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First Consultative Meeting to Consider the Main Elements of Six Pollution Reduction Regional Plans under the Land Based Sources Protocol of the Barcelona Convention

Athens, Greece, 4-5 September 2018

Agenda item 2: Approach for the Development of Regional Plans under Article 15 of the Land Based Sources Protocol of the Barcelona Convention

Agenda item 3: Main Findings and Conclusions

Main Elements for a Conceptual Framework to Develop Regional Plans under Article 15 of the Land Based Sources Protocol of the Barcelona Convention

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List of Abbreviations/Acronyms

BAT	Best Available Technique
BEP	Best Environmental Practice
BOD5	Biochemical Oxygen Demand
COP	Conference of the Parties
DDT	Dichlorodiphenyltrichloroethane
ELV	Emission Limit Value
EQS	Environmental Quality Standards
GES	Good Environmental Status
GEF	Global Environment Facility
LBS Protocol	Land-Based Sources Protocol
MAP	Mediterranean Action Plan
MED POL	Programme for the Assessment and Control of Marine Pollution in the Mediterranean Sea
NAPs	National Action Plans
PCBs	Polychlorinated biphenyls
PoM	Programmes of Measures
PoW	Programme of Work
SCP	Sustainable Consumption and Production
WWTP	Wastewater Treatment Plant

Introduction

1. The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol) provides for the Parties to take all appropriate measures to prevent, abate, combat and eliminate to the fullest possible extent pollution of the Mediterranean Sea caused by discharges from rivers, coastal establishments and outfalls or emanating from any other land based sources and activities within their territories, giving priority to the phasing out of inputs of substances that are toxic, persistent and liable to bioaccumulate. Annex I to the Protocol defines the categories of these substances and their characteristics as well as key sectors.

2. The Protocol contains two main provisions addressing the Regional Plans and measures, specifically the “General Obligations” contained in Article 5, and Article 15. The latter provides for the adoption by the Contracting Parties of “*short-term and medium-term regional action plans and programmes containing measures and timetables for their implementation provided for in article 5 of this Protocol*”. This article further defines the process for the adoption of these legally-binding plans and programmes.

3. Therefore, the Protocol provides for general obligations for taking pollution prevention/ reduction/ elimination measures, defining a large spectrum of substances and sectors, and leaves room for the definition of specific legally-binding measures at a later stage, through the adoption of Regional Plans. The level of flexibility attributed to the Parties through Article 15 of the Protocol allows *de facto* the elaboration of measures targeting specific contaminants and sectors on a priority basis, using scientific evidence and in line with the precautionary principle, and also benefiting from technological developments and knowledge.

4. The preparation of action plans, programmes and measures is guided and framed by Annex I to the Protocol, which as mentioned above provides for priority elements to be taken into account: (a) sectors of activity; (b) characteristics of substances; and (c) categories of substances. Moreover, priorities for action shall be established by the Parties, on the basis of the relative importance of their impact on public health, the environment and socio-economic and cultural conditions and programmes should cover point sources, diffuse sources and atmospheric deposition.

5. Since 2009 the Contracting Parties have adopted ten Regional Plans. The legally-binding character of these Regional Plans is grounded on different bases, including the wording of the Article 15 par. 3 of the LBS Protocol (“*such measures and timetables become binding on the one hundred and eightieth day following the day of notification for the Parties which have not notified the Secretariat of an objection within one hundred and seventy-nine days from the date of notification*”), the instrument used for their adoption (Decisions adopted by the Ordinary Meetings of the Contracting Parties), as well as the language and obligations of the Regional Plans referring to *hard law* (i.e. use of shall/should, reporting requirements etc.).

6. The following is a list of the adopted Regional Plans in the framework of LBS Protocol article 15:

COP 16	Decision IG.19/7 <ul style="list-style-type: none"> Regional Plan on the reduction of BOD5 from urban waste water
	Decision IG.19/8 <ul style="list-style-type: none"> Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene
	Decision IG.19/9 <ul style="list-style-type: none"> Regional Plan on the phasing out of DDT
COP 17	Decision IG.20/8.1 <ul style="list-style-type: none"> Regional Plan on the reduction of inputs of Mercury
	Decision IG.20/8.2 <ul style="list-style-type: none"> Regional Plan on the reduction of BOD5 in the food sector
	Decision IG.20/8.3 <ul style="list-style-type: none"> Regional Plan on the phasing out of Hexabromodiphenyl ether, Heptabromodiphenyl ether, Tetrabromodiphenyl ether and Pentabromodiphenyl ether Regional Plan on the phasing out of Lindane and Endosulfan Regional Plan on the phasing out of Perfluorooctane sulfonyl acid, its salts and Perfluorooctane sulfonyl fluoride Regional Plan on the elimination of Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chlordecone, Hexabromobiphenyl, Pentachlorobenzene
COP 18	Decision IG.21/7 <ul style="list-style-type: none"> Regional Plan on Marine Litter Management in the Mediterranean

7. The main objective of the Regional Plans is to protect the coastal and marine environment and health from the adverse effects of contaminants inputs and of discharges from key sectors, including marine litter.

