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First Regional Meeting of Experts on the Six Pollution Reduction Regional Plans

Athens, Greece, 20-21 November 2018

**Agenda item 4: Elements for the Preparation of the Six Pollution Reduction Regional Plans**

**Main Elements of the Six Regional Plans (First Draft)**

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UNEP/MAP  
Athens, 2018

### Note by the Secretariat

1. The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol) provides for the Contracting Parties to take all appropriate measures to prevent, abate, combat and eliminate to the fullest possible extent pollution of the Mediterranean Sea Area caused by discharges from rivers, coastal establishments or outfalls, or emanating from any other land-based sources and activities within their territories.

2. To comply with this requirement, the Contracting Parties, in line with Article 15 of the LBS Protocol, after the entry into force of its 1996 amendments, adopted since 2009 ten legally-binding Regional Plans addressing mercury, BOD5 from urban wastewater as well as from the food sector, POPs and marine litter. The list of the adopted Regional Plans in 2009, 2012 and 2013 is included in document UNEP/MED WG.454/Inf.3.

3. Since 2008, the MAP Barcelona Convention system committed to implement the ecosystem approach with the overall objective of achieving and/or maintaining Good Environmental Status (GES). To this aim, eleven Ecological Objectives and related GES and targets were adopted in 2012 and 2013, four out of which address contaminants, eutrophication, marine litter and noise.

4. In 2015, the Contracting Parties prepared updated National Action Plans (NAPs)/Programmes of Measures to address pollution control and prevention and achieve or maintain the GES and related targets with regards to pollution and litter, in the framework of the SAP MED. The NAPs/Programmes of Measures were endorsed by Decision IG.22/8 of COP 19 (Athens, Greece, February 2016).

5. With the view to advancing the work of UN Environment/MAP and the Contracting Parties related to combating marine pollution; achieving and/or maintaining GES; contributing to SDGs; and fostering and leading the regional cooperation in the Mediterranean, COP 20 (Tirana, Albania, December 2017) gave a new mandate to the Secretariat for the development of the main elements of six new/updated Pollution Reduction Regional Plans (hereinafter referred to as the Regional Plans), specifying the respective categories of the sectors to be addressed:

- a) Municipal Wastewater Treatment;
- b) Sewage Sludge Management;
- c) Agriculture Nutrients Management;
- d) Aquaculture Nutrients Management;
- e) Urban Storm Water Management; and
- f) Marine Litter

6. The 85<sup>th</sup> Meeting of the Bureau of the Contracting Parties held in Athens, Greece in April, 2018, stated that “The Bureau requests the Secretariat to consider upstream pollution prevention measures on a priority basis for the development of the main elements of the 6 Regional Plans to reduce/prevent marine pollution from land based sources and invites the Contracting Parties to fully participate and contribute to this important process. To this aim, the Bureau requests the Coordinating Unit to invite MED POL Thematic Focal Points to designate experts for the participation in the two meetings to be held in 2018-2019 and to follow-up the drafting process.”

7. The objective of the First Regional Meeting of Experts on the Six Pollution Reduction Regional Plans (herein after referred to as the Regional Meeting of Experts) is to undertake a first discussion among the Contracting Parties on the possible main elements/ outline of the Regional Plans as well as the approach for their identification, including an appropriate timeline of actions until 2025. To this aim, the Secretariat (MED POL Programme) has prepared a “Background Document” (UNEP/MED WG.454/Inf.3). The latter document undertakes a brief analysis of the measures provided for under the existing Regional Plans against the six new categories decided by the COP 20, and their potential new elements with the view to facing the challenges of additional and new pressures in the region affecting marine and coastal environment and further supporting the achievement and/or maintaining of GES.

8. The “Background Document” (UNEP/MED WG.454/Inf.3) served as the initial point of discussions held during an Expert Meeting held on 4-5 September in Athens, Greece, at the premises of the MAP Coordinating Unit, which involved experts nominated by the Contracting Parties and regional experts in the field.

9. Following the outcome of this expert meeting, the Secretariat prepared the present document to serve as the main working document of the present Regional Meeting of Experts.

