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Agenda Item 5: Specific Matters for Consideration and Action by the Meeting, including draft Decisions

Draft Decision 26/8: Regional Plan on Urban Stormwater Management in the framework of Article 15 of the LBS Protocol

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UNEP/MAP
Athens, 2023

Note by the Secretariat

The 21st Ordinary Meeting of the Contracting Parties (COP 21) to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Naples, Italy, 2-5 December 2019) adopted Decision IG.24/10 mandating UNEP/MAP (MED POL Programme) to develop new regulatory measures in the framework of Article 15 of the LBS Protocol for six Regional Plans, including on Urban Stormwater Management (hereafter referred to as the “Regional Plan”).

To this aim, COP 21 Decision IG.24/10 requested the establishment of Working Groups of Experts designated by the Contracting Parties. Two meetings of the Working Groups were held in October 2022 and May 2023 (Reports of Meetings WG.539/6 and WG.562/7, respectively). During these meetings, the Contracting Parties discussed the proposed measures as well as their legally binding target dates. The final outcomes of the Working Groups Meetings were reviewed and approved by the Meeting of the MED POL Focal Points held on 24-26 May 2023 (Report of Meeting WG.563/15).

The **Regional Plan on Urban Stormwater Management** included in Appendix I of this Draft Decision is elaborated based on a set of guiding principles which constitute the building blocks for the Regional Plan. The measures address the regulatory framework for integrated stormwater management; implementation of urban stormwater control measures; and operation and maintenance of urban stormwater systems. The Regional Plan includes a single annex that provides guiding elements for Best Management Practices for Urban Stormwater Control Measures.

The implementation of measures of the Regional Plan contribute to the achievement of SDG 14 aiming to “prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution;” with a target date of 2025; as well as SDG 6 “to improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials” with a target date of 2030.

In line with the above global commitments, the legally binding timelines proposed for implementation of the Regional Plan’s measures have been agreed by the Contracting Parties between 2028 and 2030. These deadlines, as well as related technical aspects, constituted the core discussions carried out by the Contracting Parties in all previous meetings. Appendix II of this Draft Decision provides the workplan with timetable for implementation of articles of the Regional Plan.

Cost estimates for the implementation of key measures of the Regional Plan and associated socio-economic benefits are presented in a study prepared by the Secretariat (UNEP/MAP Report WG.562/6). The study aims to provide the Contracting Parties with the necessary data and information, from an economic perspective, for approval and adoption of the Regional Plan.

The implementation of the Regional Plan will contribute to Thematic Programme 1 of the MAP Medium-Term Strategy (MTS) 2022-2027 “towards a pollution and litter free Mediterranean Sea and coast embracing circular economy” of the Programme of Work and Budget for the 2024-2025 biennium; specifically, Outcome 1.2, Activity 1.2.2 which calls for “taking national and regional action including investments to implement the adopted Regional Plans” aiming to deliver 21 NAPs/PoM, including project fiches on priority actions/interventions to achieve/maintain GES.

Considering that significant amendments were made to the text of the Regional Plan during the 2nd Working Group Meeting, the Contracting Parties requested more time for consultation with national competent authorities. Accordingly, the MED POL Focal Points Meeting, which was held back-to-back with the 2nd Working Groups Meeting, agreed to grant the Contracting Parties additional time to comment. The Secretariat received a single comment requesting to replace the term “stormwater” with “wastewater” in close 7(c) of the Regional Plan noting that the current text of this Clause insinuates that there is always rainwater within a combined network and that the mixture of wastewater and rainwater that passes through this type of network is “stormwater” and not “wastewater.”

The proposed draft decision and its Appendices are submitted to the Meeting of the Mediterranean Action Plan (MAP) Focal Points 2023 for consideration and possible transmission to the 23rd Meeting of the Contracting Parties (COP 23) for adoption.

[Decision IG.26/8

Regional Plan on Urban Stormwater Management in the framework of Article 15 of the Land-Based Sources and Activities Protocol (LBS Protocol)

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 23rd Meeting,

Recalling United Nations General Assembly resolution 70/1 of 25 September 2015, entitled “Transforming our world: the 2030 Agenda for Sustainable Development,”

Recalling the United Nations General Assembly resolution 76/296 of 21 July 2022, entitled “Our ocean, our future, our responsibility,”

Recalling also the United Nations Environment Assembly resolution of 15 March 2019, UNEP/EA.4/Res. 21, entitled “Towards a pollution-free planet,”

