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Istanbul, Turkey, 28 May 2019

**Agenda item 4: Evaluation on the implementation of the existing Regional Plans on:**

- a) **Reduction of inputs of BOD from Urban Wastewater from in the Food Sector**
- b) **Reduction of inputs of Mercury**
- c) **Phasing out of POPs**
- d) **Marine Litter Management in the Mediterranean**

**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**

**First Draft**

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### Note by the Secretariat

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 for sectors presented in Annex I and substances presented in Annex II. Furthermore, Article 15 of the LBS Protocol provides for the Contracting Parties to take additional measures in the form of “Regional action plans and programmes which shall be formulated by the Organization and considered and approved by the relevant technical body of the Contracting Parties within one year at the latest of the entry into force of the amendments to this Protocol.”

In this context, the Contracting Parties to the Barcelona Convention negotiated and adopted since 2009 ten Regional Plans. These are:

- 1- Decision IG.19/7 “Regional Plan on the Reduction of BOD5 from Urban Wastewater,” 2009.
- 2- Decision IG.19/8 “Regional Plan on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene,” 2009.
- 3- Decision IG.19/9 “Regional Plan on the Phasing Out of DDT,” 2009.
- 4- Decision IG.20/8.1 “Regional Plan on the Reduction of Inputs of Mercury,” 2012.
- 5- Decision IG.20/8.2 “Regional Plan on the Reduction of BOD5 in the food sector,” 2012.
- 6- Decision IG.20/8.3.1 “Regional Plan on the Elimination of Alpha hexachlorocyclohexane; Beta hexachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride,” 2012.
- 7- Decision IG.20/8.3.2 “Regional Plan on the Phasing out of Lindane and Endosulfan,” 2012.
- 8- Decision IG.20/8.3.3 “Regional Plan on the Phasing out of Perfluorooctane, Sulfonic Acid, its salts and Perfluorooctane Sulfonyl Fluoride,” 2012.
- 9- Decision IG.20/8.3.4 “Regional Plan on the Elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene,” 2012.
- 10- Decision IG.21/7 “Regional Plan on Marine Litter Management in the Mediterranean,” 2013.

MAP Programme of Work for the biennium 2018-2019 (Activity 2.1.1.1) mandated MED POL to prepare reports on the implementation of the existing Regional Plans. The evaluation reports on the status of implementation of key regional measures in these Regional Plans would be submitted for review to the MED POL Focal Points Meeting in 2019.

To this aim, and with a consultancy support, MEDPOL undertook the evaluation of the status of implementation of the measures provided in the 10 Regional Plans. Based on a differentiated timetable approach for implementation of each adopted regional measure, the draft conclusions of the evaluation reports are final or midterm. It should be noted that the timetable for implementation of the regional plans varies from 2016-2025.

MED POL addressed a written communication to the MED POL Focal Points on 21 December 2018 to share the methodology and the approach proposed for undertaking such an evaluation. The methodology included a review of the following documentation to be provided by the MED POL Focal Points (if available):

- a. National reports on the implementation of the Barcelona Convention, Land-based sources and Activities; Dumping and Hazardous Waste Protocols submitted since 2009 by the Contracting Parties in the framework of Article 26 of the Convention.

- b. The information provided and assessed in the framework of the SAP-MED midterm evaluation undertaken in 2015 taking into account, as appropriate, the most recent developments and data.
- c. The information provided in the “NAP Mid-term Implementation Benchmark” included in the 2015 updated NAPs which captures the outcomes of actions taken by the Contracting Parties in the framework of SAP/NAP implementation since the initiation of this process in 2004.
- d. The main findings of 2017 MED QSR with regards to pollution and litter cluster based on the monitoring data reported to MED POL since 2009.
- e. The NBB/PRTR data reports since 2009 to date.
- f. Existing available official reports not necessarily developed within the MAP system, but of relevance to provide valuable information for the Regional Plans evaluation process.

Following this communication, few MED POL Focal Points responded and provided relevant information and official reports. Accordingly, MED POL undertook further research of available information and per each Regional Plan. The sources of information used for this purpose varied from national legislation and state of environment reports to formal reference documents containing regional data and published information. The list of reference documents used for evaluating the implementation of each Regional Plan is presented in the end of the evaluation report.

Evaluation of each Regional Plan is built around the types of implemented measures (i.e. legal, institutional or technical), with country-level details provided in the Annexes to the present report. Conclusions and recommendations are presented for each Regional Plan to highlight success stories, gaps and way forward. The findings and recommendations of this evaluation report are presented as “draft” at this stage to be finalized after validation of provided data and relevant findings by the Contracting Parties further to completion of the quantitative analysis of NBB data which require further update once its 4<sup>th</sup> reporting cycle is formally and successfully concluded in June 2019.

Hence, the present Meeting is expected to provide comments and feedback, as appropriate, with regards to information presented on the status of implementation of the Regional Plans with the view to having them finalized by COP 21. Based on the final versions for this evaluation report, MED POL would prepare national factsheets addressing status of implementation of each Regional Plan.

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## **List of Abbreviations/Acronyms**

<b>BAT</b>	Best Available Technique
<b>BEP</b>	Best Environmental Practice
<b>BOD</b>	Biochemical Oxygen Demand
<b>COP</b>	Conference of the Parties
<b>ELV</b>	Emission Limit Value
<b>EPR</b>	Extended Producer Responsibility
<b>GES</b>	Good Environmental Status
<b>Hg</b>	Mercury
<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>MSW</b>	Municipal Solid Waste
<b>NAP</b>	National Action Plan
<b>POP</b>	Persistent Organic Pollutant
<b>PoW</b>	Programme of Work
<b>WWTP</b>	Wastewater Treatment Plant

## 1. Introduction

1. The present document is a consolidated report describing evaluation findings of status of implementation of the 10 existing Regional Plans in the framework of Article 15 of the LBS Protocol for reduction of BOD5 from Urban Wastewater and in the Food Sector; Reduction of Inputs of Mercury; elimination/phasing out of POPs; and Marine Litter Management in the Mediterranean.

2. For the purpose of presentation of evaluation findings in this report, the 10 existing regional plans are grouped into four “Regional Plans Categories” further to the pollutants they are targeting, as illustrated in the table below.

Group	Existing Regional Plans	Regional Plans Categories
1	<ul style="list-style-type: none"> <li>• “Regional Plan on the Reduction of BOD5 from Urban Wastewater,” 2009</li> <li>• “Regional Plan on the Reduction of BOD5 in the food sector,” 2012</li> </ul>	Reduction of BOD
2	<ul style="list-style-type: none"> <li>• “Regional Plan on the Reduction of Inputs of Mercury,” 2012</li> </ul>	Reduction of Mercury
3	<ul style="list-style-type: none"> <li>• “Regional Plan on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene,” 2009.</li> <li>• “Regional Plan on the Phasing Out of DDT,” 2009.</li> <li>• “Regional Plan on the Elimination of Alpha hexachlorocyclohexane; Beta hexachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride,” 2012.</li> <li>• “Regional Plan on the Phasing out of Lindane and Endosulfan,” 2012.</li> <li>• “Regional Plan on the Phasing out of Perfluorooctane, Sulfonic Acid, its salts and Perfluorooctane Sulfonyl Fluoride,” 2012.</li> <li>• “Regional Plan on the Elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene,” 2012.</li> </ul>	Phasing out/eliminating of POPs
4	<ul style="list-style-type: none"> <li>• “Regional Plan on Marine Litter Management in the Mediterranean,” 2013.</li> </ul>	Marine litter management

3. For each “Regional Plans Category,” measures of the 10 existing Regional Plans are further classified into three groups: (i) legal; (ii) institutional; and (iii) technical. Evaluation findings are presented for each of the three groups of measures per each “Regional Plans Category.”

4. Hence, evaluation findings for each of the four Regional Plans Categories are organized in this report into five sections:

- Status of implementation of legal measures.
- Status of implementation of institutional measures.
- Status of implementation of technical measures.
- Analysis of trends of discharges/releases
- Conclusions and recommendations

5. Evaluation findings on the country level are presented in the Annex to the present report. These are classified for each group of measures under each Regional Plans Category.

6. References used for this evaluation are also included in the Annex to this report, also classified for each Regional Plans Category.

## 2. Evaluation of the Regional Plans on the Reduction of Inputs of BOD

7. Two Regional Plans with regards to reduction of BODs have been adopted by the Meetings of the Contracting Parties in the framework of the implementation of Article 15 of the LBS Protocol:

- a. The Regional Plan on the Reduction of BOD5 from Urban Wastewater adopted by the 16<sup>th</sup> Meeting of the Contracting Parties (Decision IG.19/7) in 2009. The Plan articulates a number of measures of legal, institutional and technical nature, and a timetable for implementation whereby the Parties commit themselves to implement the measures of the Plan according to two deadlines: 2015 and 2019.
- b. The Regional Plan on the Reduction of BOD5 in the Food Sector adopted by the 17<sup>th</sup> Meeting of the Contracting Parties (Decision IG. 20/8.2) in 2012. The Plan articulates also a number of measures of legal, institutional and technical nature.

### 2.1 Status of implementation of Legal Measures

8. The legal measures included in the two Regional Plans for reduction of BOD in urban wastewater and for the food sector are as follows:

- a. The Parties shall adopt National BOD5 ELVs for urban wastewater after treatment (i.e. maximum allowable concentration of BOD5 to be finally discharged from WWTP to the receiving water environment). The Parties will decide on the deadlines for the implementation of the ELVs taking into account their national circumstances and respective capacity to implement the required measures [Regional Plan Requirement for BOD5: 30 mg/l].
- b. The competent authorities shall establish ELVs in the food sector. These ELVs shall be implemented by 2014 taking into account their national circumstances and respective capacity to implement the required measures [Regional Plan Requirement for BOD5: 30 mg/l].

9. Annex I of the present document provides summary information for each country on the implementation status of the legal measures of the Regional Plans for Reduction of BOD. Based on this information, it can be inferred that almost 90% of the Contracting Parties have national regulations setting ELVs for urban wastewater in place in line with the values set in the Regional Plans for BOD reduction from urban wastewater (ELV 50 mg/l O<sub>2</sub>). Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain have stricter ELVs for urban wastewater treatment plants (minimum reduction 70-90%) based on the 91/271/EEC Directive (25 mg/l O<sub>2</sub>) in contrast with the ELV of the Regional Plans set at 50 mg/l O<sub>2</sub> for the same reduction percentage.

10. As for ELVs for discharges from the food sector, Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain have adopted the Industrial Emissions Directive (2010/75/EU) which sets authorization conditions for industrial installations (including food sector), with emission limit values (ELVs) based on the Best Available Techniques (BAT). Other countries do not have specific ELVs set for the food sector. Some countries have ELVs for industrial installations such as Israel and Turkey. These are in line with the ELV of the Regional Plans set at 30 mg/l O<sub>2</sub> for the food sector.

### 2.2 Status of implementation of Institutional Measures

11. The institutional measures included in the two Regional Plans for reduction of BOD in urban wastewater and in the food sector are as follows:

- a. The competent authorities shall establish an authorization compatible with the operation and the emission discharge values of the urban wastewater treatment plant in the food sector.

- b. The Parties shall ensure that their competent authorities or appropriate bodies shall monitor discharges from municipal WWTP and the food sector to verify compliance with the requirements.
- c. The Parties should take the necessary measures to enforce these measures in accordance with their national regulations.

12. Annex I of the present document provides summary information for each country on the implementation status of the institutional measures of the Regional Plans for Reduction of BOD.

13. With regards to monitoring and enforcement provisions, and according to the information mostly extracted from updated NAPs, approximately one half of the Contracting Parties have in place monitoring plans (Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain) or are preparation of these plans is in progress. Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain have adopted the Industrial Emissions Directive (2010/75/EU) which sets authorization conditions for industrial installations, including emission limit values (ELVs) and monitoring/reporting requirements. With regards to inspections, work is also in progress for consolidating monitoring and reporting plans in Albania, Bosnia & Herzegovina, Montenegro and Turkey. In general, their systems for collection, management and data sharing are missing. The other countries, e.g. Algeria, Egypt, Lebanon, Morocco, Tunisia have no evidence of a systematic implementation of monitoring and reporting systems. Based on the review of the NAPs, these countries conduct ad hoc monitoring campaigns limited in geographical scope, number of parameters, and/or frequency.

14. Regarding an authorization system compatible with the operation and the emission discharge values, almost one half of the Contracting Parties have such a system in place, or work is in progress for establishing of an authorization system, e.g. Bosnia & Herzegovina, Egypt, Montenegro and Turkey. The remaining half of the countries have not enforced a system for authorizing discharges of wastewater. As a result, those countries cannot ensure that installations comply with national regulations and ELVs, e.g. Albania, Algeria, Lebanon, Morocco and Tunisia.

15. Monitoring of discharges from municipal WWTP and enforcement are implemented in Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain. Work is in progress for consolidating monitoring and reporting plans in Albania, Bosnia & Herzegovina, Egypt, Montenegro and Turkey. For other countries, e.g. Algeria, Lebanon, Morocco and Tunisia, there is no evidence of presence of formal monitoring systems.

### 2.3 Status of implementation of Technical Measures

16. Annex I of the present document provides summary information for each country on the implementation status of the technical measures for the two Regional Plans for Reduction of BOD in urban wastewater and in the food sector are as follows:

- a. The Parties shall ensure that all agglomerations collect and treat their urban waste waters before discharging them into the environment. The characteristics of collected and treated urban waste waters shall, before discharge in the environment, be in accordance to provisions on the ELVs.
- b. The Parties shall reduce pollution load from the food sector by application of BEP and BAT.

17. Most of the Contracting Parties have a programme for construction or development of their WWTPs particularly for agglomerations larger than 2000 inhabitants. However, few countries have completed their construction programmes at present. Most Contracting Parties are, at different levels of progress in building infrastructure for collecting and treating urban wastewater. It is evident that the status of treatment of wastewater is directly related to the economic situation in the country. As a



result, most countries in the northern Mediterranean are at an advanced stage in wastewater treatment compared to countries of the south and east.

18. With regards to implementation of BAT and BEP, Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain have set permitting conditions which include emission limit values (ELVs). The permitting conditions are associated with a corresponding monitoring and reporting system. For other countries, no specific information could be obtained regarding BAT and BEP.

#### 2.4 Trends of BOD Releases to the Marine Environment

19. National Baseline Budget (NBB) is the reporting tool established by MAP to report on possible reduction trends in the direct and indirect releases of pollutants into the marine environment resulting from the implementation of priority actions as described in the NAPs/SAP-MED targets and provisions set by Regional Plans. NBB compiles national pollutant discharges to air and water for specific pollutants with a five-year periodicity.

20. A comprehensive data analysis regarding 2003, 2008 and 2013 data was undertaken by the “Strategic Action Programme to Address Pollution from Land Based Activities in the Mediterranean region (SAP-MED) and the National Action Plans’ (NAP) implementation (2000-2015).”

21. In 2017, the Mediterranean Quality Status Report (QSR) also compiled data on BOD and wastewater treatment.

22. Based on available data on BOD discharges estimated based on NBB reporting by the Contracting Parties between 2003 and 2013 and illustrated in Figure 1 for total BOD discharges; Figure 2 for discharges from urban WWTP; and Figure 3 from the food packing industry, it can be inferred that there is some reduction in total BOD discharges,<sup>1</sup> most notably in Turkey and Bosnia and Herzegovina. However, when reviewing the same data for urban WWTP and the food industry, reported data are inconclusive showing increasing trends for WWTP and decreasing discharges for the food packing industry. And this is also the case for other countries as nine countries did not submit their NBB data in 2013 NBB.

23. In the framework of the ENI SEIS II Project, an updated set of H2020/NAP indicators has been developed to inform on the necessary investment measures needed to reduce impacts on the Mediterranean marine environment. It is anticipated that reliable data on BOD discharges will be obtained by end of 2019 as work is currently in progress to assess the total BOD load discharged from industrial installations and WWTP required for populating the relevant H2020/NAP indicators (Indicator 6.1.1). Once available, the H2020 indicators will become an invaluable source of information for updating the findings of the evaluation of this Regional Plan.

