



UNITED
NATIONS

EP

UNEP(DEPI)/MED WG.443/9



UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

12 July 2017
Original: English

Meeting of the MAP Focal Points

Athens, Greece, 12-15 September 2017

Agenda items 5: Specific Matters for Consideration and Action by the Meeting

Draft Decision: Implementation of the Ecosystem Approach: Focus on 2017 Quality Status Report and Follow-up Assessments

For environmental and cost-saving reasons, this document is printed in a limited number. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

UNEP/MAP
Athens, 2017

Note by the Secretariat

1. In line with article 12 of the Barcelona Convention and several monitoring related provisions under different protocols, the 2017 Quality Status Report (QSR 2017) is the first report based on IMAP Common Indicators. It is prepared following the mandate given to the Secretariat by the Decision Decision IG.21/3 of the 18th Meeting of the Contracting Parties (Istanbul, Turkey, December 2013) on the Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets and by the Decision IG.22/20 of the 19th Meeting of the Contracting Parties (Athens, Greece, 9-12 February 2016) on the Programme of Work and Budget 2016-2017.

2. QSR 2017 follows a model that has been defined in cooperation with the Contracting Parties, based on the structure of the Mid-Term Strategy 2016-2021 (MTS) and the Integrated Monitoring and Assessment Programme, through the Ecosystem Approach Correspondence Groups on Monitoring (COR MONs) and the Ecosystem Approach Coordination Group. It has also considered the approach taken by other Regional Seas (i.e. OSPAR), and the work implemented at global level, such as the Regional Process on a Second World Ocean Assessment and the process on implementing the 2030 Agenda for Sustainable Development, especially its oceans related Sustainable Development Goals (SDGs).

3. Given the limited availability of data and the fact that the IMAP implementation is still at an early phase as a number of countries are in the process of revising their national monitoring programmes to align them with IMAP, the approach for the preparation of the QSR 2017 reflects the time limitations and data gaps of the IMAP Common Indicators. Therefore, it has not been possible to compile a full set of data for IMAP indicators for the QSR 2017. Hence the approach followed was to use all available data for the IMAP Common Indicators and to complement and address data gaps with inputs from numerous diverse sources where appropriate.

4. With the exception of the MED POL monitoring database, QSR 2017 has links to all information sources and case studies relevant for different IMAP Common Indicators, provided from the Contracting Parties and other partners. Additional sources of information were identified and mapped, including information related to national reports on the implementation of the Barcelona Convention and its Protocols, implementation of the National Action Plans (NAPs), Coastal Area Management Programmes (CAMPs), as well as the results of regionally and nationally driven implementation of relevant policies, programmes and projects.

5. As a result, QSR 2017, through systematic compilation of the Assessment Factsheets for all IMAP Common Indicators, provides the findings on the status of implementation of the appropriate assessment methods, identifies the status of information availability that are necessary for evaluation of the IMAP Common Indicators, provides the findings related to the status of marine and coastal ecosystems and where possible, identifies the trends that are expressed through qualitative and quantitative assessment, including the graphics and animations as appropriate. It also determines the knowledge gaps and defines key directions to overcome them with the aim to enable successful implementation of the initial phase of IMAP (2016-2019). For each cluster it provides the case studies that have been submitted by Contracting Parties and Partners.

6. The QSR Assessment Factsheets for all IMAP Common Indicators were presented at and reviewed by the relevant meetings of the Ecosystem Approach Correspondence Groups (on biodiversity, pollution, marine litter and coast and hydrography), the Ecosystem Approach Coordination Group and the meetings of the respective MAP Components Focal Points (MED POL, SPA/RAC, REMPEC, PAP/RAC), and were revised accordingly.

7. The delivery of this report is a unique MAP achievement based on joint and integrated efforts of the Contracting Parties, Secretariat, MAP Components and Partners. The key findings from the QSR2017 are presented in the Annex attached to the present Decision.

8. The implementation of this decision is linked to Output 1.1.4 and complemented by the Outputs of the Core Themes 2.4.1, 2.4.2, 2.4.3, 3.4.1, 3.4.2, 3.4.3, 3.4.4, 4.4.1, 4.4.2 of the proposed Programme of Work. It has budgetary implications on MTF and external resources, reflected in the proposed budget.

