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Item 5 of the provisional agenda**

International environmental policy and governance issues

**Progress in the implementation of resolution 4/6 on marine
plastic litter and microplastics**

Note by the Executive Director

Introduction

1. In paragraph 9 of its resolution 4/6 on marine plastic litter and microplastics, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP to report to it at its fifth session on the progress achieved in the implementation of the resolution. The present report has been prepared in response to that request and progress throughout 2021 has been added to the previous UNEP/EA.5/8 report under each item.
2. Resolution 4/6 builds on three previous Environment Assembly resolutions on marine litter and microplastics (resolutions 1/6, 2/11 and 3/7).
3. In paragraph 2 of resolution 4/6, the Environment Assembly requested the Executive Director of UNEP, subject to the availability of resources and benefiting from the work of existing mechanisms, to immediately strengthen scientific and technological knowledge with regard to marine litter, including marine plastic litter and microplastics, through the following activities:
 - (a) Convening existing relevant science advisory initiatives to provide input into the activities outlined in paragraphs 3 and 7 of the resolution;
 - (b) Compiling available scientific and other relevant data and information to prepare an assessment on sources, pathways and hazards of litter, including plastic litter and microplastics pollution, and its presence in rivers and oceans; scientific knowledge about adverse effects on ecosystems and potential adverse effects on human health; and environmentally sound technology innovations;

* In accordance with the decisions taken by the Bureau of the United Nations Environment Assembly at its meeting held on 8 October 2020 and by the bureaux of the United Nations Environment Assembly and the Committee of Permanent Representatives at their joint meeting held on 1 December 2020, the fifth session of the Environment Assembly was adjourned on 23 February 2021 and is expected to resume as an in-person meeting in February 2022.

** UNEP/EA.5/1/Rev.2.

(c) Recommending indicators to harmonize monitoring, reporting and assessment methodologies, taking into account key sources of marine litter, including plastic litter and microplastics;

(d) Gathering information with a view to informing policies and action regarding environmentally sound technological innovations, options and measures for reducing the risk of discharges of litter, including litter and microplastics, into the marine environment.

4. In paragraph 3 of the resolution, the Environment Assembly decided to establish a multi-stakeholder platform within UNEP to take immediate action towards the long-term elimination, through a life-cycle approach, of discharges of litter and microplastics into the oceans. The various possible functions of the platform included:

(a) Serving as a forum to share experiences and coordinate action on a regular or ad hoc basis;

(b) Serving as a repository for assessments, conceptual and practical guidance materials and current action plans, management practices and guidelines;

(c) Raising global awareness of the issue with a wide variety of audiences, including governments, policymakers, resource managers, educators, private-sector entities and the public;

(d) Establishing and maintaining a database of technical and scientific information related to marine litter;

(e) Promoting collaboration among relevant scientific mechanisms to facilitate access to scientific data and information;

(f) Promoting action in the framework of regional seas conventions and programmes to address marine litter through action plans, protocols, partnerships and other activities.

5. In paragraph 5 of the resolution, the Environment Assembly requested the Executive Director, through the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, to develop guidelines for the use and production of plastic in order to inform consumers, including about standards and labels; to incentivize businesses and retailers to commit themselves to using sustainable practices and products; and to support governments in promoting the use of information tools and incentives to foster sustainable consumption and production.

6. In paragraph 7 of the resolution, the Environment Assembly extended the mandate of the ad hoc open-ended expert group on marine litter and microplastics established in resolution 3/7 and requested the expert group, building on its previous work, to:

(a) Take stock of existing activities and action by all actors to reduce marine plastic litter and microplastics;

(b) Identify technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics;

(c) Encourage partnerships that undertake activities such as the development of source inventories, the improvement of waste management, awareness-raising and the promotion of innovation in relation to the prevention of marine litter;

(d) Analyse the effectiveness of existing and potential response options and activities with regard to marine litter and microplastics.

7. In paragraph 8 of the resolution, the Environment Assembly invited the Environmental Management Group to engage in and contribute to the work of the ad hoc open-ended expert group on marine litter and microplastics by providing, among other things, a mapping of all United Nations agencies, programmes, initiatives and other sources of expertise relating to marine litter, including plastic litter and microplastics.

8. The Global Partnership on Marine Litter is a key platform for enabling coordination and cooperation among stakeholders for the prevention of marine litter and plastic pollution. It serves as the main UNEP mechanism for implementing activities relating to marine litter and microplastics.

9. UNEP provides the secretariat services for the Global Partnership and, pursuant to the request in paragraph 7 of resolution 3/7 to strengthen its contribution to the Partnership, has strengthened those secretariat services and implemented various activities through the Partnership, as is detailed below.

10. Resolution 4/6 has been implemented at the global, regional and national levels in coordination with United Nations agencies, multilateral environmental agreements and the regional seas conventions and action plans, across UNEP, as well as with the members of the Global Partnership on Marine Litter and its steering committee and regional nodes. Other actors include Governments and major groups and stakeholders through, for example, the ad hoc open-ended expert group, UNEP-hosted networks and groups, the Scientific Advisory Committee on Marine Litter and Microplastics (SAC), and collaborating centres, including GRID-Arendal and the UNEP DHI Centre for Water and Environment.

11. Extrabudgetary funding has been a major source of support for the implementation of resolution 4/6. The main donors for the implementation of activities relating to marine litter and microplastics for the period 2019–2021 were Canada, France, Japan, Monaco, Norway, Sweden, the United Kingdom, the United States and the Nordic Council of Ministers.