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<sup>1</sup> Note that estimated load is shown on a log scale

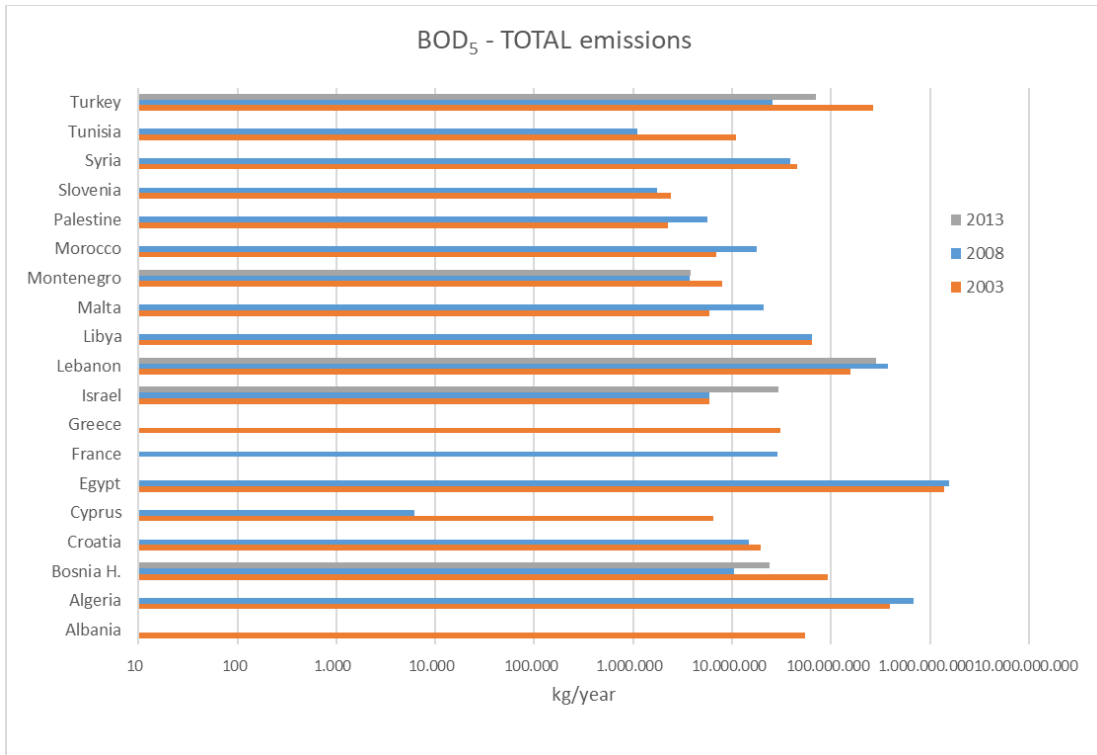


Figure 1. Trends in total BOD<sub>5</sub> discharges by countries based on NBB 2003, 2005 and 2013.

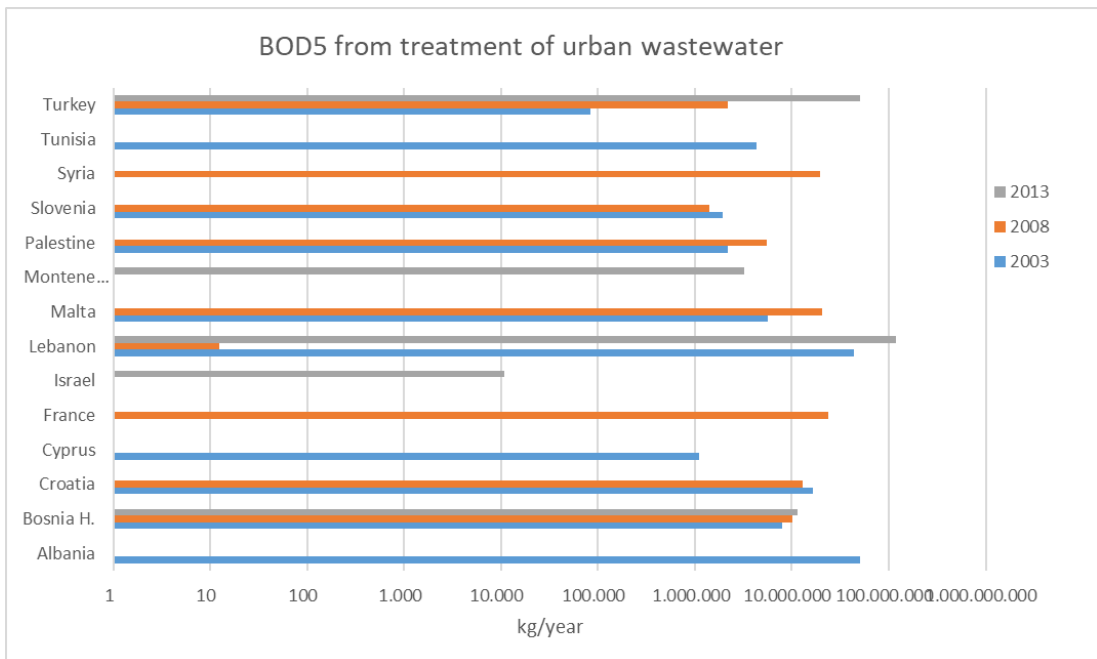


Figure 2. Trends in BOD<sub>5</sub> discharges from treatment of urban wastewater by countries based on NBB 2003, 2005 and 2013.

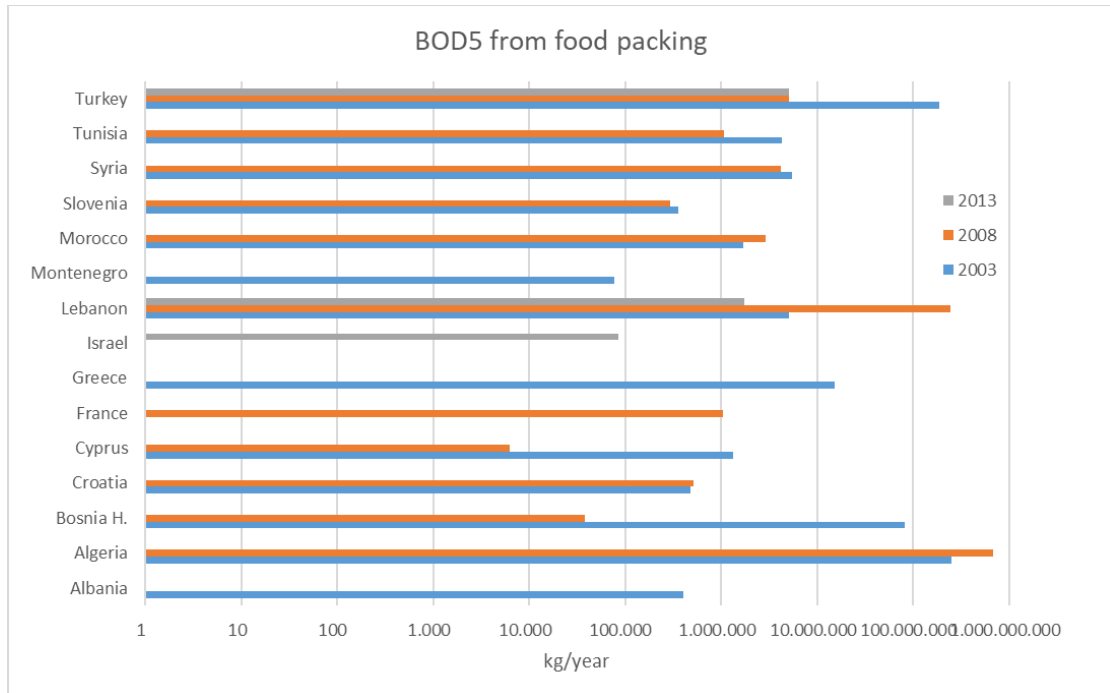


Figure 3. Trends in BOD5 discharges from food packing by countries based on NBB 2003, 2005 and 2013.

## 2.5 Trends in BOD concentrations in rivers

24. EEA-EUROSTAT databases provide trends in the concentration of BOD5 in rivers in some Mediterranean European countries as illustrated in Figure 4.

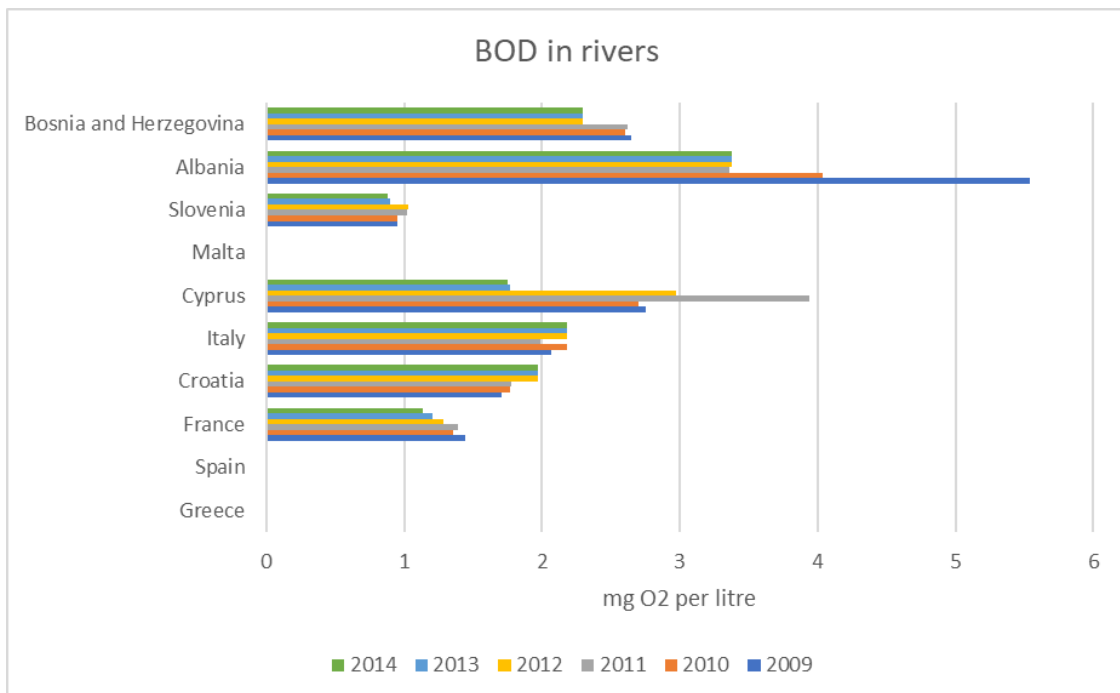


Figure 4. Trends in BOD5 concentration in rivers by countries. Source: EEA-Eurostat.

25. A clear reduction in BOD5 concentrations has been identified for the period 2009 to 2014 for most of the countries. Unfortunately, data is not available for Eastern and Southern Mediterranean countries.

26. MED POL IV reporting formats contains a template for reporting of riverine inputs of nutrients. However, a limited number of countries have reported after 2011 (e.g. Morocco which submitted some data for 2017 and Slovenia for 2016). Submitted data do not include total loads of discharged nutrients into rivers.

## 2.6 Conclusions and recommendations on the status of implementation of the BOD Regional Plans

27. Based on the status of implementation of the Regional Plans on the reduction of BOD5 from urban wastewater and in the food sector, it can be inferred that the measures included in the two Regional Plans have not been fully implemented to date amongst all the Contracting Parties. The following points substantiate this conclusion:

- a. Most countries have national regulations setting ELVs in place on urban wastewater in line with the Regional Plans. Only few countries Contracting Parties need to amend national regulations to adopt ELV on urban wastewater in line with the Regional Plans requirements.
- b. Adopting national ELVs for BOD from urban wastewater was set to be achieved by two alternative deadlines: 2015 and 2019 while ELV for food sector by 2014. Hence, it can be inferred that most countries have met the deadlines for ELV for urban wastewater. For the food sector, many Contracting Parties have not adopted ELVs.
- c. Gaps do exist regarding implementation of formal authorization, monitoring and reporting systems. Approximately half of the Contracting Parties have not consolidated formal authorization, monitoring and reporting systems.
- d. Most of Contracting Parties have programmes for construction or development of their WWTPs particularly for agglomerations larger than 2000 inhabitants. However, only few have completed their programmes to date. Countries are at different stage of progress with regards to collecting and treating their urban wastewater, with advanced programmes found in the northern Mediterranean shore compared to the south.

28. It is recommended that the Contracting Parties:

- a. For the food sector, many Contracting Parties which have not adopted ELVs need to urgently implement or modify national regulations to ensure compliance with the Regional Plan requirements
- b. Programmes for construction of WWTPs need to be implemented either for new WWTP or to upgrade existing ones. Financial resources, guidance on BAT and BEP for ensuring the appropriate treatment level and enhancing energy efficiency of WWTP need to be developed to support the Contracting Parties' efforts.
- c. Promotion of solutions adapted to small agglomerations such as nature-based solutions (e.g. constructed wetlands) is highly recommended.

### 3. Evaluation of the Regional Plan on the Reduction of Inputs of Mercury

29. The Regional Plan on the Reduction of Mercury in the framework of the implementation of Article 15 of the LBS Protocol was adopted by the 17<sup>th</sup> Meeting of the Contracting Parties (Decision IG.20/8) in 2012.

#### 3.1 Status of implementation of Legal Measures

30. The legal measures included in the Regional Plan for reduction of inputs of Mercury are as follows:

- i. The Parties shall prohibit the installation of new Chlor alkali plants using mercury cells with immediate effect (Art. IV.A1 – Decision IG 20/8).
- ii. The Parties shall prohibit the installation of vinyl chloride monomer production plants using mercury as a catalyst with immediate effect (Art. IV.A2 – Decision IG 20/8).
- iii. The Parties shall adopt by 2019 National ELVs [5 µg/l effluent] for Mercury emissions from other than Chlor Alkali industry (Art. IV.B1 – Decision IG 20/8).
- iv. The Parties shall adopt National ELVs [0.05 ng/Nm<sup>3</sup>] for Mercury emissions from incineration plants (Art. IV.B2 – Decision IG 20/8).
- v. The Parties shall neither open new mines nor re-open old mercury mining sites (Art. IV.B6 – Decision IG 20/8).

31. Annex II of the present document provides summary information for each country on the implementation status of the legal measures of the Regional Plan for Reduction of Inputs of Mercury. Based on this information, it can be inferred that regulations prohibiting and/or restricting the manufacture, export and import of mercury are in place in several Contracting Parties namely Croatia, Cyprus, France, Greece, Israel, Italy, Malta, Morocco, Slovenia and Spain. For the other countries, they either have no such regulations, or current legislation needs to be reviewed, or no information was found to undertake evaluation of these legal aspects.

32. More than half the Contracting Parties have national ELVs on mercury in place in line with the values set in the Regional Plan for mercury reduction, in particular:

- a. Lebanon has set 50 µg/l complying with ELV 2015 but not with ELV 2019.
- b. Montenegro has set 5 µg/l complying with ELV 2019.
- c. Morocco has set 10 µg/l, so a review is required to comply with ELV 2019.
- d. Tunisia has set 10 µg/l, so a review is required to comply with ELV 2019.
- e. Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain set 0.05 mg/Nm<sup>3</sup> (5µ/l) for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants. Mercury emissions from the flue-gases of kiln firing processes are also restricted to 0.05 mg/Nm<sup>3</sup>.

33. Several Contracting Parties namely Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain are progressively prohibiting or strictly restricting the use of mercury in manufacturing processes, ELVs on mercury are based on BAT and set through each industrial permit, so no national ELVs are regulated, e.g.:

- a. BAT Reference Document for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector sets for a pretreatment facility for WWTP an abatement efficiency of 99% and a concentration after treatment <5 µ/l.
- b. Best Available Techniques (BAT) Reference Document for Large Combustion Plants reports that a number of plants, including plants treating waste water originating

exclusively from flue-gas treatment, achieve the maximum emission levels of Hg 3 µg/l.

### 3.2 Status of implementation of Institutional Measures

34. The institutional measures included in the Regional Plan for Reduction of Input of Mercury are as follows:

- i. The Parties shall report to the Secretariat by January 2013 on the identified sites (Art. IV.B5i – Decision IG 20/8).
- ii. The Parties shall report in 2015 on the measures envisaged for the environmentally sound management of the identified sites by making use of the approved guidelines on BEPs (Art. IV.B5iii – Decision IG 20/8).
- iii. The Parties shall ensure that their competent authorities or appropriate bodies monitor releases of Mercury into water, air and soil to verify compliance (Art. IV.B7 – Decision IG 20/8).
- iv. The Parties shall take the necessary steps to enforce the above measures (Art. IV.B8 – Decision IG 20/8).

35. Annex II of the present document provides summary information for each country on the implementation status of the institutional measures of the Regional Plan for Reduction of Inputs of Mercury.

36. Chlor-alkali installations using mercury cells have been identified within the Mediterranean region in Algeria and Morocco. Historical contaminated sites did exist in Albania, Bosnia & Herzegovina, Israel and Tunisia which were closed down and sites' remediations are in progress. At EU level, all the chloralkali plants already ceased their activities by December 2017 and environmental sound management of mercury is taking place.

37. With regards to monitoring provisions, according to the information mostly extracted from the updated NAPs, more than two thirds of the Contracting Parties have in place, or work is in progress for consolidating monitoring plans for mercury. Algeria, Lebanon and Morocco reported not to have established mercury monitoring programs as for the rest, information is not available.

### 3.3 Status of implementation of Technical Measures

38. Annex II of the present document provides summary information for each country on the implementation status of the technical measures of the Regional Plan for Reduction of Inputs of Mercury with regards to:

- i. Achieving environmental sound management of metallic mercury from the decommissioned plants (Article IV.A)
- ii. Progressively reducing total releases of mercury (to air, water and to products) from existing Chlor-alkali plants until their final cessation with the view not to exceed 1.0 g per metric ton of installed chlorine production capacity in each plant.
- iii. Taking appropriate measures to isolate and contain mercury containing wastes (Article IV.D)

39. Historical chlor-alkali plants using mercury cells have been or are currently being remediated in Albania, Bosnia & Herzegovina, 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.

