

Decision IG.26/6**Regional Plan on Agriculture 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.2 “Sustainable nitrogen management;” UNEP/EA.5/Res.7 “Sound management of chemicals and waste;” as well as UNEP/EA.5/Res.11 “Enhancing circular economy as a contribution to achieving sustainable consumption and production,”

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),

Noting with concern the excessive levels of nutrients and pollutants originating from agriculture that significantly impact terrestrial, freshwater, coastal and marine ecosystems,

Conscious of the urgent need to enhance action in synergy with relevant regional and global initiatives, such as UNEP’s Global Partnership for Nutrient Management (GPNM), 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 Agriculture 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 Agriculture Management, set out in Appendix II to this decision;
3. *Call upon* the Contracting Parties to effectively implement the Regional Plan on Agriculture 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 Agriculture Management;
5. *Urge* the Contracting Parties, intergovernmental organizations and donor agencies to contribute to the implementation of the Regional Plan on Agriculture Management based on their specific mandates.

APPENDIX I
Regional Plan on Agriculture Management

Regional Plan on Agriculture Management

ARTICLE I Definition of Terms

For the purpose of this Regional Plan on Agriculture Management; hereinafter referred to as the “Regional Plan”:

- a. “Anaerobic digestion” is a process through which bacteria break down organic matter—such as animal manure, wastewater biosolids, and food wastes—in the absence of oxygen.
- b. “Annual crop” is any plant that completes its life cycle in a single growing season. The dormant seed is the only part of an annual that survives from one growing season to the next. Annuals include wildflowers, garden flowers and vegetables.
- c. “Bio-energy” means energy for industrial or commercial use that is derived from biological sources (such as plant matter or animal waste).
- d. “Uptake curve, nutrient” means the measurement of growth and consumption of nutrients by crops at various physiological stages: vegetative, flowering period and fruit development.
- e. “Extended Producer Responsibility” means a set of measures taken by Contracting Parties to ensure that producers of products bear financial responsibility or financial and organizational responsibility for the management of the waste stage of a product’s life cycle.
- f. “Fertigation” means the practice of applying fertilizers together with irrigation water and not in a separate operation, more often advocated for use with drip irrigation systems than with conventional flood irrigation. In principle, all required nutrients including micronutrients can be applied through fertigation.
- g. “Fertilizer”: any material, applied or intended to be applied on plants or their rhizosphere or on mushrooms or their mycosphere, or intended to constitute the rhizosphere or mycosphere, either on its own or mixed with another material, for the purpose of providing the plants or mushrooms with nutrient or improving their nutrition efficiency.
- h. “Framework conditions” entail the creation of knowledge, market conditions, access to finance, regulations and support mechanisms.
- i. “Good Agricultural Practices (GAP)” are collection of principles to apply for on-farm production and postproduction processes, resulting in safe and healthy food and non-food agriculture products, while taking into account economic, social and environmental sustainability.
- j. “Integrated Pest Management (IPM)” means careful consideration of all available plant protection methods and subsequent integration of appropriate measures that discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimize risks to human health and the environment.
- k. “Irrigation” is the artificial application of water to land to assist in the growing of crops and pastures. It is carried out by irrigation methods under pressure (such as sprinkler, drip and spray irrigation) or by pumping water onto the land (flood irrigation).
- l. “Manure”, for the purpose of this Regional Plan, means waste products and organic matter excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed forms.

- m. “Percolation” means the downward movement of fluid (water or waste effluent) in soil.
- n. “Permanent crops” are non-rotational crops other than permanent grasslands and permanent pasture that occupy the land for five years or more, and that yield repeated harvests, including nurseries and short rotation coppice.
- o. “Pesticide” means chemical substance used to control harmful insects, small animals, wild plants, and other unwanted growth of organisms. The pesticides that farmers spray on their crops control pests; they may also damage people's health and biodiversity.
- p. “Precision agriculture” means the application of external inputs, including but not restricted to water, fertilizers and pesticides, following the temporal and spatial variability of crop requirements.
- q. “Runoff” means water that runs off the soil surface instead of infiltrating: the process of running off.
- r. “Tillage, soil” means mechanical manipulation of soil to control weeds and pests and to prepare for seeding.
- s. “Trend monitoring” is to detect site-specific temporal trends of selected contaminants at designated hotspot sites in the coastal marine environment with the aim to monitor the effectiveness of control measures taken at pollution hotspots with long-term data of several decades or more.