12. The work undertaken to implement resolution 4/6 has also contributed to the implementation of several other Environment Assembly resolutions, including resolution 4/11 on the protection of the marine environment from land-based activities; resolution 4/1 on innovative pathways to achieve sustainable consumption and production; resolution 4/5 on sustainable infrastructure; resolution 4/7 on environmentally sound management of waste; resolution 4/8 on the sound management of chemicals and waste; resolution 4/9 on addressing single-use plastic products pollution; resolution 4/12 on the sustainable management for global health of mangroves; resolution 4/13 on sustainable coral reefs management; resolution 4/17 on promoting gender equality and the human rights and empowerment of women and girls in environmental governance; and resolution 4/20 on the Fifth Programme for the Development and Periodic Review of Environmental Law (Montevideo Programme V): delivering for people and the planet.

13. Under UNEP's 2022-2025 Medium Term Strategy, these activities directly contribute to the pollution and nature pillars. They mainly fall under the programme of work project "Protecting the Marine Environment from Land-Based Pollution through Strengthened Coordination of Global Action". Efforts to address land-based sources of marine pollution have also been embedded in other parts of the programme, including the work on sustainable consumption and production, environmental governance, GEF projects globally and in the regions, the new plastics economy global commitment and the work of the International Resource Panel (IRP) of UNEP.

Annex

I. Progress in the implementation of resolution 4/6

A. General implementation activities

14. The implementation of activities under resolution 4/6 supports the achievement of expected accomplishments of a number of UNEP subprogrammes, including expected accomplishment (a)¹ of subprogramme 3, Healthy and productive ecosystems; expected accomplishment (b)² of subprogramme 4, Environmental governance; expected accomplishments (a)³ and (b)⁴ of subprogramme 5, Chemicals, waste and air quality; and the sole expected accomplishment⁵ of subprogramme 7, Environment under review. These activities mainly fall under programme of work project no. 522.4, entitled “Protecting the Marine Environment from Land-Based Pollution through Strengthened Coordination of Global Action”. Several activities have taken place at the global, regional and national level in the areas of work discussed below.

1. Support for developing and strengthening governance frameworks to address marine litter and microplastics

15. This area of work covers reporting and advancing global and regional governance arrangements for addressing the issue of marine litter and microplastics. It includes support for the ad hoc open-ended expert group on marine litter and microplastics, the facilitation of multistakeholder participation across regions through various activities and technical and logistical support to a number of country-driven informal processes on marine litter and plastic pollution, upon request of Member States.

16. Under this area of work, UNEP supports the development of regional actions plans for marine litter. A total of 13 regional marine litter action plans are now in place, with the latest adopted in the Arctic. An additional three action plans are in preparation, for the north-east Pacific; West, Central and Southern Africa, and the Caspian Sea, with several regional and subregional workshops convened for the purpose. Implementation support was provided for action plans for the Pacific, the wider Caribbean region, the Mediterranean, East Africa, the north-west Pacific, the Red Sea and the Gulf of Aden, South-East Asia and South Asia. There are also five Global Partnership on Marine Litter regional nodes in place and one more was recently adopted and is currently under development. The Steering Committee of the Partnership adopted terms of reference for the regional nodes⁶ and UNEP has prepared guidance material on the development of regional action plans.⁷

2. Support for enhanced marine litter and microplastics management to reduce marine pollution in key regions

17. This area of work informs priority interventions related to sources, flows, pathways, impacts and related priority responses and contributes to a better-defined policy arena for a global coordinated

¹ The health and productivity of marine, freshwater and terrestrial ecosystems are institutionalized in education, monitoring and cross-sectoral and transboundary collaboration frameworks at the national and international levels.

² Institutional capacities and policy and/or legal frameworks enhanced to achieve internationally agreed environmental goals, including the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

³ Policies and legal, institutional and fiscal strategies and mechanisms for sound chemicals management developed or implemented in countries within the framework of relevant multilateral environmental agreements and the Strategic Approach to International Chemicals Management.

⁴ Policies and legal and institutional and fiscal strategies and mechanisms for waste prevention and sound management developed or implemented in countries within the framework of relevant multilateral environmental agreements.

⁵ Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action.

⁶ <https://www.gpmarinelitter.org/who-we-are/regional-nodes>.

⁷ https://papersmart.unon.org/resolution/uploads/3_aheg_inf_7_-_marine_litter-_guidelines_for_designing_regional_action_plans_summary.pdf.

response to the issue. It also targets and contributes to capacity building through the application of tools and best practices.

18. Key activities included the creation of a global plastic flow model to simulate plastic flows using outputs from ocean circulation models to determine where the marine plastic released into the ocean by a given country goes and where the marine plastic found on the coastline of a given country comes from. UNEP also contributed to the development of approaches for hotspot identification, including a method for marine litter hotspot assessment developed in partnership with East China Normal University.

19. UNEP conducted municipality-level geographic information system modelling in partnership with the United Nations Human Settlements Programme (UN-Habitat) and the University of Leeds to identify land-based point-source hotspots in Africa, South Asia and Latin America, using waste management characteristics data (for example, about waste generation and dumpsite locations), geographic and meteorological data for such aspects as waterways, terrain and surface runoff and drainage systems, and behavioural and socioeconomic data such as GDP per capita. Through this collaboration, the Waste Wise Cities Tool (WaCT) was developed, which is a monitoring methodology for SDG indicator 11.6.1 (the proportion of municipal solid waste regularly collected and managed in controlled facilities, out of the total municipal solid waste generated). The WaCT methodology was piloted in several countries with UNEP support and has been applied in more than 20 cities.

3. Enhancement of national and regional capacities for the assessment and monitoring of marine litter and microplastics

20. At the global level, UNEP aims to harmonize assessment activities relating to marine litter and microplastics in the framework of the Sustainable Development Goals, including but not limited to target 14.1.

21. At the national level, UNEP assists Member States with enhancing national capacity to achieve the target. It does this by assisting countries in gathering scientific data, strengthening the evidence and scientific knowledge base for action, prioritizing interventions, selecting the most environmentally sound and cost-effective measures, and catalysing action.