40. In countries such as Albania, Algeria, Bosnia & Herzegovina and Tunisia, several GEF-funded projects have been implemented to identify mercury stockpiles and handle, transport, store and dispose them in an environmentally sound manner.

### 3.4 Trends of Mercury Releases to the Marine Environment

41. A comprehensive analysis of NBB data reporting in 2003, 2008 and 2013 was undertaken by “Strategic Action Programme to Address Pollution from Land Based Activities in the Mediterranean region (SAP-MED) and National Action Plans’ (NAP) implementation 2000 - 2015.”

42. Based on available NBB data in 2013 for Bosnia & Herzegovina, Egypt, Israel, Lebanon, Montenegro and Turkey and E-PRTR data (2013) for Cyprus, France, Greece, Italy, Malta, Slovenia and Spain, a significant reduction of discharges of mercury into the Mediterranean Sea is observed as shown in *Table* ; however, this trend must be considered cautiously as nine countries did not submit the 2013 NBB data.

*Table 1: Mercury discharges by countries based on NBB 2003, 2005 and 2013, and PRTR 2013*

Country	Mercury discharges in (kg/year)		
	2003	2008	2013
Algeria	249.018		
Bosnia & Herzegovina	0	3	219,1
Croatia	265	89	
Cyprus	30	1.568	73
Egypt	425	17	
France	32	213	748,13
Greece			1530,99
Israel	544,4	957,78	84,9248
Italy	3176,95	10885,81	1670,1
Lebanon	290,8	198524,81	47813
Libya	1.104	1.167	
Malta	200	200	
Montenegro	1	0	6880
Palestine	0	0	
Slovenia	83	2	92,6
Spain	880	2.154	701,32
Syria	205	212	
Tunisia	772.709	385.429	
Turkey	166	11.195	5920
<b>TOTAL</b>	<b>1.029.131</b>	<b>612.618</b>	<b>65.733</b>

43. In the framework of the ENI SEIS II Project, an updated set of H2020/NAP indicators has been developed to inform on the necessary investment measures needed to reduce impacts on the Mediterranean marine environment. It is anticipated that reliable data on Mercury releases will be obtained by end of 2019 as work is currently in progress to assess Mercury loads discharged from industrial installations which is required for populating the relevant H2020/NAP indicators (Indicator 6.2.1). Once available, the H2020 indicators will become an invaluable source of information for updating the findings of the evaluation of this Regional Plan.

### 3.5 Trends of Mercury Concentrations in Rivers

44. In 2017, the Mediterranean Quality Status Report (QSR) also compiled data on heavy metals and mercury in particular. Figure 5, Figure 6 and Figure 7 show the distribution of the assessment performed for mercury in the Mediterranean Sea in bivalves, fish and sediments, respectively. Levels of heavy metals in coastal water show a roughly acceptable environmental status assessed from bivalves and fish against Background Assessment Criteria (BACs) and ECs criteria (the EU maximum levels permitted in foodstuffs, including marine bivalves for human consumption).

45. 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.

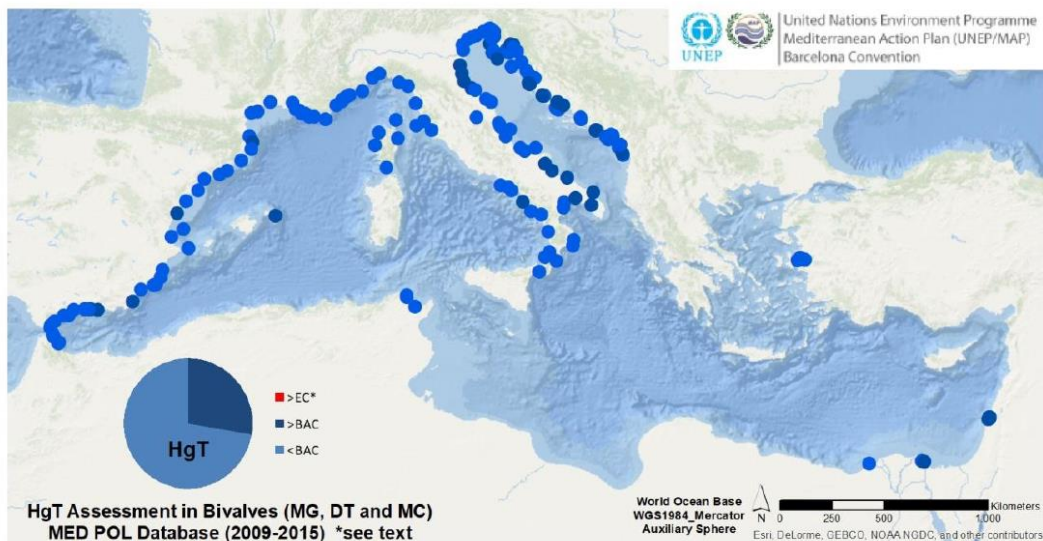


Figure 5. Regional Mercury levels assessment against EC criteria in bivalve species in the Mediterranean Sea.

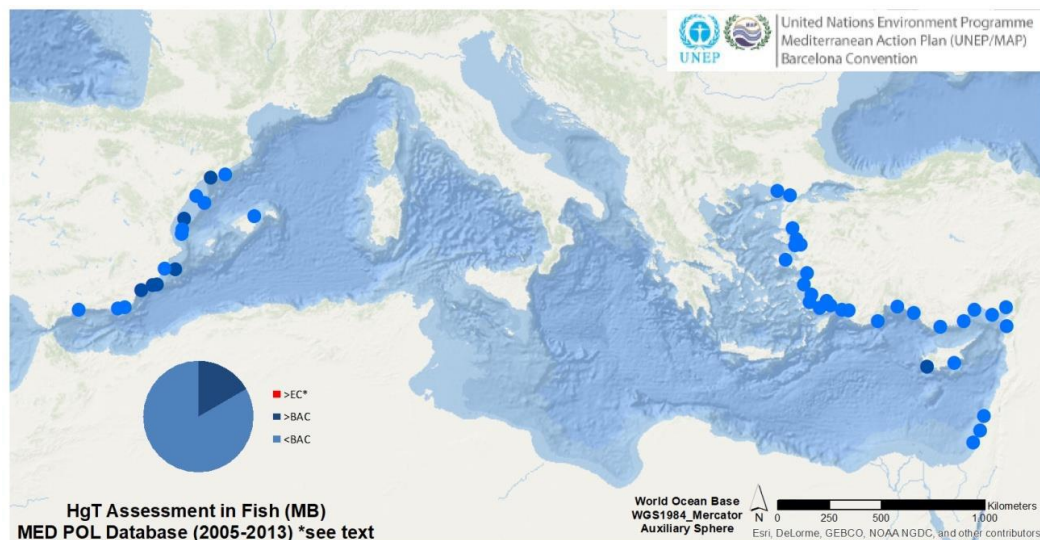


Figure 6. Regional Mercury levels assessment against EC criteria in fish sp. for the Mediterranean Sea.



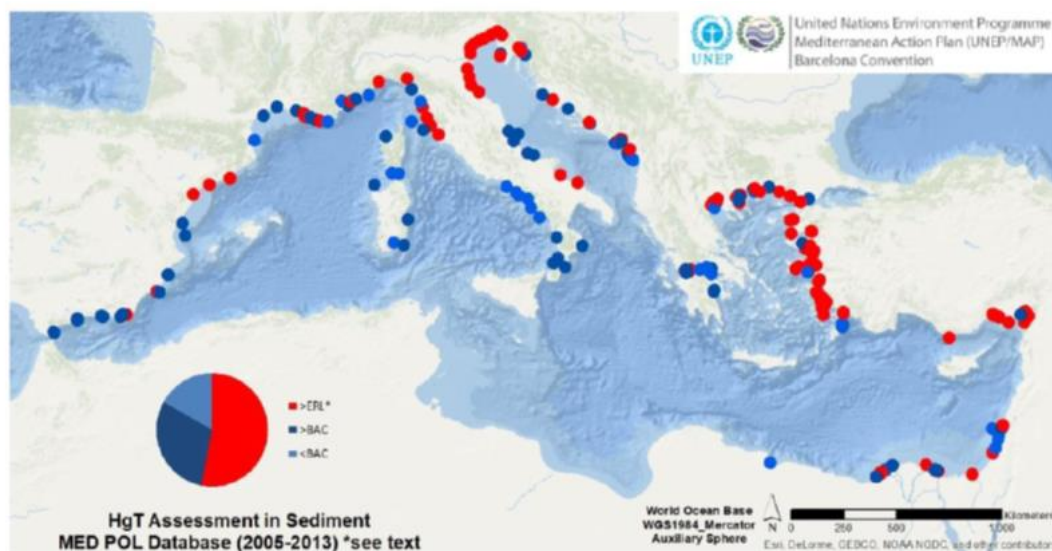


Figure 7: Regional Mercury levels assessment against ERL criteria in sediment for the Mediterranean Sea.

46. The Global Mercury Assessment 2018<sup>2</sup> publishes data regarding Global Mercury Emissions by Country and Sector.<sup>3</sup> Data are available for the following countries: Albania, Algeria, Bosnia & Herzegovina, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Serbia and Montenegro, Slovenia, Spain, Syria, Tunisia, Turkey.

47. Contracting Parties mainly discharging mercury to the Mediterranean marine environment are Turkey, Greece, Spain, Egypt and Italy.

### 3.6 Conclusions and recommendations on the status of implementation of the Regional Plan for Reduction of Inputs of Mercury

48. 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. In that respect, most countries have met the deadline set in the Regional Plan for 2019.

49. More than two thirds of the Contracting Parties have in place, or work is in progress for consolidating monitoring plans for mercury.

50. Seven Contracting Parties (Croatia, France, Lebanon, Malta, Monaco, 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.

51. There are gaps on assessing the level/progress of implementation of the Regional Plan due to poor monitoring programmes in place in six Contracting Parties and lack of information regarding Libya and Syria. The initial assessments (MIA) under the Minamata Convention are still under development. Once available, they will provide a valuable source of information for updating this evaluation.

<sup>2</sup> <https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/mercury/global-mercury-assessment>

<sup>3</sup> [https://public.tableau.com/views/GlobalMercuryEmissions/Dashboard1?:embed=y&:display\\_count=no&:showVizHome=no#1](https://public.tableau.com/views/GlobalMercuryEmissions/Dashboard1?:embed=y&:display_count=no&:showVizHome=no#1)

52. Some of the measures provided in the Regional Plan had timetable for their achievement, while others did not specify deadlines. The overall situation is that at least half the Contracting Parties have met deadlines set in the Regional Plan's provisions. The particular situation for the measures with deadlines is as follows:

- i. The prohibition of new chloralkali plants and new vinyl chloride monomer plants had immediate effects. Although this measure has not been evidenced for the half of the Contracting Parties, the installation of such new plants has not been identified in the region.
- ii. By 2020, the releases of mercury from the activity of chloralkali plants shall cease. To comply with this provision, urgent measures need to be adopted in countries where chloralkali plants are still operating (i.e. Algeria and Morocco).
- iii. The adoption of national ELVs should be in place by 2019, in this case the evidence is that some Contracting Parties need to implement or modify national regulations to ensure compliance with ELVs. Identification of contaminated sites (deadline 2013) has been roughly achieved in Croatia, Cyprus, France, Greece, Italy, Israel, Malta, Spain, Slovenia and it is in progress in Albania, Algeria, Bosnia & Herzegovina, Tunisia thanks to GEF-funded projects.

53. In view of the common provisions between the Minamata Convention and the Regional Plan for Reduction of Inputs of Mercury, it is recommended to actively coordinate ongoing programmes and activities with those under implementation by the Minamata Convention. It is also recommended to coordinate with the Minamata Convention for introducing technical solutions and best practices measures for reduction of inputs of mercury to the Mediterranean.

#### 4. Draft Evaluation of the Regional Plans for Elimination/Phasing Out of POPs

54. Six Regional Plans with regards to elimination/phasing out of POPs have been adopted by the Meetings of the Contracting Parties in the framework of the implementation of Article 15 of the LBS Protocol:

- a. Decision IG.19/8 “Regional Plan on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene,” 2009.
- b. Decision IG.19/9 “Regional Plan on the Phasing Out of DDT” 2009.
- c. Decision IG.20/8.3.1 “Regional Plan on the Elimination of Alpha hexachlorocyclohexane; Beta hexachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride” 2012.
- d. Decision IG.20/8.3.2 “Regional Plan on the Phasing out of Lindane and Endosulfan 2012.
- e. Decision IG.20/8.3.3 “Regional Plan on the Phasing out of Perfluorooctane, Sulfonic Acid, its salts and Perfluorooctane Sulfonyl Fluoride 2012.
- f. Decision IG.20/8.3.4 “Regional Plan on the Elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene 2012.

##### 4.1 Status of implementation of Legal Measures

55. The legal measures included in the six Regional Plans for elimination/phasing out of POPs are as follows:

- a. Prohibit and/or take legal and administrative measures necessary to eliminate the production and use of POPs (Art. III.1a – Decision IG 20/8.3)
- b. Prohibit and/or take legal and administrative measures necessary to eliminate the import and export of POPs (Art. III.1b – Decision IG 20/8.3)

56. Information on the status of implementation of legal measures is mainly based on the national reports submitted to the Stockholm Convention and updated NAPs prepared by all Contracting Parties during the period 2015-2016.

57. Annex III provides summary information on the implementation status of the legal measures for the elimination of POPs. Based on this information, 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.

##### 4.2 Status of implementation of Institutional Measures

58. The institutional measures included in the six Regional Plans for elimination/phasing out of POPs are as follows:

- a. The Parties shall ensure that any export or import of POPs for the purpose of their environmentally sound disposal, and for the use or purpose which is allowed under Appendix A, is done in accordance with the relevant international rules, standards and regulations (Art. III.2 – Decision IG 20/8.3).
- b. The Parties shall take appropriate measures so that POPs waste is handled, collected, transported and stored in an environmentally sound manner (Art. III.3a – Decision IG 20/8.3).

- c. The Parties shall take appropriate measures so that POPs waste disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed (Art. III.3b – Decision IG 20/8.3).
- d. The Parties shall take appropriate measures so that POPs waste is not permitted to be subjected to disposal operations that may lead to recovery, recycling, reclamation, direct reuse or alternative uses of persistent organic pollutants (Art. III.3c – Decision IG 20/8.3).
- e. The Parties shall take appropriate measures so that POPs waste is not transported across international boundaries without taking into account relevant international rules, standards and guidelines (Art. III.3d – Decision IG 20/8.3).
- f. The Parties shall ensure that their competent authorities or appropriate bodies monitor the implementation of the (Art. III.5 – Decision IG 20/8.3).

59. Annex III provides summary information on the implementation status of the above institutional measures for the elimination of POPs. Based on this information, it can be inferred that almost all of the Contracting Parties reported measures for ensuring the environmentally sound management of POPs. However, solid regulatory and enforcement policies regarding the export/import with the purpose of the environmentally sound disposal of POPs waste are mostly evidenced in Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain. As for the other Contracting Parties, a general weak control and enforcement is identified due to lack of financial and technical capacities.

60. According to the information extracted from NIPs and national reports submitted to Stockholm Convention, almost one half of the Mediterranean Countries have monitoring plans for POPs in place; although at different degrees of implementation. Few countries reported not to have established any POP monitoring system (Algeria, Morocco) and some others reported to have monitoring plans in progress, e.g. Albania, Bosnia & Herzegovina, Egypt and Montenegro.

#### 4.3 Status of implementation of Technical Measures

61. Annex III of the present document provides summary information for each country on the implementation status of the technical measures for the six Regional Plans for elimination/phasing out of POPs as follows:

- a. The Contracting Parties shall endeavor to apply BEPs for environmentally sound management of POPs (Art. III.4 – Decision IG 20/8.3).
- b. Capacity building, including transfer of know-how and technology, shall be provided by the Parties and the Secretariat to the Contracting Parties in need of assistance (Art. VI – Decision IG 20/8.3).
- c. The Parties should identify to the extent practicable stock piles consisting of or containing POPs and they should report to the Secretariat before 2013 (Art. VII – Decision IG 20/8.3).

62. Almost all of the Contracting Parties have identified stockpiles consisting of or containing POPs, mainly pesticides and PCBs. Stockpiles of new POPs are still at an earlier stage.

63. In Albania, Algeria, Bosnia & Herzegovina, Egypt, Lebanon, Montenegro, Morocco, Tunisia and Turkey, several GEF-funded projects have been implemented to identify stockpiles and handle, transport, store and dispose them in an environmentally sound manner. Major stockpiles consist of PCBs, which are not covered by the Regional Plans. Other stockpiles include pesticides.

64. 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.

