



UNITED
NATIONS

EP

UNEP/MED WG.509/9



UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

07 May 2021
Original: English

Meeting of the MED POL Focal Points

Videoconference, 27-28 May 2021 and 6-7 October 2021

Agenda item 5: Indicator-based midterm evaluation of the implementation of National Action Plans/Programme of Measures (2015-2020)

Draft Indicator-based Midterm Evaluation of the Implementation of National Action Plans/Programme of Measures (2015-2020)

For environmental and economic 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.

Note by the Secretariat

The 19th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Athens, Greece, 9-12 February 2016), (COP19), agreed in Decision IG.22/8 to endorse the National Action Plans (NAPs) 2016–2025 as unique policy documents comprising legally binding programmes of measures and timetables required to achieve Good Environmental Status (GES) in line with the Regional Plans/LBS Protocol objectives in the framework of SAP-MED.

COP19 urged the Contracting Parties to report on the implementation of the NAPs in the framework of Article 13 of the LBS Protocol and requested the Secretariat to undertake in 2020 an indicator-based midterm evaluation of the NAPs' implementation based on the existing reporting system and in close collaboration with the Contracting Parties.

The NAPs 2016–2025 have been developed and anchored upon three Ecological Objectives: EO5 (Eutrophication); EO9 (Contaminants); and EO10 (Marine Litter). The range of measures put forward by the Contracting Parties in the updated NAPs directly target these three ecological objectives based on the requirements of legally binding measures included in the respective Regional Plans, following the hierarchy of (i) prevention at source; (ii) reduction of pressures; and (iii) remediation interventions.

The Midterm Evaluation of the NAPs for the period of 2015 to 2020 is undertaken using NAP/H2020 Indicators agreed and further developed under the EU-Funded project “Shared Environmental Information System (SEIS) - SEIS Support Mechanism,”. The main data and information sources used for undertaking this Midterm Evaluation various technical studies and reports prepared in 2015-2020 as further listed in Chapter 2 of the document.

The Midterm Evaluation report was discussed during the Meeting on “National Baseline Budget Methodologies, Assessments of new Regional Plans and Evaluation of National Action Plans under the LBS Protocol” held by videoconference on 22-23 April 2021. The Meeting reviewed the document and recommended its submission with some modifications to the MED POL FP meeting to be held in May 2021.

Table of Contents

1.	INTRODUCTION.....	1
2.	METHODOLOGY OF THE EVALUATION	1
3.	THE BENCHMARK (2015)	5
4.	PROGRESS AND LINKS BETWEEN THE BENCHMARK AND CURRENT STATUS	5
4.1	Status of Implementation of targeted NAP Measures/PoMs to achieve EO5 (Eutrophication) during the period 2015-2020.....	7
4.2	Status of Implementation of targeted NAP Measures/PoMs to achieve EO9 (Contaminants) during the period 2015-2020.....	10
4.3	Status of Implementation of targeted NAP Measures/PoMs to achieve EO10 (Marine Litter) during the period 2015-2020.....	15
4.4	Status of Implementation of NAP Measures/PoMs regarding monitoring and reporting as well as public awareness, access to information and public participation during the period 2015-2020	18
5.	GAPS AND CONCLUSIONS	20

List of Abbreviations / Acronyms

BOD	Biological oxygen demand
CO₂	Carbon Dioxide
COD	Chemical Oxygen Demand
H2020	Horizon 2020 initiative
EC	European Commission
ECAP	Ecological Approach
EEA	European Environment Agency
ELV	Emission Limit Value
EO	Ecological Objective
EU	European Union
GES	Good Environmental Status
GIS	Geographic Information System
IPCC	Intergovernmental Panel on Climate Change
ICZM	Integrated Coastal Zone Management
LBS	Land Based Sources
MEDPOL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean
N	Nitrogen
NBB	National Baseline Budget
NH₃	Ammonia
N₂O	Nitrous Oxide
NO	Nitric Oxide
NO₂	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
OECD	Organization for Economic Cooperation and Development
P	Phosphorus
PCBs	Polychlorinated Biphenyls
POMs	Programme of Measures
POPs	Persistent Organic Pollutants
PRTR	Pollutant Release and Transfer Registers
RP	Regional Plan
SAP-MED	Strategic Action Program for the Mediterranean
TN	Total Nitrogen
TP	Total Phosphorus
UNEP/MAP	United Nations Environmental Program/Mediterranean Action Plan

1. INTRODUCTION

1. The 19th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Athens, Greece, 9-12 February 2016), hereinafter referred to as the COP19, agreed in Decision IG.22/8 to endorse the Countries' National Action Plans (NAPs) 2016–2025 as unique policy documents comprising legally binding programmes of measures and timetables required to achieve Good Environmental Status (GES) in line with the Regional Plans/LBS Protocol objectives in the framework of SAP-MED.

2. COP19 urged the Contracting Parties to report on the implementation of the NAPs in the framework of Article 13 of the LBS Protocol. It also requested the Secretariat to undertake in 2020 an indicator-based midterm evaluation of the NAPs' implementation based on the existing reporting system and in close collaboration with the Contracting Parties for submission to COP 21.

3. As the NAPs 2016-2025 are anchored upon three Ecological Objectives: EO5 (Eutrophication); EO9 (Contaminants); and EO10 (Marine Litter), the Midterm Evaluation is based on these three main pillars which are reflected in the updated programme of measures directly targeting three types of national actions based on the legally binding measures included in the respective Regional Plans following the hierarchy: (i) prevention measures at source (ii) reduction of pressures and (iii) remediation interventions in line with the **source-to-sea** approach.

2. METHODOLOGY OF THE EVALUATION

4. The Midterm Evaluation is indicator-based in line with the NAP/H2020 Indicators further developed under the EU-Funded project "Shared Environmental Information System (SEIS)¹ principles and practices in the ENP South region - SEIS Support Mechanism". The NAP/H2020 indicators and relevant IMAP indicators (both included in Annex II) were clustered in the "Pressure-State-Response (PSR)" assessment framework, an approach developed by OECD.

5. The NAP/H2020 indicators resulted from an extensive revision and participatory process including a mapping exercise ² of current regional indicators against the different policies and their reporting requirements, with the aim to explain how the NAP/H2020 indicators are related to the other regional processes.

6. The mid-term evaluation is complemented by data and information found in relevant reports submitted under the 'Barcelona Convention' Reporting System (BCRS)³ and the LBS Protocol pertaining to Implementation of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities as illustrated in Figure 2.2. These reports served to provide information for the evaluation of the progress between the "benchmarking point", i.e. NAP 2015, and "current status," i.e. midterm year of 2020.

¹ <https://eni-seis.eionet.europa.eu/south>

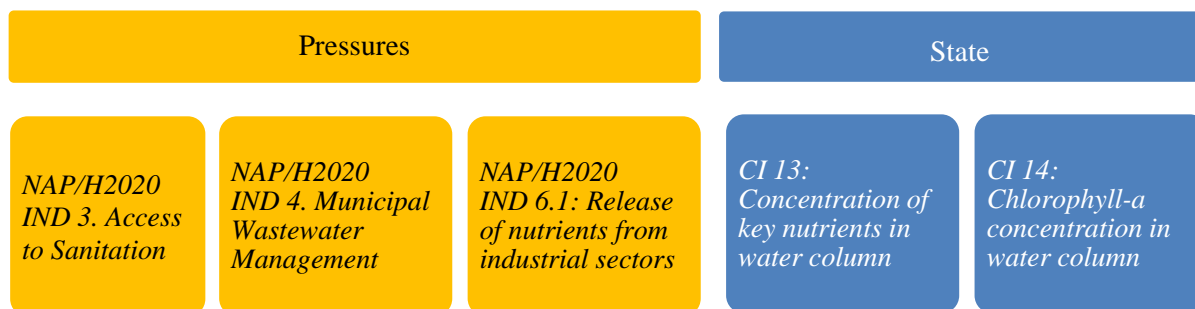
² <https://forum.eionet.europa.eu/etc-icm-consortium/library/service-contract-eni-south-2017-2018/key-deliverables/d3.2-concept-note-mapping-indicator-processes-and-country-guidance/d3.2-concept-note-mapping-indicator-processes>

³ <http://www.info-rac.org/en/infomap-system/bcrs-reporting>

EO5 Eutrophication: 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

Operational Targets:

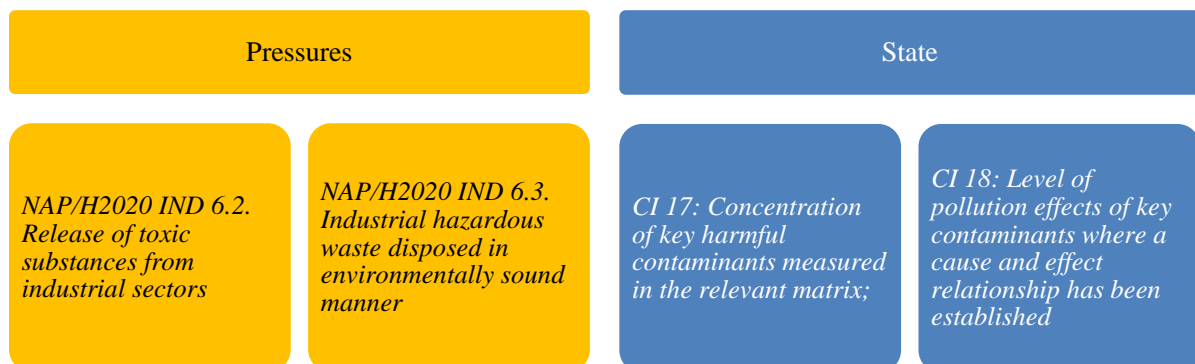
1. Provide XX% population with connection to sewage networks [2019 to 2025]
2. Provide XX% of agglomerations in excess of 2000 inhabitants with wastewater collection and treatment [2019 to 2025]
3. Reduce by XX% of BOD discharged to water bodies [2018 to 2021]
4. Reduce by XX% nutrient input from agricultural activities discharged to water bodies [2019 to 2020] (No data available)



EO9 Contaminants: cause no significant impact on coastal and marine ecosystems and human health.

Operational Targets:

1. Phase out/reduce/control quantities or concentrations of POPs (PCB, pesticides) by 2025
2. Phase out/reduce discharges of PAHs by 2025;
3. Reduce discharge of hazardous substances from industrial plants (apply BAT/BEP) by XX% or dispose in a safe manner [2020 to 2025]
4. Reduce discharge of heavy metals (mercury, cadmium, lead, zinc, copper, chromium) by XX% [2019 to 2025];
5. Decontaminate XX% of sites polluted with mercury or phase out/isolate mercury from closed plants by 2025



EO 10 Litter: Marine and coastal litter do not adversely affect coastal and marine environment

Operational Targets:

1. Provide for the collection of XX% of solid waste [2019 to 2025]
2. Construct XX municipal solid waste landfills [2019 to 2025]
3. Adopt good practices in solid waste management including waste reduction, sorting, recycling, recovery, and reuse [2020 to 2025]
4. Regulate/reduce usage/ discharge of XX% of fraction of plastics [2015 to 2025]
5. Close/ remediate XX% of illegal solid waste dump sites [2019 to 2020]
6. Reduce XX% of disposed marine litter on beaches/sea [2019 to 2025]
7. Prevent riverine run-off of marine litter to the sea by XX% [2019 to 2020]

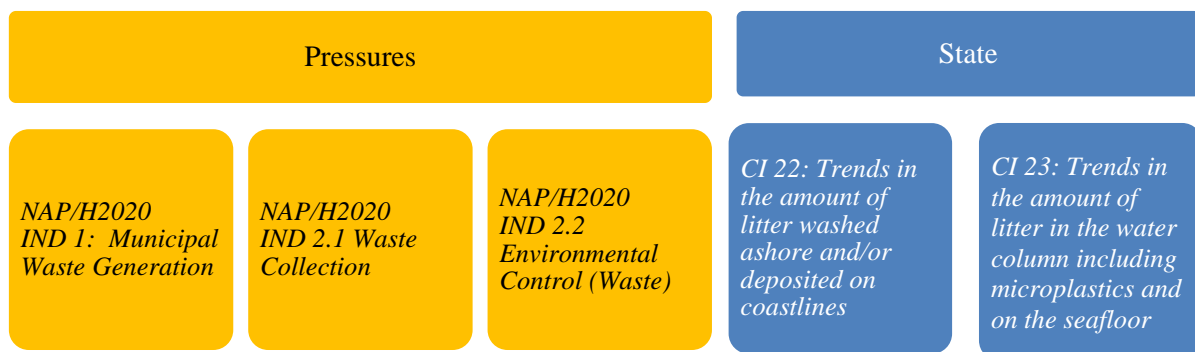


Figure 2.1: Ecological objectives and linked indicators under Pressure-State-Response framework

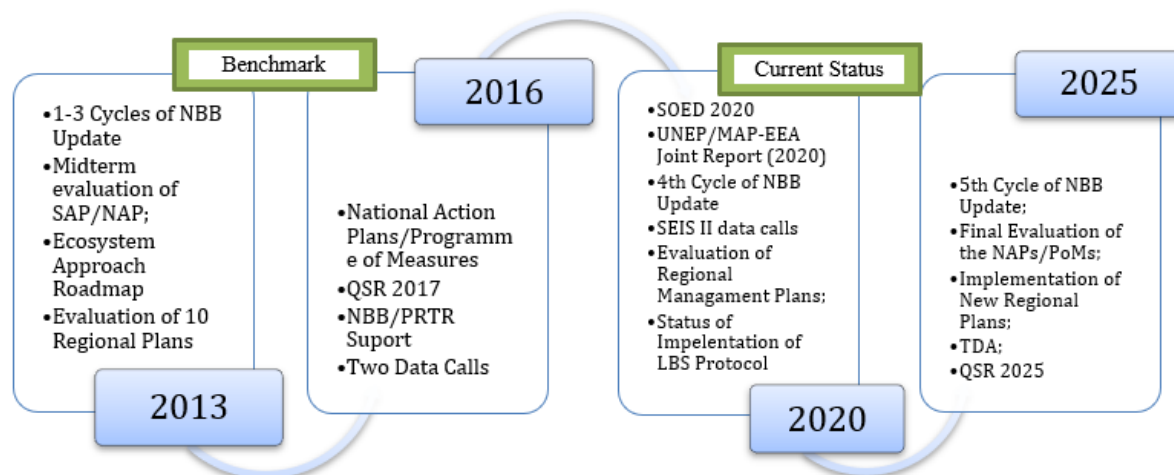


Figure 2.2: Main timeframe and available assessment tools for the Midterm Evaluations.

7. Regarding the “regional benchmark” pertinent to the “Pressures” and “State”, this evaluation report considers the following major regional assessment and evaluation reports which are assessing the progress and achievements as well as the “current status”:

- a. The “State of Environment and Development Report” (2020)⁴ by UNEP/MAP which gathers evidence from various chapters most closely related to marine and coastal environmental issues and highlights the combined interactions and impacts according to the analytical framework of factors-pressures-state-impacts-responses (DPSIR). The

⁴ <https://planbleu.org/wp-content/uploads/2020/11/SoED-Full-Report.pdf>

SoED brings a timely compilation and analysis of the most comprehensive and up-to-date knowledge available on the environment and development in the Mediterranean.

- b. “Towards a cleaner Mediterranean: A decade of progress” (No:7/2020 and No:8/2020),⁵ a Joint Report by EEA and UNEP/MAP which summarizes the main outcomes of the indicator-based appraisal of the progress observed since the launch of the Horizon 2020 initiative. It is the result of a multifaceted collaborative process among both national and regional actors to set up a regular review and reporting mechanism on pollution pressures in the Mediterranean region. The indicators used in this report were already streamlined and aligned with NAP Indicators therefore, the report presents a good information of the progress and “current status” of implementation of the NAP/PoMs.
- c. The Quality Status Report, 2017,⁶ which is first report based on the Ecological Objectives and Common Indicators of IMAP, with a view to assess the status of the Mediterranean in achieving GES.
- d. Additionally, Implementation status (2000-2015) of Strategic Action Programme to Address Pollution from Land Based Activities (SAP-MED) and related National Action Plans (NAP).