8. Since 2008, MAP Barcelona Convention system committed to implement the ecosystem approach with the overall objective of achieving and/or maintaining Good Environmental Status (GES). In this context, the Regional Plans adopted in the framework of the LBS Protocol were assessed by the Secretariat and needs for their further elaboration and possible new measures were identified to ensure the achievement and maintaining of GES. This analysis has showed which existing measures were not sufficient and/ or not adequately implemented to achieve and maintain GES, identifying at the same time areas and new measures required to fulfill GES objectives.

9. The analysis has been conducted following a homogenous methodology and systematic approach:

- Definition of main pressures on the Mediterranean Sea and coast based on existing reports;
- Overall assessment of their impacts and sources;
- Identification of the existing measures at regional level and the main gaps;
- Identification of areas where problems are already addressed by existing measures, but better implementation is required;

- Identification of problems that are not sufficiently tackled by existing measures and for which additional measures are needed;
- Proposal of potential measures to be considered for the areas that are inadequately addressed so far, taking into account to the extent possible measures adopted by the Contracting Parties in the updated National Action Plans (NAPs)/ Programmes of Measures (PoM).

10. On this basis, a list of potential new/ updated measures has been formulated and screened against a set of criteria to identify the most relevant ones in terms of their **effectiveness, significance of the driver/ expected impact, relevance for other policies and potential for coordinated/ joint implementation**. Attention was paid to areas where effectiveness of measures could be fostered through regional cooperation and/ or joint implementation of measures.

11. The MED POL Focal Points Meeting, held in Rome, Italy in May 2017, reviewed a proposed list of new/ updated measures and approved a priority clustering of the listed measures under six potential categories of Regional Plans in the framework of the article 15 of the LBS Protocol namely: Municipal Wastewater Treatment; Sewage Sludge Management; Agriculture Nutrients Management; Aquaculture Nutrients Management; Urban Storm Water Management; and Marine Litter. The MAP Programme of Work 2018-2019 (Decision IG.23/14) adopted by the Contracting Parties in their 20th Ordinary Meeting (COP 20, Tirana, Albania, December 2017), mandates the Secretariat to develop and propose to the MED POL Focal Points Meeting in 2019 the main elements of the six Regional Plans (PoW Activity 2.2.2.1).

12. To deliver this mandate, the Secretariat has developed a methodology addressing both the technical aspects and the consultation process, including the following steps:

1. Assess the measures provided for in the 10 existing Regional Plans adopted in the framework of article 15 of the LBS Protocol, against the list of measures identified in the 2017 Regional Measures Analysis report (UNEP(DEPI)/MED WG.444/3) and in the 2017 MED POL Focal Points Meeting Report (UNEP(DEPI)/MED WG.439/20);
2. Consider best practices and lessons learnt from regional measures negotiated and implemented in the framework of other regional seas, of relevance for the Mediterranean;
3. Undertake in-depth assessments based on updated National Baseline Budget data expected latest by Spring 2019, with the view to prioritizing sectors and substances and the relevant pollution loads trend;
4. Consider lessons learnt and results from National Action Plans (NAPs), Programmes of Measures implementation and NAPs mid-term evaluation, as well as the 2018 - 2020 Transboundary Diagnostic Analysis to be undertaken with the support of GEF;
5. Identify the main elements, measures and requirements of the 6 Regional Plans, with the objective of maintaining and achieving Good Environmental Status and keeping the right balance between reduction and prevention measures;
6. Organize two expert meetings in the biennium 2018-2019 to address the above elements and report to the MED POL Focal Points/Pollution Thematic Focal Points Meeting in late Spring 2019.

13. The objective of the present meeting is to contribute to steps 1 and 2 of the above methodology and process, and to initiate discussion on step 5. The latter will be further elaborated based on the results of steps 3, 4 and 6.

14. With the view to facilitating the deliberation of the present meeting towards definition of a clear baseline and concrete requirements of potential new/updated regional measures to achieve and/or maintain GES, the Secretariat has developed the following table that:

- (a) Identifies the linkages between the list of clustered potential new/ updated measures and provisions under the existing Regional Plans;
- (b) Formulates questions/ indications per each measure for further analysis, specifications and completion by meeting participants, including on the identification of the key elements of the new/ updated Regional Plans and existing best practices.

15. Based on the meeting outcomes regarding the available baseline information, best practices, available new technologies, and state of play of pollution reduction and prevention measures at national level, the Secretariat will elaborate a concrete proposal for the first meeting of experts (step 6) nominated by the Contracting Parties, which is scheduled for November 2018.