#### 4.4 Trends of Releases of POPs to the Marine Environment

65. Based on available NBB data in 2013 for Bosnia & Herzegovina, Egypt, Israel, Lebanon, Montenegro and Turkey and E-PRTR data (2013) for Cyprus, France, Greece, Italy, Malta, Slovenia and Spain, a significant reduction of discharges of POPs into the Mediterranean Sea is observed as shown in Table 2. However, this trend must be considered cautiously as nine countries did not submit the 2013 NBB data.

Table 2. POP discharges into the Mediterranean based on NBB 2003, 2005 and 2013, and PRTR 2013

Substance	Emission value (kg/year)			Trend 2013 vs 2003 <sup>4</sup>
	2003	2008	2013 <sup>5</sup>	
Aldrin	-	133.1	127.1	-5% <sup>6</sup>
Dieldrin	-	69.59	124.23	79% <sup>6</sup>
Endrin	-	0.06	37.97	>100% <sup>6</sup>
Heptachlor	-	0.07	92.00	>100% <sup>6</sup>
Hexachlorobenzene	0.36	29.57	25.17	>100%
PCB/PCT	5.2	14.93	7,289.15	>100%
PCDD/PCDF	5.18	1,037.62	147,195.57	>100%

66. It is anticipated that additional reliable data on POPs releases will be obtained by end of 2019 as work is currently in progress to assess the total quantity generated of hazardous waste from industrial installations, and percentage quantity disposed in an environmentally sound matter in the southern Mediterranean Countries (Indicator 6.3). This work is undertaken in the framework of collaboration between UN Environment/ MAP and the European Union's funded Project ENI SEIS II South Implementation of the Shared Environmental Information System (SEIS) in the ENP South region to develop an updated set of H2020/NAP indicators developed to inform on the necessary investment measures needed to reduce impacts on the Mediterranean marine environment.

#### 4.5 Production and disposal of POPs

67. 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 (see Table 3), the most recent production was endosulfan in Croatia until 2007. 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 as shown in Table 4.

Table 3. Production of POPs reported to Stockholm Convention by Mediterranean countries.

Country	Chemical	Year in which the production started	Year in which the production ended	Total Production (Kg)
Albania	DDT (1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane) CAS No: 50-29-3	Before 2001	Before 2001	
Albania	Heptachlor CAS No: 76-44-8	Before 2001		
Albania	Lindane CAS No: 58-89-9	Before 2001		

<sup>4</sup> Trend (in %) has been calculated following the formula: (kg substance reported 2013/kg substance reported 2003)/kg substance reported 2003.

<sup>5</sup> 2013 values include NBB 2013 for Bosnia & Herzegovina, Egypt, Lebanon, Israel, Montenegro and Turkey. E-PRTR 2013 for Cyprus, France, Italy, Greece, Malta, Slovenia and Spain

<sup>6</sup> Trend calculated following: (kg substance reported 2013/kg substance reported 2008)/kg substance reported 2008.

Country	Chemical	Year in which the production started	Year in which the production ended	Total Production (Kg)
Albania	Toxaphene CAS No: 8001-35-2	Before 2001		
Croatia	Technical endosulfan (CAS No: 115-29-7) and its related isomers (CAS No: 959-98-8 and CAS No: 33213-65-9)		2007	
Spain	Lindane CAS No: 58-89-9		2004	
Egypt	DDT (1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane) CAS No: 50-29-3	Before 2001		

Source : <http://chm.pops.int/Countries/Reporting/ReportingDatabase/tabid/7477/Default.aspx>

Table 4. Production, export, import and disposal of POPs reported to Stockholm Convention by Mediterranean countries (3rd reporting cycle 2010-2014).

Country	Chemical	Total Production (kg)	Total Export (kg)	Total Import (kg)	Total Disposal (Ton)
Morocco	Polychlorinated biphenyls (PCB)		595,000		
Croatia	Polychlorinated biphenyls (PCB)				265.01
Slovenia	Polychlorinated biphenyls (PCB)				390.53
Spain	Polychlorinated biphenyls (PCB)				81,365
Turkey	Polychlorinated biphenyls (PCB)				20,320

#### 4.6 Concentrations of POPs

68. 2017 Quality Status Report is the first report based on the Ecological Objectives and Common Indicators of IMAP,<sup>7</sup> with a view to assess the status of the Mediterranean in achieving GES. The method for the assessment of POP has been undertaken by evaluating the latest and available MED POL datasets of levels of chemical contaminants against set environmental criteria (for different matrices) at a regional scale. Heavy metals (Cadmium, Mercury and Lead), petroleum hydrocarbons and persistent organic pollutants (POPs) -from the national coastal monitoring networks reported to the MEDPOL Database were initially evaluated. However, petroleum hydrocarbons and POPs show a data scarcity, a lack of regional coverage and mostly non-detected concentrations.

69. Persistent organic pollutants (POPs) include certain legacy chlorinated pesticides and industrial chemicals, such as the so-called polychlorinated biphenyls (PCBs), most of which have already been prohibited at global scale under the Stockholm Convention. Results of the report show that the scarcity of recent POPs quality assured datasets in the MED POL Database and the fact that most of these show non-detectable levels, mainly in biota matrices, is in accordance with the earlier lowering levels and trends observed in previous reports (UNEP/MAP/MED POL 2011a, 2011b)<sup>8</sup> and no further updates could be performed at present.

<sup>7</sup> Integrated Monitoring and Assessment Programme (IMAP) was adopted by the 19th Meeting of Contracting Parties (COP 19) in 2016

<sup>8</sup> UNEP/MAP/MED POL (2011a). Hazardous substances in the Mediterranean: a spatial and temporal assessment. United Nations Environment Programme, Mediterranean Action Plan, Athens.  
UNEP/MAP/MED POL (2011b). Analysis of trend monitoring activities and data for the MED POL Phase III and IV (1999-2010). United Nations Environment Programme, Mediterranean Action Plan, Athens.

70. The Second Global Monitoring on the Global Monitoring Plan for POPs summarizes and highlights the monitoring information reported on POPs in non-core media since 2009 by AMAP, NCP, HELCOM, OSPAR, MEDPOL, the Great Lakes and on Antarctica. Regarding the Mediterranean Sea Region, the report considers aldrin, dieldrin, endrin with a low level of concern; DDT, PCBs and dioxins and furans as relevant issues; HCB, Lindane and PBDEs as issues deserving special attention and finally, the rest of POPs presenting insufficient data.

71. Global Monitoring Plan of the Stockholm Convention on Persistent Organic Pollutants offers a visualization and on-line analysis of global levels of chemicals in air, water, breast milk and blood. The visualization of global levels of chemicals in air, water, breast milk for Mediterranean countries available from <http://www.pops-gmp.org/visualization-2014> shows the data availability summarized in the following Table 5:

Table 5: Data available from <http://www.pops-gmp.org/visualization-2014> for the Mediterranean countries

<b>Country</b>	<b>Monitoring Programme Network</b>	<b>Matrix</b>	<b>Year</b>
Albania	GMP UNEP	Human milk	1992
Croatia	GMP UNEP, MONET	Air, human milk	1987-2012
Cyprus	GMP UNEP	Human milk	2006
Egypt	GAPS, GMP UNEP, MONET	Air, human milk, water	2001, 2002, 2006, 2013
France	GAPS, MONET	Air	2005-2012
Greece	MONET	Air	2009-2010
Israel	GMP UNEP	Human milk	2012
Italy	GAPS, GMP UNEP, MONET	Air, human milk	2001-2012
Malta	MONET	Air	2009-2013
Montenegro	MONET	Air	2007
Morocco	MONET	Water	2014
Slovenia	MONET	Air	2007-2013
Spain	GAPS, GMP UNEP, MONET	Air, human milk	1992-2011
Syria	GMP UNEP	Human milk	2009
Tunisia	MONET	Air	2008
Turkey	GAPS, MONET	Air	2005-2013

#### 4.7 Conclusions and recommendations on the status of implementation of the Regional Plans on elimination/phasing out of POPs

72. The implementation of the Regional Plans on the elimination/phasing out of POPs are, in general, being progressively implemented by the Contracting Parties due to synergies with the Stockholm Convention. The Stockholm Convention initially addressed the 12 initial POPs but annexes to the Stockholm Convention have been amended since 2009 to include new POPs. In total, five amendments have been adopted at COP4, COP5, COP6, COP7 and COP8 to the Stockholm Convention including 16 new POPs. The Regional Plans on POPs address new POPs in the Stockholm Convention until the amendment adopted by COP4 (2009). All the provisions set in the Regional Plans have past deadlines.

73. All the Contracting Parties of the Barcelona Convention, except for Italy and Israel, have ratified the Stockholm Convention on Persistent Organic Pollutants. The ratification of the Stockholm Convention involves the implementation of legal and administrative measures on the elimination of

the production, use, import and export of POPs and to ensure that any export or import of these chemicals for the purpose of their environmentally sound disposal, etc. As a result, most of the Contracting Parties have legal and administrative measures on POPs in place.

74. Almost all Contracting Parties reported measures for ensuring the environmentally sound management of POPs. Almost half of the Contracting Parties have monitoring plans for POPs in place, although at different degrees of implementation.

75. Based on Stockholm Convention reporting, there has been no production of POPs in the Mediterranean since 2007, before the adoption of Regional Plans on POPs.

76. There is a scarcity of recent POPs quality assured datasets in the MED POL Database both regarding their presence in sediments and biota matrices, most of these show non-detectable levels, mainly in biota matrices, in accordance with the earlier lowering levels and trends observed in previous reports.

77. It is recommended that NIPs update and periodic reporting cycles under the Stockholm Convention are used for following-up on Contracting Parties which have not fully implemented provisions of Regional Plans on POPs. It is further recommended that the new POPs are adopted by the Contracting Parties in the Regional Plans in line with the new POPs approved by COP5, COP6, COP7 and COP8 of the Stockholm Convention.



## **5. Draft Evaluation of the Regional Plan on Marine Litter Management in the Mediterranean**

78. The Regional Plan on Marine Litter Management in the Mediterranean in the framework of the implementation of Article 15 of the LBS Protocol was adopted by the 18th Meeting of the Contracting Parties (Decision IG.21/7) in 2013.

### **5.1 Status of implementation of Legal Measures and Institutional Measures**

79. Information on the status of implementation of the legal and institutional measures stipulated in the Regional Plan for Marine Litter (RPML) is based in on the updated NAPs prepared by the Contracting Parties during the period 2015-2016; review of national legislation of these countries; and from presentations and information provided by the countries in CorMon and Best Practices Meetings held in Izmir, Turkey. Podgorica, Montenegro and Seville, Spain in 2018 and 2019.

80. The legal and institutional measures encompass adoption of legislation to ensure efficient marine litter reduction and the prevention of its generation. The legislation should ensure institutional coordination among relevant national policy bodies and close coordination and collaboration between national, regional and local authorities (RPML, Article 8)

81. Annex IV provides summary information on the implementation status of the legal and institutional measures for marine litter management in the Mediterranean. Based on the information, it is concluded that:

- a. Almost one third of the countries have specific legislations or regulatory frameworks addressing marine litter specifically. The remaining Mediterranean countries have laws and strategies in place to deal with municipal solid waste, which naturally include marine litter. Missing from these laws and legislations are specific legal measures addressing particularly marine litter, relevant to the provisions of the Regional Plan on Marine Litter Management in the Mediterranean. Consequently, nearly one third of the updated versions of the National Action Plans include dedicated sections on marine litter and relevant reporting formats.
- b. Most Contracting Parties have adopted national legislation on the prevention of marine litter through sectorial policies and strategies such as waste management and protection and the integrated management of the coast. Some countries have also put in place policies for recycling and initiatives for reducing the use of single-use plastic bags tackling the major marine litter items found in the Mediterranean.

### **5.2 Status of implementation of Institutional Measures**

82. Information on the status of implementation of technical measures, particularly those related to prevention and reduction, monitoring and assessment, is based in part on the updated NAPs prepared by the Contracting Parties during the period 2015-2016, and partly from the input provide during the Regional Meetings on Marine Litter Best Practices (Izmir, Turkey, 9-10 Oct. 2018 and Seville, Spain 8-10 April 2019), the IMAP Best Practices Meeting (Rome, July 2018), and the Joint Meeting of the Ecosystem Approach Correspondence Group on Marine Litter Monitoring and ENI SEIS II Assessment of Horizon 2020/National Action Plans of Waste Indicators (Podgorica, Montenegro, 4-5 April 2019).

83. Annex III of the present document provides summary information for each country on the implementation status of the technical measures for the Regional Plan for Marine Litter Management. The technical measures encompass prevention and reduction measures, including removal of existing marine litter and establishment of dedicated monitoring and assessment programmes for marine litter generation, collection and disposal (included under technical measures due to the technical capacities needed to undertake these institutional measures).

84. Based on available information, a wide range of pollution prevention measures are implemented by the Contracting Parties, varying in scope and breadth from one country to another, and at different maturity levels. Most common measure is the national IMAP-based monitoring programme on marine litter. This programme is found in most Mediterranean countries. Almost one third of the countries implement systematically this programme; whereas the remaining countries are either at initial phases of implementation or at the pilot level. Generally, implementation of proper monitoring programmes require advanced arrangements typically associated with the establishment of a sound legal and institutional frameworks for dealing with various aspects of marine litter.

85. Pollution prevention measures such as Adopt-a-Beach or Fishing-for-Litter are most commonly implemented by all Contracting Parties. Levels of implementation vary. Some countries have designated specific beaches and ports for implementing these measures, while others still implement these programmes on a pilot level (more than 20 pilots in 9 different countries).

86. As a result of the implementation of marine litter pollution prevention programmes, awareness raising programmes are quite widespread across all Mediterranean countries; and this includes government personnel, civil society and businesses.

87. Public participation in issues related to marine litter management is quite widespread in all Contracting Parties. Cleanup campaigns are quite common, and these influence government commitment to the implementation of pollution prevention measures for marine litter. For example, campaigns for cleanup of beaches force local governments to ban generation of marine litter in reaction to public pressure. Government agencies would have to cooperate with civil society organizations involved in marine litter cleanup for example in disposing of collected waste. Public participation is also instrumental for pushing the adoption of various policies including recycling schemes, extended producer responsibility (EPR), closure of illegal dumps, funding research in marine litter impacts and mitigation, and developing educational and promotional materials to prevent marine litter.

88. In response to public pressure, some Contracting Parties have implemented 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.

89. With regards to the provisions of the Regional Plan for Marine Litter Management addressing pollution prevention under Article 9, it is concluded that some specific aspects of this Article are implemented across all countries (AaB and FfL) while others such as EPR are not very common or have not matured yet. Clearly, the Marine Litter Regional Plan has had a crucial impact on raising awareness in most countries about the importance of dealing with the problem of marine litter. Governments in almost one third of the countries have reacted and enacted legislation to deal with the issue, but for most of the remaining Mediterranean countries, much more work on the legal, policy and institutional aspects is needed to effectively tackle the problem of marine litter.

90. On the regional level, response to marine litter is also evident. Two assessment products on marine litter are already available: the 2015 Regional Assessment on Marine Litter, and the 2017 Mediterranean Quality Status Report. Both reports include two dedicated chapters on marine litter. The next challenge which the Contracting Parties need to address is to prepare a regional assessment on marine litter fully based on national derived data.

91. With regards to the Integrated Monitoring and Assessment Programme for the Mediterranean Sea and Coast, and Relevant Assessment Criteria (IMAP), it is noted that, on the regional level, this programme is in place since 2016 including two Common Indicators and a single Candidate Indicator on marine litter. Expert groups have been established, guidelines and reporting templates have been

developed, and two meetings of the Ecosystem Approach Correspondence Group for Monitoring (CorMon) Marine Litter have been organized since 2016.

### 5.3 Trends of marine litter

92. The Municipal Solid Waste collection rates and the disposal methods in the Mediterranean countries are presented in Figure 8 and Figure 9 based on World Bank data from 2012.<sup>9</sup> Although collection rates are in general above 80%, some countries still need to improve their municipal solid waste collection. Illegal dumping is still the major waste management alternative in several Mediterranean countries while recycling and composting are symbolic, presenting actual room for improvement.

