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**United Nations
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Programme**

**Ad hoc open-ended expert group
on marine litter and microplastics
First meeting
Nairobi, 29–31 May 2018**

**Report of the first meeting of the ad hoc open-ended expert
group on marine litter and microplastics**

I. Introduction

1. In accordance with resolution 3/7, on marine litter and microplastics, adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its third session, held in Nairobi from 4 to 6 December 2017, the secretariat of the United Nations Environment Programme convened the first meeting of the ad hoc open-ended expert group, established pursuant to the same resolution, with a view to further examining the barriers to and options for combating marine plastic litter and microplastics from all sources, especially land-based sources.

II. Opening of the meeting (agenda item 1)

2. The meeting was opened at 10.10 a.m. on Tuesday, 29 May 2018, by Mr. Jorge Laguna-Celis, Director of the Governance Affairs Office of the United Nations Environment Programme.

3. The meeting was attended by 266 participants representing 72 member States, 3 non-member states, 9 intergovernmental organizations and 28 observers representing major groups and stakeholders accredited to the Environment Assembly.

4. Ms. Mette Wilkie, Director of the Ecosystems Division of the United Nations Environment Programme, and Mr. Erik Solheim, Executive Director of the United Nations Environment Programme, delivered opening remarks.

5. In her remarks, Ms. Wilkie recalled that the current meeting was the result of resolution 3/7, in which the Environment Assembly had decided to convene meetings of an open-ended ad hoc expert group to further examine the barriers to and options for combating marine plastic litter and microplastics from all sources, especially land-based sources; had requested the Executive Director of the United Nations Environment Programme to provide the secretariat for the group; and had decided that the group should meet at least once, but not more than twice, before the fourth session of the Environment Assembly.

6. The current meeting, she said, was part of a long journey to tackle the problem of marine litter that had begun in 1995 with the adoption by member States of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, in which marine litter had been identified as one of the key source categories of marine pollution to be addressed under the Programme. Since then, marine litter had become one of the most prominent issues on the international agenda thanks to the adoption by the Environment Assembly of three resolutions on marine litter and microplastics; the adoption by the General Assembly of a dedicated sustainable development goal on oceans (Sustainable Development Goal 14); the launching of the Global

Partnership on Marine Litter and initiatives such as the CleanSeas campaign of the United Nations Environment Programme; and the holding of numerous international conferences on oceans.

7. At the same time, plastic production was projected to increase by up to 40 per cent over the next 10 years, which made achieving a significant reduction in marine pollution by the year 2025, as reflected in Sustainable Development Goal target 14.1, as remote as ever. Stressing that achieving that target would require legal frameworks, incentives, the adoption of waste management plans and other actions by national and local governments, robust international cooperation, continued active engagement by civil society in informing the public, in generating new knowledge and in holding Governments accountable, and the development of innovative solutions to tackle marine litter by research organizations and the private sector, she expressed the hope that productive discussions on those issues would be held at the current meeting to turn the tide on plastics in preparation for the second meeting of the expert group, scheduled for November 2018, and the fourth session of the Environment Assembly, to be held in March 2019.

8. In his opening remarks, Mr. Solheim said that the serious problem of marine litter and microplastics was very clear, as plastic was found on the ocean floor and in the most remote parts of the world, hundreds and in some cases thousands of kilometres away from where humans lived. However, it was equally clear that Governments, civil society and business actors were stepping up efforts to tackle the problem in a way that no one had thought possible even two years earlier. Recent efforts included the adoption in 2018 by the European Commission of a bold strategy on plastic pollution, entitled “A European Strategy for Plastics in a Circular Economy”, which he said would have a major impact in Europe and across the world, and the adoption of measures to reduce plastic pollution by Governments across the globe, including those of China, Eritrea, India, Indonesia, Kenya, Malawi, Rwanda and the United Kingdom of Great Britain and Northern Ireland. On 5 June 2018, the Government of India would host the celebrations of World Environment Day, with a focus on combating plastic pollution, and the University Grants Commission of India had recently directed all universities in the country to ban the use of plastic cups, lunch packets, straws, bottles and bags on their campuses, which once implemented would inspire students to spread the message that it was possible to implement similar bans everywhere. The citizens of Kigali, which was one of the cleanest cities of the world, could also serve as an inspiring example of what could be achieved if citizens adopted the attitude of keeping public spaces as clean as private ones.

9. Suggesting that solving the problem of plastic pollution was a matter of taking concerted political action and making bold decisions comparable to banning smoking in public spaces, he said that efforts to tackle plastic pollution should aim to distinguish between necessary and unnecessary plastic products and avoid the latter, including products such as straws, plastic bags, microplastics in perfumes and soaps, and fruit plastic wrappings; replace plastics that served useful purposes such as food preservation with natural biodegradable materials; and recycle those plastics that could neither be avoided nor replaced.

10. For such efforts to succeed, plastic pollution must be defined as an issue of concern to all citizens, including through the launch of strong campaigns that reached all segments of the population, and Governments must regulate and work with the private sector to promote innovative solutions to plastic pollution and the design and production of new and better products. He then named a number of activities undertaken by the United Nations Environment Programme to mobilize citizens and the private sector, including actions taken under the CleanSeas campaign and under partnerships with companies and with traditional and non-traditional media outlets, as well as efforts to reduce use of plastic at the United Nations complex in Nairobi.

11. In closing, Mr. Solheim invited the expert group to examine how to stimulate action and to serve as a forum to discuss whether a new global agreement on plastics was needed, to exchange information on best practices and on challenges to combating marine litter and microplastics, to set global guidelines on plastics, and to create friendly competition among Governments by showing which of them were taking the lead in tackling plastic pollution in the lead-up to the fourth session of the Environment Assembly.

III. Organizational matters (agenda item 2)

A. Adoption of the agenda

12. The Government representatives adopted the following agenda, on the basis of the provisional agenda and the annotated provisional agenda circulated in advance of the meeting (UNEP/AHEG/2018/1/1 and UNEP/AHEG/2018/1/Add.1).

1. Opening of the meeting.

2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work;
 - (c) Election of officers.
3. Introduction of discussion papers.
4. Barriers to combating marine litter and microplastics, including challenges related to resources in developing countries.
5. National, regional and international response options, including action and innovative approaches, and voluntary and legally binding governance strategies and approaches.
6. Environmental, social and economic costs and benefits of the different response options.
7. Feasibility and effectiveness of the different response options.
8. Options for continued work.
9. Other matters.
10. Adoption of the report.
11. Closure of the meeting.

B. Organization of work

13. The Government representatives agreed to work from 10 a.m. to 1 p.m. and from 3 to 6 p.m. each day, in accordance with the provisional timetable distributed in advance of the meeting, on the understanding that the allocation of time to each agenda item might be revised depending on the progress of the meeting, and to conduct the meeting in plenary, as proposed in the annotations to the provisional agenda (UNEP/AHEG/2018/1/1/Add.1). Interpretation into the six official languages of the United Nations would be available during all sessions from 10 a.m. to 1 p.m. and from 3 to 6 p.m.

C. Election of officers

14. Pursuant to paragraph 3 of rule 63 of the rules of procedure of the United Nations Environment Assembly, the Government representatives elected Ms. Elizabeth Taylor Jay (Colombia) and Ms. Jillian Dempster (New Zealand) as Co-Chairs. Mr. Mphatso Kamanga (Malawi) was elected as Rapporteur.

IV. Introduction of discussion papers (agenda item 3)

15. Introducing the item, the Co-Chair drew attention to five working documents (UNEP/AHEG/2018/1/1, UNEP/AHEG/2018/1/2, UNEP/AHEG/2018/1/3, UNEP/AHEG/2018/1/4 and UNEP/AHEG/2018/1/5) and five information documents (UNEP/AHEG/2018/1/INF/1, UNEP/AHEG/2018/1/INF/2, UNEP/AHEG/2018/1/INF/3, UNEP/AHEG/2018/1/INF/4 and UNEP/AHEG/2018/1/INF/5) that had been circulated by the secretariat in advance of the meeting and had been prepared in English only owing to resource constraints.

16. The representative of the Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants introduced the information document entitled "Possible options available under the Basel Convention to further address marine plastic litter and microplastics" (UNEP/AHEG/2018/1/INF/5), which he said had been prepared for consideration by the Open-ended Working Group of the Basel Convention at its eleventh meeting, to be held in Geneva in September 2018, in order to assist the Group in developing a proposal for possible further action under the Basel Convention to further address marine plastic litter and microplastics for consideration by the Conference of the Parties to the Basel Convention at its fourteenth meeting, to be held in Geneva from 29 April to 10 May 2019.

17. The information document, he said, showed that the Basel Convention held considerable potential to address the issue of marine litter and microplastics, but to realize that potential would require lengthy work, including the possible adoption of an amendment to the treaty. The representative also drew attention to a document entitled "Activities related to marine plastic litter and microplastics undertaken by the Basel Convention regional and coordinating centres and the

Stockholm Convention regional and subregional centres” (UNEP/CHW/OEWG.11/INF/22/Add.1), which listed a range of activities undertaken by the above-mentioned centres, stressing that those undertaken by the Stockholm Convention Regional Centre in Spain in coordination with the secretariat of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) were particularly relevant to the current meeting. In closing, he said that the close coordination achieved thus far should continue in the lead-up to the fourth session of the Environment Assembly and suggested that the views expressed by the Open-ended Working Group of the Basel Convention at its eleventh meeting should be communicated to the ad hoc open-ended expert group for consideration at its next meeting.

18. The representative of the secretariat then made a brief presentation of the information document entitled “Combating marine plastic litter and microplastics: an assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches – a summary for policymakers” (UNEP/AHEG/2018/1/INF/3), which had been prepared in response to resolution 2/11 of the Environment Assembly for consideration of the Assembly at its third session and provided a legal assessment of the effectiveness of the current legal and policy framework to combat marine litter and microplastics, and the identification of gaps in that framework and of options for addressing them.

19. The assessment examined 18 international instruments and 36 regional instruments grouped into three categories on the basis of their objectives, that is, pollution prevention, protection of biodiversity and species, or chemicals and waste management, and found that marine litter was not the primary objective of any international legal instrument and that the current governance strategies and approaches were fragmented and did not adequately address the global issue of marine plastic litter and microplastics. The assessment therefore identified the need for coordination of activities under multiple agreements; monitoring of progress specific to the issue of plastics; and harmonization of targets and reporting procedures.