16. It is also important to exchange views on the approach for the elaboration of the six Regional Plans, with a focus on the following questions:

- (a) Undertake an in-depth thematic assessment per sector/ substance or use the existing knowledge and information to recommend actions and measures?
- (b) Maintain the existing Regional Plans as they are and define new instruments beyond the existing Regional Plans to accommodate the new/ updated regional measures?
- (c) Expand the scope of and integrate new/ updated regional measures into relevant existing Regional Plans?
- (d) Prepare Guidelines for key sectors corresponding with proposed categories of the Regional Plans (e.g. Aquaculture, Agriculture, etc.) as a first step to support prospective development of pertinent Regional Plans?
- (e) Transform and upgrade recently adopted MAP/MED POL Guidelines (on the management of desalination activities, tannery sector, lube oil, used batteries, polychlorinated biphenyls (PCBs), mercury sites decontamination etc.)¹ into Regional Plans?
- (f) What would be the appropriate timeframe for all the above-listed options?

17. The answers to the above issues may be different per measure and category of Regional Plans.

¹ Work is ongoing to develop other guidelines, mainly in the field of marine litter management.

Existing Measures and Standards adopted under the MAP Barcelona Convention Framework and Potential new measures to achieve GES

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
1. Municipal WWTP	1.1. Strengthen implementation of Regional Plans' provision on sewage and WWT systems; strengthening of capacities and provision of support for construction, expansion and upgrading of sewage/ WWT systems	E	<p>Decision IG.19/7 RP on reduction of BOD5 from UWW</p> <p>Art.II.1 The Parties shall ensure that all agglomerations (<i>area where the population of more than 2.000 inhabitants and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point</i>) collect and treat their urban waste waters before discharging them into the environment. Collecting systems should satisfy the requirements set forth in Appendix I.</p> <p>Art.II.2. The Parties shall adopt National BOD5 ELVs for urban waste waters after treatment (i.e. maximum allowable concentration of BOD5 to be finally discharged from WWTP to the receiving water environment).</p> <p>Art.II.3. The Parties shall ensure that characteristics of collected and treated urban waste waters shall, before discharge in the environment, be in accordance to provisions on ELVs described in the following table.</p> <p>- LBS Protocol Area → ≤50 mg /l O₂ - LBS Protocol Area – marine outfalls → ≤200 mg /l O₂)</p> <p>Appendix I Collecting systems Appendix II Guidelines on Monitoring and Enforcement</p>	<p>This proposed measure is de facto a suggestion to expand the existing Regional Plan and above all to enhance its implementation and enforcement.</p> <p>There is a need to assess the status of its implementation. For the European countries there is sufficient information. For the other Mediterranean countries, there is good information in the updated NAPs. It is expected to populate at least 3 H2020 indicators with data coming from the WW sector.</p> <p>The discussions may address the following:</p> <ul style="list-style-type: none"> • Is there sufficient baseline information across the region with regards to WWTP, their standards of operation, level of treatment and enforcement? What would be the sources of information? • Which are the main challenges and needs for <i>construction, expansion and upgrading of sewage/ WWT systems</i> as well as their operation? • What are the best practices/ new technologies to be considered, including non-conventional technologies? <p>If the option to expand this Regional Plan would prevail, what additional elements are to be considered?</p>

² To be elaborated during the meeting with baseline information and description of potential new/updated technical measures or requirements. Some questions/indications are provided to facilitate discussions and sharing of information.

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			Appendix III Guidelines and criteria to implement Article V	a) Secondary treatment. b) Tertiary treatment. c) Other considerations, i.e. sludge management? d) Stricter quality standards: water reuse, heavy metals, micro plastic, storm water, BOD, nutrients, others? e) Move from ELV approach to EQS/GES approach? Or opting for a combined approach? f) Available best practices on cost-effective and or low-cost technologies.
	1.2. Develop efficiency standards for WWTPs; support strengthened control of their operations	E+N	<p>Decision IG.19/7 RP on reduction of BOD5 from UWW</p> <p>Art.II.4. The Parties shall ensure that their competent authorities or appropriate bodies shall monitor discharges from municipal WWTP to verify compliance with the requirements of the above table taking into account the guidelines included in Appendix II.</p> <p>Art.II.5. The Parties should take the necessary measures to enforce these measures in accordance with their national regulations.</p> <p>Decision IG.19/7 RP on reduction of BOD5 from UWW</p> <p>Art. IV.2 The Parties shall ensure that their competent authorities or appropriate bodies shall monitor related discharges into water to verify compliance with the requirements of the above table taking into account the guidelines included in Appendix I (<i>providing information on the design and construction of collecting systems</i>).</p> <p>APPENDIX II</p>	This section liaises naturally with the previous measure related to the WWTP <ul style="list-style-type: none"> Is there sufficient information available to set a baseline? In case a regional approach for setting WWTP efficiency standards is acceptable, what concrete standards can be considered? How is enforcement and control ensured? Are there any best practices to be considered?