Recalling further the United Nations Environment Assembly resolutions of 6 December 2017, UNEP/EA.3/Res.10 “Addressing water pollution to protect and restore water-related ecosystems;” of 15 March 2019, UNEP/EA.4/L.12 “Protection of the marine environment from land-based activities;” and of 2 March 2022, UNEP/EA.5/Res.9 “Sustainable and resilient infrastructure;”

Having regard to the Barcelona Convention and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol), specifically Article 5 thereof, providing for the elaboration of national and regional action plans and programmes, containing measures and timetables for their implementation; and Article 15 (paragraph 3) thereof, stipulating the legally binding nature of measures and timetables,

Recalling Decision IG.24/10 on the Main Elements of the Six Regional Plans to Reduce/Prevent Marine Pollution from Land-Based Sources adopted by the Contracting Parties at their 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019),

Conscious of the urgent need to enhance action in synergy with relevant regional and global initiatives, such as the European Green Deal (2019) and UfM Water Agenda,

Recalling Decision IG.19/5 on Mandates of the Components of MAP (COP 16) (Marrakesh, Morocco, 3-5 November 2009), and in particular the mandate of the Mediterranean Pollution Assessment and Control Programme (MED POL),

Having considered the report of the MED POL Focal Points Meeting (Athens, 24-26 May 2023), as well as the reports of the First and Second Meetings of the Working Groups of Designated Experts for Developing the Regional Plans on Agriculture, Aquaculture and Urban Stormwater Management in the Mediterranean (Athens, October 2022 and May 2023),

1. *Adopt* the Regional Plan on Urban Stormwater Management in the framework of Article 15 of the LBS Protocol, set out in Appendix I to this decision;
2. *Take note of* the workplan with timetable for implementation of articles of the Regional Plan on Urban Stormwater Management, set out in Appendix II to this decision;
3. *Call upon* the Contracting Parties to effectively implement the Regional Plan on Urban Stormwater Management and to report to the Secretariat, accordingly, as provided for in its Article 8;
4. *Request* the Secretariat (MED POL) to provide, upon request and subject to availability of funds, the necessary assistance to the Contracting Parties for the implementation of the measures provided for in the Regional Plan on Urban Stormwater Management;
5. *Urge* the Contracting Parties, intergovernmental organizations and donor agencies to contribute to the implementation of the Regional Plan on Urban Stormwater Management based on their specific mandates.]

Appendix I

Regional Plan on Urban Stormwater Management

Regional Plan on Urban Stormwater Management

ARTICLE I Definition of Terms

For the purpose of this Regional Plan on Urban Stormwater Management; hereinafter referred to as the "Regional Plan":

- a. "Best Management Practices (BMP)" are physical, structural, and/or managerial practices that, when used singly or in combination, reduce the downstream quality and quantity impacts of stormwater. The term is synonymous with Stormwater Control Measures, Sustainable Drainage System, and Low Impact Development (LID).
- b. "Green Infrastructure (GI)" is the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.
- c. "Low Impact Development (LID)" refers to the development of a site while maintaining as much of its natural hydrology as possible, such as infiltration, frequency and volume of discharges, and groundwater recharge.
- d. "Nonstructural Stormwater Control Measures" are best management practices that rely on natural measures to reduce flow of stormwater and pollution levels; as such, they do not require extensive construction efforts and do promote pollutants reduction by eliminating the pollutants sources.
- e. "Stormwater" is the portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via rooftops, paved streets, highways, parking lots, overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.
- f. "Stormwater Collection System" is a collection of structures, including retention basins, ditches, roadside inlets and underground pipes, designed to gather stormwater from built-up areas and discharge it, with or without treatment, into local water bodies, e.g. streams, rivers, coastal waters.
- g. "Structural Stormwater Control Measures" are best management practices that rely on the construction and operation of infrastructure and facilities to control the downstream quantity and quality of urban stormwater.
- h. "Urban runoff" means rainwater and snow melt from agglomerations typically collected by combined or separate sewers.

ARTICLE II Scope and Objective

1. The area to which the Regional Plan applies is the area defined in accordance with Article 3 of the LBS Protocol, consisting of the Mediterranean Sea Area as defined in Article 1 of the Convention; the hydrologic basin of the Mediterranean Sea Area; waters on the landward side of the baselines from which the breadth of the territorial sea is measured and extending, in the case

of watercourses, up to the freshwater limit; brackish waters, coastal salt waters including marshes and coastal lagoons; and ground waters communicating with the Mediterranean Sea.

2. The Regional Plan shall apply to the management of urban stormwater in urban agglomerations situated in coastal areas or hydrologic basins discharging to the Mediterranean Sea.
3. The objective of the Regional Plan is to control stormwater runoff and to prevent and significantly reduce inputs of pollutants and other waste into receiving waters.