22. All UNEP divisions were engaged in the development of the concept of “national source inventories” for marine litter and microplastics to guide the development of national action plans for marine litter and plastic pollution. A national source inventory consists of a comprehensive assessment of the marine litter sources, pathways and accumulation zones within a country’s national jurisdiction. The inventory takes into account data as far upstream as the production and importation of plastic products and the approximate quantities of plastic on the domestic market, using a material flow accounting approach. It assesses the waste management system in the country and its vulnerability to waste leaking into the environment. This approach allows the precise identification of key intervention points to reduce such leakage and thereby prevent marine litter from reaching the ocean. The inventories, coupled with methodologies identified by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), contribute to the collection of relevant data from across the plastic life cycle and from source to sea in relation to other relevant Sustainable Development Goals targets.

23. UNEP has been supporting, upon request, the development of national action plans to reduce marine litter and plastic pollution, with initial support provided to four countries in the African region (Kenya, Seychelles, Tanzania and Uganda) and four in Latin America and the Caribbean (Ecuador, Guatemala, Mexico and Saint Lucia).

24. UNEP has also focused on the application of tools and methodologies for strengthened capacity to use innovative monitoring and assessment approaches in developing countries. UNEP developed an approach for applying some of the methodologies identified in the GESAMP guidelines for the monitoring and assessment of plastic litter in the ocean⁸ and tested the approach through pilot projects in Kenya and Seychelles. A “Training of Trainers on Monitoring and Assessment of Marine

⁸ <http://www.gesamp.org/publications/guidelines-for-the-monitoring-and-assessment-of-plastic-litter-in-the-ocean>.

Plastic Litter and Microplastics” workshop was arranged for countries of East Africa and South-East Asia⁹ in 2019 based on these guidelines..

25. UNEP also released the report *Water pollution by plastics and microplastics: A review of technical solutions from source to sea*¹⁰ with a focus on wastewater and accompanied by a toolkit/catalogue of options for the removal of these pollutants; as well as *Monitoring Plastics in Rivers and Lakes: Guidelines for the harmonization of methodologies*¹¹ which provides guidance on the assessment of plastic contamination in freshwater environments. These guidelines will aid in the development and implementation of monitoring programmes for rivers, lakes, reservoirs and wastewater treatment plants and will contribute to the enhancement of national capacity to report on Sustainable Development Goal targets 6.3 (water quality) and 14.1 (marine pollution).

26. Data for Sustainable Development Goal indicator 11.6.1¹² were also collected with UN-Habitat in Kenya and Seychelles. The surveys and the stakeholder workshops resulted in the identification of key waste management infrastructure projects for reducing marine plastic litter. The data collection exercise also contributed to the development of a plastic leakage model for cities and of an indicator 11.6.1 sub-indicator relating to plastic leakage potential in cities, which will be part of national source inventories, together with the indicators for Sustainable Development Goal target 6.3.

4. Knowledge and communication products

27. This area of work aims to enhance the development and reach of knowledge outputs for stakeholders to inform decisionmaking and action through the range of available media, tools and learning methods. It supported:

- (a) Development of a legislative guide on the regulation of single-use plastics, with a broader policy toolkit planned as part of the Law and Environment Assistance Platform;¹³
- (b) Awareness-raising regarding issues related to environmental justice, marine litter and plastic pollution;
- (c) Expansion of the knowledge base relating to risk assessment from source to fate in relation to marine litter, including emerging pollutants, nano-plastics and plastics as vectors, through the work of entities such as GESAMP;¹⁴
- (d) Review of the current status of knowledge and knowledge gap regarding the role of chemicals in plastics and their impact on the environment and health;
- (e) The publication *Single-Use Plastic Bags and Their Alternatives: Recommendations from Life Cycle Assessments*;
- (f) Advocacy, education materials and youth engagement including through online courses, and the Tide Turners Plastic Challenge Badge, which engaged so far a total of more than 214,000 young people;
- (g) A massive open online course on marine litter, whose four iterations have attracted more than 30,000 students to date, with the last one launched in October 2020 in 10 languages, and “master classes” on monitoring marine litter and unnecessary, avoidable and problematic plastic products to be released in 2022;
- (h) A review of financial instruments and measures, including the first global study of the insurance industry on risks associated with plastic pollution, “Unwrapping the risk of plastic pollution to the insurance industry”, conducted by the UNEP Finance Initiative and the Global Partnership on Marine Litter.
- (i) Implementation and further development of the “Clean Seas” campaign, which involves more than 60 Governments, with a mid-term review and survey conducted to assess impact

⁹ <https://www.unenvironment.org/cobsea/events/workshop/training-trainers-monitoring-and-assessment-marine-plastic-litter-and-microplastics>.

¹⁰ <https://www.unep.org/resources/report/water-pollution-plastics-and-microplastics-review-technical-solutions-source-sea>

¹¹ <https://wedocs.unep.org/handle/20.500.11822/35405>

¹² Percentage of municipal solid waste collected and managed in controlled facilities out of the total generated by the city.

¹³ See <https://leap.informea.org/>

¹⁴ <http://www.gesamp.org/publications/gesamp-international-workshop-on-assessing-the-risks-associated-with-plastics-and-microplastics-in-the-marine-environment>.

and provide input for planning on how to best support action leading up to 2022. Regional Clean Seas campaigns were launched in the Caribbean and the Pacific and several activities were implemented to increase action on marine litter and microplastics. The new phase *Clean Seas 2.0 – From Source to Sea* prioritizes action on the most problematic products, sources and sectors.

28. Additional activities in support of the Clean Seas Campaign include *The Tide Turners Plastic Challenge Badge*, which seeks to increase awareness and educate young people on challenges and solutions related to the production and waste of single use plastics. Over 214,000 young people have been engaged in 32 countries in Africa, Asia and the Caribbean to date. More than 2,400 young champions have been trained on advocacy through Advocacy Bootcamps.