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²								
			<p>Guidelines on Monitoring and Enforcement (monitoring methods, sampling, frequency, requirements for lab performing analysis).</p> <p>Decision IG.20/8.2 RP on reduction of BOD5 from Food Sector</p> <p>Art IV.1 Industrial Food Plants outlined in Appendix I which discharge more than 4 000 pe into water bodies shall meet the following requirements (24-hour values):</p> <table><tr><th>Parameter</th><th>Value</th></tr><tr><td>Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)</td><td>160 mg/l</td></tr><tr><td>Biochemical Oxygen Demand BOD5 or (BOD7)</td><td>55 mg/l</td></tr><tr><td></td><td>30 mg/l</td></tr></table> <p>In case the food sector installation discharges into the sewerage system, the competent authorities shall establish ELV and an authorization compatible with the operation and the emission discharge values of the urban waste water treatment plant.</p>	Parameter	Value	Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)	160 mg/l	Biochemical Oxygen Demand BOD5 or (BOD7)	55 mg/l		30 mg/l	<ul style="list-style-type: none">Should we consider other sectors than the food sector’s wastewater?Should we consider expanding the list of branches and industries presented in Appendix I (IG.20/8.2)?Can Appendix II be more concrete and easy to implement? Can some of these elements be included as provisions in the text of the Regional Plan (IG.20/8.2)?
Parameter	Value											
Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)	160 mg/l											
Biochemical Oxygen Demand BOD5 or (BOD7)	55 mg/l											
	30 mg/l											
	1.3. Setting of targets for secondary treatment; promotion of tertiary treatment (with targets) and of uptake of new improved WWT technologies; setting of targets for reuse of treated wastewater	N	The RP on BOD5 from UWW considers only primary and secondary treatment. No mention of tertiary treatment, nor of reuse of wastewater.	<ul style="list-style-type: none">Is setting of region-wide targets for secondary and tertiary treatment feasible at this stage?If yes, how quantifiable targets can be defined?Best practices for wastewater treatment.								

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
				<ul style="list-style-type: none"> Description of potential measures. How to ensure links with the Marine Litter Regional Plan measures.
	1.4. Adopt an updated list of priority contaminants taking into account 'emerging pollutants' such as pharmaceuticals, nano-materials etc.	N	LBS Protocol Annex I- C. Categories of substances 1. Organohalogen compounds and substances which may form such compounds in the marine environment. Priority will be given to Aldrin, Chlordane, DDT, Dieldrin, Dioxins and Furans, Endrin, Heptachlor, Hexachlorobenzene, Mirex, PCBs and Toxaphene; 2. Organophosphorus compounds and substances which may form such compounds in the marine environment; 3. Organotin compounds and substances which may form such compounds in the marine environment; 4. Polycyclic aromatic hydrocarbons; 5. Heavy metals and their compounds; 6. Used lubricating oils; 7. Radioactive substances, including their wastes, when their discharges do not comply with the principles of radiation protection as defined by the competent international organizations, taking into account the protection of the marine environment; 8. Biocides and their derivatives; 9. Pathogenic microorganisms; 10. Crude oils and hydrocarbons of petroleum origin; 11. Cyanides and fluorides; 12. Non-biodegradable detergents and other nonbiodegradable surface-active substances; 13. Compounds of nitrogen and phosphorus and other substances which may cause eutrophication;	<p>Although this Measure is included in the WWTP cluster it deserves to be addressed on its own.</p> <p>This issue was addressed during the last 10 years on priority basis by the MED POL Focal points. It is an evolving process and difficult to conclude.</p> <p>A more specific list was developed in 2011, updated in 2017 for monitoring and action purposes, inspired by the list of substances provided for in Annex I of the LBS Protocol.</p> <p>The definition of such a list should guide the elaboration of the Regional Plans for specific substances and sectors. The Regional Plans on mercury and on the POPs are excellent pioneering examples at regional level. The relevant actions at global levels under the Minamata and Stockholm Conventions came after the adoption of the respective Mediterranean Regional Plans.</p> <p>Questions:</p> <ul style="list-style-type: none"> Should Regional Plans addressing specific substances are to be developed what would be the best approach for their formulation and selection? <ol style="list-style-type: none"> One substance across relevant sectors; ELV or EQS/GES based per each substance and sector? Or a combined approach? SCP/BEP/BAT based measures; low cost and environmental audit; Please list at least 10 substances which require regional measures and standards setting in the

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			<p>14. Litter (any persistent manufactured or processed solid material which is discarded, disposed of, or abandoned in the marine and coastal environment);</p> <p>15. Thermal discharges;</p> <p>16. Acid or alkaline compounds which may impair the quality of water;</p> <p>17. Non-toxic substances that have an adverse effect on the oxygen content of the marine environment;</p> <p>18. Non-toxic substances that may interfere with any legitimate use of the sea;</p> <p>19. Non-toxic substances that may have adverse effects on the physical or chemical characteristics of seawater.</p> <p>Priority substances agreed by MED POL Focal points at their meeting held in Aix en Provence, France in November 2009</p> <p>COP 18 Decision IG. 21/3 Annex II</p> <p>Evaluation of Annexes to the Pollution-related Protocols to the Barcelona Convention (UNEP(DEPI)/MED WG.439/Inf.14) proposed a list of potential additional priority contaminants in light of recent developments at regional and global level</p> <p>i.e.</p> <p>- Chlordecone, Hexabromobiphenyl, Hexabromodiphenyl ether and heptabromodiphenyl ether, Lindane, Pentachlorobenzene, Tetrabromodiphenyl ether and pentabromodiphenyl ether, Perfluorooctane sulfonic acid and its salts, and perfluorooctane sulfonyl fluoride, hexabromocyclododecane (HBCD), hexachlorobutadiene, pentachlorophenol and its</p>	<p>Mediterranean? Please provide relevant justification;</p> <p>e) Please list at least 10 sectors the management of which requires common measures/guidelines to eliminate toxic substances in the Mediterranean;</p> <p>f) What about reporting on measures implementation and effectiveness?</p> <p>g) Examples of best practices from the countries, regional seas, etc.;</p> <p>h) State of play of existing guidelines (EU, REACH, Stockholm, Basel) on specific substances and sectors.</p>