ARTICLE III

Preservation of Rights

4. The provisions of this Regional Plan shall be without prejudice to stricter provisions respecting the management of urban stormwater contained in other existing or future national, regional or international instruments or programs.

ARTICLE IV

Guiding Principles

5. Regional Plan measures are formulated with the aim of addressing the following principles:
 - a) Integrated Stormwater Management incorporates urban stormwater planning into wider urban planning practices and city design schemes.
 - b) Increased urban stormwater runoff volumes play a major role in harming species' habitat, polluting sensitive potable water sources, degrading water streams, rivers, lakes, and other waterbodies in urban areas, as well as impacting recreational uses.
 - c) Control measures for stormwater runoff are best planned in the early phases of development of new urban areas to be implemented near the source of pollution of new or existing urban development areas.
 - d) Integrated stormwater management should be adopted in the context of adaptation measures to address climate change and to mitigate the impacts of extreme hydrological events.

ARTICLE V

Measures

I. Regulatory Framework for Integrated Stormwater Management

6. By 2028, the Contracting Parties shall establish a regulatory framework to reduce stormwater runoff volume and peak flows as well as address related pollution aspects. To this aim, the Contracting Parties shall:
 - a) Develop stormwater management plans that include nonstructural and structural stormwater control measures covering as appropriate further to the items mentioned in the Annex.
 - b) Ensure that stormwater and other wastewater discharge plans, (in case of combined stormwater and sewage collection systems), are based on drainage boundaries instead of administrative boundaries.

- c) Regulate future land use development aiming to maintain as much of its natural hydrology in order to minimize stormwater runoff, increase its infiltration, and harvest where possible rainwater for domestic or industrial or any other uses (e.g. Sustainable Drainage Systems; Low Impact Development, etc.)
- d) Identify the sources that contribute pollutants through stormwater and select the measures for pollution reduction.
- e) Establish monitoring programmes for recipient water (e.g. lakes, water streams, groundwater, etc.), as appropriate in order to undertake the proper mitigation measures.

II. Implementation of Urban Stormwater Control Measures

7. By 2030, the Contracting Parties shall implement the approved stormwater management plans further to the selection of applicable nonstructural and structural control measures stipulated under the guiding elements provided in the Annex. To this aim, the Contracting Parties shall consider the following elements for inclusion in stormwater management plans, as appropriate:
 - a) Implement Green Infrastructure (GI) that complements the piped networks in *existing urban areas serviced with separate collection systems* and Best Management Practices (BMP) in newly developed areas as indicated in the Annex.
 - b) Construct separate systems for municipal wastewaters (blackwater from toilets, greywater and industrial wastewater) and urban runoff in *newly developed residential, commercial and industrial areas*.
 - c) Reduce the adverse impacts of untreated **stormwater**¹ overflows discharging from *existing combined collection systems* of rainwater or snow melt, domestic sewage, and industrial wastewater in the same pipe with a focus on below measures in the following hierarchal order, where applicable:
 - i. De-connecting impervious areas from combined sewer systems;
 - ii. Applying Green Infrastructure (GI) where possible to reduce and recover stormwater flows as indicated in the Annex; and
 - iii. Providing additional storage volume (decantation basins) in domestic, touristic and industrial areas to capture, collect and pre-treat the first storm flows (first flow) with heavy pollution loads in order to ensure the adequate capacity of the system for absorption of the peak flow during intense rain events.

III. Operation and Maintenance of Urban Stormwater Systems

8. By 2028, the Contracting Parties shall implement adequate seasonal maintenance of stormwater collection systems to ensure their efficient functioning and prevent any overflow flooding or pollution. To this aim, the Contracting Parties shall at least implement the following measures:
 - a) Maintain an updated inventory list on storm water infrastructure and sources of pollution such as the locations and functional conditions of overflow structures; as well as sewage storage capacity structures, in order to acquire a better understanding of the occurrence of stormwater overflows and their impacts on the quality of receiving water bodies, including potential future issues due to climate change.

¹ Proposal by France to replace the term “stormwater” with “wastewater” as the current text of this Clause insinuates that there is always rainwater within a combined network and that the mixture of wastewater and rainwater that passes through this type of network is stormwater (while it should be referred to as “wastewater”). Considering this water to be wastewater makes it possible to put in place the necessary measures to reduce the pollution that it is likely to generate in the environment.

- b) Plan and implement regular road maintenance, street sweeping, storm-drain maintenance, stormwater hotline response, and landscape and park maintenance.
- c) Perform regular monitoring of quantity and quality stormwater at key urban stormwater structures (e.g. continuous, flow-weighted sampling methods which require flow and water quality data) with the aim of setting thresholds on the quantity and quality of stormwater into recipient water taking into account national water standards and regulations.

