrix	**Cd**	**Hg**	**Pb**
fish muscle	0.05-0.25	0.5-1	0.3
cephalopods	1		1
crustaceans	0.5	0.5	0.5
bivalve mollusc	1		1.5

Table 12. The Mediterranean EAC values for IMAP CI 20 related to Benzo(a)pyrene and sum of four PAHs based on the maximum regulatory levels for these contaminants in foodstuffs for the protection of human health, as provided in EC/EU EC Regulations 835/2011 and 1259/2011 amending Regulation (EC) 1881/200.6. The concentrations are presented in µg/kg wet wt.

The EACs values for CI 20 related to Benzo(a)pyrene and sum of four PAHs (benzo(a)pyrene, benz(a)anthracene, benzo(b)fluorantheneand chrysene) - EC Regulation (EC) 1881/2006 and amendments 835/2011 and 1259/2011		
Matrix	**Maximum levels (µg kg^{-1} wet wt)**	
	Benzo(a) pyrene	**Sum of Benzo(a) pyrene, Benzo(a) anthracene, Benzo(a) fluoranthene and chrysene**
Smoked fish muscle	2-5	12-30
Smoked bivalve mollusc	6	35
Bivalve mollusk (fresh, chilled or frozen)	5	30

Table 13. The Mediterranean EAC values for CI 20 related to Dioxins and PCBs based on the maximum regulatory levels for these contaminants in foodstuffs for the protection of human health, as provided in EC/EU EC Regulation 1259/2011 amending EC Regulation 1881/2006. The concentrations are presented in wet wt.

TheEACs values for CI 20 related to Dioxins and PCBs – EC Regulation 1259/2011 amending EC Regulation 1881/2006			
Foodstuffs	**Maximum levels**		
	Sum of dioxins (WHO-PCDD/F-TEQ) (1) pg g^{-1} ww	**Sum of dioxins and dioxin-like PCBS (WHO-PCDD/F-PCB-TEQ) (1) pg g^{-1} ww**	**Sum of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180 (ICES 6) ng g^{-1} ww**
Fish muscle	3.5	6.5	75
Fish liver	3.5	20	200
Eel muscle	3.5	10	300

(1) Dioxins (sum of polychlorinated dibenzo-para-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), expressed as World Health Organisation (WHO) toxic equivalent using the WHO-toxic equivalency factors (WHO-TEFs)) and sum of dioxins and dioxin-like PCBs (sum of PCDDs, PCDFs and polychlorinated biphenyls (PCBs), expressed as WHO toxic equivalent using the WHO-TEFs). WHO-TEFs for human risk assessment based on the conclusions of the World Health Organization (WHO) (For TEF values see note 31, (EC) Regulation 1259/2011 – Annex 1.1.9.).
Where fish are intended to be eaten whole, the maximum level shall apply to the whole fish.

4. The Environmental Assessment Criteria (EAC) values for IMAP CI 18[17]

Table 14. The Mediterranean BACs and EACs for biomarkers in mussel (*M. galloprovincialis*) as endorsed by Decisions IG.22/7 and IG.23/6.

The Mediterranean BACs and EACs for biomarkers in mussel (*M. galloprovincialis*)				
Biomarkers/Bioassays and units	BACs IG.23/6 in Mussels (*Mytilus galloprovincilais)*	EACs IG.23/6 in Mussels (*Mytilus galloprovincilais)*	BACs IG.22/7 in Mussels (*Mytilus galloprovincilais)*	EACs IG.22/7 in Mussels (*Mytilus galloprovincilais*)
Lysosomal membrane stability Neutral Red Retention Assay (minutes)			120[a*]	50 [a*]
Lysosomal membrane stability Cytochemical method (minutes)			20 [a*]	10 [a*]
AChE activity (nmol min-1 mg-1 protein) in gills (French Mediterranean waters)			29	20
AChE activity (nmol min^{-1} mg^{-1} protein) in gills (Spanish Mediterranean waters)			15	10
Stress on Stress (days)	11	5		
Metallothioneins (µg/g digestive gland)	247			
Micronuclei frequency (number of cases /1000 cells) in haemocytes)	1			

[a]Technical annex: assessment criteria for biological effects measurements. Integrated monitoring of chemicals and their effects. ICES Cooperative Research Report No. 315. Davies, I.M. and Vethaak, A.D.Eds.
**Moore et al., 2006 (Standard values adopted by ICES)*

[17] For ease of reference, the Secretariat included the values as approved by Decisions IG.22/7 of (COP 19) and IG.23/6 (COP 20) which are shown in shaded cells.

PART II: Marine Litter (IMAP – EO10)[18]

5. Baseline Values (BV) and Threshold Values (TV) for IMAP Common Indicator 22

Table 15: Baseline Values and Threshold Values for IMAP Common Indicator 22 (i.e., beach macrolitter).

IMAP Indicator	Categories of Marine Litter	Baseline Values (BV – 2021)	Threshold Value (TV – 2021)
Common Indicator 22	Beach Macro-litter	369 items/100m	130 items/100m

6. Baseline Values (BV) and Threshold Values (TV) for IMAP Common Indicator 23

Table 16. Baseline Values and Threshold Values for IMAP Common Indicator 23 (i.e., seafloor macrolitter, floating microplastic).

IMAP Indicator	Categories of Marine Litter	Baseline Values (BV – 2023)	Threshold Value (TV – 2023)
Common Indicator 23	Seafloor Macro-litter	135 items/km^2	38 items/km^2
Common Indicator 23	Floating Microplastics	0.044338 items/m^2	0.000845 items/m^2

7. Baseline Values (BV) and Threshold Values (TV) for IMAP Common ~~Candidate~~ Indicator 24[19]

Table 17. Updated Baseline Values (BV) and Threshold Values (TV) for IMAP Common ~~Candidate~~ Indicator 24 (i.e., for ingestion and entanglement on *Caretta caretta*).

IMAP Common Indicator 24	Updated BV (2025)	Proposed TV (2025)
~~Candidate~~ Common Indicator24: Ingestion	**0.07 ~~0.4~~ gr dry weight ML ingested**[20]	**0.009 ~~0.03~~ gr dry weight ML ingested**
~~Candidate~~ Common Indicator24: Entanglement	**35% ~~36%~~ affected sample**	**9% ~~14%~~ affected sample**

[18] **Threshold Values are subject to update for the third iteration of the MED QSR.**

[19] Values for ingestion and entanglement **~~are pending~~were revised further to the** review of the Joint Meeting of the Ecosystem Approach Correspondence Groups on Pollution and Marine Litter Monitoring (Anavyssos, Greece, 27 -28 May 2025). **The detailed elaboration and applied methodology with regards to the updated values is provided in WG.627/Inf.10.**

8. Updated Environmental Targets for Marine Litter

Table 18. Intermediate (IET) and Final (FET) Environmental Targets for IMAP EO10 Marine Litter Common Indicators.

IMAP Common Indicator (CI)	Marine Litter Categories	Threshold Value	ML Average Concentrations*	IET 2026	IET 2028	IET 2030	FET		
							Value	by:	RP**
CI22 (item/100m)	Beach Macrolitter	130	6,425±9,075	150	-	-	130	Approx. 2027	65%
CI23 (item/km^2)	Seafloor Macrolitter	38	570± 2,588	66	58	50	38	> 2030	63%
CI23 (item/m^2)	Floating Microplastics	0.000845	0.36 ± 1.9	0.015	0.010	0.008	0.000845	> 2030	80%