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			salts and esters, and polychlorinated naphthalenes, (Stockholm Convention) - Silicon (other RSC) - Microlitter (MAP BC EO 10) - Chemicals used for the preservation of wood, timber, wood pulp, cellulose, paper, hides and textiles (other RSC) - Brine (MSFD) Emerging Chemicals in the Mediterranean Sea (UNEP(DEPI)/MED WG.439/Inf.11) proposed a Candidate Chemicals List (MED POL FP Meeting in Rome, in May 2017)	
	1.5. Promote upgrading of WWTPs to reduce the inflows of plastics into the marine environment	E	Decision IG.21/7 Regional Plan on Marine Litter Management in the Mediterranean (MLRP) Art.9.4 By the year 2020 take necessary measures to establish as appropriate adequate urban sewer, wastewater treatment plants, and waste management systems to prevent run-off and riverine inputs of litter. No provisions related to marine litter and plastics in the RP on BOD5.	This measure is already addressed under the section 1.1.
2. Sewage Sludge Management	2.1. Strengthen the existing and development of new measures to improve region-wide performance with sewage sludge management	E+N	Dumping of sludge at sea is prohibited in the Mediterranean. However, there are no specific provisions related to sludge management in the existing RPs.	The management of sludge deriving from WWTP operations has become an emerging issue in the Mediterranean and highlighted as a key priority in almost all updated NAPs developed by the Contracting Parties. <ul style="list-style-type: none"> Which are the most cost-effective solutions for sludge management and reuse; best practices from countries and other regions.

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
				<ul style="list-style-type: none"> What would be the best approach to address sludge management? Guidelines versus Measures? Should a Regional Plan be mandated what would be its main elements? Please develop a list of possible standards for sludge disposal and to promote sludge reuse.
3.Agriculture [Nutrients] Management	3.1. Develop technical guidelines and management standards to tackle inputs of nutrients and contaminants from agriculture and to promote sustainable farming practices	N	<p>LBS Protocol Annex I</p> <p>Agriculture is included in the list of sectors of activity (Part A) which are <i>to be primarily considered when setting priorities for the preparation of action plans, programmes and measures for the elimination of the pollution from land-based sources and activities.</i></p> <p>Regarding contaminants inputs from agriculture, the elimination/phasing out of some key POP pesticides/insecticides has been regulated by relevant Regional Plans:</p> <ul style="list-style-type: none"> - Phasing out of DDT: Decision IG. 19/9 providing for implementation of measures by 2012. - Phasing out of aldrin, chlordane, dieldrin, endrin, heptachlor, mirex, toxaphene: Decision. IG.19/8 providing for implementation of measures by 2012. 	<ul style="list-style-type: none"> Existing measures under HELCOM³ and OSPAR⁴ on pollution from agriculture, including on the use of fertilizers and pesticides. Any concrete other measures to be considered for the Mediterranean? Is there sufficient information on the impacts of agriculture in the Mediterranean? Is there any need to undertake an in-depth assessment? What best practices to consider and promote? What would be the best approach? Develop Guidelines on Agriculture best practices versus Measures contained in a Regional Plan. <p>Some actions, although not legally binding as in the sense of the Pollution Reduction RPs, are set out in the Decision IG.22/5 Regional Action Plan on</p>

³ Helsinki Convention, Annex III, Part II Prevention of Pollution from Agriculture; HELCOM RECOMMENDATION 24/3: measures aimed at the reduction of emissions and discharges from agriculture; HELCOM RECOMMENDATION 19/6: amendments to Annex iii of the Helsinki Convention concerning regulations on prevention of pollution from agriculture (26 March 1998); HELCOM RECOMMENDATION 31E/3: cadmium in fertilizers

⁴ PARCOM RECOMMENDATION 94/7 on the Elaboration of National Action Plans and Best Environmental Practice (BEP) for the Reduction of Inputs to the Environment of Pesticides from Agricultural Use; OSPAR RECOMMENDATION 2000/1 on Best Environmental Practice (BEP) for the Reduction of Inputs of Agricultural Pesticides to the Environment through the Use of Integrated Crop Management Techniques; Guideline 6: Quantification and Reporting of Nitrogen and Phosphorus Losses from Diffuse Anthropogenic Sources, and natural Background Losses (Reference Number: 2007-8)