ARTICLE VI

Technical Assistance, Transfer of Technology and Capacity Building

9. For the purpose of facilitating the effective implementation of Article V of this Regional Plan, the Contracting Parties collaborate to implement, exchange and share Best Management Practices for application of the stormwater control measures contained in the Annex of this Regional Plan, directly or with the support of the Secretariat. To this aim, the Contracting Parties also collaborate in developing common stormwater best practices guidelines.

ARTICLE VII

Timetable for Implementation

10. The Contracting Parties shall implement the measures included in this Regional Plan as per the timelines associated with these measures.

ARTICLE VIII

Reporting

11. The Contracting Parties shall report on implementation of measures stipulated in this Regional Plan in line with the reporting requirement and timelines provided in Article 26 of the Convention and Article 13, paragraph 2(d) of the LBS Protocol.

ARTICLE IX

Entry into Force

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

ANNEX

Guiding Elements for Best Management Practices including Structural and Nonstructural Urban Stormwater Control Measures for Implementing Article V on Measures

With the view to implementing Article V on structural and nonstructural control measures to be considered for preventing, reducing and treating stormwater flows, as well as slowing and holding back stormwater that runs off from sites, the following guiding elements shall apply, as appropriate:

No.	Description of Control Measure	Type of Measure	Aim of Control Measure	Implementation Stage
1	Watershed and land use planning	Non-Structural	Minimize impervious areas	Planning
2	Conservation of natural areas	Non-Structural	Maintain the predevelopment hydrology of a site	Site Planning/ Preconstruction
3	Earthwork minimization	Non-Structural	Limit the degree of clearing to prevent soil compaction, prevent erosion from steep slopes	Grading stage/ Preconstruction
4	Erosion and sediment control	Structural & Non-Structural	Temporary practices to minimize soil erosion and prevent off-site delivery of sediment	Construction
5	Reforestation and soil conservation	Non-Structural	Improve the quality of native vegetation and soils present at the site	Site planning/ Preconstruction
6	Pollution prevention	Non-Structural	Prevent contact of stormwater runoff with pollutants natural and anthropogenic (e.g. from volcanic ashes, gas stations, outdoor storage of materials, informal dump sites, etc.)	Planning
7	Rainwater harvesting (GI) ⁺	Structural	Reduce runoff volume from rooftops in rain barrels, tanks or cisterns	Post Construction/ Retrofit
8	Bioswales, vegetated areas (GI)	Structural	Reduce runoff volume and improve quality through infiltration and evapotranspiration via vegetation	Post Construction/ Retrofit
9	Subsurface volume reduction (GI)	Structural	Reduce runoff through infiltration via pervious pavement, infiltration trenches, seepage pits, etc.	Post Construction/ Retrofit
10	Peak reduction and runoff treatment (GI)	Structural	Hold a volume of stormwater for an extended time in detention/retention basins, wetlands, lagoons, etc.	Post Construction

⁺ GI: Green Infrastructure

No.	Description of Control Measure	Type of Measure	Aim of Control Measure	Implementation Stage
11	Aquatic buffers and managed floodplains	Non-Structural	Reserve a vegetated zone adjacent to streams, shorelines, or wetlands	Planning/ Construction/ Post Construction
12	Water stream rehabilitation	Structural	Stabilize streambanks and/or prevent channel incision/enlargement to reduce downstream delivery of sediments and attached nutrients from urban agglomerations	Post construction/ Post development
13	Municipal housekeeping	Non-Structural	Provide source treatment of pollutants before they enter the storm-drain system like street sweeping and sediment cleanouts of sumps and storm-drain inlets	Post construction/ Post development
14	Snow management	Non-Structural	Removal, slipperiness control, transport, and dumping	Post construction/ Post development
15	Detection and elimination of illicit discharge	Non-Structural	Prevent pollutants from illegal cross-connections from introducing into the storm-drain system due to spills, leaks etc.	Post construction/ Post development
16	Stormwater Education	Non-Structural	Municipal efforts to make sure individuals understand how their actions and behaviors can influence water quality.	Post development
17	Residential Stewardship	Non-Structural	Municipal programs to enhance residential practices that can reduce the volume or improve the quality of runoff produced on their property (e.g. installing rain barrels or rain gardens, downspout disconnection, storm-drain marking, waste pickups, and yard waste composting).	Post construction/ Post development

Appendix II

Workplan with timetable for implementation of Articles of the Regional Plan on Urban Stormwater Management