10. While preparing the present document, the Secretariat took into account the previous analysis reports and respective assessments (UNEP/MED WG.454/Inf.4) including the 2017 MED QSR; the outcome of the Expert Meeting held in September 2018 in Athens, Greece; as well as the following elements:

- a. National and Regional priorities as outlined in the NAPs/ Programmes of Measures and relevant Decisions of the Contracting Parties: focus on achieving and maintaining GES;
- b. The global work and developments on pollution (UNEA3 Resolutions adopted by the Member States at the third UN Environment Assembly in December 2017) including on plastics and microplastics;
- c. The ongoing evaluation processes of the status of the implementation of the Regional Plans and the LBS Protocol (Contracting Parties’ reports are expected on this matter by end of December 2018);
- d. The need to use a combined approach to build the Regional Plans’ measures around sectors rather than individual pollutants, as it was the case so far;
- e. Possible options of the relationship between the existing Regional Plans and the new/updated Regional Plans and relevant Regional Guidelines adopted by the Contracting Parties, particularly in the past 10 years;
- f. The need for a realistic timeframe for the development of Regional Plans and their implementation that should contribute to the achievement the GES as decided by the Contracting Parties and the 2030 SDG targets;
- g. Multiple benefits derived from preventing and managing marine pollution, including socio economic aspects and circular economy;
- h. The need for cross-cutting actions across the pollution dimension, including actions on climate change, and economic instruments/ cost benefit approaches; and
- i. Partnerships and collaboration.

11. The timeframe for development and adoption of the six Regional Plans will follow a set timeline progressing along a process of assessment, identification of measures, development of the Regional Plans and their negotiation by the Contracting Parties through technical meetings and adoption that may well extend until 2025 (Section 8 of the present document describes possible options and scenarios for timeline preparations of the Regional Plans).

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## **List of Abbreviations/Acronyms**

<b>BAT</b>	Best Available Technique
<b>BEP</b>	Best Environmental Practice
<b>BOD5</b>	Biochemical Oxygen Demand
<b>COP</b>	Conference of the Parties
<b>ELV</b>	Emission Limit Value
<b>GES</b>	Good Environmental Status
<b>LBS Protocol</b>	Land-Based Sources Protocol
<b>MAP</b>	Mediterranean Action Plan
<b>MED POL</b>	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
<b>NAPs</b>	National Action Plans
<b>PoW</b>	Programme of Work
<b>SCP</b>	Sustainable Consumption and Production
<b>WWTP</b>	Wastewater Treatment Plant

## 1. Outline of the Elements of the six Regional Plans

12. Based on the approach already in place for the development of the 10 existing Regional Plans, the table of contents and provisions for the six Regional Plans may replicate the same outline, as follows:

- a. Definition of terms
- b. Scope and objectives of the Regional Plan
- c. Proposed measures including:
  - i. Regulatory measures (including where appropriate economic incentives):
  - ii. Technical measures (including efficient use of resources and energy): and
  - iii. Other type of measures (including monitoring, reporting and enforcement).
- d. Timetable for implementation of measures
- e. Support to implementation which may include:
  - i. Technical assistance;
  - ii. Scientific cooperation and research;
  - iii. Guidelines; and
  - iv. Stakeholders participation.
- f. Entry into force
- g. Annexes including:
  - i. Reporting templates (linkage to Barcelona Convention Reporting System and NAP Follow-up Indicators); and
  - ii. Other technical matters.

13. With regards to the geographical scope of the Regional Plans and taking into consideration that the legal basis for their development is the LBS Protocol (Art. 5 and 15), the geographical extent of the Regional Plans will apply to the area defined by Article 3 of the LBS Protocol, namely:

- a. The Mediterranean Sea Area as defined in Article 1 of the Convention;
- b. The hydrologic basin of the Mediterranean Sea Area;
- c. Waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case of watercourses, up to the freshwater limit;
- d. Brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.

## 2. Possible Elements of the Regional Plan on Municipal Wastewater Treatment

14. The existing Regional Plan on the Reduction of BOD<sub>5</sub> from Urban Wastewater may be expanded in scope/ upgraded in view of integrating the newly identified measures related to municipal wastewater treatment needed to ensure the achievement and/or maintaining of GES and addressing additional pressures and new elements, such as multiple benefits approach and stricter standards.

15. The upgraded Regional Plan should address priority substances identified in Annex I-C of the LBS Protocol (Categories of substances) with a particular focus on the list of priority substances, indicated in Annex I to the Decision IG. 21/3 adopted by COP 18 (Istanbul, Turkey, December 2013).