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			- Phasing out of lindane and endosulfan: Decision IG. 20/8.3 providing for implementation of measures by 2013.	Sustainable Consumption and Production in the Mediterranean aiming at promoting sustainable agriculture, that can be considered for the development of new/updated measures, such as adoption of Good Agricultural Practices (GAP) schemes, promotion of environmental practices like Integrated Pest Management (IPM) and organic farming.
4. Aquaculture [Nutrients] Management	4.1. Develop technical guidelines and management standards to tackle inputs of nutrients and contaminants from aquaculture	N	LBS Protocol Annex I Aquaculture is included in the list of sectors of activity (Part A) which are <i>to be primarily considered when setting priorities for the preparation of action plans, programmes and measures for the elimination of the pollution from land-based sources and activities</i> . However, there are no relevant provisions in the existing Regional Plans.	<ul style="list-style-type: none"> Existing measures under HELCOM⁵ and OSPAR⁶ as well as relevant FAO⁷ and GFCM⁸ Decisions and Guidelines. Any concrete other measures to be considered for the Mediterranean? Is there sufficient information on the impacts of aquaculture in the Mediterranean? Is there any need to undertake an in-depth assessment? What best practices to consider and promote? What would be the best approach? Develop Guidelines on Aquaculture best practices versus Measures contained in a Regional Plan.
5. Urban Stormwater Management	5.1. Develop guidelines on management of runoff from urban areas and effluents from stormwater sewers; promotion of the use of Green Infrastructure and nature based solutions	N		<ul style="list-style-type: none"> Is there sufficient baseline information on storm water management/runoff / effluents in the Mediterranean?

⁵ HELCOM RECOMMENDATION 37/3: Sustainable Aquaculture in the Baltic Sea Region

⁶ PARCOM RECOMMENDATION 94/6 On Best Environmental Practice (BEP) for the Reduction of Inputs of Potentially Toxic Chemicals from Aquaculture Use; Guideline 2: Quantification and Reporting of Nitrogen and Phosphorus Discharges/Losses from Aquaculture Plants

⁷ FAO 2010, Technical Guidelines for Responsible Fisheries 5, Aquaculture Development Suppl. 4. Ecosystem approach to aquaculture

⁸ GFCM Decisions on: Guidelines for the streamlining of aquaculture authorization and leasing processes; A strategy for the sustainable development of Mediterranean and Black Sea aquaculture; The reporting of aquaculture data and information repealing Recommendation GFCM/35/2011/6; Guidelines on Allocated Zones for Aquaculture (AZA)

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
				<ul style="list-style-type: none"> Best practices to be considered for storm water management, including nature-based solutions, if any? Please list any best practice and guidelines related to storm water management.
	5.2. Establish appropriate sewage and stormwater collection systems, WWTPs and waste management systems to prevent runoff and riverine inputs on marine litter	E	Decision IG.19/7 RP on reduction of BOD5 from UWW APPENDIX I Collecting systems should take into account waste water treatment requirements. The design, construction of collecting systems should be undertaken considering the best technical knowledge, notably regarding (...) (d) the separation of storm water pipes from collection pipes of WWTP, when applicable.	<ul style="list-style-type: none"> Best practices and challenges faced on enforcement at national level? Please develop possible links with the Regional Plan on Marine Litter Management.
6. Marine Litter (upgrade)	6.1. Strengthen solid waste management systems in the region: adopt quantifiable targets as appropriate, promote adequate collection and treatment/ disposal, stimulate recycling and uptake of new waste management technologies	E+N	Decision IG.21/7 Regional Plan on Marine Litter Management in the Mediterranean (MLRP) Art 9.2. By the year 2019 implement adequate waste reducing/reusing/recycling measures in order to reduce the fraction of plastic packaging waste that goes to landfill or incineration without energy recovery.	<ul style="list-style-type: none"> Description of potential new concrete measures/ specifications, if any? Best practices for solid waste collection/ treatment/ disposal/ recycling to be considered? What kind of concrete standards can be considered?
	6.2. Promote waste prevention at source, better integration of SCP principles and measures, decoupling waste generation from economic growth, green procurement and adoption and implementation of circular economy strategies	E+N	MLRP Art.9.1. By the year 2025 at latest, to base urban solid waste management on reduction at source, applying the following waste hierarchy as a priority order in waste prevention and management legislation and policy: prevention, preparing for re-use, recycling, other recovery, e.g. energy recovery and environmentally sound disposal.	<ul style="list-style-type: none"> Existing application of circular economy strategies/measures in waste prevention/management? Best practices in the region? Description of potential new concrete measures?