20. In order to close identified gaps, the assessment identified three options. Option 1 represented a business-as-usual scenario and was not presented as a solution. Option 2 entailed strengthening existing instruments by including measures specific to marine litter and microplastics, encouraging industry-led commitments, expanding the mandate of an existing international body to coordinate existing institutions, and adopting a voluntary global agreement on marine plastic litter that would include, at a minimum, voluntary national reduction targets, standardized global reporting on the production, consumption and final treatment of plastics and additives, and the development or improvement of global industry guidelines on, for instance, the management of polymers and additives and global labelling and certification schemes. Lastly, option 3 entailed the development of a new global architecture with a multi-layered governance approach that would be implemented in two phases: phase I would encompass the voluntary measures outlined in option 2; phase II would run in parallel with phase I and would encompass the development of a global legally binding framework that would include voluntary measures and legally binding national standards. Phase II would provide an opportunity to set the legal basis for a global liability and compensation scheme, engage the main global stakeholders and polluters in long-term solutions and provide legislative stability and security for Governments and industry and encourage investment. Under options 2 and 3, an existing international body would be strengthened, consideration would be given to countries in need of assistance and timelines for the review of the measures and the agreement itself would be set.

V. Barriers to combating marine litter and microplastics, including challenges related to resources in developing countries (agenda item 4)

21. Introducing the item, the Co-Chair drew attention to a document entitled “Discussion paper on barriers to combating marine litter and microplastics, including challenges related to resources in developing countries” (UNEP/AHEG/2018/1/2). The representative of the secretariat then made a brief presentation of the discussion paper, which included a non-exhaustive list of barriers to combating marine litter and microplastics that were divided into four categories, namely legal barriers, which were defined as any impediment established by, founded upon or generated by law, the absence of law or a lack of implementation or enforcement of law; financial barriers, which related to situations in which high costs made a certain activity difficult to afford or to implement; technological barriers, which related to the production, manufacturing and design of product materials, consumption systems and all aspects of waste collection, management and recovery; and information barriers, which pertained to data, research, transparency, and education and awareness. The paper also looked at small island developing States and identified challenges that were specific to them.

22. In the ensuing discussion, representatives expressed appreciation to the secretariat for the discussion paper and the presentation. One representative said that the paper appeared to suggest that the problem of marine litter and microplastics was the result of activities in developing countries and small island developing States, which he said was not the case and requested the secretariat to revise the paper in order to discuss the problem as a global issue and to identify barriers that applied to other countries. He reiterated his request following an explanation from the secretariat that most of the barriers discussed in the paper were similar in developed and developing countries and that those that related to resources in developing countries had been identified in response to the request in Environment Assembly resolution 3/7 to identify barriers to combating marine litter and microplastics, including challenges related to resources in developing countries.

23. One representative suggested that the secretariat revise the discussion paper to add the World Trade Organization and the World Tourism Organization as entities that could play a role in combating marine litter and microplastics at all levels, and to include sediment as one of the environmental media that should be monitored and considered in the design of plastic products. Another representative said that the paper should list as a financial barrier the need to calculate the economic impacts of marine litter and microplastics on coastal activities, including recreational, tourism and port and harbour operations, and the need to identify and address social and psychological barriers to behavioural change, in addition to cultural barriers, as an information barrier.

24. A number of representatives expressed support for narrowing down the list of barriers identified in the discussion paper to enable a more focused discussion on possible solutions. Two representatives said that, given the gaps in knowledge, it was premature for the expert group to develop a list of priority barriers at the current meeting. Two others suggested that there was sufficient information to establish priorities and to take action, with one stressing that reducing marine litter and pollution required both upstream and downstream measures and that measures should be taken in parallel with monitoring and information-gathering efforts. Two other representatives proposed that, instead of trying to narrow down the list of barriers identified in the discussion paper, the expert group could move forward by focusing instead on the issue of governance, in particular by identifying the role of existing international instruments in addressing those barriers, how responses could improve and possible gaps in existing instruments, for instance with regard to microplastics.

25. Many representatives highlighted specific barriers identified in the discussion paper. Barriers on which representatives placed emphasis included insufficient scientific knowledge on the source, flux and risks of marine litter and microplastics; a lack of knowledge on the effects of microplastics on ecosystems and human health, which two said required the application of the precautionary principle; the absence of common or internationally-harmonized methodologies for monitoring and assessing marine litter and microplastics, their sources, pathways, quantities and impacts, which one said made comparison and interpretation of data difficult and could hamper the allocation of resources where they were most needed and undermine the uptake of action; the inadequate management of plastic waste, including in parts of the world where rapid economic development and higher plastic consumption were not being matched with the development of infrastructure to collect and manage waste and wastewater; a lack of citizen awareness of the problem, including of the fact that it affected all aquatic ecosystems and not only ocean-facing countries; a disconnect between investments in plastic products and the resulting push to create new plastic markets and efforts to reduce consumption of plastic and to make recycling viable, which two said required consideration of the entire life-cycle of products; a lack of a comprehensive and global approach to microplastics, in particular those that were intentionally added to products and those generated from sources such as tyres, textiles and plastic pellets; a fragmentation of governance, which several said made it necessary to have a global mechanism to steer and coordinate the multiple efforts being undertaken at the national, regional and international levels, in collaboration with civil society organizations and industry; a lack of systematic efforts on plastic pollution beyond measures to reduce specific single-use plastic products; a disconnect between water and waste management policies and policies related to the protection of the marine environment; fossil fuel subsidies, which one said encouraged wasteful consumption, affected trade and investment decisions and distorted markets; and the lack of a global liability and compensation mechanism through which compensation for plastic pollution could be obtained, given that plastic litter could disperse and fragment and this made it difficult or impossible to trace its origin.

26. Stressing that the main barrier to combating marine litter and pollution was the lack of efficient environmental governance at the national and international levels, one representative said that an international governance structure was needed to guide member States on solutions that should be developed and implemented at the national level, where she said efficient waste management and pollution control were crucial; to fill gaps in existing structures; and to support Governments in the development and implementation of stronger national policies. Stressing that many countries had waste collection and management systems that could be upgraded and that they faced challenges in the

implementation of waste management regulations and policies, she said that international cooperation was needed to support on-the-ground activities and that the Government of Norway had set up a development programme to combat marine litter and to help establish effective and sustainable waste management systems to prevent litter from entering the oceans.

27. Another representative said that improper waste management was the primary overarching barrier to combating marine litter and microplastics, and highlighted numerous legal, financial, technological and information barriers related to waste management identified in the discussion paper as barriers that deserved consideration for additional work by the Environment Assembly. Some of the barriers that she highlighted included a lack of effective national or subnational waste management frameworks, policies or legislation; a lack of national enforcement mechanisms; a lack of incentives for waste prevention; insufficient information on downstream or secondary markets for recovered materials; a lack of country assessments to review existing waste management assets and deficiencies in order to identify needs; difficulty accessing capital for waste management; a lack of appropriate waste management infrastructure and models for local circumstances; the need for better packaging design to reduce waste and increase recyclability and reuse; a lack of basic information in many countries on their largest sources of waste; and a lack of reliable or robust data on the volumes, makeup, sources and pathways of marine litter to help countries to identify and prioritize actions.

28. A number of representatives suggested that there was a need to address behavioural changes and production and consumption patterns by reducing the unnecessary use of plastics in everyday products, avoiding the use of single-use plastics, sensitizing the public and citizens to make more responsible consumption choices and to avoid littering, and educating children. Other needs identified by representatives included the need to work with industry to obtain from them a firm commitment to engage in sustainable plastic production; reduce the quantity of waste being generated in product distribution, for instance through over-packaging; facilitate access to plastic-free alternatives and to better quality, reusable plastics; and adopt policies that reflected integrated approaches to the issues of waste, water and resource efficiency or a circular economy.

29. Several representatives said that it would be useful for the expert group to examine success stories in combating marine litter and microplastics, which one said could be replicated and help countries to develop effective policies to combat marine litter and microplastics. One representative said that tackling the global problem of marine litter and microplastics would require the adoption of a new legally binding instrument under the aegis of the United Nations Environment Programme, as well as partnerships and public awareness-raising campaigns. Two other representatives suggested that, before discussing whether a new global treaty was needed, the group should examine solutions to make existing legal instruments more implementable and effective and to empower the regional seas conventions and action plans to tackle the issue of marine litter, with one suggesting that the solution may lie in improving or expanding existing structures in order to share experiences and leverage experience, resources and expertise, increase efficiency, avoid duplication of work, transfer knowledge, build synergies between existing mechanisms and promote the implementation of existing instruments, as well as in identifying gaps in science and implementation, identifying barriers to ratification of and compliance with existing international treaties and eliminating obstacles through international cooperation, and creating a level playing field, for instance by developing a global extended producer responsibility scheme.

30. With regard to the challenges faced by developing countries, several representatives said that difficulties were related to capacity-building, resource mobilization and a lack of alternatives in replacing certain types of plastics. Another representative said that small island developing States were particularly vulnerable to the problem of marine plastic litter and microplastics and faced significant challenges with regard to waste management and plastic pollution, including limited resources and legislative mechanisms; small recycling markets; a lack of capacity to monitor, govern and deal with pollution; a lack of experts to carry out much-needed analyses; and a lack of coordination at the national and regional levels to deal with plastic pollution in a holistic manner. Small island developing States therefore needed international support to deal with the problem, as well as more awareness-raising programmes on marine litter and microplastics, especially for the most vulnerable populations. Another representative highlighted the positive work being done by Pacific islands to develop a Pacific regional plan on marine litter and encouraged the international community to support this and similar regional schemes.

31. One representative said that her country was experiencing problems with polyurethane, which contained dangerous additives and presented greater risks than polyethylene, the polymer used in single-use plastics found in higher volumes in the oceans that seemed to be the focus of current efforts to combat marine litter; a lack of information from manufacturers on plastic raw materials and additives imported into the country; and insufficient information on substitutes, which she said could

appear to be more sustainable than plastic but might in fact have greater environmental impacts. She suggested that there was a need for regulations on producers and exporters and for life-cycle analyses of plastic substitutes.

