Ad hoc open-ended expert group
on marine litter and microplastics
Fourth meeting
Online, 9–13 November 2020
Item 5 of the provisional agenda*

Consideration of potential response options pursuant to
subparagraph 10(d) of United Nations Environment
Assembly resolution 3/7

Identification of potential options for continued work for
consideration by the United Nations Environment Assembly**

Note from the secretariat

1. The ad hoc open-ended expert group (AHEG) was established through United Nations Environment Assembly (UNEA) resolution 3/7 paragraph 10, which requested the group, among other things, through subparagraph 10(d): (i) To explore all barriers to combating marine litter and microplastics, including challenges related to resources in developing countries; (ii) To identify the range of national, regional and international response options, including actions and innovative approaches, and voluntary and legally binding governance strategies and approaches; (iii) To identify environmental, social and economic costs and benefits of different response options; (iv) To examine the feasibility and effectiveness of different response options; (v) To identify potential options for continued work for consideration by the United Nations Environment Assembly;

2. The expert group’s mandate was extended through resolution 4/6 paragraph 7, in which the expert group was requested to: (a) Take stock of existing activities and action by governments, regional and global instruments, international organizations, the private sector, non-governmental organizations and other relevant contributors to reduce marine plastic litter and microplastics with the aim of the long-term elimination of discharge into the oceans; (b) Identify technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics; (c) Encourage partnerships that undertake activities such as the development of source inventories, the improvement of waste management, awareness-raising and the promotion of innovation in relation to the prevention of marine litter, including plastic litter and microplastics; (d) Analyse the effectiveness of existing and potential response options and activities with regard to marine litter and microplastics at all levels to determine the contribution that they make to solving the global problem;

3. The expert group’s review of barriers and response options and other matters during its first and second sessions (AHEG-1 and AHEG-2) provided input to UNEA-4. There was unanimous agreement at the first meeting that maintaining the status quo was not an option\(^1\). During its third

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* UNEP/AHEG/4/1.

** The present document is being issued without formal editing.

\(^1\) Paragraph 60 of the meeting report of AHEG-1: https://papersmart.unon.org/resolution/uploads/k1801471.pdf
session (AHEG-3) and in the intersessional period leading up to AHEG-4, the ad hoc expert group carried out work in response to its full mandate.

4. This document brings together information about response options and input based on submissions made throughout the process leading up the expert group’s fourth session, including for the stock-taking exercise, the inventory of technical and financial mechanisms, and complements the findings and suggestions of the analysis of effectiveness. Information provided in the outcome documents of AHEG-2 outlining potential options has also been incorporated, including that found in “Combating marine plastic litter and microplastics: an assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches” (UNEP/EA.3/INF/5) and “Consolidated background paper of the discussion papers presented at the first meeting of the ad hoc open-ended expert group on marine litter and microplastics, held in Nairobi from 29 to 31 May 2018” (UNEP/AHEG/2018/2/2).

I. **Overview of submitted response options**

5. Pursuant to subparagraph 7(d) of UNEA resolution 4/6 and paragraph 10 of UNEA resolution 3/7, it was requested at AHEG-3 that “an opportunity should be given to update submissions of response options discussed at the second meeting of the expert group in time for the fourth meeting”.² The Chair of AHEG therefore sent a letter on 11 December 2019 inviting Member States and stakeholders to provide submissions concerning potential response options through the AHEG web portal.

6. By the deadline, 15 August 2020, the Secretariat had received 14 submissions from Member States and specialized agencies and six submissions from major groups and stakeholders. Original and unedited submissions are available on the AHEG web page.³ The Secretariat invited AHEG members which had contributed submissions to also submit pre-recorded presentations elaborating on their submissions. The pre-recorded presentations were voiced over in all UN official languages and made available online.⁴ Submissions were compiled in UNEP/AHEG/4/INF/10, “Submissions on potential options for continued work for consideration by the United Nations Environment Assembly”.

7. Two sessions of interactive technical briefings on response options, chaired by the Acting Chair of the Bureau of the AHEG, were held on 29 July 2020 to facilitate exchanges and understanding of the submissions.

8. Member States, Regional Groups, and other groups of Member States that provided submissions were the African Group, the European Union and Member States, the Nordic Council, Iran, Japan, Malaysia, Myanmar, Norway, the Philippines, Singapore, Switzerland, Timor-Leste, the United States and Viet Nam.

9. Major groups and stakeholders that provided submissions were Association Welfare; the Center for International Environmental Law (CIEL), the Environmental Investigation Agency EIA and GAIA; the India Water Foundation; the International Council of Chemical Associations (ICCA); the Somali Youth Development Foundation; and the Worldwide Fund for Nature (WWF).