8. Regarding the “Responses”, the midterm evaluation report examines data and information provided in:

- a. The “Evaluation Report on Implementation of Regional Plans for Reduction of BOD5 from UWWTP and food sector; Reduction of Inputs of Mercury; Elimination of POPs; and Marine Litter Management in Mediterranean”,⁷
- b. The NBB Reports submitted under 4th Cycle of NBB Update, 2018-2019,⁸
- c. The National Implementation Reports of LBS under Barcelona Convention Reporting System (BCRS),⁹ 2018-2019,
- d. Report on the General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols: Synthesis of the Information Mentioned in the National Implementation Reports for the 2016-2017,¹⁰
- e. Reports from the Commission to the European Parliament and the Council assessing Member States’ programmes of measures under the Marine Strategy Framework Directive, 2018,¹¹ and
- f. Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC).¹²

It should be noted that there are serious data and information gaps which still hinder the complete and accurate assessment

⁵ <https://www.eea.europa.eu/publications/towards-a-cleaner-mediterranean>

⁶ <https://www.medqsr.org/>

⁷ UNEP/MED IG.24/Inf.15

⁸ <http://www.info-rac.org/en/infomap-system/nbb-reporting>

⁹ <http://www.info-rac.org/en/infomap-system/bcrs-reporting>

¹⁰ UNEP/MED IG.24/Inf.8

¹¹ COM/2018/562 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:562:FIN&qid=1533034580736>

¹² SWD/2020/60 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0060>

3. THE BENCHMARK (2015)

9. In 2016, UNEP/MAP MEDPOL issued the report on the implementation status (2000-2015) of Strategic Action Programme to Address Pollution from Land Based Activities (SAP-MED) and related National Action Plans (NAP). For understanding the benchmark on 2015 when the first set of NAPs (2003-2013) were completed, this report evaluated the status of main pressures and their trends (with limited data) by assessing the implementation of SAP-MED/NAP by undertaking a desk review of the legal framework, national strategies and plans and all the available information and data on the state of the environment of each Contracting Party, and analysis of reported and published data by the Contracting Parties on releases of pollutants into the marine environment, mainly in NBB and (e-) PRTR in order to track trends.

10. As part of above-mentioned evaluation, a comprehensive data analysis regarding 2003, 2008 and 2013 NBB data was undertaken complemented by respective e-PRTR reports where available.

11. Aiming to assess the main findings regarding the “state” on marine environment in 2017, UNEP/MAP-MEDPOL Programme issued the Report on the Quality Status of Mediterranean, (herein after as QSR 2017). The 2017 QSR, via compilation of IMAP Common Indicators, provided details on the status of marine and coastal ecosystems and endeavoured to identify the trends that were expressed through qualitative and quantitative assessment, and brought forward the findings on the status of information availability.

12. The QSR 2017 was based on IMAP Indicators. Considering their relevance to the NAPs/PoM, the main findings of this report related to the Common Indicators (CI) under EO5, EO9 and EO10 are taken into consideration.

4. PROGRESS AND LINKS BETWEEN THE BENCHMARK AND CURRENT STATUS

13. The NAPs/POMs have been conceived with specific operational targets to be achieved with the view to achieve EcAp-Ecological Objectives EO5, EO9 and EO10, (streamlined with GES) in line with the 2025 SAP-MED targets and the legally binding commitments of the 10 Regional Plans adopted by COP 16, 17 and 18 of the Barcelona Convention.

14. This evaluation aims to track performance of NAP/POMs implementation, progress and achievements made and effectiveness of measures taken by Contracting Parties.

15. As illustrated in Figures 2.1 and 2.2 and in line with the methodology used, this evaluation has been performed in order to examine and conclude on:





- a. Evidence of progress to achieve Ecological Objective EO5, Eutrophication during the period 2015-2020.
- b. Evidence of progress to achieve Ecological Objective 9 during the period 2015-2020.
- c. Evidence of progress to achieve Ecological Objective 10, Marine Litter, during the period 2015-2020.
- d. Evidence of progress to towards, public awareness, access and participation, and to meet monitoring and reporting requirements during the period 2015-2020.

16. As per Midterm Evaluation Methodology, the Ecological Objectives are linked with the key requirement of the NAPs, which are monitored using information from agreed Indicators to assess the “approximation” towards the Operational Targets. Therefore, the following three sub-chapters will provide evidence of, and evaluation on, the progress to achieve the relevant EOs. Conclusions are presented at the end of this evaluation with the outlook for 2025 for Operational Targets.

17. The key NAP requirements stemming from the LBS Protocol, Ecosystem Approach targets and the legally binding measures of the Regional Plans in the framework of SAP-MED, are evaluated in the following Table 5.2 for EO5; Table 5.3 for EO9; and Table 5.4 for EO10 as well as for







monitoring reporting, and public awareness, access to information in Table 5.5 based on the available evidence. The “outlook” for achieving these requirements is also presented. It should be noted that, these requirements are closely linked with the NAP Operational Targets, yet, implementing these Policy, Legal and Institutional and Preventive requirements are the means to attain the Operational Targets which are very country specific. The NAP Operational Targets are evaluated in the Final Chapter.








18. The criteria for evaluating the future outlook are summarized according to the following legends below:



Legends on the criteria for future outlook	
	Based on the current information and trends (Indicators) in 2015-2020, there is a need for significant focus and substantive investment to implement the requirements until 2025
	The requirements are highly likely to be implemented until 2025.
	Despite perturbances, the requirement could be implemented until 2025, however, it will need some focused efforts as well as investment.
	No data is sufficiently arable to have a conclusive evidence-based evaluation.

4.1 Status of Implementation of targeted NAP Measures/PoMs to achieve EO5 (Eutrophication) during the period 2015-2020

Table 5.1: Evaluation findings of legal, institutional and response measures under EO5 including future outlook







NAP/PoM Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Policy	Enforce the adopted ELVs by monitoring discharges from municipal wastewater treatment plants into the environment	Enforcement is a big challenge in the regions especially with some countries where gaps do exist regarding the implementation of formal procedure for authorizations, monitoring and reporting system. Approximately, less than half of Contracting Parties have not yet, consolidated formal authorization system. Despite efforts made to overcome this gap, enforcement remains, due to one or another reason, the biggest challenge in the Mediterranean.	
	Adopt emission limit values (ELV) for BOD5 in urban wastewater after treatment in accordance with the requirements of the “regional guideline on the reduction of BOD5 from urban wastewater”	Almost all Contracting Parties have legislations regulating setting ELVs for urban wastewater in line with NAPs and Regional Plans. The process is on good track, where only a few countries needs to amend their national regulations to comply. For CP which are members state of EU, Directive 91/271/EEC on urban wastewater treatment is in place.	
Legal and institutional	Monitor discharges from municipal wastewater treatment plants and take necessary measures to enforce national regulations	More than half of the Contracting Parties have established monitoring programmes, as indicated in NAPs and Regional Plans of their discharges from their Urban Wastewater Treatment Plans, especially in bigger agglomerations. Work is in progress for consolidating monitoring and reporting plans in Albania, Bosnia & Herzegovina, Egypt, and Montenegro and partially Morocco.	
	Report on the implementation of the measures on the reduction of BOD5 from urban wastewater and on their effectiveness [On a biennial basis]	The Contracting Parties are regularly reporting the measures for the implementation at national level under LBS Reporting Format. The reporting rate has been slightly in increase, and the Compliance Committee is monitoring and advocating further increase.	
Prevention and Pollution control	Ensure that all agglomerations of more than 2000 inhabitants collect and treat their urban wastewater before discharging them into the environment	Collection and treatment of municipal wastewater is generally on the rise, as is wastewater generated as a result of the steady increase in population in the region. However, this rise is mostly in large agglomerations. For small agglomerations, especially in rural areas, the collection of wastewaters is still a major problem for some countries, yet alone the sufficient treatments after collection is not in place for smaller agglomerations. (For the agglomeration more than 100.000, see the requirement below)	
	Prevention of direct and indirect effects of nutrient over-enrichment in the marine environment	The state of eutrophication still remains the same or has changes slightly since 2015. The hotspots of eutrophication remain the same. Indication that either prevention measures were limited, or less likely, the status would need more time to recover.	