32. One representative said that extensive use of water bags had helped his country to address a cholera epidemic but had created a major plastic waste issue, since the bags were low-quality and could not be reused. This situation, he said, emphasized the need to raise public awareness about plastics, to provide technical support to countries at different stages of waste management, and to ensure that industry, which often promoted as biodegradable plastics that merely fragmented and released additives into the environment, provided accurate information on its products and packaging. Another representative said that it was critical to engage with major plastic producers in order to determine which plastics should be considered necessary and urged the Governments of exporting countries to consider adopting legislation or other measures through which the export of plastics from companies based in their territories could be reduced.

33. Several representatives described efforts taken by their Governments to combat marine litter and plastic pollution, including the adoption of legislation, policies and other measures to improve waste management; prevent the discharge of waste into waterways; ban or reduce the production, importation or use of single-use plastic bags and other plastic items; promote the use of locally-made biodegradable bags to replace plastic carrier bags; apply extended producer responsibility to plastic products; and conduct coastal clean-up operations. Some of the representatives identified challenges associated with their efforts, including insufficient capacity to enforce existing legislation and to tackle plastic pollution; limited capacity to assess and to conduct research on plastic substitutes; difficulties financing the production of durable biodegradable items locally; insufficient understanding of the costs and impacts of marine litter, including on human health, and of the costs of plastic recycling technologies; difficulty quantifying the volumes of marine litter; a lack of consumer awareness of and public participation in marine litter and plastic pollution issues; and a lack of technical means to manage and control the entry of banned plastic products.

34. The representative of the European Union said that in an effort to tackle marine litter in a systematic manner, legislation had just been proposed in the European Union to reduce the impact of the ten single-use plastics most commonly found on beaches and in fishing gear, which he said represented 70 per cent of marine litter by count, by promoting less harmful alternatives when available, by better informing consumers, by using extended producer responsibility schemes when no alternatives existed, and by ensuring that certain products entered the existing separation and collection and recycling circuit. He said that the development of the proposed legislation had involved monitoring, the conduct of impact assessments, and consultations with stakeholders and the general public.

35. The representative of the Mediterranean Action Plan and the secretariat of the Barcelona Convention said that although there was a robust legally binding framework to combat marine litter in the Mediterranean Sea, important barriers remained, including those outlined in the discussion paper (UNEP/AHEG/2018/1/2) and in a document entitled “Gap Analysis on existing measures under the Barcelona Convention relevant to achieving or maintaining good environmental status of the Mediterranean Sea” (UNEP(DEPI)/MED WG.444/Inf.12), which highlighted the need for strengthened implementation of existing instruments. He identified as key challenges in the Mediterranean region a lack of financial and other resources; a lack of measures to support circular economy strategies; a lack of knowledge, in part owing to very patchy monitoring and assessment systems and a lack of availability or access to data produced by Governments; and a lack of coordination, in particular with the private sector and industry.

36. The representative of the United Nations Industrial Development Organization highlighted as important barriers to combating land-based sources of marine litter and microplastics regulatory deficiencies and a lack of administrative capacity to implement relevant regulations, which often stemmed from the absence of common definitions and standards for waste and secondary materials; a lack of labelling requirements for hazardous additives in plastics; an absence of bans on unnecessary products such as microplastics in cosmetics; limited extended producer responsibility for most types of plastic packaging and products; unclear market signals, which he said could act as an incentive for the generation of plastics and microplastics; low levels of investment in waste collection, sorting, processing, recycling, upcycling and disposal infrastructure, as well as in wastewater management infrastructure; insufficient research, in particular into designs that could detoxify and extend the lifespan of plastic products and facilitate their reuse, repair, remanufacturing and recycling, into the environmental and health risks posed by microplastics and into costs, risks and solutions; and a low level of consumer awareness of sustainable consumption habits and of waste separation and disposal issues.

37. The representative of the Regional Organization for the Protection of the Marine Environment (ROPME) said that the problem of marine litter and microplastics was particularly alarming in the ROPME sea area, where major barriers to addressing it included a lack of coordination of clean-up efforts; a lack of assessment studies and research; a high rate of per capita consumption of plastics and an increase in use of single-use plastics; a lack of recycling and reuse of plastic wastes into useful products; and a lack of standardization of plastic products and other requirements of recycling. Stressing that three ROPME protocols addressed waste-related issues and that ROPME provided a good platform for member States and concerned parties to work together towards finding common solutions to the problem of marine litter, he said that a regional workshop on marine plastics and marine litter was scheduled to be held in 2018 to identify priority actions and to stimulate the development of regional action plans and a strategy for marine litter and plastics.

38. The representative of the International Maritime Organization (IMO) said that, at the request of the IMO Assembly, which at its 30th session had recognized that marine plastic pollution required further consideration in order to significantly reduce marine pollution of all kinds by 2025, the IMO Marine Environment Protection Committee had included a new output on its agenda to address the issue of marine plastic litter from shipping and had invited member States and others to submit concrete proposals for the development of an action plan for its consideration in October 2018. Similarly, in May 2018, the scientific groups of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and its London Protocol at its joint session had discussed the issue of marine plastic litter and had adopted a statement of concern regarding the disposal of fiberglass-reinforced plastic vessels at sea, and the governing bodies of the two treaties would discuss marine litter further at a meeting in November 2018.

39. Several representatives, speaking on behalf of major groups and stakeholders, provided comments on the discussion paper and highlighted barriers to, and solutions for, combating marine litter and microplastics. One representative, speaking on behalf of seven major groups, said that the discussion paper assumed that the problem of marine litter and microplastics was caused primarily by limitations of waste management systems in certain countries and was largely a behavioural problem that could be solved through voluntary actions such as refusing specific plastic items, when in fact it was a global and systemic problem that required pushing the industries that produced an overwhelming amount of plastics that could not be adequately disposed of, reused or recycled in any country, to change their entire business models. Another representative, speaking on behalf of indigenous people, highlighted as barriers a lack of legal obligations to adopt a waste management hierarchy that placed waste prevention at the top; insufficient application of the polluter pays principle, including through extended producer responsibility; inadequate legislation on prevention of hazardous chemicals and toxic additives in plastic products; a refusal by manufacturers to publicly disclose the ingredients of their products; insufficient labelling; and the externalization of the human and environmental costs of plastic products.

40. With regard to solutions, representatives of major groups and stakeholders said that they should focus on waste prevention and the full life cycle of plastics; limit the production and consumption of plastics; avoid incineration, waste-to-energy and plastic-to-fuel technologies, which they said produced significant quantities of greenhouse gases, hazardous air pollutants, hazardous and highly toxic ash and other residues and were not acceptable ways of managing plastic waste; implement measures to ensure a just transition and create green and decent jobs for workers in displaced industries, including the plastics industry, and including those working in the informal economy as waste pickers; create incentives or legal strategies to make sure plastics were designed to be reused or recycled into diverse products, consistent with a circular economy; promote labelling of products to educate consumers on proper waste management strategies; reduce microplastics in product design and by capturing them at source; and promote greater participation by industry in Operation Clean Sweep, which was an industry initiative that sought to prevent the accidental loss of plastic resin into the environment. Stressing the importance of law for achieving Sustainable Development Goal 14, one representative suggested that the rapidly rising production and use of plastics should be addressed through a global legally binding instrument.

41. The representative speaking on behalf of the business and industry major group identified as barriers to addressing marine debris a lack of local policies and incentives, including legal and political stability, to enable and encourage investments in waste management systems; a lack of sufficient scientific data and knowledge, which he said should form the basis of action; and a lack of harmonized definitions of terms such as microplastics and single-use plastics. Noting that the discussion paper identified the insufficient involvement by industry in solutions as a barrier, he said that industry was and remained committed to bringing solutions to the table and to collaborating with stakeholders to address all aspects of marine litter, citing as examples the Global Plastics Alliance, which he said had undertaken over 350 projects in 40 countries to address marine debris, Closed Loop

Ocean, which was a fund to finance waste management infrastructure in developing economies that the World Plastics Council and others in the plastics industry were supporting, and Operation Clean Sweep. In closing, he said that the plastics industry supported the responsible consumption of plastics and had adopted circular economy goals.

VI. National, regional and international response options, including action and innovative approaches, and voluntary and legally binding governance strategies and approaches (agenda item 5)

A. Overview

42. Introducing the agenda item, the representative of the secretariat said that the mandate for the item was derived from paragraph 10 (d) (ii) of Environment Assembly resolution 3/7, which stated that the initial programme of work of the ad hoc open-ended expert group would, inter alia, “identify the range of national, regional and international response options, including actions and innovative approaches, and voluntary and legally binding governance strategies and approaches”. The secretariat had prepared a discussion paper to facilitate the deliberations under the agenda item (UNEP/AHEG/2018/1/3).

43. In her introductory presentation, the representative of the secretariat said that for the purpose of the discussion on the item, the responses to address the barriers at the national, regional and international levels had been grouped into four categories: legal and policy responses; technological responses; economic responses; and educational and informational responses. She also provided a range of examples of responses in each category, as provided by member States.

44. Mr. Geoffrey Wahungu, Director-General of the National Environment Management Authority of the Government of Kenya, gave a presentation on the Kenyan experience of addressing plastic waste. He said that Kenyans had a constitutional right to a clean and healthy environment, and the Government applied the precautionary principle in ensuring that right. The ban on plastic bags in Kenya, which had been implemented in August 2017 (with some exemptions, for example in the hospitality and waste disposal sectors), followed years of negotiation, research and previous partial measures to regulate the production and use of plastic bags. Stimuli for the ban included the large proportion of plastics in the waste stream, the high percentage of plastics imported and the deficiency of plastic waste recycling. In addition, plastic wastes were clogging waterways and drains and contributing to flooding, and open burning of plastics was a major cause of air pollution.