Draft Decision IG.23/6

2017 Quality Status Report

The 20th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, herein after referred to as the Barcelona Convention,

Having regard to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, in particular Article 12 of the Barcelona Convention and relevant Articles of its Protocols addressing monitoring and assessment;

Recalling Decision IG.17/6 of the 15th Meeting of the Contracting Parties on the Ecosystem Approach Roadmap;

Recalling Decisions IG. 20/4 of the 17th Meeting of the Contracting Parties and IG. 21/3 of the 18th Meeting of the Contracting Parties on the ecosystem approach with particular focus on monitoring and assessment;

Recalling Decisions IG. 22/7 and IG.22/20 of the 19th Meeting of the Contracting Parties on IMAP and on Programme of Work and Budget 2016-2017, mandating the preparation of the 2017 Quality Status Report, hereinafter referred to as “2017 QSR”;

Expressing appreciation for the work of the Correspondence Groups on Monitoring (COR MONs), Ecosystem Approach Coordination Group, Contracting Parties, Partners, Secretariat and MAP Components;

Having considered the reports of the COR MONs, MAP Components Focal Points, and Ecosystem Approach Coordination Group meetings;

1. *Endorses* the 2017 QSR Executive Summary [and Policy Recommendations], contained in the Annex to this Decision;
2. *[Urges* the Contracting Parties and the Secretariat to take the necessary measures to follow-up on the policy recommendations included in the Annex to this Decision;]
3. *Requests* the Contracting Parties to continue their work towards finalizing their updated national monitoring and assessment programmes in line with IMAP as soon as possible;
4. *Urges* the Contracting Parties, with the support of the Secretariat and taking into consideration the need to fill the existing data gaps as highlighted in the 2017 QSR, to regularly report quality assured data deriving from the implementation of the updated integrated national monitoring and assessment programmes; this will support the development of future regional assessment products, as well as design, implement and monitor coherent and consistent regional and national measures based on sound science-policy interface and aimed at achieving GES;
5. *Requests* the Secretariat to make all possible efforts to overcome the knowledge gaps that are recognized in the 2017 QSR, contributing to the success of the initial phase of IMAP implementation (2016-2019) and enhancing the capacity of Contracting Parties to deliver the second QSR in 2023 to demonstrate progress towards GES and its related targets;
6. *Requests* the Secretariat to develop synergies of the IMAP implementation and related common indicators with the on-going work by UN and Regional Seas on indicators monitoring the progress towards SDGs and in particular SDG-14, and share the Mediterranean experience at the global level.

ANNEX
Key Findings from the 2017 Quality Status Report

1. This document presents key findings of the 2017 Quality Status Report as current status of the Mediterranean marine and coastal environment. The key findings are summarized below per each Ecological Objective.

2. The **Ecological Objective (EO 1) on Biodiversity** is to ensure that biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic and climatic conditions. It includes five common indicators:

- ***Common Indicator 1: Habitat distributional range and Common Indicator 2: Condition of the habitat's typical species and communities***

3. The existing studies indicate a majority of habitats as threatened. Almost half of the Mediterranean habitats (23 habitats, 49%) were Data Deficient in EU28 countries. Of the remainder (24 habitats) 83% were of conservation concern (Near Threatened (NT)-Critically Endangered (CR)) with 63% threatened to some degree (42% Vulnerable and 21% Endangered). A good proportion of habitats in infralittoral and mediolittoral environments were either Vulnerable or Endangered. They include algal-dominated communities on infralittoral sediments, and circalittoral sediments and rocks together with mussel and oyster beds. The criteria under which habitats were most frequently assessed as threatened in both the EU28 and EU28+ were *decline in extent* and a *decline in quality*.

4. Regional expertise, research and monitoring programmes over the last few decades have tended to concentrate their attention on only a few specific Mediterranean habitats. The exploration of habitats such as bioconstructions from very shallow to the deep-sea should be further supported.

5. Despite the scientific importance of time series studies, the funding for many monitoring programmes is in jeopardy and much the Mediterranean Sea remains not just under-sampled but un-sampled. Monitoring should be coordinated and standardized so that results can be easily comparable at least for some, decided *a priori*, variables.

- ***Common Indicator 3: Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)***

6. The application of this indicator resulted in three assessments related to marine mammals, sea birds and marine reptiles. For marine mammals, 12 species of marine mammals are regularly present in the Mediterranean Sea, one seal and 11 cetaceans. The Mediterranean monk seal (*Monachus monachus*) and the 11 cetacean species (fin whale, *Balaenoptera physalus*; sperm whale, *Physeter macrocephalus*; Cuvier's beaked whale, *Ziphius cavirostris*; short-beaked common dolphin, *Delphinus delphis*; long-finned pilot whale, *Globicephala melas*; Risso's dolphin, *Grampus griseus*; killerwhale, *Orcinus orca*; striped dolphin, *Stenella coeruleoalba*; rough-toothed dolphin, *Steno bredanensis*; common bottlenose dolphin, *Tursiops truncatus*; harbour porpoise, *Phocoena phocoena*) face several threats, due to heavy anthropogenic pressures throughout the entire Mediterranean basin. For the evaluation of sea-birds, information is patchy and often lacking. A southeast to northwest increasing diversity gradient has been observed, in agreement with productivity patterns in the region, but this might be confounded by larger data gaps in the southernmost and easternmost countries. For marine reptiles, most nesting sites of loggerheads are located in the eastern and central basins of the Mediterranean, in particular in Greece, Turkey, Cyprus and Libya, while all green turtle nesting sites are located in the eastern basin, primarily Turkey, Syria and Cyprus. The number of nests held at different sites is not just dependent on climate, but other factors, like predation, sand type/structure etc.