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 agricultural sector in the coastal regions or hydrologic basins discharging pollutants into the Mediterranean Sea.
3. The objective of the Regional Plan is to reduce and further prevent pollution caused or induced by fertilizers, pesticides and waste generated from agricultural activities, as well as to promote aspects related to sustainable agriculture.

ARTICLE III

Preservation of Rights

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

ARTICLE IV

Guiding Principles

5. The Regional Plan measures are formulated in line with the following principles:
 - a) Sustainable agriculture is linked to efficient, economically viable agricultural production systems that preserve and protect biodiversity, optimize the use of natural resources, and contributes to climate change adaptation and mitigation.
 - b) Preventing nutrient pollution caused or induced from agricultural sources is key to protect human health and living resources, as well as aquatic ecosystems.
 - c) Runoff is a critical factor that drives the transfer of excess of nutrients, pesticides, and waste and particularly plastic waste into the Mediterranean Sea.
 - d) The efficient use of irrigation water and the appropriate operation of irrigation systems adapted to the characteristics of soil, climatic conditions, and crops types, are essential to minimize surface runoff and regulate water percolation.
 - e) Overuse and other inappropriate uses of pesticides contribute to the contamination of soil, water, air, and adversely impacts biodiversity with detrimental effects on plant, animal, and human health.

ARTICLE V

Measures

- I. Regulatory Framework for Reduction of Inputs of Pollutants and other Wastes from Agricultural Activities
6. By 2028, the Contracting Parties shall establish a regulatory framework with the objective to reduce and further prevent pollution caused or induced by pollutants and other wastes discharged from agricultural activities. To this aim, the Contracting Parties shall consider the following four key aspects, as appropriate:
 - a) Nutrients discharged from agricultural activities that contribute to the eutrophication of coastal waters by land-application of inorganic and organic fertilizers and manure. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex I.
 - b) Irrigation water runoff and percolation that contribute to the transfer of excess of nutrients, pesticides, waste and particularly plastic waste to the marine environment. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex II.
 - c) Integrated Pest Management as one of the tools that contribute to low-pesticide-input which keeps the use of pesticides only to levels that are economically and ecologically justified. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex III.
 - d) Good management practices that contribute to reducing plastic waste generation from agricultural activities in the context of sustainable consumption and production and circular economy. Guiding elements to be considered for inclusion in the regulatory framework are provided in Annex IV.

II. Implementation of Measures for Reduction of Inputs of Pollutants and other Wastes from Agricultural Activities

7. By 2030, the Contracting Parties shall to the extent possible, establish extension/advisory services, training programmes and awareness raising campaigns for farmers in order to promote implementation of the appropriate measures on the basis of the regulatory framework established as per Paragraph (6) for reducing inputs of pollutants and other wastes from agricultural activities.
8. By 2030, the Contracting Parties shall to the extent possible, enact support mechanisms to enable farmers to implement, as applicable, the appropriate measures for reducing inputs of pollutants and other wastes from agricultural activities on the basis of the regulatory framework established as per Paragraph (6).
9. By 2030, the Contracting Parties shall, to the extent possible, designate “vulnerable zones” as all known areas of agricultural land which drain into, and contribute to eutrophication of, coastal waters. To this aim, the Contracting Parties shall:
 - a) Notify the Secretariat to the Barcelona Convention of this initial designation within 6 months;
 - b) Monitor the trend and measure the concentrations of nutrients discharging into coastal waters further to the guiding elements to be considered for the procedure set in Annex V;
 - c) Agree on pollution reduction targets of excess of nutrients further to the outcomes of trend monitoring as per paragraph (9.b) and Annex V;
 - d) Implement appropriate response measures to reduce the sources of excessive discharges of nutrients as per reduction targets set for vulnerable zones in paragraph (9.c); and
 - e) Evaluate, revise or add new designations of vulnerable zones every five years.