45. Several factors had contributed to the success of the ban on plastic bags, including political support at the presidential level; regional examples of best practice, as in Rwanda; realization of national responsibilities under the 2030 Agenda for Sustainable Development; the support of the global community, including international leaders and partners; and growing public awareness of the environmental threats posed by plastics. The ban had given rise to a number of co-benefits, including improved drainage during the recent heavy rains, entrepreneurial opportunities to develop innovative packaging solutions, and the revival of the cotton sector in the manufacture of packaging alternatives. Several challenges still needed to be resolved, such as the fact that the high penalties involved had a differential impact on people of low income; the need for more data on the impacts of the ban to enable evaluation of progress made; and cross-border movement of plastic bags from countries yet to implement a ban. For the future, opportunities to widen the ban would be assessed, including for such products as plastic bottles.

46. During the ensuing discussion, there was broad recognition by all participants of the urgent importance of tackling the issue of marine litter and microplastics, given the present scale of the problem and its rapidly increasing dimensions owing to the unabated release of plastics and other contaminants into the world’s oceans. Cleaning up the legacy of waste and plastic pollution was in itself a daunting global task, in addition to taking action to combat the problem in the future. Small island developing States were in a particularly disadvantageous position, as they generated little of the mass of plastic waste in the oceans but disproportionately suffered the consequences, for example owing to the ingestion of microplastics by marine organisms that constituted a considerable proportion of the population’s food supply, and the threat to the tourist industry that was a mainstay of many island economies.

47. In the search for solutions, there was a need to put strong emphasis on land-based activities, which generated the major part of marine litter, and to look upstream at the dumping of waste in rivers, which then carried the waste to the oceans. The contamination of lakes by microplastics was also highlighted. One representative stressed that in developing solutions, form should follow function,

supported by a robust assessment of the added value, practicality and feasibility of any measures implemented.

B. Responses at the national level

48. With regard to legal and policy responses at the national level, a number of representatives outlined actions that were being undertaken in their own countries to combat the problem of marine litter and microplastics, including legislation, policy formulation and putting in place various programmes, strategies, action plans and projects. Bans on plastic bags, plastic straws and styrofoam packaging were frequently mentioned as useful short-term policy options. Several representatives noted their countries' international obligation to deal with the issue under Sustainable Development Goal target 14.1. In that regard, the representative of a major group said that cognizance should be taken of the fact that plastics had many characteristics that supported the attainment of the Sustainable Development Goals, for example in such applications as medical appliances and lightweight transport options. Some representatives highlighted the wider relevance of combating all forms of pollution as part of their pro-poor development agendas, with opportunities for enterprise, job creation and community empowerment.

49. Several representatives alluded to the importance of forming partnerships to deal with marine litter and microplastics at the national level, involving a wide range of stakeholders, including industry, academia and non-governmental and community actors and organizations. Dialogue and social inclusion were identified as important processes in garnering support for any measures undertaken, including in the case of such straightforward actions as beach clean-up campaigns. The key role of municipalities and local governments in introducing appropriate measures at the subnational levels was also recognized.

50. There was general agreement that there was no "one-size-fits-all" solution to dealing with pollution, and within any global framework flexibility should be given to each country to select measures and actions based on their national situations and on the specific barriers they were facing. In addition, national and regional differences and capacities should be taken into account. With regard to waste management, for example, small States might lack space for landfills, with incineration being the only viable option. A range of policy options and approaches existed for dealing with waste, including recycling or use of biodegradable materials, each with their pros and cons. Some representatives emphasized the importance of transitioning to a resource-efficient, circular economy, with a focus on response options that targeted waste prevention through more environmentally friendly production and consumption patterns, and adoption of a life-cycle approach. One representative said that waste management systems should be informed by comprehensive waste characterization studies in order to gain a full understanding of the nature of the waste stream. Some representatives said the polluter pays principle should be applied as a significant element of waste management policy. As an example of what could be done, one representative said that her country had succeeded in removing 99 per cent of microplastics from wastewater using improved treatment techniques, and had launched a national innovation challenge for marine litter solutions.

51. Regarding technological responses at the national level, some representatives highlighted the role of research and development in devising solutions to deal with marine litter and microplastics, including in the development of alternatives, which had attained high priority with the burgeoning of bans on certain plastic products. Studies were required to build scientific knowledge and to assess the current status of production and management of plastics, environmental and ecosystem impacts, transport routes of plastics and microplastics through water systems, effectiveness of solutions, and barriers faced. One representative of a non-governmental organization said that the benefits or otherwise of various waste management solutions should be carefully assessed before they were applied, including waste-to-energy solutions, use of biodegradable materials and recycling, and investment should focus on zero-waste plans and strategies. A major group representative said that it would be imprudent to limit innovation or potential solutions at the outset; for example, waste-to-energy technologies were being used in some of the world's cleanest cities, and chemical recycling was providing options for materials that had previously been unrecyclable. Waste should be treated as a resource and greater efforts were needed to capture its inherent value. Several representatives stressed the crucial role of industry in rising to the challenge of developing alternatives and introducing new technologies and eco-designs, as well as accepting producer responsibility in such areas as collection and reuse of plastic products. Some representatives highlighted the role of monitoring and surveillance in assessing measures and informing solutions.

52. On the matter of economic responses at the national level, some innovative suggestions were made, involving either financial incentives or voluntary agreements. National measures mentioned included a voluntary agreement between industry and non-governmental organizations to reduce

packaging waste; charges for plastic bags or rebates for consumers who brought their own bags; a waste bank programme that linked recycling with personal savings; and a refund to customers depositing plastic bottles at designated redemption centres. On a broader level, one representative said there was a need for innovative financing mechanisms that could catalyse new investments and provide greater levels and sustainability of funding to improve waste management infrastructure and systems, such as the Closed Loop Fund to promote recycling technologies. Incentives were also needed to promote extended producer responsibility.

53. With regard to educational and informational responses at the national level, several representatives described country-level actions that had been undertaken in the area. One representative spoke of the role that beach clean-up projects played in raising awareness; such voluntary activities often attracted young people who were adept at information sharing using social media. Another representative said that a national television campaign on pollution, in conjunction with World Environment Day, would focus on plastics and marine litter, while promoting recycling and the concept of waste as a resource. The representative of a major group referred to initiatives that industry could undertake, such as developing labelling standards to help consumers recycle and formulating policy guidelines to encourage the responsible use of plastics.

C. Responses at the regional level

54. A number of representatives stressed the importance of regional efforts to combat pollution, including in the form of marine litter and microplastics. With regard to legal and policy responses at the regional level, the Regional Seas Programme and other regional marine agreements were viewed as particularly important vehicles for action, and had demonstrated added value in supporting the development and implementation of well-coordinated national activities, promoting exchange of knowledge and experiences, and improving joint response capacity. Several representatives alluded to organizations playing vital roles in the control of marine litter in their respective regions, including the Partnerships in Environmental Management for the Seas of East Asia; the Arctic Council; the South Pacific Commission; the South Asia Cooperative Environment Programme; and the Singapore-Norway Third Country Training Programme, which conducted a regional training programme on waste management and reduction of marine litter in October 2017. The role of the Environment Assembly in approving decisions that provide guidance for measures and responses at the national and regional levels was also acknowledged.

55. Important regional events included the annual celebration of the African Day of Seas and Oceans; the commitment to combat marine litter agreed by the participants in the Association of Southeast Asian Nations (ASEAN) Conference on Reducing Marine Debris in the ASEAN Region, held in Thailand in November 2017; and the forty-eighth Pacific Islands Forum Leaders Meeting, held in Samoa in September 2017, at which the leaders had, in a communiqué, expressed their commitment to fast-tracking the development of policies to ban the use of single-use plastic bags and other plastic packaging.

56. Several representatives highlighted the important role played by the Group of Seven and the Group of Twenty, with one representative stating that they served as valuable mechanisms for raising awareness, establishing cooperation on technical matters and engaging multiple sectors of society. The representative of the European Union summarized the relevant legislative measures being taken by the Union, including the Marine Strategy Framework Directive, to guide action on marine litter among member States, while stressing that there were no one-size-fits-all solutions. He acknowledged that enforcement presented a problem, and said that more integrated and efficient initiatives were required. A representative of a non-governmental organization said that national and regional policy options still largely focused on management of waste, rather than looking more widely at the upstream control of waste through limitations on production, recommendations for design and extended producer responsibility.

57. Several representatives said that a water basin approach offered promise for efficient transboundary management of marine litter, including in the areas of research and development, diagnostics, and market and political mechanisms. For example, in 2014 the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region adopted a marine litter strategy tailored to the problems in the Caribbean.

58. The representative of the Mediterranean Action Plan and the secretariat of the Barcelona Convention delivered a statement on the relevant activities of the organization in the Mediterranean basin, including under the legally binding Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land-Based Sources Protocol, which included a set of measures to combat marine litter from both land-based and sea-based sources, with timetables for implementation. The plan included national obligations regarding waste management, illegal

dumping, sustainable consumption and production, removal of existing marine litter and monitoring, assessment and reporting. In addition, the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities to the Barcelona Convention assisted countries in developing national action plans that included marine litter management. In conclusion, he emphasized the need to foster national and regional cooperation among major actors, including policymakers, industry, fisheries, research institutions and non-governmental organizations, in order to harmonize efforts and maximize outcomes. To that end, the Regional Cooperation Platform on Marine Litter in the Mediterranean had been founded to coordinate the efforts of regional and international partners in the environmentally sound management of marine litter.

59. The representative of the Secretariat of the Pacific Regional Environment Programme delivered a statement on the role of the organization in providing technical assistance to address waste and pollution in its 21 member countries, several of which covered large ocean areas and relied heavily on healthy ocean ecosystems. The Programme's Cleaner Pacific 2025: Pacific Regional Waste and Pollution Management Strategy for the period 2016–2025 had succeeded in mobilizing donor investments to support a number of activities to address marine litter issues in the region, including improvement of port waste reception facilities, pilot marine litter boom projects in Samoa and the Solomon Islands, research to model sources and fates and investigate fish ingestion of plastics, and studies of recycling options in the region, among many others. In conclusion, she stressed the need to explore options to address the millions of tons of legacy wastes that were spread throughout the globe.

