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MEDITERRANEAN ACTION PLAN

Meeting of MAP Focal Points

Athens (Greece), 7-10 July 2009

**Regional Plan on the reduction of BOD₅ from urban waste water in
the framework of the implementation of Article 15 of the LBS
Protocol**

DRAFT DECISION

Regional Plan on the reduction of BOD₅ from urban waste water in the framework of the implementation of Article 15 of the LBS Protocol

The 16th Meeting of the Contracting Parties,

Recalling Article 8 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean as amended in Barcelona 1995, hereinafter referred to as the Barcelona Convention,

Recalling Annex 1.C of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities, hereinafter referred to as the LBS Protocol,

Recalling further the decision 17/8 of the 15th Meeting of the Contracting Parties (Almeria, Spain, January 2008) entitled "Implementation of NAPs and the preparation of legally binding measures and timetables required by Art.15 of the LBS Protocol",

Taking into account the pertinent provisions of the relevant international environmental agreements, EU directives and regulations,

Noting the different capabilities of the Parties to undertake measures, as well as their common but differentiated responsibilities,

Considering that the precautionary principle underlies the concerns of all the Parties of the Mediterranean Action Plan,

Considering the recommendations of the Meeting of the Government Designated Experts on Long Term Implementation of NAPs and Preparation of Plans and Programmes Containing Measures and Timetables Requested by Art. 15 of the LBS Protocol (Aix en Provence in 2008),

Considering that BOD₅ is an element contributing to the eutrophication phenomena associated with nutrients enrichment in coastal areas of the Mediterranean,

Fully aware of Article 27 at the Convention and Decision IG 17/2 of the 15th Meeting of the Contracting Parties (Almeria, Spain, January 2008) on compliance procedures and mechanisms,

Fully aware of the health concerns resulting from local exposure associated to inputs of pathogens with BOD₅ resulting from untreated and treated municipal waste water,

Recognizing the special hydrographical and ecological characteristics of the Mediterranean Sea Area,

Decides to adopt the Regional Plan on the reduction of BOD₅ from urban waste water in the framework of the implementation of Article 15 of the LBS Protocol together with its Annexes hereinafter referred to as the Regional Plan, which are contained in the **Annex** to this decision,

Invites the Contracting Parties to take the necessary measures to the implementation of this Regional Plan.

ANNEX

Regional Plan on the reduction of BOD₅ from urban waste water in the framework of the implementation of Article 15 of the LBS Protocol

ARTICLE I

Definitions of Terms

For the purpose of this Action Plan:

- (a) "Urban waste water" means waste water of the mixture of domestic waste water with industrial waste water ,pretreated or not and/or run-off rain water;
- (b) "Domestic waste water" means waste water from residential settlements and services which originates predominantly from the human metabolism and from household activities;
- (c) "Collecting system" means a system of conduits which collects and conducts urban waste water.
- (d) "Wastewater Treatment Plant WWTP" means systems used to treat urban wastewater using physical, chemical and /or biological techniques.
- (e) "Agglomeration" means an 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;
- (f) "Population-equivalent (p.e.)" means the organic biodegradable load having a five-day biochemical demand (BOD₅) of 60 g of oxygen per day;
- (g) "Emission Limit Values (ELVs)" means the maximum allowable concentration measured as a "composite" sample, of a pollutant in an effluent discharged to the environment.
- (h) "Primary treatment" means treatment of urban waste water by a physical and/or chemical process involving settlement of suspended solids, or other processes in which the BOD₅ of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste water are reduced by at least 50%;
- (i) "Secondary treatment" means treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process so that the treatment results in a minimum reduction of the initial load of 70-90% of BOD₅;

ARTICLE II

Scope and Objective:

1. The area to which this Regional Plan applies is the area defined in accordance with Art. 3 of the LBS Protocol. This is intended for all the releases within the hydrological basin discharging directly or indirectly into the Mediterranean Sea.
2. This Regional Plan shall apply to the collection, treatment and discharge of urban waste waters.
3. The objective of this Regional Plan is to protect the coastal and marine environment and health from the adverse effects of the abovementioned waste water direct and or indirect discharges, in particular regarding adverse effects on the oxygen content of the coastal and marine environment and eutrophication phenomena.

ARTICLE II (Bis)

Preservation of Rights

The provisions of this Regional Plan shall be without prejudice to stricter provisions respecting the reduction of BOD₅ from urban waste water contained in other existing of future national, regional or international instruments or programmes.

ARTICLE III

Measures

1. The Parties shall ensure that all agglomerations collect and treat their urban waste waters before discharging them into the environment. Collecting systems should satisfy the requirements set forth in Appendix I.
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).
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.