NAP/PoM Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Reduce nutrient inputs, from agriculture and aquaculture practices into areas where these inputs are likely to cause pollution	Since 2015 up until 2019, no major shift on reducing the nutrient import from agriculture or aquaculture has been made. In 2019, UNEP/MAP initiated the preparation of two relevant management plans for agriculture and aquaculture. Considering the data is very scarce, UNEP/MAP has initiated a preparation of estimation techniques for non-point sources and aquaculture to be able to monitor the situation in coherent and compatible data.		
Industrial Food Plants which discharge more than 4000 PE into water bodies shall meet the following requirements: COD 160 mg/l or TOC 55 mg/l and BOD 30 mg/l	The food packaging sector remains to be one of the dominant sectors in region regarding releases of nutrients. However, not all Contracting Parties have adopted the ELVs in the NAPs needed to urgently improve or modify national regulations ensure compliance with the regional plan or national action plans. Contracting Parties which are also member states of EU, have developed a number of BEP and BAT; however, it is not possible to track the progress for each individual country.		
Dispose all wastewater from industrial installations which are sources of BOD, nutrients and suspended solids	More than half of the Contacting Parties had ELV in place especially for CP which implement and transpose the Directive 2010/75/EU (Industrial Emission Directive). It should be noted that the ELVs in this directive are set in BATs and BREFs. Despite further steps are needed to ensure a full implementation, it is expected that industrial wastewater treatment will be more on focus in coming years. It should be noted that the majority of nutrients are discharged not from industry but from cities. Also, it is known that, the transfers from industry to UWWTPs are evident.		
Promotion of separate collection of rain waters and municipal wastewaters	There is no sufficient data regarding the collection of rainwater (storm water) and its disposal. It highly depends on the date on the collection system establishment and the need for such collections. UNEP/MAP is currently developing regional plan on urban storm water where the targets will be set.		
Coastal cities and urban agglomerations of more than 100,000 inhabitants are connected to a sewer system	Large coastal cities seem to improve their collection and connection to sewer systems. Detailed analyses especially in the south show a stark difference between urban and rural population access to basic sanitation services. Contrary to rural areas, improvement in large coastal cities are visible; however, not fully sufficient to match the increasing levels of population and tourism fluctuations.		
Take necessary measures to establish adequate urban sewer and wastewater treatment plants that prevent run-off and riverine inputs of litter	The leakage of marine litter from unregulated dumpsites, as well as from municipal wastewater treatment plants seem to be still a big challenge. Especially, when the evidence indicates the increasing number of marine litter in the marine environment. There are no sufficient data to evaluate the status of the pressure or prove an increases quality of the state.		
Limit concentrations of key nutrients in the marine environment to levels which are not conducive to eutrophication	Evidence shows that the eutrophication hotspots in the Mediterranean still remain. The distributions of Chl a confirm that the Mediterranean Basin is largely oligotrophic in the centre, with a Chl a gradient from west to east. The recognized hotspots in the Alboran Sea, Gulf of Lion, Gulf of Gabès, Adriatic, Northern Aegean and the southeast Mediterranean (Nile-Levantine) are clearly visible.		








NAP/PoM Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
	Promotion of reuse of treated effluents for the conservation of water resources	With the exception of a few countries, such as Israel and Tunisia which rely heavily on wastewater reuse as a non-conventional source of water, the uptake of wastewater reuse in the south subregion has been slow and uneven. In general, after an increase in the proportion of directly reused wastewater since 2012, there is a slight decrease observed between 2013 to 2019. In the same period, in the norther Mediterranean countries, a steady increase in the direct reuse of wastewater led by France and Spain.	
	For food sector installation discharges into the sewerage system, the competent authorities shall establish ELVs and an authorization compatible with the operation and the emission discharge values of the urban wastewater treatment plant	The ELV for food sector is not set, except for Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain under directive 2010/75/EU as well as Israel and Turkey with their own national regulations. However, these countries constitute half of the Contracting Parties in the Mediterranean, indicating the other half needs to be supported to establish such ELVs in line with the NAPs and the Regional Plans.	








4.2 Status of Implementation of targeted NAP Measures/PoMs to achieve EO9 (Contaminants) during the period 2015-2020



Table 5.2: Evaluation findings of legal, institutional and response measures under EO9 including future outlook

NAPs/PoMs Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Policy	Application of BAT and BEPs for environmentally sound management of POPs	Most of the Contracting Parties have legal and administrative measures on POPs in place. Israel and Turkey are currently finalizing their legal frameworks. Algeria, Morocco, Tunisia need to update national legislation to include new POPs. No particular information has been gathered regarding the applications of BEPs for environmentally sound management of POPs as this measure is not explicitly considered by the Stockholm Convention.	
	Concentration of priority contaminants in biota, sediment or water is kept within acceptable limits	Heavy metal concerns are found in the coastal sediment compartment for Pb and HgT indicating an impact of these chemicals. For HgT, 53% of the sediment stations assessed are above the ERL, set as regional assessment criteria for acceptable environmental conditions for the Mediterranean basin, although sub-regional differences have to be taken into account. For the other contaminant, the results indicate that they are within the acceptable limits, however, the data is very scarce to make a conclusive evaluation.	
	Safeguard of the ecosystem function and maintenance of the integrity and biological diversity of species and habitats	No available and comprehensive data to make a conclusive evidence of progress.	
	Minimization of effects of released contaminants to the marine environment such as not to give rise to acute pollution events	No available and comprehensive data to make a conclusive evidence of progress.	
	Prevention of acute pollution events and minimization of their impacts	No available and comprehensive data to make a conclusive evidence of progress.	
	Adopt National ELVs for mercury emissions based on values included in the “regional plan on the reduction of inputs of mercury” from other than Chlor Alkali industry	More than half of the Contracting Parties have regulations in place regarding prohibiting and/or restricting the manufacture, export and import of mercury and setting national ELVs in line with the values set in the Regional Plan and NAPs.	

NAPs/PoMs Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
	Prohibit the installation of new Chlor alkali plants using mercury cells and vinyl chloride monomer production plants using mercury as a catalyst	Eight Contracting Parties (Croatia, France, Lebanon, Malta, Monaco, Montenegro, Slovenia and Syria) have ratified Minamata Convention. The Convention shares similar measures with the Mercury Regional Plan including a ban on new mercury mines, the phase-out of existing ones, etc.	
	Cease releases of mercury from the activity of Chlor alkali plants	Historical chlor-alkali plants using mercury cells have been or are currently being remediated in Albania, Bosnia & Herzegovina (the installations are on Sava River Basin), Croatia, Cyprus, France, Greece, Israel, Italy, Malta, Slovenia, Spain and Italy. On the other hand, measures to reduce mercury emissions from existing chlor-alkali plants in Algeria and Morocco are being undertaken. Lebanon and Montenegro reported not to have stocks or sites contaminated with mercury.	
	Prohibit and/or take legal and administrative measures necessary to eliminate the production and use, import and export of POPs and their wastes	Based on data on production of POPs reported to Stockholm Convention by the Mediterranean countries, it can be observed that there is no current production of POPs in Mediterranean countries. In addition, data on total production, export, import and disposal of POPs reported to Stockholm Convention show that PCBs are the main POP waste either exported or disposed by the Countries.	
	Support, promotion and facilitation of programmes of assistance in pollution control and reduction in the area of scientific, technical and human resources	No data to evaluate this requirement	
	Support, promotion and facilitation of capacities to apply, develop and manage access of cleaner production technologies as well as Best Available Techniques (BAT) and Best Environmental Practices (BEP)	As data indicates, in the business-as-usual scenario, it is unlikely the current state of industrial processes will not achieve developing capacity on sustainable an innovative infrastructure including energy efficiency and applying cleaner technologies.	
	Provision of information to the public about bathing water quality and implemented management measures	Despite different bathing water quality calcification are applied across the region, countries mostly make the information publicly available. The bathing water profile are consistent on the Contracting Parties which are member state to EU and Israel, consistent profiles do exist in Turkey despite slightly different than EU methodology. Tunisia and Morocco have large number of stations monitoring the bathing water quality, different approach than EU, the bathing water quality seems to be slightly increasing from “good or satisfactory” levels.	
Legal and institutional	Monitor releases of mercury into water, air and soil in order to verify compliance with the requirements	More than two thirds of the Contracting Parties have in place, or work is in progress for consolidating monitoring plans for mercury. However, considering the Industrial Emission directive is in place for the EU countries, more vagarious efforts needs to be put in place for monitoring. Ratification of Minamata Convention may give s significant boost in terms of capacity building, monitoring.	