D. Responses at the international level

60. Considerable attention was paid during the debate to the various options for legal and policy responses to marine litter and microplastics at the international level, including the three options outlined in the discussion paper: maintaining the status quo; reviewing and revising the existing framework to address marine plastic litter and microplastics, adding components to address industry; and a new global architecture with a multi-layered governance approach. There was unanimous agreement that maintaining the status quo was not an option. There was some discussion on how different waste streams might be managed, and on the need to define what activities should be prioritized in the short term or undertaken in the medium or long term.

61. There was much debate as to whether the existing global architecture of relevance to the regulation of marine pollution was adequate to combat the problem of marine litter and microplastics. One representative said that while existing international measures, such as the United Nations Convention on the Law of the Sea and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, addressed aspects of marine pollution, they fell short of a broad set of enforcement standards to reduce the potential impacts of marine litter and microplastics globally.

62. One representative said that the voluntary nature of many existing instruments did not give sufficient levels of enforcement to achieve international targets for control of marine litter and microplastics, adding that the most feasible approach was one that aimed at the sustainable growth of ecosystems. A representative of a non-governmental organization said that evidence suggested that local or national efforts to ban certain plastic products, such as single-use plastic bags, were often undermined by influxes of the product from unregulated areas. That lesson could be extrapolated to the global level, implying that only a strong global framework would have sufficient robustness to guide, inspire and encourage effective national and regional action.

63. At the same time, a number of existing international agreements offered potential to move forward the global agenda on marine litter. Examples included the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, which had brought marine litter and microplastics into its sphere of concern; the Stockholm Convention on Persistent Organic Pollutants; the International Convention for the Prevention of Pollution from Ships; and the Strategic Approach to International Chemicals Management. Several representatives urged that a coordinated approach be adopted to avoid duplication of activities.

64. International meetings also offered a powerful opportunity to frame global action on marine litter. The Environment Assembly, for example, had a proven track record in helping to raise awareness of complex environmental problems. In another example, the Fifth International Marine Debris Conference, held in March 2011, had developed the Honolulu Strategy, which provided many response options for the prevention, management and control of marine litter. A number of other platforms for global action already existed, including the Clean Seas Campaign on marine litter.

65. Many representatives said that a new legally binding instrument was necessary to adequately address the threat of marine litter, given the scale and complexity of the challenge. One representative

said that while responses must ultimately be carried out at the national level, the fact remained that marine litter knew no borders, requiring a new, global dedicated structure to combat marine litter and microplastics in a holistic, integrated manner. She outlined a number of potential benefits of such a structure, including a dedicated global meeting place at the government level under the United Nations to discuss present and future actions; improved coordination of actions and mobilization of resources; continuity of efforts, enabling long-term planning; effective allocation of available resources in accordance with agreed priorities, in a cost-effective and results-oriented manner; harmonization and standardization of monitoring and reporting; and support for national policymaking and implementation.

66. One representative proposed a combined, three-pillar approach that drew much interest and support. Pillar 1 would involve strengthened cooperation under the regional seas conventions; pillar 2 would entail the establishment of a platform for knowledge-sharing and cooperation among industry, relevant authorities, non-governmental organizations and other stakeholders, as well as a forum for voluntary and coordinated commitments by member States; and pillar 3 would involve the amendment of the Basel Convention to comprehensively address plastic waste as a waste of concern.

67. In order to promote concrete action on the ground, the representative of Norway said that her Government had launched a development programme to combat marine litter, and had taken the initiative to establish a multidonor trust fund in the World Bank to improve waste management and prevent marine litter. Norway had allocated \$13 million to the fund in 2018, and invited other donors to add their contributions.

68. The representative of the Food and Agriculture Organization of the United Nations (FAO) gave a statement on the activities of the organization in relation to marine litter and microplastics. FAO collaborated with a number of organizations to deal with the issue from three major perspectives: marine litter originating from the fishing industry; the impact of microplastics on fisheries and aquaculture resources; and the food safety risks of microplastics for human health through fish consumption. Regarding the first of those, voluntary guidelines on the marking of fishing gear had been adopted at a technical consultation in February 2018, and further steps were under consideration. In addition, studies of microplastics were continuing, and yielding various knowledge products. FAO hoped that sea-based sources of marine litter would be given due attention within a holistic global response to the marine litter issue.

69. In a final round of discussion on the various options contained in the discussion paper, there was consensus among the participants that the list of options should be kept open at the present stage. Several representatives expressed the opinion that the current grouping of options was rather artificial, and it was premature to delete options or to try and limit them to particular categories. A number of representatives recalled the mandate of the expert group as defined by the United Nations Environment Assembly, which was to identify a range of options, not to make decisions on the relative merit of those options.

VII. Environmental, social and economic costs and benefits of the different response options (agenda item 6)

70. Introducing the agenda item, the representative of the secretariat said that the mandate for the item was derived from paragraph 10 (d) (iii) of Environment Assembly resolution 3/7, which stated that the initial programme of work of the ad hoc open-ended expert group would, inter alia, “identify environmental, social and economic costs and benefits of different response options”. The secretariat had prepared a discussion paper to facilitate the deliberations under the agenda item (UNEP/AHEG/2018/1/4).

71. In her introductory presentation, the representative of the secretariat described the purposes and limitations of the discussion paper, and drew attention to the annex of the paper, which summarized the economic, social and environmental costs and benefits associated with each of the three response options under consideration by the expert group.

72. During the ensuing discussion, several representatives acknowledged the difficulties faced in attempting to calculate and place a monetary value on the costs and benefits of various response options, particularly when including environmental and social costs in addition to economic costs. One representative described a national monitoring and survey project that was generating data that could be used in the calculation of costs and benefits of actions to mitigate pollution in coastal tourist destinations. One representative drew attention to the costs associated with physical damage to mangroves, seagrass and kelp, with implications for carbon sequestration, an issue that could be discussed with the United Nations Framework Convention on Climate Change.

73. It was acknowledged that greater standardization of methodologies would assist in generating comparable data. Some representatives stressed the importance of establishing baseline data in order to monitor progress. One representative said that a useful first step might be to test the approach and thinking of the work of the expert group through some case studies, for example a cost-benefit analysis of large ocean clean-up operations.

74. As an example of the difficulty of assessing relative costs and benefits, one representative said that his country was finding that the cost of manufacturing biodegradable alternatives to plastic bags was often higher, but that did not take into account the external costs for the environment and human health. How to incentivize manufacture of alternatives, while internalizing external costs, presented a major challenge. Another representative said that it was necessary for solutions to be economically viable, and the focus should therefore be on the benefits of action with regard to marine litter and microplastics, including the opportunities for employment and enterprise, improvement in quality of life and protection of ecosystems.

75. Regarding the response options, one representative said that the groupings presented by the secretariat should not be taken as sacrosanct and that all could be considered as stand-alone options as part of a step-by-step approach, depending on the particular challenges faced and their urgency. One representative said that in tabulating the costs related to the various options, it would be useful to indicate how the costs were to be borne and by whom.

76. One representative, speaking on behalf of a group of countries, said that in the present analysis, further clarity was needed as to whether the costs of plastics in general were being discussed, or the costs of improving the governance framework to combat marine litter and microplastics. While the expert group was obliged to make some impact assessment, quantifying those impacts went beyond the mandate and capabilities of the group. However, those limitations should not prevent the expert group from analysing existing instruments and identifying the necessary steps to fill gaps. The Co-Chair responded that the mandate of the expert group pertained specifically to marine litter, but that did not obviate consideration of aspects of the life cycle related to marine litter, or of opportunities for co-benefits, for example in discussing links with other multilateral environmental agreements. Another representative said that the costs and benefits of alternatives also needed to be taken into account to ensure that substituting other materials for plastics did not result in greater social, environmental or economic costs. Greater quantitative analysis was needed, looking at all options, in line with the mandate of the Environment Assembly. A representative of a major group said that a holistic approach needed to be adopted when considering alternatives, with efficient allocation of responsibilities and coordination with existing frameworks in order to avoid duplication of activities.

77. One representative said that the options being considered should aim at minimizing environmental costs, with a focus on prevention; the costs of prevention and mitigation would initially be high, but still minor compared to the costs of treatment of existing pollution. Another representative said that the present focus on marine litter and microplastics presented an opportunity to spotlight marine pollution in general, of which plastics were only the tip of the iceberg. An integrated, source-to-sea approach would be advantageous, as adopted by the World Water Forum in Brazil in March 2018, with potential benefits for awareness-raising, promotion of ocean literacy and coordinated action to combat all threats to the ocean.

78. There was some discussion of the importance of assessing and disseminating the cost of no action, which could be an important advocacy tool when lobbying decision makers. One representative said that while the calculation of that cost presented considerable difficulties, even indicative figures could assist advocacy and help promote action. Several representatives urged that the precautionary principle be applied in the face of incomplete data. One representative said that it would be useful to recall the gaps identified by the third session of the Environment Assembly, including gaps in solid waste management, in regulation of microplastics and industrial pollution, and in application of the polluter pays principle, all of which involved costs. While data were often only indicative and were hard to compare, enough knowledge was available to indicate that the environmental, social and economic costs associated with marine litter and microplastics were unacceptable, and the cost of putting in motion a global response could not outweigh the cost of inaction.

79. One representative urged adoption of a life-cycle approach, including consideration of the social and monetary benefits of substitutes and alternatives that would reduce negative environmental impacts. The representative of a non-governmental organization, speaking on behalf of a number of major groups, agreed that there was a need to apply a life-cycle approach, looking at the health, biodiversity, climate, social and economic impacts at each stage of the life cycle of plastics. The accounting of the impacts at each stage should include the external costs shouldered by communities, taxpayers and local governments, and the impacts on health, livelihoods, the environment and food

sources. Such work would best be driven by a new legally binding global governance framework. Another representative of a non-governmental organization, speaking on behalf of a number of major groups, also supported the life-cycle approach within a legally binding framework, and provided an example of how multinational, large-scale plastic producers, while apparently generating significant employment and income, also give rise to massive costs in terms of government subsidies, disposal of plastic waste, adverse health effects, environmental damage and other negative impacts. Another representative of a non-governmental organization, speaking on behalf of a number of major groups, highlighted the danger posed by the chemical additives of plastics and the by-products of manufacture, including persistent organic pollutants of various types, with negative effects on human health and wildlife. One representative drew attention to a recent report by the Expert Committee on Pesticide Residues in Food, a body providing independent advice to the Government of the United Kingdom on the monitoring of pesticide residues in food, which highlighted the challenges faced by small island developing States in maintaining sustainable management systems.