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			MLRP Art.9.3. By the year 2017 explore and implement to the extent possible prevention measures related to: (a) Extended Producer Responsibility strategy by making the producers, manufacturer brand owners and first importers responsible for the entire life-cycle of the product with measures prioritizing the hierarchy of waste management in order to encourage companies to design products with long durability for reuse, recycling and materials reduction in weight and toxicity.	
	6.3. Close the illegal dumps	E	MLRP Art.9.9 The Contracting Parties shall take the necessary measures by the year 2020 to close to the extent possible the existing illegal dump sites on land in the area of the application of the Regional Plan.	<ul style="list-style-type: none"> Strengthen the existing enforcement measures.
	6.4. Incorporate marine litter into national regulations, prepare Marine Litter National Action Plans	E+N	MLRP Art. 7 Integration of marine litter measures into the LBS National Action Plans (LBS NAPs) Par.2 The LBS National Action Plan shall include: (a) Development and implementation of appropriate policy, legal instruments and institutional arrangements, including adequate management plans for solid waste also including those originating from sewer systems, which shall incorporate marine litter prevention and reduction measures; (b) Monitoring and assessment programmes for marine litter; (c) Measures to prevent and reduce marine litter; (d) Programmes of removal and environmentally sound disposal of existing marine litter according to the national legislation about management of this kind of waste; and	<ul style="list-style-type: none"> Done

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			(e) Awareness raising and education programmes.	
	6.5. Establish a regional marine litter database	E	MLRP Art.12.1b Establish in the year 2016 the Regional Data Bank on Marine Litter which should be compatible with other regional or overarching databases.	<ul style="list-style-type: none"> • Ongoing
	6.6. Stimulate reduction/ recycling/ prevention of plastics by, for example, adoption of recycling targets, promotion of sustainable consumption patterns, promotion of instruments to reduce packaging wastes, replacement of plastics with bioplastics where feasible, preventing/ reducing use of microplastics (microbeads) in personal care and cosmetics products, and similar	E+N	MLRP Art.9.2 By the year 2019 implement adequate waste reducing/reusing/recycling measures in order to reduce the fraction of plastic packaging waste that goes to landfill or incineration without energy recovery. MLRP Art.9.3 (b) Sustainable Procurement Policies contributing to the promotion of the consumption of recycled plastic-made products; (c) Establishment of voluntary agreements with retailers and supermarkets to set an objective of reduction of plastic bags consumption as well as selling dry food or cleaning products in bulk and refill special and reusable containers; (d) Fiscal and economic instruments to promote the reduction of plastic bag consumption; (e) Establishment of Deposits, Return and Restoration System for expandable polystyrene boxes in the fishing sector; (f) Establishment of Deposits, Return and Restoration System for beverage packaging prioritizing when possible their recycling; and (g) Establish procedures and manufacturing methodologies together with plastic industry, in order to minimize the decomposition characteristics of plastic, to reduce micro-plastic.	<ul style="list-style-type: none"> • Promote sharing of best practices. Any need for new measures? • Description of concrete measures to further develop and implement artt. 9.2 and 9.3, including technical specifications and guidance for their implementation?

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
	6.7. Assess options for phasing out landfilling of recyclable wastes (in particular plastics)	N	MLRP Art.9.2 By the year 2019 implement adequate waste reducing/reusing/recycling measures in order to reduce the fraction of plastic packaging waste that goes to landfill or incineration without energy recovery.	<ul style="list-style-type: none"> • Available baseline information on landfilling of recyclable waste? • Best practices in the region? • What kind of concrete standards can be considered?
	6.8. Adopt common definition of microplastics and studies to improve knowledge (sources, quantities, impacts, possible reduction/ prevention measures, differentiated for primary and secondary microplastics)	N	MLRP Annex III Potential Research Topics MICROLITTER <ul style="list-style-type: none"> • Identification of main sources (industrial pellets and personal hygiene products related micro litter particles). • Define harm for micro litter to establish potential physical and chemical impacts on wildlife, marine living resources and the food chain. • Define adequate indicators for the Mediterranean to assess the micro litter problem and its effects. 	
	6.9. Promote introduction of region-wide plastic bag tax (alternatively promote coordinated approach to restricting single-use plastic bags)	E+N	MLRP Art. 9.3 By the year 2017 explore and implement to the extent possible prevention measures related to: (d) Fiscal and economic instruments to promote the reduction of plastic bag consumption;	<ul style="list-style-type: none"> • Sharing of best practices. Please list 2-3 best practices. • Is there any need to further specify this measure?
	6.10. Strengthen the implementation of MARPOL Annex V on the prevention of pollution by garbage from ships	E+N	MLRP Art.9.5 (...) The Contracting Parties shall also take the necessary steps to provide ships using their ports with updated information relevant to the obligation arising from Annex V of MARPOL Convention and from their legislation applicable in the field.	<ul style="list-style-type: none"> • Ongoing. (outside the scope of this meeting)
	6.11. Use of port reception facilities at no-special-fee	E+N	MLRP Art.9.5 In accordance with Article 14 of the Prevention and Emergency Protocol explore and implement to the extent possible by 2017, ways and means to charge reasonable cost for the use of port reception	<ul style="list-style-type: none"> • Ongoing. (outside the scope of this meeting)