(a) UNEP also continues to encourage governments and private sector actors along the plastic value chain to commit to specific actions to tackle plastic pollution at source through the *New Plastics Economy Global Commitment*, co-led with the Ellen MacArthur Foundation.

B. Implementation of resolution 4/6, paragraph 2: strengthen scientific and technological knowledge with regard to marine litter, including marine plastic litter and microplastics

29. The Executive Director of UNEP convened a scientific advisory committee¹⁵ to guide the implementation of resolution 4/6, paragraph 2, including the preparation of an assessment of sources, pathways and hazards of litter, including plastic litter and microplastics pollution, pursuant to subparagraph 2(b). UNEP developed the conceptual approach for the assessment, coordinated the process, established parameters for identifying areas in need of more research and generally built on the UNEP 2016 report, *Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change*, in preparing the assessment.

30. The UNEP report *From Pollution to Solution: A global assessment of marine litter and plastic pollution*¹⁶ presents the sources and pathways of marine litter and plastic pollution and their impacts on ecosystems, economies and society, including negative effects on human health and climate. The assessment and a synthesis were launched on 21 October 2021. They were complemented by several associated resources to enhance the assessment's reach and accessibility, including an interactive presentation in all UN languages.¹⁷

31. Additional knowledge products have been developed to further inform decision-making and evidence-based action, such as:

(a) *Drowning in Plastics – Vital Graphics on Marine Litter and Plastic Waste*¹⁸ was developed in collaboration with the Secretariat of the Basel, Rotterdam and Stockholm Conventions and GRID-Arendal. This report provides an overview of global challenges related to marine litter and plastic waste, using graphic illustrations accompanied by condensed descriptions of key thematic areas.

(b) *Neglected: Environmental Justice Impacts of Marine Litter and Plastic Pollution*¹⁹ explores the environmental justice impacts of marine litter and plastic pollution. It looks at how vulnerable communities are disproportionately and negatively affected during all stages of the plastic life cycle.

(c) A series of studies²⁰ comparing the life cycle impacts of single-use plastic products with those of their alternatives, with the support of the UNEP-hosted Life Cycle Initiative, in response to UNEA4 resolution 9 and others whose purpose is to tackle marine litter and plastic pollution. The

¹⁵ For more details see document UNEP/AHEG/2019/3/INF/6.

¹⁶ Available at <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>

¹⁷ Available at <https://www.unep.org/interactive/pollution-to-solution>

¹⁸ Available at <https://www.unep.org/resources/report/drowning-plastics-marine-litter-and-plastic-waste-vital-graphics>

¹⁹ Available at <https://www.unep.org/resources/report/neglected-environmental-justice-impacts-marine-litter-and-plastic-pollution>

²⁰ Available at <https://www.lifecycleinitiative.org/single-use-plastic-products-studies/>

overall report, *Addressing Single-Use Plastic Products Pollution using a Life Cycle Approach*²¹ that includes recommendations for policymakers was launched on 19 February 2021.

(d) The report *Sea-based Sources of Marine Litter*²² aims to build a broader understanding of sea-based sources of marine litter, particularly from the fishing and shipping sectors, including the relative contribution of different sources, analysis of plastic use and management in both sectors, and the range and extent of impacts from all sea-based sources of marine litter. This report was developed by GESAMP Working Group 43. Lead agencies were the Food and Agriculture Organization of the United Nations (FAO) and the International Maritime Organization (IMO), with co-sponsorship by UNEP.

(e) The study *Policy Options to Eliminate Additional Marine Plastic Litter by 2050 under the G20 Osaka Blue Ocean Vision*²³ was developed by the IRP. It was commissioned by the Government of Japan on behalf of the Group of Twenty (G20).

32. With regard to capacity building, UNEP is revising the MOOC on marine litter. The leadership track is now available in English as well as in Arabic, Chinese, French, Indonesian, Portuguese, Russian, Spanish, Thai and Vietnamese.

33. As per paragraph 2(c) of the resolution, *a comprehensive list of indicators* is being developed with input by relevant organizations. Spanning the life cycle of plastics, they include indicators related to environmental status and trends, policy development, technology and innovation, capacity building and cooperation. The indicators are being mapped to existing and proposed indicator frameworks. A progress report summarizing this work is available online²⁴.

34. One of the recommendations in the *From Pollution to Solution* assessment highlights the need for the development of a risk framework, based on a full life cycle for marine litter and plastic pollution from source to sea and covering ecological, social, economic and health effects. UNEP has initiated work based on this recommendation with GESAMP. A workshop on the development of a risk framework was held in November 2021 aimed at identifying, mapping, and better understanding the multi-sectoral risks posed by marine litter and plastic pollution.

C. Implementation of resolution 4/6, paragraph 3: establishment of a digital multi-stakeholder platform for marine litter and microplastics

1. The GPML Digital Platform is a multi-stakeholder and partly open source platform that compiles and uses crowdsourcing to access different resources, integrating data and connecting stakeholders to guide and coordinate ad hoc and regular action.²⁵

2. The Platform is being developed using a phased approach. A series of phased releases, informed by user-centred design, will culminate in a final version in June 2023. UNEP, in cooperation with the Science Policy Business Forum, launched phase 1 of the multi-stakeholder platform as the digital arm of the Global Partnership on Marine Litter in February 2021.²⁶ The platform facilitates coordination among stakeholders and aims to integrate data and information from multiple sources; connect stakeholders; identify gaps and help prioritize actions; coordinate and guide action based on the best available science and information; and facilitate target setting and measuring progress, including towards achievement of the Sustainable Development Goals and other goals, targets and indicators.