Regional ELV on BOD₅ to be implemented for every single urban WWTP effluents

Parameter	Scope/Area	ELV (mg /l O ₂)	Comments/Provisions
BOD ₅ at 20°C without nitrification	LBS Protocol Area	<=50	Assuming a performance of reduction of the influent load of 70-90 % (secondary treatment) ¹ .
	LBS Protocol Area – marine outfalls (ref. Art. 7 LBS Protocol)	<=200	Assuming a performance of reduction of the influent load of 20 % (primary treatment) ¹ . These ELV should only be adopted taking into account local conditions, and provided that total loads do not affect the receiving marine environment.

¹ As referenced in UNEP/MAP-MEDPOL/WHO (2008), and adopted in EU Directive 91/271/CEE, Annex1

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.
5. The Parties should take the necessary measures to enforce these measures in accordance with their national regulations.

ARTICLE IV

Timetable for Implementation

The Parties commit themselves to implement the above measures, according to two deadlines: 2015 and 2019. The Parties will decide on the deadlines for the implementation of the ELVs indicated in the table of Article III above, taking into account their national circumstances and respective capacity to implement the required measures. A national programme of action, including the adopted deadlines, should be prepared and communicated to the Secretariat within 180 days after the adoption of the regional plan by the Contracting Parties. The Secretariat should inform the Parties accordingly. This national programme should take into account the guidelines included in Appendix III.

ARTICLE V

Reporting

In conformity with Article 26 of the Convention and Article 13, paragraph 2(d), of the LBS Protocol, the Parties shall report on a biannual basis on the implementation of the above measures and on their effectiveness. The Contracting Parties should review the status of implementation of these measures on 2013 and 2017.

ARTICLE VI

Technical Assistance

For the purpose of facilitating the implementation of the measures, capacity building, including transfer of know how and technology, will be provided by the Parties and the Secretariat. Priority will be given to those Parties who have ratified the LBS Protocol.

ARTICLE VII

Entry into Force

The present regional Action Plan shall enter into force and become binding on the 180 day following the day of notification by the Secretariat in accordance with Article 15, paragraphs 3 and 4 of the LBS Protocol.

APPENDIX I

Collecting Systems

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:

- (a) the volume and characteristics of urban waste water;
- (b) the high maintenance of piping system for the prevention of leaks;
- (c) the high maintenance of pumping and boosting equipment; and
- (d) the separation of storm water pipes from collection pipes of WWTP, when applicable.

APPENDIX II

Guidelines on Monitoring and Enforcement

1. The Parties should ensure that a monitoring method is applied which corresponds at least with the level of requirements described below. Alternative methods may be used provided that it can be demonstrated that equivalent results are obtained. The Parties shall provide the Secretariat with all relevant information concerning the applied method.
2. Flow-proportional or time-based 24-hour samples shall be collected at the same well-defined point in the outlet and if necessary in the inlet of the treatment plant in order to monitor compliance with the requirements for discharged waste water laid down in this Regional Action Plan.
3. Good international laboratory practices aiming at minimizing the degradation of samples between collection and analysis shall be applied.
4. The minimum annual number of samples shall be determined according to the size of the treatment plant and be collected at regular intervals during the year. The following guidelines should be considered:
 - From 2000 to 9,999 p.e.: 12 samples during the first year; 4 samples in subsequent years, if it can be shown that the water during the first year complies with the provisions of this Action Plan; if one sample of the four fails, 12 samples must be taken in the year that follows.
 - From 10,000 to 49,999 p.e.: 12 samples;
 - Over 50,000 p.e.: 24 samples.
5. Extreme values for the water quality in question shall not be taken into consideration when they are the result of unusual situations such as those due to heavy rain.

APPENDIX III

Guidelines and Criteria for the Implementation of the Provisions of Article V

1. National legislation. The regional ELVs proposed in Annex II should be adopted without prejudice to existing legislation already in force in the Contracting Parties. In this sense, in those countries where the proposed ELVs have already been adopted, deadlines should be earlier or immediate.
2. Target cities. The bigger urban agglomerations are the bigger load and point source pressure is put on the aquatic receiving environment. In this sense, the Parties might consider in their national programmes an earlier adoption of ELVs in largest agglomerations.

For information in other regional regulations (EC, 2001; HELCOM 2007), common thresholds to differentiate between small, medium and big cities are 2,000, 10,000 and 100,000 person equivalent, respectively. The threshold of 100,000 inhabitants is also considered in the SAP (UNEP/MAP, 1998), and the threshold of 2,000 and 10,000 inhabitants are also relevant in terms of inventory of WWTPs in the Mediterranean (UNEP/MAP-MEDPOL/WHO, 2004; 2008).

3. Capacity. In those countries where collecting systems and WWTPs are not still in place, and/or a significant amount of population is not connected/served by existing WWTPs, and/or many WWTPs do not have an appropriate performance, according to Article V, the economic capacity to address the above issues shall be taken into account.