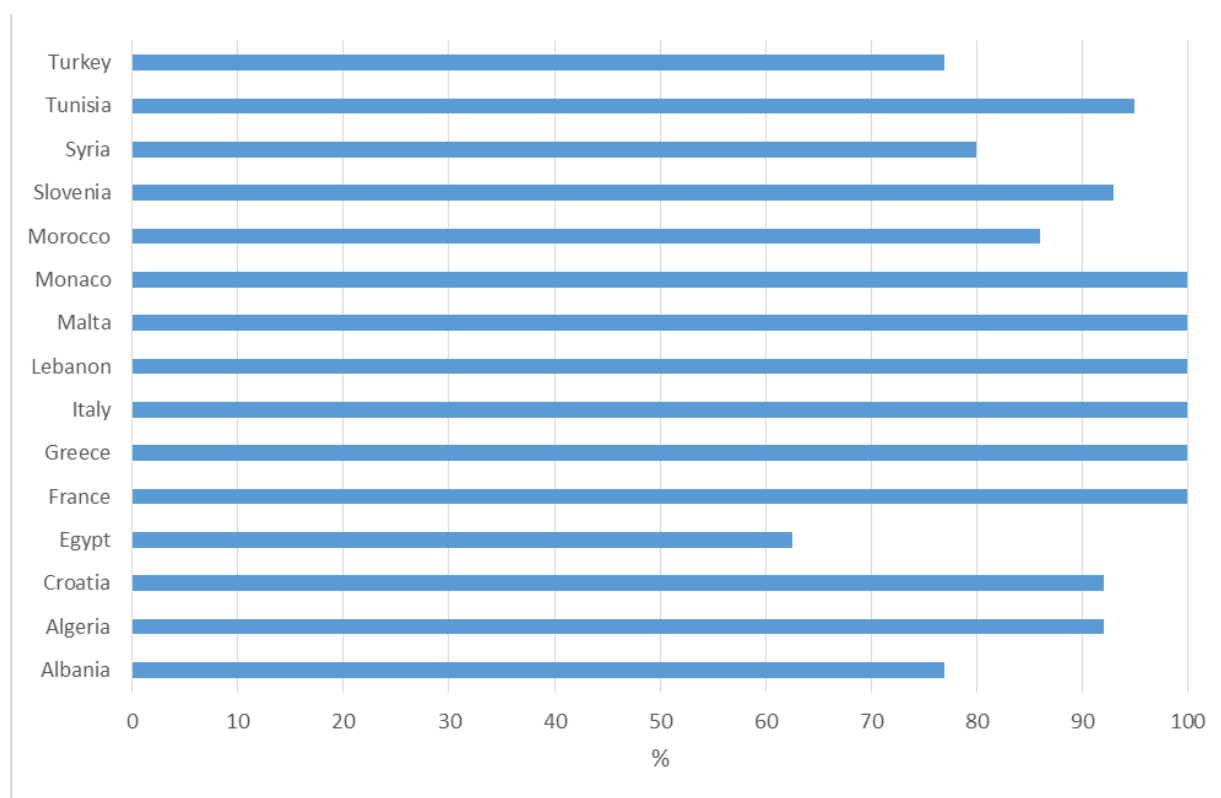


Figure 8. MSW collection rates in Mediterranean countries (Source: World Bank, 2012)<sup>10</sup>

### 5.4 Conclusions and recommendations on the status of implementation of the Regional Plan on Marine Litter Management in the Mediterranean

93. Most Contracting Parties have adopted national legislation on the prevention of marine litter through sectorial policies with incidence in the marine environment such as waste management and protection and the integrated management of the coast. Some countries have also put in place national legislation and policies for recycling, pilot projects on Extended Producer Responsibility (EPR), and initiatives for reducing the use of single-use plastic bags, tackling the major marine litter items found in the Mediterranean.

<sup>9</sup> Hoornweg, Daniel; Bhada-Tata, Perinaz. 2012. What a waste: a global review of solid waste management. Urban development series; knowledge papers no. 15. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/2012/03/16537275/waste-global-review-solid-waste-management>

<sup>10</sup> Note that rates for Egypt and Morocco are mean values

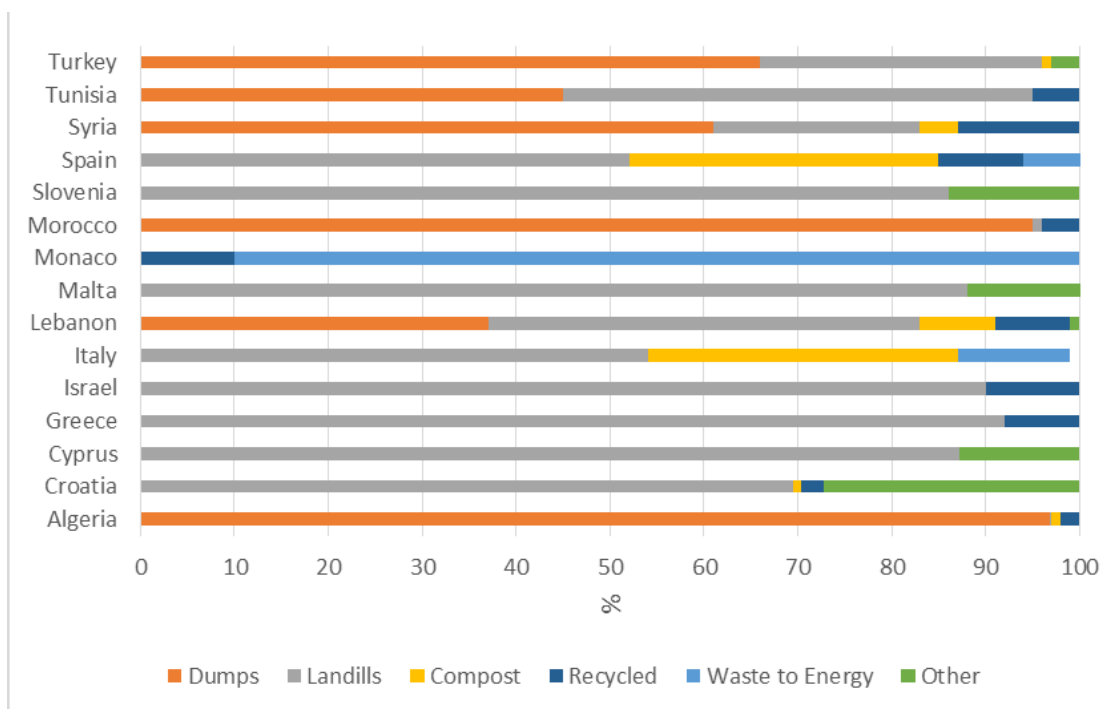


Figure 9. MSW disposal methods in Mediterranean countries (Source: World Bank, 2012)<sup>11</sup>

94. Further work is required with regards the enforcement of measures further to implementation of monitoring and assessment programmes, in particular the Integrated Monitoring and Assessment Programme for the Mediterranean Sea and Coast which encompasses two Common Indicators and a single Candidate Indicator on marine litter.

95. Important progress has been achieved with regards to the better management of sea-based marine litter, and particularly in relation to better management of marine litter in ports and marinas, as well as the implementation of Fishing-for-litter measures.

96. Several measures on the prevention of marine litter from land-based sources and sea-based sources provided in the Regional Plan had 2017 as the deadline for their achievement (e.g. Extended Producer Responsibility, Sustainable Procurement Policies, voluntary agreements, charge reasonable cost for the use of port reception facilities, apply No-Special-Fee system, “Fishing for Litter” practices, etc.) The overall evaluation based on the available information shows that most of Contracting Parties have reported to have launched some of the marine litter prevention initiatives before 2017. However, such initiatives need to be strengthened and consolidated in the near future.

97. Regarding measures to be achieved by 2019, while marine litter clean-up campaigns have been positively initiated by most of the Contracting Parties, other measures such as the identification of accumulations/hotspots of marine litter and close to the extent possible the existing illegal dump sites, have been partially implemented or insufficient information has been collected. In this context, urgent measures are needed to support the implementation of such measures.

98. Provisions with deadlines by 2020 are currently being implemented in most of the Contracting Parties including measures to establish as appropriate adequate urban sewer, wastewater treatment plants, and waste management systems to prevent run-off and riverine inputs of litter and effective measures to prevent any marine littering from dredging activities. Further efforts are needed in this direction.

<sup>11</sup> Note that rates for Monaco and Syria have been adjusted to 100%.

99. Finally, and with regards to provisions to base urban solid waste management on reduction at source and applying the waste hierarchy by 2025; this measure is far from being achieved in almost half of the Contracting Parties. So, waste management strategies and action plans need to be developed and implemented in this regard.

100. Finally, and in view of the plans to upgrade the Marine Litter Regional Plan, the following measures are recommended:

- a. Investigate and promote the use of Best Available Techniques (BAT) and Best Environmental Practice (BEP) to develop sustainable and cost-effective solutions to reduce and prevent sewage and storm water related waste and entering the marine environment,
- b. Adopt binding quantitative targets to reduce marine litter (e.g. reduce beach marine litter by 20% by 2024), should be established and reached.
- c. Promote new technologies for the removal of marine litter from the marine and coastal environment in an environmentally sound way, particularly the retrieval, recycling and reuse of ghost gears;
- d. Identify potential sources and regulation of primary and secondary microplastics (industrial pellets and personal care products related micro litter particles, fibers from clothing) through the promotion of voluntary commitment (e.g. Assess potential of certification schemes).
- 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.

**Annex I**  
**Legal, Institutional and Technical Measures on the Country Level and Evaluation References**  
**for Evaluation of Status of Implementation of the Regional Plans**  
**for Reduction of Inputs of BOD**

Annex I includes three tables with country data and information on the status of implementation of legal, institutional and technical measures included in the Regional Plans for reduction of inputs of BOD5 in Urban Wastewater and in the Food Sector. This is followed by the list of references used for collecting this information and for undertaking the evaluation.

*Table I.1: Summary information on the implementation of the legal measures by the Contracting Parties as foreseen in the Regional Plans for Reduction of BOD from urban wastewater and in the food sector*

<b>Country</b>	<b>Status of implementation of the legal measures</b>
Albania	<p>National regulations are in place. Law No. 10431, dated 9.6.2011 “On Environmental Protection,” Law No. 111/2012 on the integrated management of water resources.</p> <p><i>Typical domestic wastewater characteristic and treatment requirements are BOD5 = 30 mg/l.</i></p> <p><i>There is no specific authorization by competent authority to practice and control the discharges.</i></p>
Algeria	<p>Pursuant to the provisions of article 10 of Law 03-10, the allowable limits of industrial wastewater discharge effluents are set out by Decree 06-141 and completed by Order of 6<sup>th</sup> January 2013. Decree 06-141 sets general limit values as well as specific limits for a number of facilities.</p> <p><i>Industrial effluent discharge limits for BOD5 from existing industrial installations is 40 mg/l.</i></p> <p><i>Domestic wastewater discharge limits is 30 mg/l.</i></p>
Bosnia & Herzegovina	<p>National regulations setting ELVs are in place:</p> <p><i>Article 55 of the Federal Water Law, the Decree on conditions for the discharge of wastewaters into natural recipients and public sewage systems (“Official Gazette of the FB&amp;H”, No. 101/15) sets quality limits, which are even stricter than the ones that are required by RP. (COD =125mg/l; BOD=35mg/l; TOC= 30 mg/l)</i></p>
Croatia	<p>Amendments on national regulations still needed as explained below:</p> <p><i>Some legislative amendments are necessary to fully align the national legislation with the Urban Waste Water Treatment (UWWT) Directive.</i></p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT.)</i></p>
Cyprus	<p>National regulations setting ELVs are in place</p> <p><i>Water and soil pollution control Law (N.106 (I)/2002) in compliance with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.)).</i></p> <p><i>Industrial Emission Law (N.184 (I)/2013).</i></p>
Egypt	<p>National regulations setting ELVs are in place:</p> <p><i>Decision No. 44 for year 2000 to amend the executive decision for Law 93 for 1962 regarding discharge of liquid effluents (BOD 60 mg/l)</i></p>
France	<p>National regulations setting ELVs are in place:</p>

Country	Status of implementation of the legal measures
	<p>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</p>
Greece	<p>National regulations setting ELVs are in place:</p> <p>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</p>
Israel	<p>National regulations setting ELVs are in place:</p> <p>For discharge to rivers, BOD5 = 10 – 15 mg/l</p> <p>For unrestricted agricultural irrigation from small WWTP, BOD maximum value = 30 mg/l</p>
Italy	<p>National regulations setting ELVs are in place:</p> <p>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</p>
Lebanon	<p>ELVs for urban wastewater treatment plants in place. Need for update of ELVs for food sector installations as explained below:</p> <p>Decision 8/1 of 2001 - Annex 5: sets limit values for sea water discharge in case of primary treatment at &lt;200 mg/l BOD5 and in case of secondary treatment at &lt;50 mg/l which is in compliance with the “regional guideline on the reduction of BOD5 from urban waste water”</p> <p>Need for update of ELVs for effluent discharged by food sector installations directly in the sewerage system</p>
Malta	<p>National regulations setting ELVs are in place:</p> <p>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</p>
Montenegro	<p>National regulations setting ELVs are in place:</p> <p>Rulebook on the quality and sanitary-technical conditions for waste water discharge into the recipient and public sewage system (Official Gazette of Montenegro 45/08 and 9/10, 26/12 and 56/12).</p> <p>Official Gazette of Montenegro 26/12 defines in Article 5 the ELVs for concentration of hazardous and noxious substances in wastewater discharged in surface water: BOD &lt; 25mg/l, COD &lt; 125 mg/l, and TOC &lt;15mg/l.</p>



Country	Status of implementation of the legal measures
	<i>Requirements and conditions defined in authorizations and regulations. ELV not particularly defined for the food industry.</i>
Morocco	<p>Need for review/update of national regulations regarding ELVs as explained below:</p> <p><i>The 2006 decree setting specific limit values for domestic waste (BOD5 at 120 mg O2 / l, COD at 250 mg / l and MES at 150 mg / l). this order requires updating to comply with the Regional Plan (PR)</i></p> <p><i>Need for update Decision 8/1 of 2001 - Annex 5 to specifically address food sector installations in terms of ELVs for discharges in sewer explicitly taking into consideration compatibility of discharges with the operation and the emission discharge values of the urban waste water treatment plant</i></p>
Slovenia	<p>National regulations setting ELVs are in place:</p> <p><i>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</i></p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</i></p>
Spain	<p>National regulations setting ELVs are in place:</p> <p><i>National regulations in line with Directive 91/271/EEC on urban wastewater treatment (BOD 25 mg/l; COD: 125 mg/l; TSS: 35 mg/l (&gt;10,000 p.e.) or 60 mg/l (2,000-10,000 p.e.))</i></p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT)</i></p>
Tunisia	<p>National regulations setting ELVs are in place:</p> <p><i>The standard NT-106-02 specifies the thresholds for wastewater discharges in the different reception media. Natural media BOD 30 mg/l</i></p> <p><i>Decree No. 79-768 of 8 September 1979 regulating the conditions for the connection and discharge of effluents into the public sewerage network</i></p>
Turkey	<p>National regulations setting ELVs are in place:</p> <p><i>According to The Environment Law (Public Law 2872) became active on August 9, 1983, the Turkish Government established the Water Pollution Control Regulation which declares standards for wastewater discharges, on September 4, 1988. ELV for BOD is 25 mg/l.</i></p> <p><i>EU directives related to waste water are compatibly transferred in internal legislation to a large extent.</i></p> <p><i>Within the EU accession period, Turkey is conducting studies on compliance of industrial facilities with BAT and emission limits included in BREFs.</i></p>

*Table I.2: Summary information on the implementation of the institutional measures by the Contracting Parties as foreseen in the Regional Plans for Reduction of BOD from urban wastewater and in the food sector*

<b>Country</b>	<b>Status of implementation of the institutional measures</b>
Albania	<p>Monitoring plans are not consolidated:</p> <p><i>Need to enforce legislation for the industrial installations and a specific authorization by competent authority to practice and control the discharges</i></p> <p><i>Limited number of analyzed parameters. Limited geographical coverage. No consolidated system for collection, management and data sharing.</i></p>
Algeria	<p>Authorization/monitoring schemes are needed:</p> <p><i>No specific authorization by competent authority to practice and control the discharges</i></p>
Bosnia & Herzegovina	<p>Monitoring plans are not consolidated:</p> <p><i>Monitoring of the urban waste water discharges is not organized.</i></p> <p><i>According to the Regulation 4/12, all industries (including food sector) have to organize and conduct monitoring plans.</i></p>
Croatia	<p>Authorization/monitoring scheme in progress:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements.</i></p>
Cyprus	<p>Authorization/monitoring scheme in place:</p> <p><i>The Waste Discharge Permits set the obligations of the holder of a permit for self-monitoring of discharges, monitoring of the receiving water and soil, information of any accidental release, the monitoring results of receiving water and soil, waste transportation and disposal elsewhere etc.</i></p>
Egypt	<p>Authorization scheme in place. Monitoring plans are needed:</p> <p><i>Law 93/1962, Decree No. 649/1962 and Decree No. 9/1989, issuance of permits regulating wastewater discharge into public sewerage networks or the environment.</i></p> <p><i>Decree 8/1983 is an executive regulation of Law 48/1982. Under this law, discharges to the Nile, canals, drains and groundwater are controlled by licensing. Licenses are issued provided that discharges satisfy regulatory standards and requirements.</i></p>
France	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>
Greece	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>