²¹ Available at <https://www.unep.org/resources/publication/addressing-single-use-plastic-products-pollution-using-life-cycle-approach>

²² Available at <http://www.gesamp.org/publications/sea-based-sources-of-marine-litter>

²³ Available at <https://www.resourcepanel.org/reports/policy-options-eliminate-additional-marine-plastic-litter>

²⁴ <https://www.gpmarinelitter.org/recommended-indicators>

²⁵

<https://wedocs.unep.org/bitstream/handle/20.500.11822/34453/UNEP%20GPML%20Digital%20Platform%20Concept%20for%20User%20and%20Partner%20Consultations%20May%202021.pdf>

²⁶ The development of the platform responds to the request in paragraph 7 (b) of Environment Assembly resolution 3/7 that the Executive Director strengthen the capacity and activity of UNEP on marine litter and microplastics by providing advice on the prioritizing of activities based on best available scientific knowledge and the most environmentally sound and cost-effective measures to prevent and reduce marine litter and microplastics.

3. A pilot demonstration of the data mapping and search components of the platform was created in partnership with International Business Machines Corporation (IBM) and finalized in June 2020.²⁷ The demonstration illustrated the value of integrating and analysing citizen science data to enable reporting progress towards Sustainable Development Goal sub-indicator 14.1.1.b and allowed exploration of how a digital avatar could encourage emotional engagement while delivering customized content. Following the pilot demonstration at the Act#ForNature global online forum, a conceptual architecture was produced to further guide the design and development of the platform.
4. An extensive stakeholder consultation was conducted to establish strategic, technology and data partnerships.²⁸ This consultation also informed the development of phase 1 of the platform, which builds on the pilot demonstration to provide access to information from internal and external databases through a single portal. Stakeholders including Governments, the scientific and technical community, businesses and non-governmental organizations will be able to use the platform to find data and information, use mapping and layering tools, and interact with other users.
5. During the phase I release data sets and data layers such as a plastic flow model²⁹ assessing how litter moves through the environment, a policy toolkit³⁰ with information on national legislation from around the world, a marine litter technology inventory,³¹ an online repository of ongoing activities and actions to reduce marine plastic and microplastic³² and an inventory of marine litter actions dashboard and action plans were made accessible from the GPML Digital Platform. Additional tools, with pilot demonstrations, being developed include interfaces for inventories of technical and financial resources and mechanisms, pilots to identify interoperability between models and matchmaking functionalities.
6. In June 2021 UNEP, the GPML and IOC UNESCO launched the Ontology Community of Practice (CoP) to develop the first marine litter and plastic pollution ontology, creating a coherent and machine-readable classification for marine litter and plastic pollution and driving the harmonization of existing definitions and terminology. The Ontology CoP will have a pivotal role in connecting experts with ontology developers to ensure the highest possible accuracy and utility of the ontology. A Data Harmonization CoP is being developed to derive standards and consistent methodologies which will be underpinned by harmonized terminology.
7. On 13 July 2021 UNEP provided technical and logistical support to the Forum of the Multi-stakeholder Platform on Marine Litter and Microplastics hosted by the Government of Japan. The forum enabled subject-specific discussions, coordination of existing actions and identifying immediate and concrete activities to be implemented involving various stakeholders. The forum also raised awareness and enhanced the potential use of the GPML Digital Platform.

D. Implementation of resolution 4/6, paragraph 5: consumer guidelines for the use and production of plastics

8. The development of guidelines for the use and production of plastics to inform consumers has been coordinated by the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns. These guidelines are centred around the promotion of sustainable consumption and production practices and the uptake of circularity along the entire plastics value chain to address plastic pollution. They aim to harness the power of consumption to trigger upstream and systemic solutions, focusing on guidance on the use of plastic packaging.
9. The common framing of the guidelines focuses on three strategic intervention points identified as action gaps at the use stage of the plastics value chain – information on the sustainability of plastic packaging, changing public procurement practices, and understanding triggers for behavioural change

²⁷ The site will be launched before the fifth session of the Environment Assembly.

²⁸ More information is available at <https://www.gpmarinelitter.org/what-we-do/gpml-digital-platform>.

²⁹ See <http://marinelitter.coaps.fsu.edu/>.

³⁰ See <https://leap.informea.org/>.

³¹ In response to the request in resolution 4/6, paragraph 2 (d). More information is available at <https://ml-resource-inventory.herokuapp.com/>.

³² <https://environmentassembly.unenvironment.org/stocktaking-online-repository>.

– and their application in the tourism sector. The guidelines³³ offer detailed recommendations for the provision of reliable sustainability information to consumers in relation to standards, labels and claims on plastic packaging,³⁴ the use of public procurement as a tool to steer market transformation and lead by example, and the design of more effective communication campaigns to engage households and individual consumers in the fight against plastic pollution.³⁵ They also showcase the engagement of actors along the tourism value chain to take concerted action against plastic pollution through the implementation of the Global Tourism Plastics Initiative.³⁶

E. Implementation of resolution 4/6, paragraph 7: ad hoc open-ended expert group on marine litter and microplastics

10. The ad hoc open-ended expert group on marine litter and microplastics held four meetings – in May 2018, December 2018, November 2019 (with guidance for the intersessional period) and November 2020 (online). Several technical briefings were also held, as well as two virtual meetings to prepare for the fourth meeting. At that meeting, held online from 9 to 13 November 2020, the expert group considered potential options for continued work for consideration by the Environment Assembly. It adopted a chair's summary³⁷ setting out, among other things, potential options for continued work.

11. In response to paragraph 24 of the chair's summary of the ad hoc open-ended expert group on marine litter and microplastics (AHEG), UNEP has provided technical and logistical support to a number of informal country-driven processes including the Ministerial Conference on Marine Litter and Plastic Pollution co-convened by Ecuador, Germany, Ghana and Viet Nam on 1-2 September 2021 in Geneva and online, as well as its two preparatory meetings in May and June 2021. The Ministerial Statement finalized during the Conference has been endorsed by 75 countries.³⁸

12. The Nairobi Group of Friends to Combat Marine Litter and Plastic Pollution, co-chaired by Chile and Portugal with technical support from UNEP, was launched on 6 July 2021. Among other actions, it initiated the Nairobi Dialogue Series on Marine Litter and Plastic Pollution to advance discussions on this topic in the lead up to UNEA5.2.