80. The representative of Ocean Conservancy presented a summary of some of the research on plastic pollution. That research had shown that there was global contamination of macro- and microplastics in marine and freshwater ecosystems across habitat types and in remote locations. Many species of wildlife interacted with plastics, either by entanglement or ingestion. Microplastics and their associated chemicals could alter the development, survival rates and reproductive output of aquatic animals. With regard to human health, microplastics were found in seafood, sea salt and bottled and tap water, though there was as yet limited scientific knowledge of the effects of microplastics on human organisms. There was a need to carry out more research and standardize methodologies. There was, however, sufficient evidence of the dangers of microplastics and marine litter to prompt action for the benefit of wildlife, people and the planet.

81. In her summary, the Co-Chair noted the priority placed on prevention, and the interest of the group in delving deeper into the quantitative and qualitative elements of the costs and benefits associated with marine litter and microplastics, despite the considerable challenges involved in taking account of the full range of costs and benefits. It was clear that inaction was not cost neutral, and there was a need to quantify the costs of doing nothing. Another message was the importance of interacting and collaborating with all stakeholders in order to take advantage of the range of skills and methodologies available and generate comparable data. The representative of the secretariat added that intersessional work would be undertaken before the next meeting of the expert group to harmonize monitoring methodologies and provide step-by-step guidance for country-level monitoring programmes. In addition, funding from France would enable an overview of the legal actions being taken by countries globally to control plastic waste. Among other proposed outputs, a model was being developed to evaluate the cost of marine litter at the national level, which would soon be ready for testing; and a study was being conducted to identify key intervention points along the plastics value chain.

VIII. Feasibility and effectiveness of the different response options (agenda item 7)

82. Introducing the item, the Co-Chair drew attention to a document entitled “Discussion paper on feasibility and effectiveness of different response options” (UNEP/AHEG/2018/1/5).

83. The representative of the secretariat then made a brief presentation of the discussion paper (UNEP/AHEG/2018/1/5), which he said assessed the technical and political feasibility of the three options presented in the assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches (UNEP/AHEG/2018/1/INF/3), as well as the effectiveness of each option. Effectiveness, he said, was measured by the degree to which a response or policy option reached its intended goal of helping to achieve a zero-plastic-waste society.

84. He said that the discussion paper found that option 1, which represented the status quo and would aim to continue and encourage existing efforts under existing instruments for both land- and sea-based sources, was both technically and politically feasible, but would not be effective overall, since marine litter and microplastics would keep increasing. With regard to option 2, which encompassed revising and strengthening the existing framework, including by expanding the mandate of an existing international body to include coordination of existing institutions in the field of marine litter and by adopting a voluntary agreement on marine litter, the paper found that it was technically feasible but would require negotiations if the mandate of a legal instrument were to be expanded and, should a voluntary agreement be developed, it could require the provision of technical assistance to countries in setting voluntary national reduction targets and with regard to monitoring and reporting; its political feasibility would depend on the decisions of member States, and it would be effective only

insofar as additional or strengthened measures were implemented. Lastly, for option 3, which involved a new global architecture with a multi-layered governance approach, including a new international legally binding instrument, the paper found that it was technically feasible but the different modalities under the new instrument would need to be further assessed; its political feasibility would depend on the decisions of member States and could be affected by the economic impacts of the instrument and the severity of its compliance mechanism; and it would allow a comprehensive, coordinated approach to the problem of marine litter and would therefore be effective, subject to the exact nature of the compliance mechanism used.

85. In the ensuing discussion, representatives expressed their appreciation to the secretariat for the discussion paper and the presentation. One representative said that while there was enough information to take action on marine litter and microplastics, the expert group needed to develop a robust analysis of response options but many elements were still missing from the analysis. Supported by several other representatives, she suggested that at its second meeting the expert group should have a more focused, in-depth and interactive discussion in order to identify and understand the gaps in existing mechanisms and agreements, including what was covered under them and what was working well; to understand the challenges that existing programmes and institutions, including the regional seas conventions, were facing to determine whether they should be strengthened or if new solutions were required; to clarify the need for global coordination; and to identify opportunities for short-term action, in addition to medium- and long-term action.

86. To enable the expert group to have more interactive and focused discussions, a number of representatives said that it would be beneficial to host a workshop in conjunction with, or using a workshop format during, the second meeting of the expert group, which one said could serve to review activities at the regional level and to share regional experiences in combating marine litter and microplastics. Support was also expressed for requesting the secretariat to consolidate into a single document the four discussion papers considered at the current meeting in order to clarify the links between the measures, barriers, gaps and costs considered under the different agenda items and in the assessment report (UNEP/AHEG/2018/1/INF/3). One representative suggested that the added value of each option should be examined when looking into the feasibility of each option to enable the expert group to have a more informed discussion. Another representative suggested estimating the cost of inaction or the status quo option.

87. Two representatives said that the assessment report (UNEP/AHEG/2018/1/INF/3) provided a comprehensive assessment of gaps in the current legal and policy framework to combat marine litter and microplastics, with one suggesting that a discussion on the gaps identified in the assessment report should bring the expert group closer to finding solutions for achieving the overarching goal of long-term elimination of discharge of litter and microplastics to the oceans reflected in resolution 3/7 of the Environment Assembly. Another representative suggested that Sustainable Development Goal target 14.1 could be used as a benchmark to assess the gaps and weaknesses of existing instruments. A fourth representative suggested that there was a need to look at gaps in addressing plastics other than single-use plastics in order to ensure the responsible use of all plastic under a circular economy approach.

88. As for the case for coordination, one representative said that it would serve to prompt the governing bodies of different instruments and institutions to tackle the issue of marine litter and microplastics in a coordinated manner, avoid duplication, agree on similar or harmonized standards and reporting formats, and follow best practices. Another representative said that the current fragmentation in governance made it necessary to develop a more holistic governance approach to combat marine litter and microplastics; specifically, she said that there was a need to develop a new global structure to support policymaking and the implementation of waste management and waste prevention policies; global stocktaking to assess progress towards the goal of eliminating all discharges of litter and microplastics into the ocean; the development of harmonized and standardized methodologies for environmental monitoring, definitions and indicators; technology transfer and capacity-building; coordination of efforts at all levels; and more effective use and dissemination of available resources. She said that the expert group should focus on developing such a structure and, in so doing, work with existing international bodies at the regional and global levels to clarify their roles and responsibilities and explore possibilities within existing instruments to strengthen measures and actions to combat marine litter and microplastics. She further said that such a global structure could be developed swiftly if Governments agreed to move ahead, and suggested that issues such as liability and compliance were not a priority at this stage.

89. One representative said that flexibility should be given to each country to select specific measures to combat marine litter and microplastics, given that different countries faced different challenges, and suggested that the expert group examine the costs and benefits of possible options

before concluding whether an overarching global structure was needed. Another representative said that many of the solutions proposed were highly resource-dependent and could not be easily implemented or sustained by developing countries, and that there was therefore a need to develop cost-effective and sustainable programmes to reduce plastic litter at the local level and to improve marine litter management at all levels. A third said that in developing countries the recycling of plastics was taking place, but recycling activities were often insufficient, isolated and carried out by the private sector with no government or institutional support, so there was a need to support private recycling schemes, artisanal waste collectors and the conduct of life-cycle analyses of plastic substitutes, since some plastics had reduced the need to cut trees and those that were reusable were often reused until they no longer served any purpose.

90. Several representatives expressed interest in learning more about the experiences and challenges of existing instruments, in particular at the regional level, with one suggesting that a scoping paper providing an overview of what the regional seas conventions were doing or planned to do over the next few years to achieve Sustainable Development Goal target 14.1, which was related to marine litter, should be prepared for consideration by the expert group at its next meeting. Another representative said that it was important to look at the work of the International Maritime Organization; the Food and Agriculture Organization of the United Nations; and the United Nations Education, Scientific and Cultural Organization, whose Intergovernmental Oceanographic Commission she said offered opportunities for the conduct of scientific work and harmonization of methods on marine litter and microplastics.

91. The representative speaking on behalf of the non-governmental organization major group said that additional information on possible coordination mechanisms would be useful and suggested that, in preparation for the second meeting of the expert group, the secretariat could be asked to examine the feasibility and limitations of using the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and/or the Global Partnership on Marine Litter as the global coordinating mechanism on marine litter and microplastics. He further suggested that the expert group could invite the parties to relevant international treaties to explore the possibility of tackling the issue of marine litter and microplastics under those treaties and that in parallel the secretariat of the United Nations Environment Programme could informally approach the secretariats of those treaties and ask them to provide information on their successes and challenges in combating marine litter.

92. One representative suggested that it could be useful to see the different measures proposed under options 1 to 3 as individual elements that could be combined in different ways, and to consider stages of implementation so that responses could be adopted in the short-term without precluding the development of more ambitious long-term solutions, such as an international legally binding agreement. To select the most effective responses, she said that the group must consider all the options discussed under agenda item 5, namely, obligations at the international, regional and national levels; legal, economic and technological measures on prevention, disposal and awareness-raising; a combination of voluntary and mandatory options; and a harmonized monitoring system to measure effectiveness. Another representative said that short-term actions to combat marine plastic pollution could include banning single-use plastic products such as straws and microbeads in cosmetics and promoting environmentally friendly alternatives. A third representative suggested that useful lessons could be learned from the ozone treaties, which had dealt effectively with manufacturers of substances that were widely distributed across products, to deal with marine plastic litter.

93. The representative of IMO said that his organization would be willing to work with the secretariat to provide information on barriers and success stories in the context of the regulations and treaties under its mandate that related to marine litter, including the International Convention for the Prevention of Pollution from Ships, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and its London Protocol, and the compliance mechanisms under such treaties.

94. The representative of the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden said that his organization had taken action on marine litter at least since 2005, including through the development of a regional protocol on protection of the marine environment from land-based activities that addressed solid waste management; clean-up campaigns; awareness-raising programmes; and the development of a new regional action plan on sustainable management of marine litter in collaboration with the United Nations Environment Programme. There was, however, a lack of on-the-ground activities on marine litter in the region, where most countries faced difficulties with regard to finance, capacity-building, awareness and waste management infrastructure. Suggesting that urgent action was needed and that developing a legally binding global instrument on marine litter would require time, he urged consideration of those actions that were most effective in delivering results on the ground by supporting field activities.