NAPs/PoMs Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
	Monitor bathing water quality	Vast majority of countries do monitor their bathing waters. Analysis of bathing water quality in the MED EU is thorough and complete, thanks to the reporting established under the European Bathing Water Directive. The bathing water legislation in Turkey is also harmonized, with EU Directive 2007/6/EC. Albania, Montenegro, Bosnia Herzegovina lacks consistent data for the trends indicating insufficient monitoring. Tunisia Israel, and Morocco do monitor the bathing water quality, the last two periodically publish the results of bathing water monitoring.	
	Prepare bathing water profiles or beach profiles	Contracting Parties which are member states of EU, provide bathing water profiles, regularly most of the time. Beach profiles except for Turkey (prepared only for 2014-2018) and Israel, are either under development or are inconsistent.	
Pollution prevention and control	Phase out discharges and emissions and losses of mercury, cadmium and lead	The heavy metal discharges show mixed terms; however, the releases are non in general declining trends, despite some countries do show decreasing trends. The data gaps especially in the south region is obvious. Data gaps can be closed with estimations for mostly air emissions.	
	Eliminate to the fullest possible extent pollution of the Mediterranean Sea caused by discharges, emissions and losses of zinc, copper and chrome	The heavy metal discharges show mixed terms; however, the releases are non in general declining trends, despite some countries do show decreasing trends. The data gaps especially in the south region is obvious. Data gaps can be closed with estimations for mostly air emissions.	
	Phase out to the fullest possible extent discharges, emissions and losses of organomercuric compounds and reduce those of organolead and organotin compounds	The data gaps especially in the south region is obvious. Data gaps can be closed with estimations for mostly air emissions.	
	Phase out inputs of PAHs	With regards to the trends of discharge of polyaromatic hydrocarbons, it is not possible to infer from the limited number of best available data the actual trends in their emissions.	
	Eliminate to the fullest possible extent pollution caused by discharges, emissions and losses of organohalogen compounds	Unfortunately, tracing the implementation of NAPs to phase out Organohalogen compounds were not possible due to the data gaps.	







NAPs/PoMs Requirements (Responses/Actions)	Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Eliminate to the fullest possible extent inputs of radioactive substances	Unfortunately, tracing the implementation of NAPs to eliminate radioactive substances were not possible due to the data gaps.	
Dispose all hazardous wastes in a safe and environmentally sound manner	The trends especially for the south countries indicate that generating the HW is higher than it is environmentally sound disposal, indicating an accumulation of HW in “temporary” storage facilities. It should be noted that the storage of industrial hazardous waste cannot be seen as a sustainable way of managing it. Identifying countries' available means and capacities for the treatment and disposal of hazardous waste is a critical and urgent step towards coping with the amounts of hazardous waste generated annually that accumulate in storage centers.	
Restore marine and coastal habitats that have been adversely affected by anthropogenic activities	No sufficient data for evaluate this requirement.	
Identify existing sites which have been historically contaminated with mercury	Under the MEDProgramme (GEF funded project) the contaminated sites are identified in 2019. Further studies are on the way for de-contamination work.	
Apply environmentally sound management measures to sites which have been historically contaminated with mercury	Under the MEDProgramme (GEF funded project) the contaminated sites are identified in 2019. Further studies are on the way for de-contamination work.	
Progressively reduce total releases of mercury (to air, water and to products) from existing Chlor alkali plants until their final cessation	To comply with this provision, urgent measures need to be adopted in countries where chloralkali plants are still operating (i.e. Algeria and Morocco).	
Identify stockpiles consisting of or containing POPs [deadline passed]	Under the MEDProgramme (GEF funded project) stockpiles of existing PCBs and POPs has been updated. In Algeria, Morocco, Tunisia and Lebanon. These stockpiles are being planned for disposal especially in Algeria and Lebanon.	








NAPs/PoMs Requirements (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
	Phase out inputs of the 9 pesticides and PCBs and reduce inputs of unwanted contaminants: hexachlorobenzene, dioxins and furans	The terms furans and dioxins are used to describe two groups of environmental pollutants: polychlorinated dibenzofurans (PCDF) and polychlorinated dibenzo-p-dioxins (PCDD). There is a huge gap in the south and east of the Mediterranean on their releases, hindering to have a conclusive evidence on their reduction performance.	
	Adopt the criteria and standards for bathing waters in the Mediterranean region based on Intestinal enterococci	Most of the contracting parties has built their water quality standards based on <i>e. coli</i> . In the the region still there is no regional standard accepted by the Contracting Parties for <i>Intestinal enterococci</i> except Contracting Parties which are also member state of EU.	

4.3 Status of Implementation of targeted NAP Measures/PoMs to achieve EO10 (Marine Litter) during the period 2015-2020

Table 5.3: Evaluation findings of legal, institutional and response measures under EO10 including future outlook







Requirements in NAPs/POMs (Responses/Actions)		Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Policy	Adopt preventive measures to minimize inputs of plastic in the marine environment	Efforts has been made by majority of the Contracting Parties which are starting to set policies for preventing plastic waste and marine litter. Most of the legislations are in place, especially in the Contracting Parties which are also member states to EU, as well as Israel and Turkey. However, enforcement seems to be problematic in southern countries coupled with slow transition to circular economy for the whole region.	
	Enforce measures to combat illegal dumping including littering on beaches and illegal sewage disposal in coastal zones and rivers	Uncontrolled dump sides still pose a threat to the environment in Mediterranean, especially the south countries, considering 54% of the MSW is deposited in open dump sides these includes Egypt and Lebanon, where the issue still needs further improvement, especially in the later. Unfortunately, the available data, complemented with estimations is indicating that for the southern the waste is normally discharged into open dumps, creating considerable negative impacts on the environment and human health. Although almost all south countries have some policies that dictate how waste should be managed, there are several factors that constrain the waste management system, such as missing or weak legislation and enforcement.	
	Seek direct cooperation with other Contracting Parties, with assistance of the MEDPOL or competent international and regional organizations, to address trans-boundary marine litter cases [As appropriate]	No data is available to measure the effect of this actions. Trans-boundary cooperation between Contracting Parties should be promoted to address trans-boundary marine litter cases.	
Legal and institutional	Report on the implementation of the National Marine Litter Monitoring Programme [On a biannual basis]	Contracting Parties continues to report the implementation of the Marine Litter Regional Plan in BCRS. However, the data is scarce and very limited. The situation is expected to improve, considering the development in NBB/PRTR Methodologies and especially in IMAP.	
	Design National Monitoring Programme on Marine Litter	The some of the Contracting Parties have developed National Monitoring Programmes on Marine Litter. The remaining Contracting Parties are developing/finalizing/adopting the National Monitoring Programmes on Marine Litter. However, the monitoring programme are not fully implemented, in some countries rather in design stage. Under IMAP, there has been a lot of efforts to support Contracting Parties on developing monitoring programmes on ML, however, implementing of these developed monitoring programmes would require significant funding and capacity building.	



Requirements in NAPs/POMs (Responses/Actions)	Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)	
Establish Regional Data Bank on Marine Litter	A fully fledged data regional data bank is nor established yet in the regions which will include all Contracting Parties to the Barcelona Convention. There are significant efforts to establish such data bank under IMAP		
Pollution prevention and control	By the year 2025 at latest, to base urban solid waste management on reduction at source, separate collection, recycling, composting and environmentally sound disposal in all cities and urban agglomerations exceeding 100.000 inhabitants and areas of concern		
	Reduction of fraction of plastic packaging waste that goes to landfill or incineration	Recent laws have been put in place to restrict plastic bags in some south Contracting Parties, as well as for broader single-use plastics in the Contracting Parties, which are also EU member states. The fraction of plastics in the municipal solid waste generated varies widely between Contracting Parties which are also EU member states, and the data shows an increase in plastic packaging waste in recent years. No trends for south and Balkans & Turkey are possible although we can infer that plastic waste generation increased with higher municipal solid waste generated generation. It should be noted that the Mediterranean region is taking a step to ban single use plastic or introduce economic mechanisms to reduce their usage, for instance, by introducing a price for plastic bags.	
	Ensuring adequate urban sewer systems, WWTP and waste management systems to prevent run-off and riverine inputs of Marine Litter	Wastewater and waste collection system are in place in vast majority of the Contracting Parties in big urban agglomeration. However, in some countries it is failing to accommodate the ever-growing population and urban sprawl. Collection and treatment in rural agglomerations continues to be a problem. leading to a accumulation of unregulated dumpsites which are obvious leakage points for marine litter entries to the marine system	
	Application of cost-effective measures to prevent any marine littering from dredging activities	Most of the Contracting Parties, does not have any specific regulation to avoid marine litter from dredging activities. There are only couple of Contracting Parties who established monitoring of the marine litter during dredging operations. The issue is handled by ad-hoc decisions making mostly for macro-litter which are found in the dredged materials by dredgers. MEDPOL has developing best practices on establishing coherent monitoring for dredging and disposal operation of the dredged material.	
	Implement programmes on regular removal and sound disposal of accumulations/hotspots of marine litter	No data to evaluate.	