13. UNEP has also facilitated coordination between the constituencies in Nairobi and New York, including with the New York Group of Friends to Combat Marine Plastic Pollution, formed in 2020 and co-chaired by Antigua and Barbuda, Norway and the Maldives.

14. The Geneva Environment Network coordinated by UNEP organized a series of Geneva Beat Plastic Pollution Dialogues to facilitate further engagement and discussion among the stakeholders.³⁹

F. Implementation of resolution 4/6, paragraph 8: mapping of all United Nations agencies, programmes, initiatives and other sources of expertise relating to marine litter, including plastic litter and microplastics

15. The Environmental Management Group established a temporary inter-agency task team on marine litter and microplastics in 2019 to facilitate the preparation of the mapping exercise proposed in paragraph 8 of resolution 4/6. As part of the mapping exercise, the stocktaking survey was circulated to the task team members. The input from United Nations entities formed the basis of the

³³ More information on the guidelines is available at <https://www.oneplanetnetwork.org/value-chains/plastics>

³⁴ <https://www.oneplanetnetwork.org/consumer-information-scp/consumer-information-and-plastic-packaging>

³⁵ <https://www.oneplanetnetwork.org/knowledge-centre/resources/reducing-plastic-pollution-campaigns-work>

³⁶ <https://www.oneplanetnetwork.org/sustainable-tourism/global-tourism-plastics-initiative>

³⁷ The summary is annexed to the report of the meeting and is also available at <https://environmentassembly.unenvironment.org/chairs-summary-aheg-4>.

³⁸ <https://ministerialconferenceonmarinelitter.com/ENDORSEMENTS/>

³⁹ <https://www.genevaenvironmentnetwork.org/resources/updates/geneva-beat-plastic-pollution-dialogues/>

stocktaking report.⁴⁰ The survey was followed by in-depth interviews with close to 50 entities. The initial results show that the United Nations system is addressing marine litter at all levels (global, regional, transnational, national and subnational). Projects mainly address legislation and standards, building of the knowledge and scientific base, capacity-building and awareness-raising, and activities are implemented in collaboration with public administration and non-governmental organizations.

The report on the mapping of all United Nations agencies, programmes, initiatives and other sources of expertise relating to marine litter, including plastic litter and microplastics, *An overview of UN activities and initiatives related to marine litter and microplastics: UN system-wide contribution to support Member States in addressing marine litter and microplastics*⁴¹, was finalized and adopted by the Environment Management Group. Amidst its major conclusions, the report acknowledges Member States' growing interest in the connections between plastics pollution and trade, shipping, industry, tourism and other types of economic activities. Also pointed out solutions which address plastic pollution should reflect health, climate, gender, youth, and human rights considerations.

Drawing on the EMG recently concluded system-wide mapping of plastic in conjunction with the others above mentioned initiatives, the UN Secretary General recognizes the issue of plastic pollution is relevant across the UN system.

Acknowledging the role of the UN to 'walking the talk' and aligning its internal operations and facilities the UN SG requested: "UNEP ED to lead the preparation of a proposal for a working group to unite efforts across the UN system and with external stakeholders, on solutions for challenges posed by plastic pollution".

G. Progress under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

16. In 2019, through Decision BC-14/13, the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal at its fourteenth meeting adopted amendments to Annexes II, VIII and IX to the Convention with the objectives of enhancing the control of the transboundary movements of plastic waste and clarifying the scope of the Convention as it applies to such waste. These 'plastic waste amendments' make the Basel Convention the only global legally binding instrument⁴². The new entries became effective as of 1 January 2021.

17. In addition, the Conference of the Parties adopted decision BC-14/13 on further actions to address plastic waste under the Basel Convention. The decision includes in its sections I, II, III and VII a set of actions for preventing and minimizing the generation of plastic waste, improving its environmentally sound management and controlling its transboundary movement; reducing the risk from hazardous constituents in plastic waste; and public awareness, education and information exchange. In section VI of the decision, the Conference of the Parties welcomed the proposal to establish a Basel Convention partnership on plastic waste and decided to establish a working group of the Partnership. The goal of the Plastic Waste Partnership is to improve and promote the environmentally sound management of plastic wastes at the global, regional and national levels and prevent and minimize their generation so as to, among other things, reduce significantly and in the long-term eliminate the discharge of plastic waste and microplastics into the environment, in particular the marine environment.

18. Technical guidelines for the identification and environmentally sound management of plastic waste⁴³ and other tools and guidance documents⁴⁴ have been and are being developed to support countries in the implementation of the plastic waste amendments. The secretariat of the Basel, Rotterdam and Stockholm conventions is also providing technical assistance⁴⁵ to countries, with a focus on the three pillars of the Basel Convention. Projects⁴⁶ are being implemented among others in Ghana, Sri Lanka, Malawi and Zimbabwe.⁴⁷ Moreover, an interactive online course on plastic waste

⁴⁰ See UNEP/AHEG/4/2 and UNEP/AHEG/4/INF/6.

⁴¹ https://unemg.org/wp-content/uploads/2021/09/EMGSOM.27_INF_2_FINAL_Draft_Marine-Litter-Report.pdf

⁴² <http://www.basel.int/tabid/8426/Default.aspx>.

⁴³ <http://www.basel.int/tabid/7992/Default.aspx>.

⁴⁴ <http://www.basel.int/tabid/8333/Default.aspx>.

⁴⁵ <http://www.basel.int/tabid/8340/Default.aspx>.