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			<p>facilities or when applicable, apply No-Special-Fee system. (...)</p> <p>MLRP Art.10 (...) the Contracting Parties undertake to explore and implement to the extent possible the following measures by the year 2019: (f) Charge reasonable costs for the use of port reception facilities or, when applicable apply No-Special-Fee system, in consultation with competent international and regional organizations, when using port reception facilities for implementing the measures provided for in Article 10.</p>	
	6.12. Implement prevention/ retrieval of lost/discarded fishing gear; assessment options for collecting and processing/ recycling fishing gear and equipment at the end of its useful life	E+N	<p>MLRP Art.9.7 Explore and implement to the extent possible by the year 2017 “Gear marking to indicate ownership” concept and ‘reduced ghost catches through the use of environmental neutral upon degradation of nets, pots and traps concept’, in consultation with the competent international and regional organizations in the fishing sector.</p>	<p>FAO Technical Consultation on the Marking of Fishing Gear (Rome, Italy, 5–9 February 2018)</p> <ul style="list-style-type: none"> - Draft Guidelines on the Marking of Fishing Gear (TCMFG/2018/3); - Draft Annexes and Appendices to the Draft Guidelines on the Marking of Fishing Gear TCMFG/2018/4 <ul style="list-style-type: none"> • Elements/ potential measures to be considered for the Mediterranean?
	6.13. Encourage and implement to the extent possible ‘fishing for litter’ schemes	E+N	<p>MLRP Art.9.6 Explore and implement to the extent possible by the year 2017 the “Fishing for Litter” environmentally sound practices, in consultation with the competent international and regional organizations, to facilitate clean-up of the floating litter and the seabed from marine litter caught incidentally and/or generated by fishing vessels in their regular activities including derelict fishing gears.</p> <p>MLRP Art.10</p>	<ul style="list-style-type: none"> • Ongoing; Fishing for Litter Guidelines adopted by COP 19 (Decision IG. 22/10);

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			<p>(...) the Contracting Parties undertake to explore and implement to the extent possible the following measures by the year 2019:</p> <p>(e) Apply Fishing for Litter in an environmentally sound manner, based on agreed guidelines and best practice, in consultation with the competent international and regional organizations and in partnership with fishermen and ensure adequate collection, sorting, recycling and/or environmentally sound disposal of the fished litter.</p> <p>Fishing for Litter Guidelines adopted by COP 19 (Decision IG. 22/10).</p>	
	6.14. Implement pilot projects for removal of marine litter accumulations impacting on MPAs	E+N	<p>MLRP Art.10</p> <p>The Contracting Parties shall, where it is environmentally sound and cost effective, remove existing accumulated litter, subject to Environmental Impact Assessment procedure, in particular from specially protected areas and Specially Protected Areas of Mediterranean Importance (SPAMI) and litter impacting endangered species listed in Annexes II and III of the SPA and Biodiversity Protocol.</p>	<ul style="list-style-type: none"> Is there any need to set stricter measures related to Marine Litter for MPAs?
	6.15. Develop and implement measures to reduce incidence of cigarette butts in marine environment, including provision of adequate facilities and signs on organised beaches, awareness raising and clean-up activities	E+N	No specific provision on cigarette butts.	<p>According to the most recent assessment cigarette bust consist a considerable amount of ML items on the beach.</p> <ul style="list-style-type: none"> Recommendations on concrete technical measures for cigarette butts?
	6.16. Clean-up activities targeting riverbanks	E+N	<p>There are provisions in the MLRP for removal of marine litter and clean up campaigns</p> <p>Art.10</p> <p>(a) Identify in collaboration with relevant stakeholders accumulations/hotspots of marine litter</p>	<ul style="list-style-type: none"> Ongoing

Suggested Pollution Reduction RP	Measures	E/N	Existing relevant MAP BC RP measures	Remarks ²
			and implement national programmes on their regular removal and sound disposal; (b) Implement National Marine Litter Cleanup Campaigns on a regular basis; (c) Participate in International Coastal Cleanup Campaigns and Programmes. However, no specific reference is made to targeted riverbanks clean-up activities.	
	6.17. Promote and expand beach stewardship schemes	E+N	MLRP Art.10 (...) the Contracting Parties undertake to explore and implement to the extent possible the following measures by the year 2019: (d) Apply as appropriate Adopt-a-Beach or similar practices and enhance public participation role with regard to marine litter management.	<ul style="list-style-type: none"> Ongoing; Guidelines under preparation.
Industrial Pollution*			Decision IG.20/8.1 Regional Plan on the reduction of inputs of Mercury in the framework of the implementation of Article 15 of the LBS Protocol	<ul style="list-style-type: none"> This was addressed above in section 1.4. of the table.

(*) This has not been part of the table of clustered new/updated measures, which was agreed by the MED POL Focal Points Meeting (Rome, Italy, May 2017), but is part of the work mandated to the Secretariat regarding the refinement and update of the priority contaminants list. It is therefore added to the table for consideration and review by the meeting.