Requirements in NAPs/POMs (Responses/Actions)	Effect of the Response/Actions on <u>Decrease on “Pressures” or/and Improvement on the “State”</u> (2015-2020)	Outlook (2020-2025)
Close to the extent possible existing illegal solid waste dump sites	Despite all efforts, the closure of existing illegal dumping sites are not going as expected in the south and east region. There are improvements in Israel, however, in the south and eastern countries the data indicates that still substantive amount of collected waste is not disposed in sanitary conditions, meaning they are dumped illegally. Although data on uncontrolled dumpsites are very limited in EU, there is evidence on breaches to Landfill Directive by Italy, Greece, Slovenia, and Spain. In Balkans & Turkey, for example, Bosnia and Herzegovina need to align with the EU Landfill Directive by closing or rehabilitating non-compliant landfills.	
Remove existing accumulated litter from Specially Protected Areas of Mediterranean Importance (SPAMI) and litter impacting endangered species	No data to evaluate	
Control of impacts of litter on marine life to the maximum extent practicable	No clear data to evaluate this response/action. In Europe, there are sizeable gaps in the data on litter on the seabed, in the surface layer and water column, micro-litter and effects on marine species (especially entanglement). The MSFD is tackling the urgent need to coordinate monitoring methodologies at national, regional and EU levels.	
Explore and implement National Marine Litter Cleanup Campaigns; participate in International Coastal Cleanup Campaigns and Programmes; apply “Adopt-a-Beach” or similar practices; and apply “Fishing for Litter” practices	Marine Litter Cleanup Campaigns are being implemented in all Contracting Parties. The countries, supported by UNEP/MAP, have also explored and implemented fishing-for-litter schemes, as well as improved port reception facilities, including the application of charges at reasonable costs and no-special-fee systems. In addition, five Mediterranean countries have joined the CleanSeas campaign. Policy action by sub-national authorities, industry-based solutions and large-scale green economy initiatives support the transition towards a more sustainable economy, promoting the transfer of environmentally-sound technologies to industry, policy changes and incentives to enable the circular economy, providing innovative and long-term solutions. Public participation in issues related to marine litter management is quite widespread in all Contracting Parties.	
Urban solid waste management is based on reduction at source with the following waste hierarchy: prevention, re-use, recycling, recovery, and environmentally sound disposal	Contracting Parties are trying to implement specific measures to prevent marine litter from reaching the Mediterranean marine environment such as separating sewage and storm water networks, constructing traps to prevent riverine inputs of marine litter. Also common is the establishment of institutional structures needed to prevent marine litter and developing policies and strategies for reducing marine litter, such as recycling schemes, EPR, etc.	
By the year 2025 at latest, to base urban solid waste management on reduction at source, separate collection, recycling, composting and environmentally sound disposal	This measure is far from being achieved in almost half of the Contracting Parties. Recycling and composting are symbolic and presenting actual room for improvement, while landfilling and illegal dumping are still the major waste management alternatives in several Mediterranean countries.	
Properties and quantities of marine litter do not cause harm to the coastal and marine environment: <input type="checkbox"/> Characteristics of litter in the marine and coastal environment <input type="checkbox"/> Impacts of litter on marine life	The presence of litter has been confirmed in all compartments of the marine environment (shoreline, water column and seafloor). Plastic items are the most abundant component of marine litter. Single-use plastics represent 50% of all European beach litter items by count, and fishing gear containing plastics accounts for another 27%. Ingestion of plastic by marine species is also widespread in the European seas: 85% of the turtles assessed in the Mediterranean Sea had ingested litter.	

4.4 Status of Implementation of NAP Measures/PoMs regarding monitoring and reporting as well as public awareness, access to information and public participation during the period 2015-2020

Table 5.4: Key requirements for Monitoring and Reporting, public awareness, access to information and public participation





Requirements in the NAP/POMs (Responses/Actions)		Based on the BCRS Reports	Outlook (2020-2025)
Public Participation Policy	Facilitation of public access to scientific knowledge and activities for protection and management of the environment Facilitation of public access to scientific knowledge and activities for protection and management of the environment	No significant data available to yield to conclusive evaluations	
	Mobilization, participation and involvement of major actors concerned in protection and management of the environment (local and provincial communities, economic and social groups, consumers, etc.)	No significant data available to yield to conclusive evaluations. majority of Contracting Parties has the public participation principle in their legislations.	
Monitoring and reporting	Establish a monitoring programme of the inputs of priority pollutants identified in the SAP- MED and of the quality of the marine environment	Significant efforts have been made to improve IMAP, NBB and overall BCRS. The BCRS reporting modules are clustered as follows: <ul style="list-style-type: none"> • BCRS Reporting; • IMAP Pilot Reporting; • InfoMAPNode • MEDPOL Info System • NBB Reporting 	
	Establish systems of inspection to ensure compliance with conditions laid down in the authorizations and regulations	No significant data available to yield to conclusive evaluations. However, low inspections and enforcement in the region imply that such system is still not in place effectively.	
	Establish a permanent river water quality/quantity register	No significant data available to yield to conclusive evaluations	
Monitoring	Publish a report on the State and Evolution of the Mediterranean Environment [on a regular interval]	The state of reports is regularly published. Recent reports relays more and more in the data collected/report to the Barcelona Convection under several reporting obligations. Mainly, NBB and IMAP. The data is also streamlined with other regional and global requirements, such as (e) PRTR, and MSFD, WFD etc., increasing the comparability of the data.	

Requirements in the NAP/POMs (Responses/Actions)		Based on the BCRS Reports	Outlook (2020-2025)
	Application of a unified reporting system for implementing the provisions of the Barcelona Convention, the Protocols, the SAP- MED, the Regional Plans and ECAP objectives	Several data dictionaries and measurement protocols are under development. This is paving a strong way to unification of reporting formats. Also, the reporting system BCRS is being streamlined with other Reporting Obligations.	
Public access to information	Provide to the public access to information available on the state of the environment of the Mediterranean and its evolution, and of the measures taken to improve it	The reports are publicly accessible in different languages making them accessible to the public. and all meeting and thematic report are publicly assessable in accordance with UN rules and procedures at https://www.unep.org/uneppmap/meetings and for data at http://www.info-rac.org/en/infomap-system/bcrs-reporting	

5. GAPS AND CONCLUSIONS

19. Based on the evidence collected from available data and published information, it can be concluded that, in general, progress is being made towards the implementation of the requirements of the NAPs/POMs. In recent years, the ambitions for tackling pollution have taken greater priority on the national, regional and global political agenda. However, it can be concluded that the implementation of NAPs will require significant efforts not only by national actors, but also by streamlined assistance and financial and technical support from international institutions.




20. The criteria for evaluating the future outlook of the operational targets are as follows:


<i>Based on the available data, cumulative progress towards the Operational Target (from regional perspective) is in line.</i>	
<i>Based on the available data, cumulative progress towards the Operational Target (from regional perspective) is not in line</i>	
<i>Based on the available data, cumulative progress towards the Operational Target (from regional perspective) will need further attention.</i>	
<i>No sufficient data</i>	

Achievements of the operational targets under EO5

21. Based on the evaluation findings included in Table 5.1 for the legal, institutional and prevention measures under EO5, Table 6.1 provides the outlook for the achievement of the related NAP operational targets.