Country	Status of implementation of the institutional measures
Israel	<p>Authorization/monitoring scheme in place:</p> <p><i>Monitoring performed in accordance with the Public Health Ordinances.</i></p> <p><i>Monitoring is performed either independently or by the Marine and Coastal Division.</i></p> <p><i>National regulations (based on Integrated Pollution Prevention and Control)</i></p>
Italy	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>
Lebanon	<p>Authorization/monitoring plans are needed:</p> <p><i>Compliance to the national ELVs is not ensured due to the lack of human, financial and technical resources</i></p> <p><i>Need for a self-monitoring program with concerned industries for sustainable monitoring of compliance</i></p>
Malta	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>
Montenegro	<p>Monitoring plans are not consolidated:</p> <p><i>Method and procedure of testing waste water quality, minimum number of tests and the contents of the report on the determined waste water quality (Official Gazette of Montenegro 45/08 and 9/10, 26/12 and 56/12).</i></p>
Morocco	<p>Authorization/monitoring plans are needed.</p> <p><i>No monitoring is undertaken due to insufficient human and material resources</i></p>
Slovenia	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>
Spain	<p>Authorization/monitoring scheme in place:</p> <p><i>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT) and monitoring/reporting requirements. Inspections are also considered.</i></p>
Tunisia	<p>Monitoring plans are not consolidated:</p> <p><i>ONAS has the right to refuse the connection to its network of an effluent that does not meet the standard NT106-02. However, most industrial discharges (more than 80%) do not comply with pretreatment standards.</i></p>

<b>Country</b>	<b>Status of implementation of the institutional measures</b>
Turkey	Authorization/monitoring scheme in progress: <i>Treatment systems providing discharge criteria in accordance with Urban Waste Water Treatment Directives are not supervised and reported efficiently</i>

*Table I.3: Summary information on the implementation of the technical measures by the Contracting Parties as foreseen in the Regional Plans for Reduction of BOD from urban wastewater and in the food sector*

<b>Country</b>	<b>Status of implementation of the technical measures</b>
Albania	Work in progress to close the gaps for collection and treatment of urban wastewater in all agglomerations with more than 2,000 inhabitants. In 2015, 96% of population is connected to sewerage system, and 64% has WWTP. Major programmes in progress: <i>Development of river basin management plan for Shkumbini and Ishmi-Erzeni in progress.</i> <i>Untreated wastewater from some industries with obsolete technologies.</i>
Algeria	Significant gaps regarding collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants. <i>Linear network sanitation has been made with an average connection to the sewerage system around 92% in these municipalities.</i> <i>27 wastewater treatment plants (WWTP) scattered along the Algerian coast for a capacity 1,591,581 total nominal EQH.</i>
Bosnia & Herzegovina	Work in progress for collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants. <i>Almost 50% % of the population in the agglomeration with more than 2000 inh. are covered by sewage net, only 8 % of covered by WWTP and old section of sewage system are partially damaged and build as mixed systems.</i> <i>WWTP do not have complete and operational adequate technology for the discharge in accordance with the ELVs</i>
Croatia	Plans for the construction of WWTP for agglomerations of more than 2000 inhabitants in progress. In 2015, 58% of population is connected to sewerage system, and 40% has WWTP. <i>The Accession Treaty provides for gradual compliance with the requirements of the Directive for collecting systems and treatment. The transitional measures are still active for all its agglomerations, and have to be progressively achieved by the end of 2018, 2020 and 2023.</i>
Cyprus	Programme for construction of wastewater treatment plants is almost completed. <i>More than 90% of the total generated load of all agglomerations <math>\geq</math> 2,000 p.e. were collected in a sewerage system</i>

Country	Status of implementation of the technical measures
Egypt	<p>Work in progress regarding collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants in terms of capacity and/or level of treatment</p> <p><i>Over 60% of coastal villages in the delta region still do not have adequate sanitation. The percentage population with adequate sanitation in urban areas are about 90% while it does not exceed 12% in rural areas.</i></p> <p><i>About 70% of coastal zones with agglomerations of 2000 inhabitants and more are without adequate sewage system especially slum areas.</i></p>
France	<p>Programme for construction of wastewater treatment plants is completed so 100% of the waste water load was connected to a collecting system; 99.5% of the load collected is entering the treatment plants and 87.6% of this load was correctly treated as regards the secondary treatment requirement</p>
Greece	<p>Programme for construction of wastewater treatment plants is completed</p> <p><i>High general compliance rates with the Urban Waste Water Treatment Directive: 100% for collection and 96.4% for secondary treatment of waste water</i></p>
Israel	<p>Over 99% of Israel's wastewater is collected in sewage networks. Over 93% is treated.</p> <p><i>Gradual upgrade of all WWTPs to tertiary level of treatment Not all WWTPs have been upgraded to tertiary level of treatment</i></p>
Italy	<p>Over 97% of Italy's wastewater is collected in sewage networks. Over 94% is treated.</p>
Lebanon	<p>Over 78% of Lebanon's wastewater is collected in sewage networks. Only 11% is treated. Work in progress for construction of wastewater treatment plants. Disparities in sewer network coverage are observed throughout the country:</p> <p><i>Despite an average wastewater network coverage reaching 78% (up to 96% in Beirut and 91% in city of Tripoli), treatment efficiency is still below acceptable levels.</i></p>
Malta	<p>Programme for construction of wastewater treatment plants is almost completed (93% connected to WWTP). Almost 100% is collected, but the load collected is treated in secondary treatment systems (i.e. 70% removal efficiency of BOD load).</p>
Montenegro	<p>Work in progress regarding collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants. Only 44% of wastewater is collected in sewage networks; 13% is treated in WWTP.</p> <p><i>Only one wastewater treatment plant in Budva has been constructed and put in operation. All coastal agglomerations with more than 2,000 inhabitants do not have waste water treatment facilities.</i></p>
Morocco	<p>Only 49% of wastewater is collected in sewage networks; 21% is treated in WWTP. Work in progress regarding collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants in terms of capacity and/or level of treatment.</p>
Slovenia	<p>Only 52% of wastewater is collected in sewage networks; 52% of treated in WWTP. Plans for the construction of WWTP for agglomerations of more than 2000 inhabitants in progress.</p>

<b>Country</b>	<b>Status of implementation of the technical measures</b>
	<i>Only nine agglomerations met the requirements of the Directive in terms of collection requirements and 4 in terms of secondary treatment.</i>
Spain	Programme for construction of wastewater treatment plants is completed. <i>99.7% of the waste water load is collected and 86.2 % is subject to secondary treatment.</i>
Tunisia	Only 58% of wastewater is collected in sewage networks; 56% of treated in WWTP. Work in progress regarding collection and treatment of urban wastewater in agglomerations with more than 2,000 inhabitants in terms of capacity and/or level of treatment <i>Despite the progress made with the increase in the connection rate, more than 4 million inhabitants (including in rural areas) do not yet benefit from improved sanitation services. Of the 264 communes in Tunisia, there are 94 communes that are not yet supported by ONAS. It is therefore necessary to improve the connection rates in urban areas by generalizing sanitation services to those with relatively low rates.</i>
Turkey	Only 81% of wastewater is collected in sewage networks; 37% of treated in WWTP. Plans for the construction of WWTP for agglomerations of more than 2000 inhabitants in progress. <i>There is a need for establishing healthy data inventory in terms of WWTF, sewerage and rainwater systems.</i> <i>Operating performances of treatment facility substructure investments are low.</i>

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**Annex II**  
**Legal, Institutional and Technical Measures on the Country Level and Evaluation References**  
**for Evaluation of Status of Implementation of the Regional Plan**  
**for Reduction of Inputs of Mercury**

Annex II includes three tables with country data and information on the status of implementation of legal, institutional and technical measures included in the Regional Plan for reduction of inputs of Mercury. This is followed by the list of references used for collecting this information and for undertaking the evaluation.

*Table II.1: Summary information on the implementation of the legal measures by the Contracting Parties as foreseen in the Regional Plan for Reduction of Mercury*

<b>Country</b>	<b>Status of implementation of the legal measures</b>
Albania	<p>Draft secondary legislation on chemicals in compliance with the law on chemicals and draft legislation on mercury is under development (NAP 2016). No new Hg cell plants could be permitted nor chemical industries using mercury catalysts.</p> <p>ELVs reported to be in place but specific information on the values are not available.</p>
Algeria	<p>National regulations and ELVs need to be reviewed in line with Minamata Convention, e.g.: Législation spécifique au Hg (santé /travail)</p> <p>Targets and measures to address mercury related pollution have been highly prioritised in the NAP 2016 and they include the following:</p> <ul style="list-style-type: none"> <li>- Setting up of an inter-ministerial commission for the alignment of national legislation with provisions of Minamata Convention;</li> <li>- Establishment of an interdepartmental commission to revise limit values for emissions of metallic contaminants, primarily mercury, to surface or groundwater and marine environment;</li> </ul> <p>Existing plants using mercury cells are progressively being closed down and rehabilitated.</p>
Bosnia & Herzegovina	<p>Legislation is vague, it sets a list of mandatory parameters to be included in wastewater monitoring, but associated responsibilities are not defined. Legislation and strategic documents need review and harmonization with international standards.</p> <p>No historical or present mercury production industries. ELVs implemented through industrial permits, no specific values are available.</p>
Croatia	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Cyprus	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> </ul>

Country	<i>Status of implementation of the legal measures</i>
	<ul style="list-style-type: none"> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Egypt	Not available
France	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Greece	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>

<i>Country</i>	<i>Status of implementation of the legal measures</i>
Israel	<p>The use of mercury cells is not considered BAT, and therefore prohibited according to the Clean Air Law.</p> <p>Adoption of national ELVs based on BAT and implemented through industrial permits. Regulation measures in the framework of the Green Licensing Law (IPPC).</p>
Italy	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Lebanon	<p>National regulations on the manufacture, export and import of mercury have not been identified. National ELVs are in place:</p> <p>Decision 8/1 of 2001 - Annex 2.8 sets ELVs for mercury generated from MSW incinerators at 0.05 mg/m<sup>3</sup> which is compliant to the regional plans requirement. Annex 3 sets limit values for Total Hg in sea discharges from other establishments at 0.05 mg/l. Annex 5 sets the limit value for Total Hg discharged in sewer system at 0.05 mg/l.</p>
Malta	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>– Prohibiting the export of mercury and mercury compounds;</li> <li>– Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>– Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>– Reducing the use of and pollution from dental amalgam;</li> <li>– Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Montenegro	<p>The existing regulation does not regulate the prohibition of construction of new plants for production of vinyl chloride monomer or plants for chlorine production. The use of mercury in existing circumstances is regulated by the Rulebook on prohibitions and restrictions on use, marketing and manufacturing of chemicals that</p>

Country	Status of implementation of the legal measures
	<p>pose an unacceptable risk to human health and the environment (Official Gazette of Montenegro 10-105/161, October 2013).</p> <p>National ELVs are in place:</p> <p>Official Gazette of Montenegro 26/12, of 24 May 2012 stipulates maximal emitted values ELVs of mercury in waste waters that are discharged into surface waters and it equals 0,005mg/l, or 5µg/l. Concentration of Hg in waste waters exceeding such established ELV has not been detected since 2012.</p>
Morocco	<p>National regulations on mercury are in place, in particular:</p> <ul style="list-style-type: none"> <li>- Law No. 05-15 promulgating and approving the Minamata Convention</li> <li>- Order No. 2942-13 setting the general limit values for discharge in surface and groundwater.</li> </ul> <p>ELV should be reviewed, the limit value of Hg for discharges into surface and groundwater is 10 µg / l. No ELV for surface treatment activity</p>
Slovenia	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>- Prohibiting the export of mercury and mercury compounds;</li> <li>- Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>- Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>- Reducing the use of and pollution from dental amalgam;</li> <li>- Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>
Spain	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury:</p> <ul style="list-style-type: none"> <li>- Prohibiting the export of mercury and mercury compounds;</li> <li>- Prohibiting the manufacture, export and import of a large range of mercury-added products;</li> <li>- Putting an end to all uses of mercury catalysts and large electrodes in industrial processes, e.g. from 11 December 2017: chlor-alkali production in which mercury is used as an electrode is prohibited. The production of vinyl chloride monomer shall be prohibited from 1 January 2022</li> <li>- Reducing the use of and pollution from dental amalgam;</li> <li>- Closing the door to future new uses of mercury in industry and in products;</li> </ul> <p>Directive 2000/76/EC on the incineration of waste. Amended by Regulation (EC) No 1137/2008, sets ELVs for mercury: 0.05 mg/Nm<sup>3</sup>.</p> <p>The permit conditions, as defined in the Industrial Emissions Directive (2010/75/EU), include emission limit values (ELVs) based on the Best Available Techniques (BAT). This Directive sets average emissions limit values: 0.05 mg/Nm<sup>3</sup> for waste gas and 0.03 mg/l for discharges of waste water from the cleaning of waste gases from waste incineration plants and waste co-incineration plants.</p>

<b>Country</b>	<b>Status of implementation of the legal measures</b>
Tunisia	National regulations on the manufacture, export and import of mercury have not been identified. National ELVs are in place:  Standard NT 106.02 (1989) for water discharge, NT 106.03 for REUT and NT 106.04 (1994) and NT 106.05 (1995) for pollutant emission limit values specify the limits for these values. The limit specified for mercury in NT.106.02 is 10 µg / l which is 5 times more stringent than the mercury standard set by Decision IG.20 / 8.1 (50 µg/l).
Turkey	Determination of country status regarding Mercury is being developed

*Table II.2: Summary information on the implementation of the institutional measures by the Contracting Parties as foreseen in the Regional Plan for Reduction of Mercury*

<b>Country</b>	<b>Status of implementation of the institutional measures</b>
Albania	Former chlor-Alkali plant in Vlora contaminated with mercury. No other mercury stocks identified (Child 1.1 project).  Laws and ELVs are not enforced. Mercury monitoring plans are not in place.  Lack of control and monitoring of the most polluted sites/most sensitive areas. A supervision of the clean-up of the disposal of hazardous waste in Albania in the former Chlor-Alkali plant in Vlora was planned in NAP 2016.
Algeria	Institutional measures in progress.  NAP mercury related priorities include decommissioning/ change of technological process by 2020 (Soachlore, Mostaganem; Baba Ali, Algiers; and CPAK, Skikda); Surveys for establishment of a temporary storage area for containment of highly polluted materials and treatment of mercury contaminated waste; and introduction of tax incentives for mercury waste collection  No BEPs in place at present.
Bosnia & Herzegovina	The environmental administration is quite fragmented and with complex institutional structure. Environmental management and regulatory-control systems are complicated, and in many cases, they overlap.  Mercury stocks identified: 3 t of metallic mercury in a steel container and an estimated 15.3 t of mercury wastes (in 110 plastic containers, 60 l volume) verified at former chlor-alkali plant (HAK I) in the industrial area in Tuzla; estimated content of pure mercury is 0.725-1.61 t  Regular monitoring plans include mercury in wastewater and surface waters.
Croatia	Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures: <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Cyprus	Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures: <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> </ul>

<i>Country</i>	<i>Status of implementation of the institutional measures</i>
	Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation
Egypt	Not available
France	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> </ul> <p>Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</p>
Greece	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Israel	<p>No Chlor alkali plants in the Mediterranean drainage basin.</p> <p>The EIL factory was closed in 2004 but old stockpiles of mercury are apparently still leaking into the bay waters.</p> <p>Mercury monitoring plans in place.</p> <ul style="list-style-type: none"> <li>• Marine mercury is monitored in the framework of the National Monitoring Program by the IOLRI.</li> <li>• Soil monitoring is performed according to local risk factors as dictated by MoEP policy.</li> </ul>
Italy	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Lebanon	<p>Mercury stocks or contaminated sites have not been identified.</p> <p>Lack of comprehensive monitoring program for mercury. Published data is based on scattered reports produced for research purposes</p>
Malta	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Montenegro	<p>Mercury stocks or contaminated sites have not been identified.</p> <p>So far, 48,160 kg of mercury-contaminated soil has been exported from the Ship Refurbishment Facility in Tivat (previous Overhaul Institute "Arsenal") during the construction of Porto Montenegro.</p> <p>The content and release of mercury into waters, soil and air are regulated and currently being monitored.</p>

<i>Country</i>	<i>Status of implementation of the institutional measures</i>
Morocco	<p>For mercury disposal/ depollution activities at COELMA site, several agencies/ institutions are relevant, including the State Secretariat for Sustainable Development, Ministry of Health, Ministry of Industry, Investment, Trade, and Digital Economy, Directorate for the implementation of development programmes, River basin agency of Loukkous, Development Company of the Oued Martil Valley and COELMA company itself.</p> <p>As well as COELMA, contaminated soils by mercury have been identified (Oued Martil and other locations). Unconfirmed stocks of mercury in storeroom (from 2017 EIB report) 65 bottles of 34.5 kg of mercury (total 2.2 tonnes) are stored in the plant's facilities.</p> <p>Mercury monitoring plans are not consolidated.</p>
Slovenia	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Spain	<p>Regulation (EU) 2017/852 covers the full life cycle of mercury, including the following measures:</p> <ul style="list-style-type: none"> <li>• Contaminated sites shall be identified and assessed.</li> <li>• Member States shall take all measures necessary to ensure that the Regulation is implemented.</li> <li>• Member States shall designate the competent authorities responsible for carrying out obligations arising from this Regulation</li> </ul>
Tunisia	<p>Overlaps in competences and insufficient coordination among the various departments have been identified. ANGeD responsibilities include storage, disposal and recovery of wastes. The agency also controls landfills and other waste management facilities. ANGeD is involved in the management of POPs and mercury/ mercury wastes</p> <p>Kasserine Chlor-alkali plant - Société Nationale de Cellulose et de Papier Alfa (SNCPA) - operated in the period 1963 – 1998 : 0.65 tons metallic mercury stored in 5 x 150L stainless steel containers; &gt;30 t of highly contaminated wastes (1,000 – 40,000 ppm) (stored in 300 x 1-1.5t bags)</p> <p>A government funded programme for sorting and proper storage of mercury wastes is being implemented (2017 – 2018) at SNCPA site.</p> <p>Mercury monitoring plans in place.</p>
Turkey	Determination of country status regarding Mercury is being developed