- **Common Indicator 4: Population abundance of selected species (EOI related to marine mammals, seabirds, marine reptiles)**

7. The result of the assessment shows that exact population densities for most marine mammals are not fully assessed, with some very low estimates for the Mediterranean monk seal, fin, sperm and killer whales as well as the common dolphin. The overall pattern of seabird abundance in the Mediterranean region tends to be more abundant in the north and west of the Mediterranean basin. This is particularly so in the case of the most marine species (shearwaters, Mediterranean shag and Audouin's gull). Abundance pattern of marine turtles indicates that over 100 sites around the Mediterranean have scattered to stable (i.e. every year) nesting of loggerhead turtles. Greece and Turkey alone represent more than 75% of the nesting effort in the Mediterranean. Information on the size structure and abundance of individuals at oceanic and neritic marine areas has proven difficult. Most green turtle nests are laid in Turkey, Cyprus and Syria, with the remainder being found in Lebanon, Israel and Egypt. Information about the numbers of green turtles in various developmental, foraging and wintering habitats is limited.

- **Common indicator 5: Population demographic characteristics (EOI, e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)**

8. The result of the assessments is focused on the population demographic characteristics of marine mammals within the Mediterranean waters and indicates that available data on demography for Mediterranean marine mammals are rather scarce and fragmented and at present it is difficult to provide strong and robust evidence on trends. Data are available for localized regions only, where more effort has been devoted over the years allowing to estimate survival rates for specific species and time intervals.

9. **Fin whale** - The preliminary study described the structure of the Mediterranean sub-population by analyzing stranding records from the period 1986–2007, showing a strong impact, natural and anthropogenic, on calves and immature animals. These results, while confirm a common pattern to several mammals – characterized by high mortality in the youngest age classes - may prevent reaching sexual maturity, thus severely impacting the species at the population level. Proper conservation plans should therefore consider the discovery of breeding grounds, where calves may benefit from greater protection, to increase survival rates. Similarly, appropriate naval traffic regulations, aimed at reducing mortality rates from ship collisions, could enhance the survival of mature females and calves. In addition, mitigating other sources of mortality and stress, such as chemical and acoustic pollution, whale-watching activities and habitat loss and degradation, could further improve the population's chances of survival.

10. **Common bottlenose dolphin** - The only Mediterranean area with quantitative historical information that can be used to infer population trends over time scales of more than a couple of decades is the northern Adriatic Sea. There, bottlenose dolphin numbers likely declined by at least 50% in the second half of the 20th century, largely as a consequence of deliberate killing initially, followed by habitat degradation and overfishing of prey species. For some other parts of the northern Mediterranean, e.g. Italy and southern France, the available information is less precise but suggests similar trends. In an area off southern Spain where the species has been studied intensively, abundance estimates have shown variability but no trend since the early 1990s.

11. Photo-identification is one of the most powerful techniques to investigate cetacean populations. Information on group composition, area distribution, inter-individual behaviour and short and long-term movement patterns can be obtained by the recognition of individual animals. Long-term datasets on photo-identified individuals can provide information on basic life-history traits, such as age at sexual maturity, calving interval, reproductive and total life span. Nevertheless, estimating

age and length from free-ranging individuals may be rather difficult and increase the uncertainties in the models. Long-term data sets on known individuals through photo-identification may overcome some of the potential biases

12. **EO 2 on Non-indigenous species** aims that non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem. It introduces one common indicator:

- ***Common Indicator 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas***

13. The result of the assessments indicates a sub-regional variation in the new introductions of alien species in the Mediterranean Sea. The Eastern Mediterranean has an increasing trend in the rate of new introductions in the contrary of the three other Mediterranean sub-regions. At regional scale, new introduction has an increasing trend by 30.7 species per decade, and the current (as of the 2000s) rate of new introductions exceeds 200 new species per decade.

14. **EO 5 on Eutrophication** aims that human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters. It includes two indicators:

- ***Common Indicator 13: Concentration of key nutrients in water column*** and ***Common Indicator 14: Chlorophyll-a concentration in water column***

15. The result of the assessments confirms the offshore waters of the Mediterranean are characterized as extremely oligotrophic with an increasing tendency for oligotrophy eastwards. The main coastal areas in the Mediterranean with permanent eutrophic trends are the Gulf of Lions, the Adriatic, Northern Aegean and the South-Eastern Mediterranean (Nile–Levantine). In areas where assessment is possible, the key nutrient concentrations are in ranges characteristic for coastal areas and in line with the main processes undergoing in the interested area, while the assessment criteria for eutrophication based on Chlorophyll-*a* concentration in the water column confirm the main status of eutrophication in the coastal area.