Table 6.1: Future outlook for achievement of NAP operational targets under EO5

<i>NAP Operational Targets under EO5 and findings</i>	<i>Approximation to target Can the targets be achieved?</i>
<p><i>Provide XX% population with connection to sewage networks [2015 to 2025]</i></p> <p>Connection to sanitation is raising in the regions and improving over time. The main challenge is continuing the investment to cope with ever increasing population needs in some countries. Where some countries are on track to increase the access of population to sanitations, some others are struggling to cope with this persistent pressure.</p>	
<p><i>Provide XX% of agglomerations in excess of 2000 inhabitants with wastewater collection and treatment [2019 to 2025]</i></p> <p>Collection and treatment of municipal wastewater is generally on the rise, as is wastewater generated as a result of the steady increase in population in the region. However, this rise is mostly in large agglomerations. For small agglomerations, especially in rural areas, the collection of wastewaters is still a major problem for some countries. The issue of tertiary treatment is lagging behind which is also affecting the releases of TN and TP as well as some heavy metals.</p>	
<p><i>Reduce by XX% of BOD discharged to water bodies [2018 to 2021]</i></p> <p>Almost all of the Contracting Parties have legislation in place regulating setting ELVs for urban wastewater in line with NAPs and Regional Plans to reduce BOD. The process is on good track. The regional plans on Management of Municipal Wastewater Plants is establishing new targets and commitments which is expected to serve as catalytic effect to boost approximation to the target. A special focus on investment in</p>	

NAP Operational Targets under EO5 and findings	Approximation to target Can the targets be achieved?
upgrade/construction of new UWWTPs the region is needed as well to decouple this catalytic effect.	
<p><i>Reduce by XX% nutrient input from agricultural activities discharged to water bodies [2019 to 2020]</i></p> <p>Insufficient data to evaluate the approximation to the target.</p>	


22. Further to the conclusions presented per Operational Target, the following general conclusions are reached:





- a. Despite the data gaps, which are blurring the picture of having a precise evaluation of the implementation of measures in the NAPs, the pressures on the upstream, collection and treatment of municipal waste water as well as heavy metals in releases from industrial production processes, growing population, fluctuations from tourism, are increasing. Tertiary wastewater treatment is lagging behind in Mediterranean.
- b. In some countries, most of the generated wastewater is still discharged untreated or insufficiently treated to the Mediterranean, despite the measures in the agreed NAPs/POMs.
- c. It seems that generally large cities are collecting and treating (treatment varies) their own wastewater reducing pressures from bigger agglomerations, at least the data indicates an increase. However, growth of the coastal population is pressurizing the infrastructure.
- d. Eutrophication hotspots in the Mediterranean have not changed drastically in the past 5 years.
- e. Legal framework is largely in place on the national level; however, institutional capacity is relatively low.
- f. Application of BAT/BEP is still a dominant challenge in some of the countries. This means that preventive measures need a significant push to reach the Operational Objectives set.
- g. Monitoring and pollutant inventory efforts are clearly increasing overall. However, the issues still remain regarding data quality and credibility of the data.

Achievements of the operational targets under EO9

23. Based on the evaluation findings included in Table 5.2 for the legal, institutional and prevention measures under EO9, Table 6.2 provides the outlook for the achievement of the related NAP operational targets.

Table 6.2: Future outlook for achievement of NAP operational targets under EO9

NAP Operational Targets under EO9 and findings	Approximation to target Can the targets be achieved?
<p><i>Phase out/reduce/control quantities or concentrations of POPs (PCBs, pesticides) by 2025</i></p> <p>Despite the lack of consistent trends leading to a comprehensive evidence on the releases of POPs from industrial processes, there is high commitment and tremendous efforts on removing the PCBs in the region. Therefore, the increase of the removal of PCBs is expected be achieved. There are several initiatives, most notable the MEDProgramme, which is making significant contribution to achieve this target.</p>	

NAP Operational Targets under EO9 and findings	Approximation to target Can the targets be achieved?
<p><i>Phase out/reduce discharges of PAHs by 2025</i></p> <p>The data, as indicated in this report, is not coherent and consistent enough to make a conclusive evaluation. However, the Contracting Parties are taking necessary legal measures to control the discharges of PAH.</p>	
<p><i>Reduce discharges of hazardous substances from industrial plants (apply BAT/BEP) by XX% or disposal in safe manner (2020-2025)</i></p> <p>The introduction of BAT/BEP processes are missing in most of the south and east countries with couple of exceptions. CP which are also EU member states already introduced BAT/BEP in their industrial processes, due to the Industrial Emission Directive. On the other hand, disposal of hazardous waste is still big challenge, limited data indicates that the HW is mostly temporary stored, rather than environmental sound disposal.</p>	
<p><i>Reduce discharges of heavy metals (mercury, cadmium, lead, zinc, copper, chromium) by XX% (2019-2025)</i></p> <p>Slight decreasing trends in the discharges of heavy metals has been observed, but more visible in EU Member states, in the regions, despite varying figures from country to country. An expected success could be catalyzed by investing more on the target of BAT/BEPs, which may in turn accelerate more prominent downfall. The issue of tertiary treatment is far lagging behind in the region, which is also affecting the releases of TN and TP as well as some heavy metals.</p>	
<p><i>Decontaminate XX% of sites polluted with mercury or phase out/isolate mercury from closed plants by 2025</i></p> <p>Decontamination is expected to progress towards upward trend via GEF Funded Metaprogramme II project implemented by UNEP/MAP. The increasing number of signatures of Minamata Conventions is expected to have a catalytic effect towards achievement of this target.</p>	

24. Further to the conclusions presented per Operational Target, the following general conclusions are reached:






- a. The releases of toxic substances, despite a slight decline, are not conclusive enough to yield to a consistent trend. In several Contracting Parties, a decrease is visible on heavy metals and some PCDD, PCDFs, PAHs and VOC.
- b. The achievement of NAPs Operational Targets will need a significant push in terms of enforcement, especially in industrial sectors. However, the public sector institutional capacity would need to be flexible and supportive enough to enable this advance to happen.
- c. The reports still confirm some problematic pollutants in sediments. Despite the scarce data, heavy metals in sediments such as lead and total mercury are problematic (although localized in their impacts). Either the legacy of the past, or due to continuation of heavy metal releases, the improvement in sediments should not be expected immediately. Consequently, focus should be placed on reduction of heavy metals, especially from industrial discharges.
- d. Despite a general improvement with most bathing sites being classified as sufficient/good or excellent and upward trends in countries that have reported under H2020, poor bathing water quality sites due to pollution from domestic and industrial effluents still require attention in view of measures to be taken



- e. The enforcement measures remain to be a major problem. There are obstacles of weak institutional structures, a lack of competences and skilled enforcement officers, and a limited number of personnel.

Achievements of the operational targets under EO10

25. Based on the evaluation findings included in Table 5.3 for the legal, institutional and prevention measures under EO10, Table 6.3 provides the outlook for the achievement of the related NAP operational targets.

Table 6.3: Future outlook for achievement of NAP operational targets under EO10

NAP Operational Targets under EO10 and findings	Approximation to target Can the targets be achieved?
<p><i>Provide for the collection of XX% of solid waste (2015 to 2025)</i></p> <p>Despite the collection rates are increasing in majority of the countries, especially in the big cities, the rural areas are not in good track. Also, collecting the municipal solid waste does not means that it will be disposed in regulated landfills. It seems that still around half of the collected MSW is dumped in other places than regulated landfills</p>	
<p><i>Construct XX number of Municipal solid waste landfills (2015-2025)</i></p> <p>The construction of regulated landfills are planned, as per information in the NBB Report presented (Lebanon, Egypt, Tunisia, Montenegro and Morocco), however, the data indicates that there is still not enough number of regular landfills serving the need of the population in some countries.</p>	
<p><i>Adopt good practices in solid waste management including waste reduction, sorting, recycling recovery and reuse (2020-2025)</i></p> <p>Majority of the Contracting Parties which are starting to set policies for preventing plastic waste and marine litter. Most of the legislations are in place, especially in the Contracting Parties which are also member states to EU, as well as Israel and Turkey. Recycling and reuse is not very prominent, or at least, the data is limited in most countries. Also, enforcement seems to be problematic in southern countries coupled with slow transition to circular economy for the whole region. For instance, Morocco, Israel, and Montenegro indicated that they have mandatory targets for recycling.</p>	
<p><i>Regulate/reduce usage/discharges of XX% of fraction of plastics (2015-2025)</i></p> <p>The fraction of plastics in the municipal solid waste generated varies widely between Contracting Parties which are also EU member states, and the data shows an increase in plastic packaging waste in recent years. No conclusive trends for south and east are possible, although we can infer that plastic waste generation increased in general since, there is evidence that the organic fractions in most of the sough countries decreased in the expense of increasing the plastic fraction. It should be note that the region is taking big step to ban single use plastic, or at least include economic incentives to reduce it.</p>	
<p><i>Close/remediate XX% of illegal solid waste dump sides (2015-2020)</i></p> <p>There is no data for rehabilitation of open dumpsite, meaning closing of illegal dump sites. But due to the economic conditions of the countries, it seems that this target would not be attained, unless significant investment is channeled. Only Egypt, Morocco, and Montenegro indicated that they have plans to close the illegal dumpsites by 2030.</p>	