III. Implementation of Measures Contributing to Sustainable Agriculture

10. By 2030, the Contracting Parties shall to the extent possible, implement measures based on Good Agricultural Practices that contribute to the preservation of the health of the natural systems; further to application of smart strategies to enhance the water, energy and food Nexus; while considering the opportunities and synergies of all systems. To this aim, the Contracting Parties shall establish the framework conditions to support farmers, as appropriate, to implement:
 - a) Integrated approaches for the supply of nutrients to crops taking into account the residual content of nutrients in the soil, nutrient content in irrigation water (fresh and treated wastewater), and available nutrients in fertilizers and manure.
 - b) Farming practices that reduce erosion by protecting the soil surface and allowing water to infiltrate instead of running off (conservation tillage, cover crops, etc.)
 - c) Climate-smart agricultural practices (e.g. solar pumping, precision agriculture, etc.) to reorient agricultural systems to first effectively support development and ensure food security in a changing climate; and second to optimize use of resources (land, water and external inputs).
 - d) Renewable energy technologies and increased efficiency processes through improvements in food production, processing and distribution.

ARTICLE VI

Technical Assistance, Transfer of Technology and Capacity Building

11. 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 agricultural practices for reduction of inputs of pollutants and other wastes from agricultural activities, directly or with the support of the Secretariat. To this aim, the Contracting Parties also collaborate in preparing and implementing common technical guidelines.

ARTICLE VII

Timetable for Implementation

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

ARTICLE VIII

Reporting

13. 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

14. 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 I

Guiding Elements for Establishment of the Regulatory Framework for Reducing Nutrients Inputs from Fertilizers and Manure for implementing Article V on Measures

With the view to implementing Article V.6(a) on the reduction of pollution caused by inputs of nutrients in fertilizers and manure from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Needs of plants for nutrients.¹
- b) Soil characteristics.
- c) Land slope.
- d) Climate characteristics.
- e) Conditions for sowing and planting.
- f) Distance to water bodies, and the seashore.
- g) Capacity and storage of manure and means to avoid spills.
- h) Method of application of fertilizers and manure: efficient use of mechanical fertilizer and manure spreaders and fertigation including performance control.
- i) Stabilization treatment of manure before application: composting or others for the solid fraction; volume reduction of the liquid fraction and diluted slurries; and reduction of nitrogen content in the liquid (ammonia stripping and absorption, nitrification-denitrification) and/or phosphorus.
- j) Reducing nitrate (N) and phosphorus (P) leaching from manure: converting breeding farms into an isolated bubble where runoff from the surroundings and the uncontrolled outflow of liquids from the farm are avoided; applying anaerobic digestion and bio energy to produce N rich (bio-slurry) organic fertilizer and reduce GHG emissions; and producing liquid fertilizers from aerobic decomposition of organic waste as well as fertilizers from composting processes.

¹ The information will be obtained by reviewing the existing knowledge in the country or by cooperating with other countries and promoting field research when there is a gap in knowledge. The information should include the total nutrient uptake and the uptake according to crop development periods during the growing season (i.e. uptake curves).

ANNEX II

Guiding Elements for Establishment of the Regulatory Framework for Control of Surface Runoff from Agricultural Activities for implementing Article V on Measures

With the view to implementing Article V.6(b) on the control of irrigation water runoff and regulating water percolation to limit the transfer of excess of nutrients, pesticides, waste and particularly plastic waste generated from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) The needs of water to be applied to main annual and permanent crops, using existing information or conducting field experiments that should close the existing data gap.
- b) Use of control methods (based on soil and crop measurement) to support irrigation management decisions by the farmers.
- c) Calibrating water consumption to actual crop-related water demands.
- d) Adoption of pressure irrigation systems to improve water use efficiency.
- e) Establishment of artificial drainage systems.
- f) Application of soil salinity management and use of equilibrated leaching doses including establishment, if necessary, of artificial drainage systems.
- g) Conservation tillage methods according to the characteristics of soils, crops, and climatic conditions with the aim of regulating water percolation and minimizing surface runoff and resulting erosion.
- h) Use of cover plants to increase water penetration into the soil and reduce evaporation.
- i) Promotion of nature-based solutions to minimize unnecessary use and pollution of water resources.
- j) Consideration of crop cycles and crop varieties adapted to water availability.
- k) Promotion of water reuse and water harvesting techniques.