16. **EO7 on Hydrography** is to ensure that the alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems, and includes one indicator:

- ***Common Indicator 15: Location and extent of the habitats impacted directly by hydrographic alterations***

17. The result of the assessments indicates there is a need for more rigorous monitoring as to be able to undertake regional and sub-regional assessments whilst there is evidence of impact of coastal developments.

18. **EO 8 on Coastal ecosystems and landscapes** is to ensure that the natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved, and includes one indicator:

- ***Common Indicator 16: Length of coastline subject to physical disturbance due to the influence of man-made structures*** and the ***Candidate Indicator 25: Land use change***

19. The result of the assessments shows only a few countries (France, Italy, Montenegro) have developed inventories on coastal man-made structures, where between 11-32% of coastline is

converted and rates of artificialization are increasing steadily due to increased population and use of coastal areas.

20. **EO 9 on Pollution** is to ensure that contaminants cause no significant impact on coastal and marine ecosystems and human health and includes five common indicators:

- ***Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)***

21. The result of the assessments shows that the levels of chemical legacy pollutants are decreasing whilst the concern is pointing to emerging chemical threats in the Mediterranean Sea. Toxic metals budgets are found almost entirely in the coastal sediment compartment indicating a clear reduction of inputs from legacy pollutants in surface waters and organic chlorinated compounds are almost non-detectable in the monitored biota, although hotspot stations remain a threat.

- ***Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established***

22. The result of the assessments are generally not comparable. The biological effects monitoring tools are still in a research phase which limits the implementation of these methodologies in the long-term marine monitoring networks. Traditional biomarkers and bioassays exhibiting confounding factors are being replaced with new molecular targets and methods, including metabolomic techniques, for its reliable application in integrated marine assessments in a cost-effective manner.

- ***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***

23. The result of the assessments indicate that accidents rates have gone down globally and regionally despite the increase in shipping transportation and it can be concluded that the impact of the international regulatory framework adopted through the IMO as well as technical cooperation activities undertaken at regional level is very positive, especially as far as prevention of accidental pollution is concerned. However, risks associated with the transport by ships of oil and HNS with possible harmful consequences on biota and ecosystems cannot be completely eliminated, especially in vulnerable areas such as the Mediterranean Sea.

- ***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***

24. The result of the assessments indicates the overall no major significant concerns or extreme high levels are observed in relation to these recent research studies and no confirmation based on temporal trends could be performed.

- ***Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards***

25. The result of the assessments shows that the implementation of measures (e.g. sewage treatment plants) to reduce, among others, the faecal pollution in coastal waters, has been a story-of-success in the Mediterranean Sea. The generalization of the domestic waters depuration in a number

of countries the latest decades has demonstrated the benefits of implementing the LBS Protocol of the Barcelona Convention. However some improvements still need to be done.

26. **EO 10 on Marine litter** aims to assess that marine litter does not adversely affect the coastal and marine environment, and includes two common indicators:

- ***Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines***

27. The result of the assessments show that there is limited data and great spatial variability on the amounts and composition of marine litter reflecting the different characteristics of the shorelines along the Mediterranean. Existing studies however indicate that the main types of beach marine litter are of land-based origin, resulting from poor waste management practices, recreational and tourism activities, mainly consisting of household items and smoking related waste. Assessment of the composition of beach marine litter in different regions of the Mediterranean Sea indicate that synthetic polymer materials (i.e. bottles, bags, caps/lids, fishing nets, and small pieces of unidentifiable plastic and/or polystyrene) make up the largest proportion of the overall marine litter pollution.

- ***Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor***

28. Based on the result of the assessments it has been well documented that plastic is the main component of floating marine litter and also for those lying on the Mediterranean seafloor, from shallow water, the continental shelf, till the deep abyssal plains. Regarding the areas where marine litter (floating and on the seafloor) are accumulating in the Mediterranean basin, no safe conclusion can be drawn for the moment. The Mediterranean Sea is heavily impacted by floating marine litter items, giving concentrations comparable to those found in the 5 sub-tropical gyres. Moreover, the seafloor seems to be the final global sink for most marine litter items with densities ranging from 0 to over 7,700 items per km². The deep-sea canyons are of particular concern as they may act as a conduit for the transport of marine litter items into the deep sea. As in any other marine litter cases, the human activities (fishing, urban development, and tourism) are primarily responsible for the increased abundance of marine litter items in the Mediterranean Sea.