*Table II.3: Summary information on the implementation of the technical measures by the Contracting Parties as foreseen in the Regional Plan for Reduction of Mercury*

<b>Country</b>	<b>Status of implementation of the technical measures</b>
Albania	<p>2006- 2012: “Environmental clean-up and disposal of hazardous waste in the Chlor-Alkali plant in Vlore, Albania” providing for site’s clean-up and landfilling mercury contaminated waste into a confined disposal facility at the site.</p> <p>No measures to isolate and contain mercury wastes in other sites. Provisions are being made to clean-up site and for landfilling mercury contaminated waste into a confined disposal facility at site.</p> <p>The 2015 NAP did not identify problems with disposal of mercury wastes in Albania.</p>
Algeria	<p>Provisions are being made to clean-up over 1,000,000 tons of mercury contaminated wastes, primarily in the former mercury mining region of Skikda, but also as a result of operation of several chlor-alkali plants in the coastal zone (GEF supported project).</p> <p>NAP mercury related priorities include: Gradual reduction of total releases of mercury from chlor-alkali plants, decommissioning/ change of technological process by 2020 (Soachlore, Mostaganem; Baba Ali, Algiers; and CPAK, Skikda); Surveys for establishment of a temporary storage area for containment of highly polluted materials and treatment of mercury contaminated waste; and introduction of tax incentives for mercury waste collection</p> <p>According to child project 1.1: 17 t of metallic mercury stored at GIPEC company chlor-alkali plant located in Baba Ali, Algiers 1.5 kg metallic mercury identified in the WWTP in Tizi Ouzu</p>
Bosnia & Herzegovina	<p>No industrial sources of mercury.</p> <p>Environmental sound management need to be addressed for identified stocks: 3 tons of metallic mercury in a steel container and an estimated 15.3 tons of mercury wastes (in 110 plastic containers) verified at decommissioned chlor-alkali plant (HAK I) in the industrial area in Tuzla; estimated content of pure mercury is 0.725-1.61 t.</p>
Croatia	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Cyprus	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Egypt	Not Available
France	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p>

Country	Status of implementation of the technical measures
	Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.
Greece	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Israel	<p>Measures to isolate and contain mercury wastes are in progress</p> <p>Measures to reduce mercury emissions in progress:</p> <ul style="list-style-type: none"> <li>– Atmospheric emissions – mostly from coal power plants.</li> <li>– Marine discharges – mainly from the Shafdan sludge outlet.</li> <li>– Mercury leach from the site of the closed EIL factory (identified as a hotspot).</li> </ul>
Italy	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Lebanon	<p>Mercury stocks have not been identified. Mercury only available in the health sector.</p> <p>NAP sets the goal of ensuring safe storage and containment of mercury waste produced by healthcare sector by 2025.</p>
Malta	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Monaco	Not Available
Montenegro	<p>There are no installations using mercury as a catalyst.</p> <p>Measures to isolate and contain mercury wastes not identified.</p>
Morocco	<p>NAP prioritizes reduction and control of mercury related pollution, by inter alia: 20% annual reduction of mercury discharges from COELMA Chlor Alkali plant; decontamination of sites polluted by Hg beginning with highly contaminated sites (by 2020); and collection of 30% of mercury waste. NAP also proposes replacement of the mercury electrolysis production process used by COELMA with membrane electrolysis.</p>
Slovenia	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p>

Country	Status of implementation of the technical measures
	Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.
Spain	<p>Commission Implementing Decision of 9 December 2013 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU on industrial emissions, for the production of chlor-alkali. It includes emissions, decommissioning and site remediation.</p> <p>Regulation (EU) 2017/852 covers the full life cycle of mercury ensures that all mercury waste is safely taken out of the economic sphere, stabilised in a less toxic form and stored permanently in environmentally sound conditions.</p>
Tunisia	<p>A paper production plant in the Kasserine region (center of Tunis and non-coastal governorate). adopted a mercury-free membrane process in 1998. Mercury pollution has been confirmed.</p> <p>A remediation and rehabilitation project is currently underway and the mercury electrolysis site is closed and access is prohibited.</p> <p>Reducing 20 tonnes of mercury in former Chlor Alkali manufacturing plant in Kasserine. Site will be remediated</p> <p>2017-2018: Tunisian Government funded programme on management of mercury wastes at National Society of Cellulose and Paper Alfa (SNCPA) site in Kasserine resulted in repackaging and storing on the site of: 0.65 t metallic mercury; 25 t of sand and gravel (1,000-3,900 ppm); 0.78 t carbide waste (25,000-39,000 ppm); 15 t scrap metal (27-160 ppm); and 6 t activated carbon (19,000-40,000 ppm). Estimated mercury content in these wastes is 0.16-0.37 t</p> <p>2015-2018: Improve Mercury Management (GEF ID 8000, UNIDO). The 2017 UNIDO study estimated around 30 t of mercury (15 t in the cells, 15 t in the decomposers) were abandoned on the site in 1998 when chlor-alkali technology was phased out.</p>
Turkey	Determination of country status regarding Mercury is being developed

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**Annex III**  
**Legal, Institutional and Technical Measures on the Country Level and Evaluation References**  
**for Evaluation of Status of Implementation of the Regional Plans**  
**for Elimination/Phasing Out of POPs**

Annex III includes three tables with country data and information on the status of implementation of legal, institutional and technical measures included in the Regional Plans for elimination/phasing out of POPs. This is followed by the list of references used for collecting this information and for undertaking the evaluation.

*Table III.1. Summary information on the implementation of the legal measures by the Contracting Parties as foreseen in the Regional Plans for the elimination of POPs.*

<b>Country</b>	<b>Status of implementation of the legal measures</b>
Albania	Legal and administrative measures are in place: <i>Decree No. 860 on adopting the national implementation plan on banning of use and elimination of persistent organic pollutants (dated 20/12/2006).</i> <i>Decree No. 360 on approval of the list of Persistent Organic Pollutants and the establishment of measures for the production, import, trade and their use (dated 29/4/2015)</i>
Algeria	National regulations in place for initial POPs, not evidenced for new POPs (NIP, 2007 and 2nd reporting cycle to Stockholm Convention, 2010): <i>L'Arrêté du 11/07/1967 interdisant la vente et la mise en vente de certaines spécialités commerciales phytosanitaires à usage agricole.</i> <i>L'Arrêté ministériel n°3032/69 du 16/09/1969 qui annule les organisations de vente et d'importation de quatre pesticides organochlorés (le Chlordane, la Dieldrine, l'Heptachlore et le Toxaphène).</i>
Bosnia & Herzegovina	Legal and administrative measures are in place: <i>List of active substances allowed for use in Plant Protection Products in Bosnia and Herzegovina ("Official Gazette of BiH" No 11/11).</i> <i>BiH – RS – Regulation on Conditions for Restriction and Prohibition of Production, Circulation and Use of Chemicals (on the List of prohibited POPs substances from the Stockholm Convention (Part A)</i> <i>BiH– Law on Putting into Circulation of Toxins (Official Gazette of SFRY, no. 13/91) – Prohibits circulation (import and export) and use.</i>
Croatia	Legal and administrative measures in place: <i>Law on Ratification of the Stockholm Convention (OG-IT 2/2007).</i> <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i> <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i>  <i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i>
Cyprus	Legal and administrative measures in place: <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i> <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i>  <i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i>
Egypt	National regulations in place based on 3rd reporting cycle (Stockholm Convention). <i>Decree No. 55/96 of the Ministry of Supply and Internal Trade that bans the use, import and production of 88 hazardous pesticides, which include all the substances under Annex (A) of the Convention,</i> <i>Law No. 4/1994 of Ministry of State for Environmental Affairs (MSEA) that covers the management of all kinds of chemicals: industrial, agricultural,</i>

Country	Status of implementation of the legal measures
	<i>pharmaceutical, petroleum products, explosives, radioactive materials, domestically used chemicals and hazardous waste, etc).</i>
France	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Greece	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Israel	Completion of policymaking process and enforcement measures (NAP 2016).
Italy	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Lebanon	<p>Legal and administrative measures in place:  <i>Law 432 dated 08/08/2002 transposed the Stockholm Convention.</i>  <i>MoA Decision 94/1 dated 20/5/1998 "Banning the import of some pesticides"</i>  <i>MoA Decision 262/1 dated 26/9/2001 "Banning the registration of some pesticides"</i></p>
Malta	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Monaco	<p>Legal and administrative measures in place (NIP 2006):  <i>L'Arrêté Ministériel n 85-304 du 31 mai 1985 relatif à l'interdiction de substances vénéneuses en agriculture interdit le recours à l'aldrine (H.É.O.n.), la dieldrine (H.H.D.N.), l'heptachlore et le chlordane en asriculture.</i>  <i>L'Arrêté Ministériel n'2003-125 du 12 fevrier 2003 fixant la liste des substances qui ne peuvent entrer dans la composition des produits cosmetiques, modifié par l'Arrêté Ministériel n" 2006-313 du 28 ju;n 2006 modifiant l'Arrêté Ministériel no 2003-125 du 12 fevrier 2003.</i></p>
Montenegro	Legal and administrative measures in place:



<b>Country</b>	<b>Status of implementation of the legal measures</b>
	<p><i>The Rulebook on the contents of the list of active matters allowed to be used in plant protection products (OGM 67/2009);</i>  <i>The List of active matters allowed to be used in the plant protection products;</i>  <i>The Rulebook on the conditions for production line, marketing, import and sampling of pesticides and fertilisers (OGFRY 12/99)</i></p>
Morocco	<p>New POPs still not covered by national legislation:  <i>Arrêté du Ministre de l'Agriculture n°466-84 portant réglementation des pesticides organochlorés, mars 1984.</i>  <i>Law No. 42-95 on the control and organization of trade in pesticides for agricultural use</i></p>
Slovenia	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Spain	<p>Legal and administrative measures in place:  <i>Regulation (EC) No. 850/2004 on POPs is the legal instrument for implementing the Stockholm Convention and UNECE Protocol on POPs and is directly applicable in all Contracting Parties which are Member States of the EU.</i>  <i>Amendments by Regulation (EU) 757/2010 and Regulation (EU) 2016/293 addressing new POPs</i></p> <p><i>Regulation (EC) No. 689/2008 concerning export and import of the dangerous chemicals</i></p>
Tunisia	<p>Not all POPs covered by national legislation:  <i>Law No. 92-72 regulating use pesticides in agriculture, as modified by the Decree No. 2002-3469</i></p>
Turkey	<p>Legal and administrative measures in progress:  <i>Law No. 92-72 regulating use pesticides in agriculture, as modified by the Decree No. 2002-3469</i>  <i>By-law on Restriction of Manufacturing, placing on the Market and Use of Certain hazardous Substances and Preparations (Official Gazette 26th December 2008, no: 27092)</i>  <i>Regulation for the Control of the Pesticides Official Gazette: 22nd June,1995 no:22321</i></p> <p>By-law on POPs" covering all SC POPs is being prepared/finalized</p>

Table III.2. Summary information on the implementation of institutional measures by the Contracting Parties as foreseen in the Regional Plans for the elimination of POPs.

<b>Country</b>	<b>Status of implementation of the institutional measures</b>
Albania	<p>Institutional measures in progress, there is a need for adopting several bylaws to regulate in detail import, export, production and use of Annex A chemicals (pesticides). Weaknesses related to the institutional framework. NIP 2017 recommends including the POPs pesticides monitoring, especially in contaminated sites.</p>
Algeria	<p>Institutional measures in progress  Monitoring not developed due to not sufficient technical and financial capacity</p>
Bosnia & Herzegovina	<p>Institutional measures in progress, the legislation sets the requirements, but not the measures for the sound POPs management and POPs monitoring.</p>

<i>Country</i>	<i>Status of implementation of the institutional measures</i>
Croatia	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Cyprus	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Egypt	Institutional measures in progress Information gaps regarding imports/exports. Many sources still have not complied with regulations: Alexandria Petroleum Company, El Baida Dyes and Asma dyes, Misr for Spinning and Textiles companies in El-Mahalla and Fertilizers companies as well as many agricultural drains.
France	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Greece	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Israel	Institutional measures in progress.
Italy	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Lebanon	Institutional framework being strengthened (NIP 2017), mainly: Develop unified form for environmental data requirements from industries Strengthen the capacities of customs inspection personnel Monitoring plans in place
Malta	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Monaco	Institutional measures in place. No POPs occurring in Monaco at present
Montenegro	Institutional framework being strengthened (NIP 2013), mainly: Raising awareness and training program for competent authorities for managing and handling waste from pesticides, packaging and PCB waste Monitoring program for POPs substances in progress
Morocco	Institutional measures in progress. Monitoring not developed due to: <ul style="list-style-type: none"> <li>• Lack of financial capacity.</li> <li>• Lack of human resources.</li> <li>• Lack of technical capacity</li> </ul>
Slovenia	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Spain	Institutional measures in place. Measures for the sound POPs management and systematic monitoring of transboundary movements of waste is established by implementing EU legislation
Tunisia	Institutional measures in progress. Monitoring program for POPs in place
Turkey	Institutional measures in progress. Monitoring program for POPs in place

*Table III.3. Summary information on the implementation of technical measures by the Contracting Parties as foreseen in the Regional Plans for the elimination of POPs.*

<b>Country</b>	<b>Status of implementation of the technical measures</b>
Albania	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes are in progress:</p> <p>According to NIP 2017 there are no stocks of POPs pesticides. Project (2006): "Repackaging and removal of pesticides and chemicals from Albania, Bishti i Pallës," Removed DDT, HCH and Lindane stocks, and the former central area of Lindane production (Porto Romano, near Durres) was surrounded and encapsulated (cemented).</p>
Algeria	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes are in progress:</p> <p>According to the Algeria NAP 2016, obsolete pesticides (both POPs and non-POPs) are located in the regions of Tlemcen, Algiers, Skikda and Mostaganem. A quantity of 191 tons of DDT is recorded, 94% of which is stored at Mostaganem. 2005-2006: Algerian company (NewTech) in cooperation with French partners collected, transported and exported 2,000 t of PCBs wastes</p>
Bosnia & Herzegovina	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes are in progress</p> <p>Preliminary inventory (conducted in the process of 2015 NIP preparation) for POPs pesticides showed there were no stockpiles of such substances. Stockpiles of Hexabromodiphenyl ether and heptabromodiphenyl ether (2014) and Perfluorooctane sulfonyl acid, its salts and perfluorooctane sulfonyl fluoride (2014) reported (4th cycle reporting, 2018)</p>
Croatia	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in place:</p> <p>Only PCBs identified and exported for the environmentally sound management. No other POP stocks or contaminated locations have been found.</p>
Cyprus	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in place:</p> <p>Wastes consisting of or containing chemicals listed in Annex A, B, or C have not been identified. No stockpiles identified.</p>
Egypt	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in progress:</p> <p>Only PCB stockpiles identified. 185 ton of PCBs contaminated equipment and oil sent out of the country through Integrated Management of PCBs with MEDPOI (Regional project).</p>
France	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in place. The following stocks identified and managed:</p> <ol style="list-style-type: none"> <li>i. Polychlorinated biphenyls identified before 2001.</li> <li>ii. Perfluorooctane sulfonyl acid, its salts and perfluorooctane sulfonyl fluoride identified in 2006.</li> </ol>
Greece	Not available
Israel	<p>Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes are in progress.</p> <p>Contaminated sites have been identified but not all rehabilitated.</p>
Italy	Not available
Lebanon	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in progress through the following projects:

<i>Country</i>	<i>Status of implementation of the technical measures</i>																		
	<ul style="list-style-type: none"> <li>i. 2015 –2019 (ongoing): PCB Management in the Power Sector Project (World Bank/GEF), export of 230t of PCB contaminated equipment.</li> <li>ii. 2016: Sectoral Assessment of POPs Pesticides in Lebanon, updated the pesticides inventory. No stockpiles or empty containers identified.</li> </ul>																		
Malta	Not available																		
Monaco	Measures not in place as there are no POPs occurring in Monaco at present																		
Montenegro	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes are in progress through the following projects: <ul style="list-style-type: none"> <li>i. 2017-2021 (ongoing): UNDP (GEF ID 9045) Comprehensive Environmentally Sound Management (ESM) of PCBs. Project includes legislative improvements, national PCBs inventory, and specialized capacity building for stakeholders in public and private sectors on ESM.</li> </ul>																		
Morocco	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in progress: <ul style="list-style-type: none"> <li>i. 2018- 2021 (GEF ID 9916, UNIDO): Making PCB and elimination sustainable in Morocco, the following outputs are planned: 613 tons of PCBs-contaminated equipment and 2.4 tons of pure PCBs oil are sent abroad for safe elimination; 1,740 transformers with 541 tons of dielectric oils are locally decontaminated.</li> <li>ii. 2009- 2014: Safe PCB Management Programme in Morocco, Pillar II (GEF ID 3883), resulting in the treatment of 450 transformers, with 110 t of contaminated oil.</li> <li>iii. 2008 – 2013: Safe Management and Disposal of PCBs (GEF ID 3082), Pillar I: over 1,080 tons of PCBs-contaminated equipment and wastes containing PCBs were exported to France for elimination (at TREDI facility)</li> </ul>																		
Slovenia	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in place, in particular the following POPs were managed: <ul style="list-style-type: none"> <li>i. Polychlorinated biphenyls Before 2001</li> <li>ii. Hexabromodiphenyl ether and heptabromodiphenyl ether 2010</li> <li>iii. Tetrabromodiphenyl ether and pentabromodiphenyl ether 2010</li> <li>iv. Perfluorooctane sulfonyl acid, its salts and perfluorooctane sulfonyl fluoride 2006</li> <li>v. Hexabromobiphenyl 2010</li> </ul>																		
Spain	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in place, in particular the following POPs were managed: <ul style="list-style-type: none"> <li>i. Polychlorinated biphenyls 2012 81365 kg</li> <li>ii. Polychlorinated biphenyls 2015 88308 kg</li> </ul>																		
Tunisia	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in progress: <p>GEF-funded project (implemented by the World Bank) addressing health care wastes and PCBs management that was completed in May 2017. 1,100 tonnes of PCBs/ PCB contaminated equipment were exported to Belgium for destruction/ decontamination</p> <p>There are 6 sites where stocks of POP pesticides, including Lindane, Hexachlorocyclohexane (HCH) and DDT, are found. Quantities are estimated at 68.6 t. Remaining quantity of PCBs is 1,380 t, including 200 t in stocks (the rest is in use).</p>																		
Turkey	Measures to handle, collect, transport, store and dispose in an environmentally sound manner POPs wastes in progress. The following POPs were identified and managed (in metric tons): <table border="0" style="margin-left: 20px;"> <tr> <td>Equipment containing PCB</td> <td>2009</td> <td>24</td> </tr> <tr> <td>Equipment containing PCB</td> <td>2010</td> <td>494</td> </tr> <tr> <td>Equipment containing PCB</td> <td>2011</td> <td>216</td> </tr> <tr> <td>Liquids containing PCBs</td> <td>2009</td> <td>105</td> </tr> <tr> <td>Liquids containing PCBs</td> <td>2010</td> <td>61</td> </tr> <tr> <td>Liquids containing PCBs</td> <td>2011</td> <td>234</td> </tr> </table> <p>Current GEF project disposing of approximately 2000 tonnes of lindane. Based on the NIP and current disposal operations, there will remain 166 tons of PCB waste.</p>	Equipment containing PCB	2009	24	Equipment containing PCB	2010	494	Equipment containing PCB	2011	216	Liquids containing PCBs	2009	105	Liquids containing PCBs	2010	61	Liquids containing PCBs	2011	234
Equipment containing PCB	2009	24																	
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Liquids containing PCBs	2011	234																	

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**Annex IV**

**Legal/Institutional and Technical Measures on the Country Level and Evaluation References for  
Evaluation of Status of Implementation of the Regional Plan on  
Marine Litter Management in the Mediterranean**



Annex IV includes two tables with country data and information on the status of implementation of legal/institutional (combined based on the provisions of the Regional Plan) and technical measures included in the Regional Plan for Management of Marine Litter in the Mediterranean. This is followed by the list of references used for collecting this information and for undertaking the evaluation.

*Table IV.1: Summary information on the implementation of the legal and institutional measures by the Contracting Parties as foreseen in the Regional Plan on Marine Litter Management*

<b>Country</b>	<b>Status of implementation of the legal and institutional measures</b>
Albania	Government approval for integrated municipal solid waste management strategy and action plan including marine litter by 2019. DCM no.99, since 2005 “On the approval of the Albanian catalogue for classification of waste”. Law no. 10463, since 2011 “On Integrated Waste Management”. DCM no. 175, since 2011 “On the approval of the National Waste Strategy and National Waste Management Plan”. DCM no. 323/201 on the reduction of single-use plastic bags (< 35µm).
Algeria	Government law No. 19 addresses approval for integrated solid waste management strategy and action plan including marine litter by 2019.
Bosnia & Herzegovina	Integrated solid waste management strategy is in place. Marine litter is not treated separately.
Croatia	Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets. Strategy for Plastics adopted by the Commission on 16 <sup>th</sup> January 2018: pollution of the seas from plastics and microplastics is one of the three major areas Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive) Directive on Port Reception Facilities for the delivery of wastes from ships At national level: The Program of Measures of Croatia is made on the basis of the Environmental Protection Act (Official Gazette No. 80/2013, 78/2015, Articles 55 and 56). Regulation on the Development and Implementation document Management Strategy Marine Environment and Coastal Zone Management (Official Gazette No. 112/2014). Regulation of establishing a framework for the operation of the marine environmental protection (Official Gazette 136/11). Development of Regulation on marine litter in accordance with Art.53. Law on sustainable waste management in Croatia (in progress).
Cyprus	Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets. Strategy for Plastics adopted by the Commission on 16 <sup>th</sup> January 2018: pollution of the seas from plastics and microplastics is one of the three major areas Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive) Directive on Port Reception Facilities for the delivery of wastes from ships At national level: Waste Law (L.185(I)/2011)
Egypt	Government law addressing approval for integrated solid waste management strategy and action plan including marine litter by 2019.
France	Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets. Strategy for Plastics adopted by the Commission on 16 <sup>th</sup> January 2018: pollution of the seas from plastics and microplastics is one of the three major areas

	<p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p> <p>At national level:</p> <p>Legal prohibitions concerning - plastics for single use or having an impact on the marine environment (plastic bags, plates and cups made of plastic, cotton swabs, microbeads in cosmetics, straws, cakes).</p> <p>Circular economy roadmap: 50 measures - 100% objective of collecting recyclable plastics in 2025</p>
Greece	<p>Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets.</p> <p>Strategy for Plastics adopted by the Commission on 16th January 2018: pollution of the seas from plastics and microplastics is one of the three major areas</p> <p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p> <p>At national level, the National Waste Management Plan (NWMP):</p> <ul style="list-style-type: none"> <li>- Law 4555/2018: Solid Waste Management Organizations to prevent the waste generation, reduce its production &amp; reintroduce it into the product cycle;</li> <li>- Joint Ministerial Decision 180036/952/2017: Reduction of the consumption of thin plastic bags.</li> <li>- Urban waste water management plan against marine micro-litter</li> </ul>
Israel	<p>Marine Litter National monitoring plan for Mediterranean waters since 2017</p> <p>IMAP-based national program, including marine litter, associated with a formal government decision recognizing its obligation to fund an IMAP-based monitoring program for all Israeli Mediterranean waters, addressing all IMAP EOs.</p> <p>Single-Use Carrier Bags Law, 2016</p> <p>The Bags Law - Part of the implementation of the policy of waste reduction at source and public participation</p>
Italy	<p>Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets.</p> <p>Strategy for Plastics adopted by the Commission on 16th January 2018: pollution of the seas from plastics and microplastics is one of the three major areas</p> <p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p> <p>At national level:</p> <p>Ban on single-use items (i.e. plastic bags, plastic cotton bud sticks, microbeads in cosmetics), since 2018.</p> <p>Legislative measure to reduce the improper discarding of small size waste items in the environment (e.g. receipts, chewing-gum, tissues, cigarette butts, etc.), since 2015.</p>
Lebanon	<p>Integrated solid waste management strategy is in place. Marine litter is not treated separately.</p>
Malta	<p>Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets.</p> <p>Strategy for Plastics adopted by the Commission on 16th January 2018: pollution of the seas from plastics and microplastics is one of the three major areas</p> <p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p>
Montenegro	<p>Law on Implementation of Marine Strategy, the monitoring of marine litter will be established as a part of National monitoring program of marine ecosystem.</p>

Morocco	<p>Framework Law No. 99-12 on the National Charter on the Environment and Sustainable Development.</p> <p>Law n ° 81-12 relating to the coast which aims mainly at the protection and integrated management of the coast.</p> <p>Law No. 28.00 (2006) on waste management.</p> <p>Law (No. 77-15 of December 7, 2015): Prohibiting the manufacturing, import, export, marketing and use of plastic bags.</p>
Slovenia	<p>Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets.</p> <p>Strategy for Plastics adopted by the Commission on 16th January 2018: pollution of the seas from plastics and microplastics is one of the three major areas</p> <p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p> <p>National programme of measures (in line with MSFD 2008/56/ES and COM DEC (EU) 2017/845), since 2016.</p> <p>LBS NAP was prepared in 2018 and is in the process of Governmental confirmation.</p>
Spain	<p>Implementation of EU waste legislation includes the waste hierarchy; the need to ensure separate collection of waste and the landfill diversion targets.</p> <p>Strategy for Plastics adopted by the Commission on 16th January 2018: pollution of the seas from plastics and microplastics is one of the three major areas</p> <p>Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)</p> <p>Directive on Port Reception Facilities for the delivery of wastes from ships</p> <p>National framework:</p> <ul style="list-style-type: none"> <li>– National Strategy for a Circular Economy</li> <li>– Roadmap for Plastics (in development)</li> </ul>
Tunisia	<p>Integrated solid waste management strategy is in place. Marine litter is not treated separately.</p>
Turkey	<p>Environmental Law (Protection of all receiving media against pollution and Polluter-pays principle).</p> <p>Waste Management regulations (Fee application for plastic bags, after 2019); Water pollution control regulations;</p> <p>Taking Waste from Ships Regulations</p> <p>Municipalities Law (Prevention at source; Cleanup)</p> <p>Fisheries Law (Usage of nylon thread is prohibited)</p>

*Table IV.2: Summary information on the implementation of the technical measures by the Contracting Parties as foreseen in the Regional Plan on Marine Litter Management in the Mediterranean*

<b>Country</b>	<b>Status of implementation of the technical measures</b>
Albania	<p>National Monitoring Programme on Marine Litter, for IMAP Common Indicators is currently under development (GEF Adriatic Project), expected to be finalized within 2019</p> <p>Adopt-a-beach measures in place</p> <p>Improvement of the collection and recycling of plastic PET bottles</p> <p>Improvement of local and national capacities and raise awareness of multi-stakeholders</p>
Algeria	<p>An agreement is in the final stage of signature with the support of UN Environment/MAP for the development of an IMAP-based National Monitoring Programme on Marine Litter, as well as the implementation of Adopt-a-beach and Fishing-for-Litter activities.</p>

<i>Country</i>	<i>Status of implementation of the technical measures</i>
Bosnia & Herzegovina	Adopt-a-beach measures in place Improvement of the collection and recycling of plastic PET bottles Improvement of local and national capacities and raise awareness of multi-stakeholders
Croatia	National Monitoring Programme for Marine Litter established since 2017 (beach, floating, seabed-deep sea, microplastics – beach sediment, floating, ingested). Currently, no systematic collection and data recording related to marine litter, and no strategic document/act which relates only to the litter. Activities relating to the prevention of marine litter are carried out through the application of the existing legal framework and strategic documents related to waste management on land.
Cyprus	IMAP- and MSFD-based National Monitoring Programme in place. Mediterranean Coastal Cleanup Campaigns Cleaning Activities in Riverbanks Fishing-for-litter; Adopt-a-beach in place Awareness raising with fishermen for prevention/reduction of generation of marine litter
Egypt	IMAP-based National Monitoring Programme on Marine Litter is under development (expected within 2019) Adopt-a-beach; Fishing-for-litter measures in place Awareness raising campaigns Collaboration with civil society and NGOs
France	IMAP- and MSFD-based National Monitoring Programme on Marine Litter in place. Awareness raising with fishermen. Adopt-a-beach measures Collaboration with civil society and NGOs
Greece	Measures to promote actions among the Government, Local Administration and businesses for the reduction of waste dumped at sea, accompanied by enforcement measures, in accordance to the "the polluter pays" principle Measures aiming at the reduction of waste and the encouragement of reuse and recycling Investments on projects aiming at the reduction of micro-litter entering the environment through sewage systems; Promoting projects to improve port reception facilities for ship-generated waste Awareness raising programs in collaboration with the Local Administration for beach and river beds cleanups Promotion and implementation of fishing-for-litter to facilitate seabed cleaning from marine litter collected incidentally and / or produced by fishing vessels during their fishing activities, including abandoned fishing gear. Awareness raising programs targeted all professionals related to the sea and the public in general about marine litter Strengthening educational programs in schools regarding the issue of marine litter.
Israel	IMAP-based National Monitoring Programme on Marine Litter. Adopt-a-beach measures in place. Awareness-raising campaigns. Clean Coast Programme established which aims to minimize and mitigate the impacts of marine litter in Israel, by improving knowledge, prevention and actions taken, for the benefit of the environment and the public in Israel. Enforcement mechanisms in place.

<i>Country</i>	<i>Status of implementation of the technical measures</i>
Italy	<p>IMAP- and MSFD-based National Monitoring Programme on Marine Litter.</p> <p>Fishing-for-litter measures, including elements for waste management in ports.</p> <p>Research projects aimed at evaluating distribution and impacts of marine litter/microplastics, awareness raising and implementing mitigation measures</p>
Lebanon	<p>With the support of UN Environment/MAP, the development of an IMAP-based National Monitoring Programme on Marine Litter, as well as the implementation of Adopt-a-beach measures are foreseen.</p>
Malta	<p>IMAP- and MSFD-based National Monitoring Programme on Marine Litter.</p> <p>Public awareness and educational activities campaign (e.g. seafarers, CleanUp Malta,).</p> <p>Single-use plastic products strategy for Malta.</p> <p>Beverage Containers refund scheme.</p> <p>Adopt-a-beach and Fishing-for-litter</p>
Montenegro	<p>National Monitoring Programme on Marine Litter, for IMAP Common Indicators is currently under development (GEF Adriatic Project), expected to be finalized within 2019</p> <p>Adopt a beach measure in place</p> <p>State of regulatory framework to promote a non-single use of plastic</p> <p>Improvement of the collection and recycling of plastic PET bottles</p> <p>Improvement of local and national capacities and raise awareness of multi-stakeholders</p>
Morocco	<p>IMAP-based National Monitoring Programme on Marine Litter is under development (exp. within 2019)</p> <p>Adopt-a-beach; Fishing-for-litter measures</p> <p>Awareness raising campaigns</p> <p>Collaboration with civil society and NGOs</p>
Slovenia	<p>Waste management hierarchy applied in national legislation (with over 40 legislative acts)</p> <p>Sustainable Procurement Policies (enacted and included in PoM and NAP)</p> <p>Plastic bag consumption (voluntary agreement made with the Chamber of Commerce of Slovenia that from 1 September 2019 plastic bags will not be at the cash desk to buy; since January 2019 they are not available for free in shops in accordance with EU Directive (2015/720/EU))</p> <p>EU Directive on banning SUP proposed (Slovenia is in support)</p> <p>MARPOL and EU PRF Directive (2000/59/EC) implemented in national legislation</p> <p>Fishing-for-Litter (DFG, mariculture and polystyrene boxes) included in PoM and NAP</p> <p>Civil society and NGO participation</p>
Spain	<p>IMAP and MSFD-based national monitoring programme in place</p> <p>Preventing marine litter from sea-based sources. Main sources include Maritime transport and fishing/aquaculture. Measures aiming to facilitate disposal at port reception facilities contribute to reduce dumping at sea (i.e. non-special fee in 49 ports for MARPOL V wastes)</p> <p>Preventing marine litter from land-based sources. Main sources include: littering in the environment, storm water discharge points, wastewater discharges(microplastics), agriculture, floods.</p> <p>Link to sectorial policies with incidence in the marine environment (e.g. wastes, water).</p> <p>Water policy: Improvement of storm water management to reduce marine litter (i.e. Dimensioning national standards for storm water tanks, separated pipes for storm water and wastewater, equipment separation of floating litter in discharge points)</p> <p>Adopt-a-beach and Fishing-for-Litter measures implemented</p> <p>Awareness raising and educational activities</p>

<i>Country</i>	<i>Status of implementation of the technical measures</i>
	Civil society and NGO participation
Tunisia	IMAP-based National Monitoring Programme on Marine Litter is under development (exp. within 2019) Adopt-a-beach; Fishing-for-litter measures Awareness raising campaigns Collaboration with civil society and NGOs
Turkey	Marine Litter Action Plans for 28 provinces, including multi-stakeholder participation Waste Management in Ports: Blue Card System Zero-waste initiative Coastal and sea surface cleanup activities Awareness raising and educational activities

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