95. The representative of the Secretariat of the Pacific Regional Environment Programme said that, given the differences among countries and regions, cost-benefit or feasibility analyses of various options must take into account the different social, cultural and economic conditions of countries, expressing support for smaller group discussions or workshops to consider the needs and capacities of different countries and regions and to develop feasible, non-prescriptive actions that member States could own and be held accountable for.

96. The representative of ROPME highlighted as three possible effective response options the use of nominal fees for plastic bags, the banning of single-use carrier bags and the adoption of regulations to standardize the manufacturing of plastic products and packaging to facilitate recycling.

97. Several representatives described measures taken by their Governments to combat marine litter, including the adoption of national strategies and other measures to promote compostable and renewable alternatives to single-use plastics through the dissemination and monitoring of voluntary commitments by public and private sector entities; to improve waste management by banning certain plastic products and by promoting biodegradable materials, education, waste segregation at source and recycling; to organize large-scale volunteer beach clean-up operations; to allocate segments of the beach to women to keep the coasts clean with the support of the private sector; to engage with the plastics industry to promote conversion and innovation; to facilitate waste collection by supporting waste collectors; and to use public-private partnerships in the collection, transport and use of waste.

IX. Options for continued work (agenda item 8)

98. Introducing the item, the Co-Chair said that representatives had made a number of suggestions under the previous agenda item for how the expert group might organize its work in the lead-up to the fourth session of the Environment Assembly, which she said included examining the four discussion papers (UNEP/AHEG/2018/1/2, UNEP/AHEG/2018/1/3, UNEP/AHEG/2018/1/4 and UNEP/AHEG/2018/1/5) in a more holistic manner and using a more interactive format, such as a workshop format, at the second meeting of the expert group. She suggested that representatives might also wish to consider working informally through virtual means.

99. With regard to substance, several representatives suggested that the expert group should focus on gaps identified in the assessment report (UNEP/AHEG/2018/1/INF/3), in particular those related to governance, and governance options to address fragmentation and ensure that the international framework, including existing regional and international instruments, was more conducive to progress in combating marine litter and microplastics. Specific topics mentioned by representatives as issues that should be discussed further included standards and targets; harmonized monitoring and assessment methodologies; waste prevention and removal measures; reporting; engagement with industry in order to promote large-scale innovation and industry solutions on issues such as design, production, packaging and consumer information; coordination of trade-related issues, for instance with regard to government bans on single-use plastics; the sharing of best practices and experiences; and mechanisms to ensure the continuity of internationally financed projects in developing countries.

100. With regard to process, several representatives expressed support for holding a workshop to discuss the options in more detail, which two said could be held immediately prior to the second meeting of the expert group. Several representatives also expressed support for the idea of holding breakout sessions during the second meeting of the expert group, which two said should focus on the same topic, so as not to create a disadvantage for small delegations, and could then reconvene in plenary sessions in order to exchange ideas on potential solutions and how they related to gaps and barriers. As for the possible use of videoconferences or other means of virtual communication, several representatives said that they would not recommend the use of such methods. However, support was expressed for the use of written communications similar to those used to provide feedback on the resolutions of the Environment Assembly, and one representative suggested that the secretariat could act as moderator of such written exchanges.

101. One representative requested the secretariat to circulate all background documents well in advance of the second meeting of the expert group to enable member States and other stakeholders to have adequate internal consultations and to hold more productive discussions at the meeting. Another representative said that it was essential that member States engage in further work in preparation for the next meeting of the expert group.

102. Many representatives drew attention to various pieces of information that should be available at the next meeting of the expert group in order to enable the group to advance on its work. Several representatives expressed support for the request presented under agenda item 7 to ask the secretariat to integrate into a single document the four discussion papers and the issues discussed therein. One of the representatives suggested that the consolidated document should examine the options better;

identify key gaps, such as the lack of a coordination body to link existing instruments and the lack of a governance body to address actions upstream in the value chain, including sustainable consumption and production; and focus on success factors in addition to barriers. Another representative asked the secretariat to provide more detailed information on the options that had been presented at the current meeting, and in particular the potential benefits and drawbacks of using the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities or the Global Partnership on Marine Litter as a platform to coordinate action on marine litter and microplastics.

103. One representative called for the regional seas conventions and other relevant instruments to provide an overview of their ongoing and planned activities on marine litter and microplastics. Another representative called for information on the outcomes of the eleventh meeting of the Open-ended Working Group of the Basel Convention and the fourth session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, to be held in Bali, Indonesia, on 31 October and 1 November, before the second meeting of the expert group. Several representatives suggested that, in order to obtain more information for the second meeting of the expert group, calls for the submission of position papers in advance of the meeting could be sent by the secretariat.

104. As a follow-up to the current meeting, several representatives expressed support for creating a repository of the measures and experiences shared by representatives at the meeting, which they said could be used by member States to replicate best practices. One representative suggested that the Global Partnership on Marine Litter website could be used for that purpose. Another representative proposed that, on the occasion of World Oceans Day, member States should submit to the Beat Plastic Pollution platform information on the measures they had taken to combat marine litter and microplastics and, to the extent possible, the cost of such measures.

105. Subsequently, in the afternoon of Thursday, 31 May 2018, the Co-Chair presented for consideration of the expert group a document prepared by the Co-Chairs entitled “Elements for further work in the lead up to the second meeting”, which she said summarized a collection of the views expressed by representatives thus far and did not constitute agreed text. She said that the document included a list of elements that the meeting participants had identified as areas in need of further work and would be used by the Co-Chairs to develop a proposal over the following weeks on how to structure the work of the expert group in the lead-up to its second meeting.

106. In the discussion that followed, many representatives queried the nature and purpose of the document, which most said proposed an overly ambitious work agenda for the secretariat that could not be completed before the second meeting of the expert group. Many representatives suggested that the expert group should focus its future work on discussing gaps and governance options, which were two of the items listed in the document, and expressed support for requesting the secretariat to merge and to consolidate the discussion papers presented at the current meeting (UNEP/AHEG/2018/1/2 to UNEP/AHEG/2018/1/5) in order to facilitate such work. Two representatives also expressed support for requesting the secretariat to identify an appropriate platform for the submission of ideas by member States, major groups and stakeholders, which was also included in the document prepared by the Co-Chairs.

107. Recalling that, in accordance with paragraph 10 (d) (ii) of Environment Assembly resolution 3/7, the expert group was tasked with identifying a range of national, regional and international response options to marine litter and microplastics, one representative cautioned against limiting the work of the expert group to the issue of governance.

108. Following the discussion, the government representatives agreed that the document prepared by the Co-Chairs on potential further work would be attached to the Co-Chairs’ summary of the current meeting and would be edited and renamed to clearly convey that it was simply a list of ideas for potential future work presented by representatives at the current meeting.

109. With regard to the possible venue of the second meeting of the expert group, one representative, supported by several others, suggested that the meeting should be held in Geneva in order to facilitate the wider participation of representatives from small island developing States and enable deeper engagement by the expert group with Geneva-based United Nations entities dealing with plastic pollution.

110. The representative of Switzerland said that his Government would be prepared to offer the meeting venue free of charge. The representative of Norway said that her Government would provide financial support to hold the meeting in Geneva.

111. Many other representatives said that the second meeting of the expert group should be held in Nairobi, bearing in mind that the expert group was a subsidiary body of the Environment Assembly,

that the technical experts of the secretariat of the United Nations Environment Programme were based in Nairobi, and that the representatives of relevant United Nations entities based in Geneva could travel to Nairobi to engage in the work of the group.

112. The Co-Chair said that the decision on the venue and exact date of the second meeting of the expert group would be subject to the availability of resources, among others, and would be taken at a later date.

X. Other matters (agenda item 9)

113. There were no other matters for discussion.

XI. Adoption of the report (agenda item 10)

114. The formal report of the meeting was adopted on the understanding that the Rapporteur, working in consultation with the Co-Chairs, would finalize it following the meeting. The report of the Co-Chairs would be finalized and annexed to the official meeting report.

XII. Closure of the meeting (agenda item 11)

115. Following the customary exchange of courtesies, the Co-Chair declared the meeting closed at 5.30 p.m. on Thursday, 31 May 2018.

Annex

Draft Co-Chairs' summary

1. The purpose of the Co-Chair's summary is to provide a short overview of key points raised during the meeting held from 29-31 May in line with the mandate established in resolution 3/7 of the United Nations Environment Assembly. It is not a negotiated document and reflects the observations of the Co-Chairs. It is hoped that this summary will facilitate the meaningful participation of and preparation for all stakeholders in the second meeting to be held in late 2018. Attached is also a summary of possible key areas for continued work highlighted by participants during the meeting. Effort has been made to incorporate all views expressed. It should be noted that this list is very ambitious, and while some elements are already being considered by the UN Environment Programme within existing work programmes, many suggested elements would benefit from the engagement of various stakeholders.

Barriers to combating marine litter and microplastics, including challenges related to resources in developing countries

2. Participants highlighted the magnitude of marine litter and microplastics in the oceans. The global, transboundary nature of the problem requires global, holistic and bold solutions. Actions need to be taken at national, regional and international levels.
3. Prioritization of barriers could guide actions in the global context. This should be framed in terms of short, medium and long-term actions to address barriers.
4. Upstream solutions are important to prevent marine litter as well as working with private sector to reorient production processes based on the circular economy approach. A number of participants wanted further exploration of areas such as extended producer responsibility, product design, harmonization of standards, additives and safer alternatives to plastics. Many participants noted their view that the Polluter Pays Principle should be considered.
5. Many country experts reported on the need for basic waste prevention and downstream waste management efforts that are important to reducing the inflow of litter to the marine environment and provide social and human health benefits.
6. Participants reported a diverse range of actions already in progress at the national level. Action at the national level to include integrated waste management is crucial. Sound science, regulation and compliance are key underpinnings. Solutions need to be appropriate to local and national circumstances as it was noted that "one-size does not fit all". Considerations need to be given to local employment and social issues related to policy interventions. Specific concerns were noted by Small Island Developing States given their vulnerabilities and limited capacities. Sharing of best practices and scaling up of local successes should be encouraged and facilitated. Political support is essential to drive and sustain national actions.
7. Harmonization of monitoring and assessment methodologies and definitions is important for policy making, target-setting, and enhanced data collection and information sharing. Of note is closing the research and data gaps on topics such as impact on human health, other coastal and marine beneficial uses as well as ecosystems, and the status of marine litter and microplastics.
8. Improved product labelling on chemical additives in plastic in particular is needed to better understand implications with respect to health and safety, recyclability and international trade.
9. Of note is the use of fossil fuel subsidies which influence the cost of virgin materials and can distort the implementation of financial incentives for recycling efforts.