16. The proposed measures may include:

- a. Reclaim nutrients and other substances;
- b. Reuse/recycle treated wastewater to address regional water scarcity (e.g. aquifer recharge);
- c. Ensure energy saving or renewable/ alternative energy sources in operating wastewater treatment plants (WWTP);
- d. Reuse treated municipal wastewater in agriculture;
- e. Set Emission Limit Values (ELVs) for COD, TN, TP and other priority substances/contaminants, as need be;
- f. Set pre-treatment ELVs for industries to discharge their effluents to collection systems that can be treated in municipal wastewater treatment plants;

- g. Apply BAT and BEP; and
- h. Set timeframe(s) for implementation of technologies to reach ELVs (BOD, COD, TN, TP and other priority substances as appropriate).

17. Support to measures' implementation:

- a. Guidance to national/regional authorities on special permits defining characteristics of wastewater for pre-treatment or full treatment for industrial facilities;
- b. Guidance and standards on the application of BAT and BEP that support reduced cost of energy and water saving;
- c. Technical Guidance on secondary/tertiary treatment of municipal wastewater; and
- d. Technical Guidance for disinfection of wastewater for reuse in irrigation.

18. In preparation for the development of this Regional Plan, the following assessments may be undertaken:

- a. Assessment of level of treatment of major agglomerations of the Mediterranean, including wastewater characterization;
- b. Assessment of the state of play of existing WWTP in major agglomerations; and
- c. Assessment of the situation regarding nutrients limitations in the sea for ELV planning.

### **3. Possible Elements of the Regional Plan on Sewage Sludge Management**

19. The proposed measures may include:

- a. Reduce inflows of heavy metals and persistent organic pollutants in the collection system, taking into consideration discharges from urban centers, discharges from run-off rainwater into combined collection system, and discharges of industrial centers connected to municipal wastewater;
- b. Minimize landfilling as a method of sludge disposal; limit only in cases where land spreading, or other methods of recycling is not feasible, and where there is no incineration capacity available at or near the site;
- c. Apply stabilized sludge as fertilizers or soil conditioner, where appropriate;
- d. Set ELVs for contaminants found in sludge for various applications;
- e. Provide for measures addressing the whole chain of the sludge treatment, including dewatering, stabilization, microbiological disinfection, and energy recovery;
- f. Provide for enforcement measures;
- g. Ensure temporary/permanent storage for sludge; and
- h. Provide for alternative uses and disposal of sludge.

20. Support to measures' implementation:

- a. provide guidance on all aspects of sludge management including pre-treatment, type of treatment, level of treatment, sludge treatment, sludge disposal, treatment technologies for secondary treatment for nitrogen and phosphorus removal, etc.

21. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of existing sludge treatment and disposal facilities in municipal wastewater treatment facilities in major agglomerations around the Mediterranean.

### **4. Possible Elements of the Regional Plan on Agriculture Nutrients Management**

22. The proposed measures may include:

- a. Minimize/ prevent agricultural runoff, which can include the following measures:
  - i. Ensure efficient irrigation systems;
  - ii. Irrigation requirements depending on type of plants, land surface, geomorphology and climate;

- iii. Apply irrigation BAT (drip irrigation, humidity sensors); and
  - iv. Apply buffer zones and irrigation depending on cultivation patterns (to minimize runoff impacts on water bodies).
- b. Fertilizers management, which may include the following measures:
- i. Apply optimal amounts of fertilizers depending on type of plants, nitrogen needs, soil properties, quality and quantity of irrigation water, and climate conditions;
  - ii. Apply fertilizers-use restrictions near water bodies, or seasonal bans;
  - iii. Set requirements for proper storage of fertilizers (addressing distance from water bodies, packaging, waterproof storages, etc.);
  - iv. Enforce the maintenance of records of purchases by farmers of fertilizers;
  - v. Apply catch crops/ nitrogen fixing crops under specific conditions; and
  - vi. Apply organic farming under specific conditions.
- c. Pesticides management, which may include the following measures:
- i. Provide for training of farmers on pesticides labelling instructions and when/ how to apply pesticides in line with good agricultural practices (GAP);
  - ii. Provide for marketing and sale of pesticides to professional organizations (conditional to training/ certification);
  - iii. Ban the use of pesticides during rainfall;
  - iv. Set targets and timetables for reduction of pesticides use;
  - v. Conduct regular inspection of farmers' equipment;
  - vi. Ban the use of pesticides through aircrafts, with strictly regulated exemptions;
  - vii. Provide for limited use of pesticides in/ close to certain areas (e.g. protected areas, drinking water sources, public spaces); and
  - viii. Apply integrated pest management.
- d. Manure management (livestock breeding), which may include the following measures:
- i. Apply adequate management techniques for cattle breeding, digestion and manure reuse;
  - ii. Apply BAT for large farms including anaerobic digestion and bio-energy production, followed by separation of liquid and solid fractions; and
  - iii. Apply aerobic digestion for liquids, followed by evaporation lagoons or usage for soil improvement.

23. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of agricultural practices and discharged pollutants reaching the Mediterranean marine environment.

## **5. Possible Elements of the Regional Plan on Aquaculture Nutrients Management**

24. The proposed measures may include:
- a. Minimization of impacts from onshore (including hatcheries) aquaculture, which may include the following measures:
    - i. Ensure efficient feeding systems;
    - ii. Provide for installation of settlement tanks (to collect suspended soils) and filters (drum filters); and
    - iii. Optimize discharge systems, including:
      - Development of submarine pipeline systems.
      - Definition of appropriate sea depth.
      - Installment of diffusers at the end of the pipelines and pumps.
    - iv. Establish monitoring programmes both in discharge areas and on the end of the settlement tank.



- v. Establish recirculating closed systems (allowing for cleaning and recycling of the same water).
  - vi. Plant blue catch crops (e.g. mussels).
  - vii. Reuse/recycle of water for irrigation purposes (possible treatment requirement).
- b. Minimize impacts from offshore aquaculture, which may include the following measures:
- i. Apply Marine Spatial Planning for the identification of the appropriate zones for establishment of aquaculture plants;
  - ii. Establish criteria to be met for aquaculture site selection;
  - iii. Ensure efficient feeding systems;
  - iv. Control discharges through monitoring (in sediments and water column);
  - v. Establish Multitrophic Aquaculture Systems;
  - vi. Control escapes (for prevention of IAS introduction and diseases/viruses spread);
  - vii. Use new environmentally benign antifouling agents (TBT-free, preferably also copper free); and
  - viii. Ensure regular movement of cages in aquaculture sites.

25. In preparation for the development of this Regional Plan, an assessment may be undertaken of the state of play of aquaculture practices in the Mediterranean and their impact on the marine environment. If decided to be undertaken, this assessment should build on existing work undertaken by the Contracting Parties and relevant Regional Organizations.

## **6. Possible Elements of the Regional Plan on Urban Storm Water Management**

26. The proposed measures may include:
- a. Develop storm water management plans;
  - b. Establish separate collection systems for run-off water under specific conditions;
  - c. In case of combined collections system, install storm water treatment tanks which include decantation and filtering;
  - d. Promote green infrastructure for small medium cities, such as wetlands, retention ponds, recharge of aquifers, etc.;
  - e. Incorporate integrated coastal zone management (ICZM) plans into management schemes of storm water run-off or the other way around;
  - f. Set technical standards for drainage of storm water to outlets on the beach; and
  - g. Locate land-based activities potentially discharging contaminated run-off or wastewater to waterways so as to minimize their discharges and to protect the quality of ground and surface water including rivers, streams, wetlands, estuaries and the marine environment.

27. In preparation for the development of this Regional Plan, various studies and assessments may be undertaken at national level to:

- a. Evaluate the locations of effluent points of storm water sewers along the coastline; and
- b. Prepare drainage features plans to illustrate the broad geographic pattern of key drainage features.

## **7. Possible Elements of the Regional Plan on Marine Litter (upgraded)**

28. The proposed measures may include:
- a. Ban single use of several plastic items (to be defined);
  - b. Ensure higher rates of plastic recycling and other waste items to avoid ending-up as marine litter in the marine and coastal environment;

- c. Introduce environmental taxes on single-use plastic items;
- d. Promote new technologies for the removal of marine litter from the marine and coastal environment in an environmentally sound way;
- e. Strengthen sanctions in case of non-compliance with the respective national regulations;
- f. Include in the MPA Management Plans stricter measures to combat marine litter and related monitoring; and
- g. Reduce packaging or ensure their full recycling;
- h. Promote voluntary agreements with industry at national and regional levels;
- i. Strengthen measures related to SCP programmes to raise awareness and enhance education; and
- j. Introduce a concrete measure on microplastics reduction.