ANNEX III

Guiding Elements for Establishment of the Regulatory Framework for Promoting Integrated Pest Management in Agriculture for implementing Article V on Measures

With the view to implementing Article V.6(c) on the promotion of Integrated Pest Management practices for low-pesticide-input pest management in Agriculture, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Setting action thresholds, a point at which pest populations or environmental conditions indicate that pest control action must be taken based on results of monitoring. In case of need of intervention, preference to be given to non-chemical, physical and biological solutions or low-risk plant protection products.
- b) Application of cultural control practices that reduce pest establishment, reproduction, dispersal and survival, such as rotating between different crops, selecting pest-resistant varieties, and planting pest-free rootstock.
- c) Restricting practices that accelerate pesticides contamination such as use of aircrafts.
- d) Application of methods and tools for monitoring of harmful and beneficial organisms and use of forecast models.
- e) Application methods of pesticides: use of authorized formulas based on clear criteria of adaptation between the type of pest and the formula used, dose, indication of the correct moment of application, and appropriate use of spraying equipment.
- f) Preventing the spreading of harmful organisms by hygiene measures (e.g. by regular cleansing of machinery and equipment).
- g) Protection and enhancement of important beneficial organisms, e.g. by adequate plant protection measures or the utilization of ecological infrastructures inside and outside production sites.
- h) Control and limit the use of organic phosphorus pesticides.

ANNEX IV**Guiding Elements for Establishment of the Regulatory Framework for Reducing Generation of Agricultural Plastics for implementing Article V on Measures**

With the view to implementing Article V.6(d) on the implementation of good management practices that contribute to reducing plastic waste generation from agricultural activities, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable:

- a) Use of cover crops to reduce soil erosion instead of mulching films.
- b) Substitution of plastic products with more durable alternatives, such as glass or polycarbonate instead of greenhouse films.
- c) Replacement of short-term single-cycle products with reusable ones, such as stackable rigid harvesting crates instead of flexible bags.
- d) Promotion of recycling of agricultural plastics.
- e) Replacement, where appropriate, of non-biodegradable polymers with biodegradation properties adapted to their specific use.
- f) Introduction of labelling of plastic products to aid the process of identification and traceability.
- g) Implementation of Extended Producer Responsibility for plastic packaging (e.g. fertilizer products) and non-packaging products (e.g. greenhouse plastics).

ANNEX V

Guiding Elements for the Procedure for Monitoring and Measurement of Concentrations of Nutrients Discharging into Coastal Waters for implementing Article V on Measures

With the view to implementing Article V.9(b) related to the procedure for monitoring and measurement of concentrations of nutrients discharging into coastal waters, the following guiding elements shall be applied by the Contracting Parties in the development of the regulatory frameworks, as appropriate, with the provision of justifications, as applicable when setting the procedure to:

- a) Establish a monitoring programme to monitor and measure the concentrations of nutrients and their trends in major water bodies discharging into coastal waters. Monitoring data shall be reported on an annual basis further to a reporting format to be agreed with the Secretariat.
- b) Set the maximum permitted level of concentrations of nutrients measured in major water bodies discharging into coastal waters as per paragraph (Annex V.a) in coordination with the Secretariat with the aim of achieving Good Environmental Status (GES) of coastal waters further to a trend analysis of the concentrations of nutrients measured during a period of 5 years.
- c) Nutrients to be considered in the monitoring programme referred to in point (a) shall include the following parameters, as applicable, which are stipulated in Data Dictionaries and Data Standards for IMAP Common Indicator 13: Ammonium, Nitrate, Nitrite, Total Nitrogen, Orthophosphate, and Total Phosphorus.
- d) Adopt the sampling procedures and sample preparation methods included in UNEP/MAP's Monitoring Guidelines and Protocols for determination of key nutrients and chlorophyll *a* in seawater.

Appendix II

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