NAP Operational Targets under EO10 and findings	Approximation to target Can the targets be achieved?
<p>Reduce XX% of <i>disposed</i> marine litter on beaches/sea (2015-2025)</p> <p>The marine litter in the beaches are increasing in particular areas, stimulated by above mentioned factors such as insufficient number of regulated dump side, significantly insufficient collection rates in the rural etc. as well as slow but steady increase of the plastic fraction of the municipal solid waste stimulated by, but not only, changing the consumption patterns. Majority of the Contracting parties who developed NAPs, indicated that they do not have even an national assessment for marine litter and its impacts.</p>	
<p>Prevent riverine run-off of marine litter to the sea by XX% (2019-2020)</p> <p>The data, as indicated in this report, is not coherent and consistent enough to make a conclusive evaluation for the progress of reduction of run-off inputs from riverine pathway.</p>	

26. Further to the conclusions presented per Operational Target, the following general conclusions are reached:

- a. There is a need for construction of solid waste treatment plants, i.e., sanitary landfills. It is obvious that despite the legal framework as stipulated by the NAPs/POMs, waste collection rates in rural areas are low. These gaps are causing significant leakage points for marine litter.
- b. Large urban agglomerations are better off with collection of waste than small agglomerations.
- c. Only few countries succeed in reaching full waste collection coverage, which remains difficult especially in rural areas, where waste is usually illegally dumped or burned. The picture is particularly poor in suburbs and in slums, where a sizable share of the population lives and where waste collection services are very limited.
- d. Plastics are gaining prevalence in the waste composition, in certain Counteracting Parties recycling is higher, but not sufficient.
- e. Vast majority of the waste collected ends up in unregulated dumpsites, in several countries.
- f. Banning of single use plastics is gaining accelerations, which is promising, considering the floating litter is mostly consistent of single use plastics.
- g. There is a need to significantly increase regional efforts to manage the waste, in accordance with waste hierarchy aiming more on reduction or banning single use plastics.
- h. There is a need to focus more on reducing or containing the entry points of marine litter, these are closing the illegal dumpsites, and most importantly constructing new regulated landfills.

27. With regards to the enabling conditions rendered by monitoring and reporting, public awareness, access to information, the following conclusions are reached:

- a. There is an improvement of established infrastructure enabling public access to information especially at regional level.
- b. There have been tremendous efforts to put in place a coherent, resilient and responsive marine pollution monitoring.
- c. Despite significant improvements in the past 5 years, the lack of sufficient monitoring is still hindering clearer, data-based assessments which could guide the policy makers in more efficient way to adapt and modify their policies in shorter times in more cost

ANNEX I
References

- Commission Staff Working Document – Key stages and progress up to 2019 – Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) {COM(2020) 259 final} - {COM(2020) 61 final}- {COM(2020) 62 final}
- Commission Staff Working Document – Review of the status of the marine environment in the EU – Towards clean, healthy and productive oceans and seas - Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) {COM(2020) 259 final} - {SWD(2020) 60 final} - {SWD(2020) 62 final} <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0061&qid=1616256158587>
- EEA The European environment —state and outlook 2020 - Knowledge for transition to a sustainable Europe
- Fourth Cycle of NBB Reports (2018-2019): Turkey, Israel, Lebanon, Albania, Egypt, Morocco, Tunisia, Montenegro, Algeria, Bosnia and Herzegovina.
- HEAT+ classification: The HELCOM Eutrophication Assessment Tool (Developed for the pan-European assessment) <https://www.eea.europa.eu/data-and-maps/data/heat-eutrophication-assessment-tool>
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0060>
- Joint EEA-UNEP/MAP Report, No 07/2020 ‘Towards a cleaner Mediterranean: a decade of progress Monitoring Horizon 2020 regional initiative’
<https://www.eea.europa.eu/publications/towards-a-cleaner-mediterranean>
[OCEANCOLOUR_MED_CHL_L4_REP_OBSERVATIONS_009_078](https://resources.marine.copernicus.eu/?option=com_csw&view=details&product_id=OCEANCOLOUR_MED_CHL_L4_REP_OBSERVATIONS_009_078)
https://resources.marine.copernicus.eu/?option=com_csw&view=details&product_id=OCEANCOLOUR_MED_CHL_L4_REP_OBSERVATIONS_009_078
- OECD Environmental Indicators Development, Measurement and Use, OECD, 2003.
- Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC), {SWD(2020) 60 final} - {SWD (2020) 61 final} - {SWD(2020) 62 final} 62final} https://ec.europa.eu/info/sites/info/files/com2020_259_final_en.pdf
- Report from the Commission to the European Parliament and the Council assessing Member States’ programmes of measures under the Marine Strategy Framework Directive {SWD(2018) 393 final} <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:562:FIN&qid=1533034580736>
- Report of the Meeting: 2nd ENI SEIS II Workshop on Indicators, 17-18 April 2018. <https://eni-seis.eionet.europa.eu/south>
- Technical assessment of progress towards a cleaner Mediterranean - Monitoring and reporting results for Horizon 2020 regional initiative - Joint EEA-UNEP/MAP Report
https://www.eea.europa.eu/publications/technical-assessment-of-progress-towards?utm_source=EEASubscriptions&utm_medium=RSSFeeds&utm_campaign=Generic
- UNEP(DEPI)/MED IG.23/09/Rev.2 Draft Decision IG.23/6: 2017 Mediterranean Quality Status Report https://www.unep.org/unepmap/meetings/search-meeting-documents?%2Fmeetings%2Fsearch-meeting-documents=&combine=&field_meeting_body_target_id%5B753%5D=753&combine_1=&field_location_place_value=&field_year_value=&page=3
- UNEP/MAP (2015). Guidelines for updating National Action Plans for the implementation of the LBS Protocol and its Regional Plans in the framework of SAP MED to achieve Good

Environmental Status for pollution related ECAP ecological objectives (UNEP(DEPI)/MED WG.404/7).

UNEP/MAP. (2017). *Mediterranean 2017 Quality Status Report (QSR 2017)*. UNEP/MAP.

<https://www.medqsr.org/>

UNEP/MAP. Evaluation Report on the Implementation of the Regional Plans for Reduction of BOD5 from Urban Wastewater and in the Food Sector; Reduction of Inputs of Mercury; Eliminations of POPs; and Marine Litter Management in the Mediterranean, Naples, Italy, 2-5 December 2019

UNEP/MAP. State of the Environment and Development in the Mediterranean (2020)

[https://planbleu.org/en/soed-2020-state-of-environment-and-development-in Mediterranean/](https://planbleu.org/en/soed-2020-state-of-environment-and-development-in-Mediterranean/)

UNEP/MED IG.24/Inf.08 General Status of the Progress in the Implementation of the Barcelona Convention and its Protocols: Synthesis of the Information Mentioned in the National Implementation Reports for the 2016-2017 Biennium (updated),

http://stg.unenvironment.org/unepmap/meetings/search-meeting-documents?%2Fmeetings%2Fsearch-meeting-documents=&combine=&combine_1=&field_location_place_value=&field_year_value=&page=2

UNEP/MED IG.24/Inf.15 Evaluation Report on the Implementation of the Regional Plans for Reduction of BOD5 from Urban Wastewater and in the Food Sector; Reduction of Inputs of Mercury; Eliminations of POPs; and Marine Litter Management in the Mediterranean

http://stg.unenvironment.org/unepmap/meetings/search-meeting-documents?%2Fmeetings%2Fsearch-meeting-documents=&combine=&combine_1=&field_location_place_value=&field_year_value=&page=2