10. All submissions received were reviewed as part of the analysis of effectiveness requested in subparagraph 7(d) of UNEA resolution 4/6. Based on the submissions, 10 response option archetypes were identified and outlined in working document UNEP/AHEG/4/4, “Summary of the analysis of the effectiveness of existing and potential response options and activities on marine litter and microplastics at all levels to determine the contribution in solving the global problem” and document UNEP/AHEG/4/INF/9, “Analysis of the effectiveness of existing and potential response options and activities on marine litter and microplastics at all levels to determine the contribution in solving the global problem and selected case studies”.

11. Four categories of response options were presented in the relevant discussion papers at AHEG-1 and AHEG-2 (UNEP/AHEG/2018/1/3; UNEP/AHEG/2018/2/2), in line with the mandate in resolution 3/7 paragraph 10, as a means of classifying actions at the international, regional and national levels: legal and policy responses, technological responses, economic responses, and

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³ All submissions are available at https://papersmart.unon.org/resolution/potential-response-options-submissions.

educational and informational responses. That classification has been used to group the international, regional and national submissions on potential response options reported in this document.

12. Numerous views were expressed by experts, including representatives of Member States, civil society and the private sector, during workshops and plenary meetings. During AHEG-2 a number of principles with regard to enhanced coordination and governance to guide follow-up in this area were identified (UNEP/AHEG/2018/2/6 annex 1), including:

(a) Responses should align with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals.
(b) Political will is essential for effective outcomes.
(c) Information and research are critical enablers.
(d) The overall approach should:
   (i) be comprehensive and holistic, transparent and evidence-based;
   (ii) incorporate sea-based and land-based sources, the circular economy perspective and a full life cycle approach;
   (iii) target the elimination and prevention of plastic waste and marine litter;
   (iv) include immediate as well as sustained, long-term actions;
   (v) be supported by, and grounded in, a science-policy interface; international cooperation; multi-stakeholder engagement; and acknowledgement of the differences in regional and local contexts and technical/financial capacities.

II. International response options

13. The range of views on a vision for combating marine litter and microplastics included:

(a) Eliminate all discharge of plastic into the ocean, directly or indirectly, based on the precautionary principle.
(b) Include targeted action and commitments that are specific, measurable and time-bound.
(c) Increase concerted global action by building on existing efforts.
(d) Engage all stakeholders. Action should be multi-layered (i.e. should take place at all levels), evidence-based and should address all stages of the life cycle of plastic, from sustainable production (including design of materials and products) and consumption (including distribution and use of products) to environmentally sound waste and wastewater management (including waste collection).

14. The range of views on the role of existing instruments included:

(a) Learn from the work of existing organizations, frameworks and initiatives, including the Association of Southeast Asian Nations (ASEAN) and the East Asia Summit (EAS); the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal; the Global Partnership on Marine Litter (GPML); the International Convention for the Prevention of Pollution from Ships (MARPOL) and its London Convention and London Protocol; the Strategic Approach to International Chemicals Management (SAICM); the Regional Seas Programmes; regional fisheries bodies; the G20 and G7; and river basin committees.
(b) Review, revise and build on relevant existing instruments, including regional and multilateral instruments and frameworks that have been adopted to address marine litter. Countries and organizations can continue to strengthen and implement these frameworks under their respective agreements and mandates.
(c) Engage existing mechanisms and programmes that encourage sustainable consumption and production.
(d) Provide cohesion and context to the many existing initiatives while avoiding duplication of efforts. Fill identified gaps in a coordinated and structured manner.
(e) Provide a framework for developing linkages with and (where gaps exist) complementing multilateral environmental agreements such as the Basel Convention, 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, while respecting their legal structures.

(f) Consolidate knowledge and efforts by mapping existing committees/scientific platforms so as to promote innovative technology, avoid duplication of efforts, coordinate funding, and harmonize reporting needs and data collection methods.

15. The range of views on global standards and guidelines included:

(a) Develop common calculation methods, definitions, standards and regulations with particular attention to categories of plastic products that are most prone to leakage and that pose a particular risk to the environment, including single-use plastics, fishing gear and primary microplastics.

(b) Develop definitions of unnecessary and avoidable use of plastic, including single-use plastic.

(c) Develop/improve global guidelines, including for:

(i) management of polymers and additives;
(ii) adoption of global labelling schemes, including common labelling;
(iii) monitoring the state of implementation

(d) Establish global standards for industry, including with regard to:

(i) use of Extended Producer Responsibility (EPR) schemes, customized based on country conditions;
(ii) use of a phased approach or the polluter pays principle;
(iii) provision of information on the adverse impacts of products;
(iv) waste management practices, including in the export and import of recycled waste;
(v) product design, durability, reparability and recyclability, including the need for multiple-use (as opposed to single-use) plastic.