10. Public awareness and outreach was mentioned across all elements of the discussion, including a need to explore new ideas and approaches on education, campaigns and information packaging which can help to change behavior and overcome the psychological barriers around marine litter.
11. It was noted that there are resources constraints to implement and develop innovative solution including technical, financial and human capacities. It was also observed that even basic waste management systems at the national level also relied on infrastructure solutions (with existing technology) and were often subject to resource constraints for development. Further discussion could be useful on financing options, collaborative research and monitoring and other relevant ongoing initiatives.

National, regional and international response options, including action and innovative approaches, and voluntary and legally binding governance strategies and approaches

12. The expert group noted many successful national strategies. It was clear that national level responses will remain a core element to resolving the problem of marine litter and microplastics. However, many participants stated that regional and global efforts could be improved and better coordinated to complement national efforts in support of global responses.
13. Many participants noted a global architecture could enhance the holistic approach and facilitate resource mobilization and minimize duplication of efforts. Options discussed in this regard included a new voluntary and/or a new binding legal instrument with a multilayered approach. Other participants recognized enhanced utilization of existing global and regional mechanisms such as the BRS Conventions, the Strategic Approach to International Chemicals Management (SAICM), Regional Seas and the Global Programme of Action as important possible support measures, within their respective mandates.
14. The participants noted that future actions should build on existing global and regional mechanisms that could support the process and seek out avenues where strengthening is needed to enhance their functionality. Several participants pointed to the need for something new and additional to fill governance gaps at the international level. One state, subsequently supported by others, proposed a three-pillar approach involving 1) the Regional Seas conventions, 2) The Basel Convention, and 3) a new and overarching structure at the global level.
15. A number of experts highlighted the need for more research to better understand the problems and potential solutions for marine litter, many states that while data gaps remain, enough is known to drive concrete action in the short term in parallel to developing longer-term global responses.
16. The source-to-sea approach of tackling the problem was noted in the context of river basin management as rivers are important conduits for delivery of plastic litter to the marine environment.
17. While coastal countries and small island states suffer visible impacts, all countries including land-locked countries are affected and contributed to marine litter and microplastics.

Environmental, social and economic costs and benefits of the different response options

18. Interest was expressed in qualitative and quantitative analysis of costs and benefits of different options including cost of no-action and pros and cons of different options. One approach suggested was to consider how costs may be apportioned across different stakeholders. It was noted that Finance Ministries need to be engaged in quantifying costs to economies of inaction.
19. The participants were encouraged to reflect on how to transition to the circular economy including exploring possible incentives to facilitate the transition.

Feasibility and effectiveness of the different response options

20. Some experts stated a need to further examine: (i) gaps in existing governance frameworks with respect to meeting relevant SDGs; (ii) challenges in implementation of existing global and regional frameworks such as IMO instruments, Basel Convention and Regional Seas Conventions and Action Plans; (iii) global coordination; and (iv) need for immediate action.
21. Many participants noted that a global approach should take into account national circumstances.

Way Forward

22. The expert group highlighted the importance of dialoguing with international and regional organizations, and Multilateral Environmental Agreements and of learning more about the challenges in addressing marine litter under their respective instruments and activities. An overview of actions taken by the Regional Seas programmes to implement SDGs particularly target 14.1 may increase inter-regional synergies.
23. Further analysis on response actions categorized into the short, medium, and long term could be beneficial. That would include up-stream and down-stream approaches.
24. For the second meeting, the Co-Chairs noted that increased interactivity such as workshop-style facilitation will be useful to advance the discussion to identify potential options for continued work for consideration by the UN Environment Assembly and to give priority to short-term solutions taking into consideration of the nature of the problem.
25. The Co-Chairs invited the participation of national focal points in addition to experts to deepen the discussion on governance on marine litter and microplastics for the second meeting.
26. The second meeting of the ad hoc open-ended expert group is expected to take place last quarter of the year subject to generous contributions. More details will be announced well in advance of the meeting.
27. The Co-Chairs encouraged all member States and observers that have not done so to submit their position/information papers to the secretariat prior to the second meeting.

Annex 1

ELEMENTS FOR POSSIBLE FURTHER WORK - ADHOC OPEN-ENDED EXPERT GROUP ON MARINE LITTER AND MICROPLASTICS MEETING- 28TH-31ST MAY 2018

This is a compilation of areas mentioned by participants at the meeting that could benefit from additional work. All relevant stakeholders are invited to see how they may be able to contribute to the implementation of these elements.

1. Ongoing assessment of ideas submitted from member states, major groups and key stakeholders

- United Nations Environment Programme to identify an appropriate platform for submissions and develop a working classification of ideas and inputs

2. Analysis of the feasibility, effectiveness and limitations and gaps in existing conventions and agreements

In addition to the mapping work already undertaken, invite parties to the various relevant conventions and international instruments to explore the possibilities existing under those other conventions, for future coordinated actions, especially with Basel and Stockholm, Regional Seas as well as the London and MARPOL Conventions. as was done by the parties to the Basel and Stockholm Conventions.

- In addition to the mapping work already undertaken in AHEG. INF 3, Parties to relevant MEAs are invited to start collecting all relevant information (or to take a decision in their governing body) to determine those aspects of each convention which would contribute to a comprehensive, holistic approach to address the management and lifecycle of plastics and prevent marine plastic pollution.
- United Nations Environment Programme also to explore the feasibility and effectiveness of the Global Partnership on Marine Litter (GPML) or the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), for example, to serve in a central coordination role.

3. Cost and benefits and cost of inaction analyses

United Nations Environment Programme, member states and stakeholders to:

- Develop a series of focused, contextually structured cost benefit studies on different aspects including:
 - improving resource efficiency and basic solid waste collection, transport and recycling rates including through new technologies and innovations
 - upstream design to improve recyclability and sustainability. New technologies, such as marine degradable plastics, biodegradable plastics, and bio resourced plastics should be evaluated and disseminated, as appropriate.
 - prices of virgin plastics ref. fossil fuel subsidies versus recycled plastics
 - infrastructure development, e.g. port facilities (IMO), wastewater treatment plants able to extract micro plastics.
- Collect information on the available resources for building capacity in basic solid waste management infrastructure including the level of resources available from lending institutions, bi-lateral assistance and regional banks
- Collate examples of costs of inaction in different contexts arising from lack of adequate waste management in freshwater, marine environments and on land; inadequate sectoral controls (e.g. fishing gears); poor air quality

controls; and climate change. The costs of inaction calculations would include *inter alia*: impacts on key economic sectors (e.g. tourism) and trade, human health (plus mental health), ecosystem functioning, resource management and livelihoods

- Quantifying the economic impact of marine litter on major economic sectors such as tourism, aquaculture and fisheries at the national/regional level to help countries make the case internally for action

4. Review of existing technology options, voluntary and regulatory solutions across the waste hierarchy

- United Nations Environment Programme to present a summary of ongoing initiatives on labelling standards and harmonization of products including voluntary industry-led initiatives
- United Nations Environment Programme, in collaboration with all relevant entities, also provides an inventory of existing measures, guidelines, standards and labels related to microplastics intentionally used in products or released from products, such as tyres and textiles, or from leakages of pre-production plastic pellets.
- Invite member states, private sector and stakeholders to submit feasible ideas on upstream product design and production processes, considering resource efficiency, circular economy and life cycle approaches

5. Expert review of data gaps on impacts, monitoring methods

- United Nations Environment Programme to merge and consolidate the working documents 2-5
- Need to gather information on the status of basic solid waste infrastructure at the national level and regional level including waste characterizations where possible
- United Nations Environment in collaboration with industry, BRS and other relevant entities, to provide an inventory of existing guidelines, standards and labels to inform consumers and flows of materials on products and materials characteristics
- United Nations Environment Programme to collate existing scientific and expert knowledge from ongoing processes, using the most appropriate modalities including academic conferences, expert meetings of conventions and other agreements, on impacts of marine litter on marine life, human health and ecosystem functions and services
- United Nations Environment Programme to provide a report on the harmonization of monitoring frameworks, indicators and data on marine litter, for example between the Regional Seas Conventions such as the ongoing work of the Joint Group of Experts on Scientific Aspects of Marine Environmental Protection

6. Review of financial instruments and measures

- United Nations Environment Programme, together with other UN agencies and IGOs, to examine existing and potential trade and economic instruments linked to limiting the export and importation of certain plastics goods, including Extended Producer Responsibility
- Recycling incentives including bottle return-schemes, upscaling recycled plastic products
- United Nations Environment Programme to work with other initiatives and conventions to analyse potential investment instruments for waste and wastewater technology infrastructure, research and development and capacity building as well as potential instruments for liability and compensation for environmental damage related to plastic litter and microplastic

7. Governance

- Identify potential useful governance models
 - Overview of existing international and regional governance structures to further identify gaps and tools to address the gaps
 - Analysis of barriers at the national level to enhance solid waste infrastructure and recycling.
 - Identify mechanisms including the following areas:
 - Coordination
 - Role of existing instruments/platforms such as the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and its Global Partnership on Marine Litter (GPML)
 - Data, Methodologies
 - Financial and market instruments
 - Generating new instruments and updating policies
 - Cooperation
 - Innovative solutions to fishing gear management, abandoned loss and otherwise discarded fishing gear
 - Mechanisms for raising awareness and communications of all stakeholders
 - Identification of innovative practices and initiatives around prevention and reduction of marine litter
-