⁴⁶ <http://www.basel.int/tabid/8341/Default.aspx>.

⁴⁷ <http://www.basel.int/tabid/8096/Default.aspx>.

and the Basel Convention is being developed in cooperation with the United Nations Institute for Training and Research Canada, the European Union, France, Germany, Japan, the Netherlands, Norway, Sweden, Switzerland, the Norwegian Agency for Development Cooperation and the Norwegian Retailers' Environment Fund are providing financial support for these projects and activities as well as the pilot projects under the Small Grants Programme on Plastic Waste and the Plastic Waste Partnership.

19. The secretariat of the Basel, Rotterdam and Stockholm conventions has contributed to the work of the ad hoc open-ended expert group on marine litter and microplastics and continues to cooperate closely with UNEP in fulfilling the mandates set out in the relevant Environment Assembly resolutions, including through partnerships, the joint publication *Marine Litter and Plastic Waste: Vital Graphics* and an online platform for sharing information on regional and national initiatives to address plastic pollution.

20. A series of projects on plastic waste are being undertaken under the Basel and Stockholm Conventions' Regional Centre Small Grants Programme (SGP) - in short 'SGP on plastic waste'. Under the first two rounds of the SGP, the number of pilot projects being implemented by the Basel and Stockholm Conventions Regional Centres has grown to 16. A third round of the call for proposals was launched at the end of 2021. The pilot projects will benefit 35 countries in Africa, Asia-Pacific, Latin America and the Caribbean, and Eastern Europe.

21. The Basel Convention Plastic Waste Partnership has made progress in mobilizing its broad stakeholder base, including the private sector, to tackle plastic pollution on multiple fronts: from stimulating the development of strategies to strengthen policy and regulatory frameworks within countries, to developing solutions to improve collection, separation and sound management of plastic waste and stimulating innovations for increasing the durability, reusability, reparability and recyclability of plastics. A total of 23 pilot projects for capacity building were selected in 2021.

H. Additional update on implementation of resolutions 1/6, 2/11 and 3/7

22. As requested in resolution 3/7, UNEP has continued to strengthen its support for the development and growth of the GPML which now has more than 460 member organizations. UNEP continues to provide secretariat services for the GPML and has convened meetings of the GPML's Steering Committee five times per year. The GPML, which reviewed and updated its Framework Document in 2020, continues to strengthen its ties to its five Regional Nodes: UNEP-MAP (Mediterranean), UNEP-CEP (Caribbean), NOWPAP (North-west Pacific), SPREP (South Pacific), SACEP (South Asia). It has organized information-sharing webinars featuring members of the Partnership, often focused on a particular region or thematic issue, and publishes a quarterly members' newsletter. Through its Regional Nodes the GPML is also providing financial and technical support to NOWPAP, the Caspian Sea region, the Wider Caribbean Region and SACEP, including their regional activities on marine litter and plastic pollution.

23. As requested in resolutions 1/6, 2/11 and 3/7, UNEP supports the development of regional and national action plans on marine litter and plastic pollution. Thirteen regional action plans are now in place, with the recent addition of the Regional Action Plan (RAP) on Marine Litter in the Arctic⁴⁸. The Caspian Sea has concluded the drafting of a Regional Marine Litter Action Plan and is awaiting its adoption at the next Conference of the Parties. The North-East Pacific region has finalized a Regional Action Plan with the support of UNEP and the MarViva Foundation. This plan will be launched formally in the coming months. In addition, several regions have developed strategies to undertake further work on marine litter and plastic pollution, including the Wider Caribbean (Regional Marine Litter and Plastics Reduction Strategy). The HELCOM Marine Litter Action Plan for the Baltic Sea and the NOWPAP Regional Action Plan on Marine Litter were revised and adopted in 2021. The North-East Atlantic region is updating its Regional Action Plan to address new and emerging issues and reduce the impacts of those items causing most harm to the marine environment. The legally binding Regional Action Plan on Marine Litter Management in the Mediterranean has been revised to widen its scope from single-use plastics to other plastic products of priority, promote extended producer responsibility (EPR) schemes and circularity, and include prevention and action measures.

⁴⁸ <https://pame.is/document-library/pame-reports-new/pame-ministerial-deliverables/2021-12th-arctic-council-ministerial-meeting-reykjavik-iceland/801-regional-action-plan-on-marine-litter-in-the-arctic/file>

24. UNEP has been supporting the review of the Noumea Convention by the Secretariat of the Pacific Regional Environment Programme (SPREP). In addition, UNEP has been providing support for the development of key elements of a possible protocol under the Noumea Convention as a regional legal framework to address marine litter and microplastics.

25. The SEA circular project implemented by UNEP and COBSEA convened about 1000 participants from more than 70 countries to its annual SEA of Solutions 2021 virtual event. Held annually since 2019, this year's event was co-hosted by the Government of Malaysia and called upon plastic value chain stakeholders to engage and unite in "Accelerating solutions to reduce plastic waste" by exploring policies, partnerships, innovative technologies and financing that help address present challenges and mitigate future impacts. Key highlights were the soft launch of Malaysia's National Marine Litter Policy and Action Plan, 2021-2030 and 10-point solutions to address plastic waste in the region.

26. The identification of sources and pathways of plastic pollution in river systems in Asia is actively carried out by UNEP through the Japan-funded CounterMEASURE II project that works with local and national governments in India, Cambodia, Lao PDR, Thailand, Viet Nam as well as in Sri Lanka to inform and develop policy tools. It also engages with regional institutions such as the Mekong River Commission Secretariat (MRCS). In collaboration with the MRCS, a series of national technical consultations on the development of assessment and monitoring protocols for the Mekong region were organized online in four member countries in September with 100 participants. The report *Impacts of Plastic Pollution on Freshwater Aquatic, Terrestrial and Avian Migratory Species in the Asia and Pacific Region* was developed under this project in collaboration with the Convention on Migratory Species.