29. The ongoing evaluation of the status of implementation of the existing Regional Plan on Marine Litter Management in the Mediterranean (Decision IG.21/7), adopted by COP 18 (Istanbul, Turkey, 2013) is expected to provide substantive evidence that should be taken into account while defining the need for additional measures, as described above.

## **8. Way forward**

30. The process of development, negotiation and adoption may take two to three years for each of the six Regional Plans, although aggregated in terms of substance; and some may even require a specific thematic assessment prior to elaboration. In this respect, several approaches may be followed to set priorities in view of their timely and differentiated development and negotiations.

31. The time required for the implementation of the technical measures at national level is a crucial consideration and key factor taking into account that the implementation of some measures may require important investments and long processes for both public and private sectors.

32. Based on the conclusions of the present Regional Meeting of Experts, the Secretariat will continue the work to define and finalize the main elements of the technical measures and related timetable for their implementation. It is safe to anticipate an overall assessment, to the extent possible, of the potential impacts (GES and SDG targets related) of their implementation in a time frame extending between 2024 and 2030. This maybe an approach for setting priorities in terms of development and negotiation timing for each Regional Plan.

33. There are several existing Regional Guidelines related to the management of obsolete chemicals, hazardous waste and environmental management of industrial sectors already adopted by the Contracting Parties. A possible approach would be to start developing the Regional Plans that address issues not yet covered by the existing Guidelines already adopted by the Contracting Parties.

34. Another approach would be to start upgrading the existing Regional Plans with the new elements/measures and/or to transform, modify, and upgrade the provisions of the existing Regional Guidelines to fulfill the requirements of the relevant Regional Plans.

35. The Table below proposes possible scenarios regarding the time frame for the development, negotiation and adoption of the Regional Plans for a first preliminary exchange of views with the Contracting Parties:

<b>Regional Plan</b>	<b>2018- 2019 COP 21</b>	<b>2020-2021 COP 22</b>	<b>2022-2023 COP 23</b>	<b>2024-2025 COP 24</b>
<i>Municipal Wastewater Treatment</i>	Develop the main elements of the Regional Plan. Mandate to upgrade the BOD Regional Plan.	Upgraded Regional Plan developed and submitted to COP 22.		
<i>Sewage Sludge Management</i>	Develop the main elements of the Regional Plan. Mandate to develop the new Regional Plan. Mandate to develop technical annexes (2020 - 2023).	Regional Plan developed and submitted to COP 22 (without technical annexes). Work ongoing to finalize the technical annexes.	Technical annexes of the Regional Plan finalized and submitted to COP 23.	
<i>Agriculture Nutrients Management</i>	Develop the main elements of the Regional Plan.	Mandate to undertake an Overall Assessment.	Mandate to develop the Regional Plan/Guidelines.	Regional Plan/Guidelines developed and submitted to COP 24
<i>Aquaculture Nutrients Management</i>	Develop the main elements of the Regional Plan.	Overall Assessment and mandate to develop technical standards for Aquaculture.	Mandate to develop the Regional Plan. Work ongoing on technical standards.	Regional Plan and its technical standards developed and submitted to COP 24.
<i>Urban Storm Water Management</i>	Develop the main elements of the Regional Plan. Sharing of best practices ongoing.	State of play report and exchange of best practices; capacity building activities.	Mandate to develop the Regional Plan.	Regional Plan developed and submitted to COP 24.
<i>Marine Litter (upgraded)</i>	Preparations of relevant Guidelines as provided for in the existing Marine Litter Regional Plan ongoing. <u>Option 1:</u> Mandate to upgrade the Marine Litter Regional Plan or to add technical annexes to incorporate the new elements.	<u>Option 1:</u> Upgraded Marine Litter Regional Plan or technical annexes to the existing Regional Plan submitted to COP 22. <u>Option 2:</u> Mandate to upgrade the existing Marine Litter Regional Plan or to add technical annexes to incorporate the new elements.	<u>Option 2:</u> Upgraded Marine Litter Regional Plan or technical annexes to the existing Regional Plan submitted to COP 23.	