II. Lessons learned and future activities

27. At every United Nations Environment Assembly since the first one in 2014, governments have adopted resolutions directly addressing the issue of marine litter and microplastics, as well as various other resolutions linked to it, such as sound management of waste and sustainable consumption and production (e.g. Resolutions 1/6, 2/11, 3/7 and 4/9).

28. Upon sequential mandates to support the Member States, UNEP help to the emerging global problem of marine plastic pollution to be first recognized, to knowledge gaps to be identified and the global governance inefficiencies to be recognized. UNEP also support a global common and long-term vision of no plastic or microplastic entering the oceans to emerge and to be agreed. Finally, UNEP help different response options and governance strategies at all levels to be identified as well as strengthening coordination and scientific and technological knowledge to be commended.

29. These given mandates demonstrate the high level of interest in this topic and the urgency of developing solutions to the global crisis of marine litter and plastic pollution. It also shows that the discussion under the UNEA lens has evolved from effects on marine ecosystems, to more focus on the source of the problem.

30. Therefore, coordination of actions remains central, as the topic of marine plastic litter and microplastic expands in scope and participation. At the time of this report update *vis a vis* its version prepared for Unea 5.1, the high-level political engagement was massively incorporated in an already highly dynamic landscape, where multiple actors and initiatives are involved.

31. Cooperation across division and UN System and with relevant multilateral environment agreements and all stakeholders at all levels is also an imperative for compelling efforts to transform the plastic economy along the life-cycle, aiming to reduce marine plastic litter and microplastics, from source to sea, alongside with strengthening scientific and technological knowledge.

32. To further coordinate action to address the priority areas highlighted in the Environment Assembly resolutions on marine litter and microplastics, the GPML has initiated five action tracks under the Partnership with the aim of catalyzing action in priority areas by connecting key stakeholders and facilitating collaboration and coordination. These are actions on (1) science-policy, (2) action plans, (3) standards and guidelines, (4) financing, and (5) access for all. These action tracks will offer stakeholders from a wide range of backgrounds a space in which to share and learn, with a

view to fostering new actions and partnerships and amplifying existing initiatives. Implementation of these action tracks is supported by stakeholders including the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), the University of Wollongong (Australia), the University of Georgia (United States), the International Maritime Organization (IMO), UNEP, the Food and Agriculture Organization (FAO), GRID-Arendal, the Ocean Conservancy and the Global Ghost Gear Initiative, members of the Steering Committee of the GPML, and other experts.

33.

34. Almost all regions now have regional marine litter action plans, and UNEP will continue to provide further support for the development and implementation of national action plans, including through the national source inventory approach, which includes aspects relevant to Sustainable Development Goals 6, 11, 12 and 14, and through national legislative reviews to guide the development of action plans.

35. To inform policymakers about the latest scientific studies, a strong science-policy interface is key. Data quality and effective monitoring of land- and sea-based sources and the quantities, pathways, fate and impacts of marine litter are all crucial for an evidence-based approach to decision-making, including with regard to Sustainable Development Goal indicator 14.1.1. The training-of-trainers programme for the monitoring and assessment of marine litter and microplastics could be further expanded. UNEP plans to conduct additional needs assessments to identify more specific areas in need of capacity-building in various areas. Such areas may include data collection and analysis; feeding and calibrating models and calculators; and linking data to action.

36. Improved scientific knowledge helps in addressing the problem of marine litter and microplastics. The current risk assessment methods should be further improved, such as by developing a risk assessment framework that can capture the complex risks and exposure pathways identified in the assessment *From Pollution to Solution: a global assessment of marine litter and plastic pollution* as well as the *Proceedings of the GESAMP International Workshop on assessing the risks associated with plastics and microplastics in the marine environment*. Further guidance or a toolkit on developing marine litter and plastic pollution inventories to enable the collection and sharing of baseline data and measuring progress may be needed to provide a common basis for further global actions.

III. Recommendations and suggested actions

37. The Environment Assembly may wish to take note of, and welcome the completion of, the work of the ad hoc open-ended expert group on marine litter and microplastics established under Environment Assembly resolution 3/7, as set out in the meeting reports of the expert group and in the chair's summary.⁴⁹

38. The Environment Assembly may wish to decide on the future direction of its work on marine plastic litter and microplastics in the light of the response options identified by the ad hoc open-ended expert group on marine litter and microplastics and the outcome of a series of country-led informal processes, including the Ministerial Conference on Marine Litter and Plastic Pollution co-convened by Ecuador, Germany, Ghana and Viet Nam on 1-2 September 2021.

39. The Environment Assembly may wish to encourage actions by all actors, including those proposed under the GPML action tracks, in the New Plastics Economy Global Commitment, and through the Clean Seas Campaign.

40. The Environment Assembly may wish to take note of the findings of the report *From Pollution to Solution: A global assessment of marine litter and plastic pollution*⁵⁰.

41. The Environment Assembly may wish to invite Member States and relevant stakeholders who have not yet done so to join the Global Partnership on Marine Litter and the Clean Seas campaign.

⁴⁹ Available at <https://environmentassembly.unenvironment.org/chairs-summary-aheg-4>.

⁵⁰ <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>

42. The Environment Assembly may wish to encourage Member States to share information on key areas through the digital platform and engage in user consultations and in further shaping of the digital multistakeholder platform.
43. The Environment Assembly may wish to take note of progress to date on the marine litter and plastic pollution indicator work and risk framework and provide further guidance.
44. The Environment Assembly may wish to consider adopting further actions to enhance cooperation and coordination on actions to prevent and reduce marine litter and plastic pollution at various levels.
45. The Environment Assembly may wish to invite Governments, the private sector, foundations and other organizations to support the work of the United Nations Environment Programme on marine litter and microplastics through voluntary financial contributions.