(e) Establish a global monitoring system that includes review and accountability, and considers use of the precautionary principle, to enable a holistic land-to-sea approach;

(f) Develop regulations on sustainable source materials, including:

(i) setting a minimum percentage of recycled plastic content in feedstocks;
(ii) designating certain types of plastics as avoidable, including specific single-use plastics and intentionally added microplastics (e.g. microbeads in personal care and cosmetic products);
(iii) common labelling which is applicable to all countries;
(iv) common regulations on plastic sachet packaging;
(v) minimum recycled content;
(vi) sustainability criteria for plastic products in domestic markets (both pre- and post-consumption) that are appropriate to, for example, national collection and recycling systems in order to ease the burden on domestic waste management regimes.

16. The range of views on the nature of a relevant instrument included:

(a) A new global agreement with the continuation of already established frameworks and efforts at global, regional, national and local levels. Attributes might include:

(i) harmonized standards;
(ii) sufficient flexibility to take into account national circumstances and region-specific challenges, including through national action plans with commitments to targets and measures best suited to each country’s individual context;
(iii) access to financial and technical support;
(iv) mechanisms to measure progress in achieving not only the Sustainable Development Goals, but also other long-term goals.

(b) Global architecture that includes existing and new voluntary and legally binding elements, using a multi-layered governance approach. This approach could be extended to other institutions. At the same time, action could be taken using other response options.

(c) Use of existing mechanisms for international action to achieve a collective vision, with a new instrument considered where needed.

(d) A combination of response options to address marine litter at various levels (local, national, regional) based on a common vision of global action.

(e) Each country to identify issues and tailor its actions based on scientific knowledge.

(f) Rather than international obligations, continue to use best practices in waste management with an emphasis on regional, national, sub-national and local approaches that consider circumstances on the ground.

17. The range of views on technological (technical) responses included:

(a) Establish mechanisms for financial and technical support to developing countries in meeting their commitments. This could include capacity-building and technology transfer, such as for material reduction, recyclability improvement, redesign of materials and low-carbon waste/material management.

(b) Establish a system to facilitate technical cooperation, transfer of expertise, exchange of technical know-how and technology, and best practices, including:

(i) online training;

(ii) face-to-face capacity-building seminars;

(iii) partnerships to promote technical resource development.

(c) Establish a strategic centralized platform for sharing information, knowledge and best practices.

(d) Share, guide and collaborate on research, innovation, and scientific studies.

(e) Facilitate the availability of needed financial and technical resources.

(f) Identify innovative approaches to mobilize non-governmental resources and financing.

(g) Implement and innovate pathway and capture interventions including for wastewater treatment (removal).

18. The range of views on economic/financial responses included:

(a) A new global funding mechanism: a robust long-term financial mechanism accessible to all parties and stakeholders, including civil society organizations (CSOs) and communities, which would assist Member States with limited resources to implement their national obligations (e.g. development of national action plans). This mechanism could include a balance between adaptation (e.g. clean-up) and mitigation (e.g. technological) measures.

(b) Reduce the resource gap by ensuring that international aid flows are well coordinated. This could include:

(i) an agreed list of priorities;

(ii) a set of evidence-based criteria to prioritize funding;

(iii) standardized reporting templates for deliverables and effectiveness evaluation.

(c) Increase markets for recycled plastics.

(d) Create an international financial mechanism for waste management and recovery.

(e) A global fund to support efforts by countries. Access could be based on:

(i) common but differentiated responsibilities;

(ii) consideration of national circumstances;

(iii) extension to land-locked countries to prevent leakage from rivers and waterways into the oceans.
19. The inventory of financial resources or mechanisms and the work of the ad hoc open-ended expert group on marine litter and microplastics (UNEP/AHEG/2018/1/3 and UNEP/AHEG/2018/2/2) identified the following additional responses for experts to consider in mobilizing financial resources to tackle marine litter and microplastics:

(a) **Increased coordination among donors at the global, regional and national level, especially bilateral donors.** An initial focus on coordinating financing in the Asia and the Pacific region, where extensive funding is currently focused, could be particularly impactful.

(b) **Increased alignment of financing with the national priorities of recipient countries and better coordination and alignment of climate finance.** Lessons can be learned from national climate finance mechanisms such as the Environmental Investment Fund (EIF) in Namibia and the Rwanda Green Fund (FONERWA), which coordinate international funding and national policies and planning processes. The development of national marine litter action plans may further facilitate this approach.

(c) **Support for countries in accessing multilateral and international funds, modelled on initiatives such as the Green Climate Fund Readiness Programme, could be considered.**

(d) **Leveraging public funding to create a pipeline of “bankable” projects for private investment.** In addition, greater use of options such as blended finance can increase private investment by making investments more attractive and less risky for the private sector.

(e) **Addressing perverse incentives to use virgin plastic as a cheaper raw material than recycled plastic.**

(f) **Making use of inclusive financing opportunities, including financing for community-based organizations and indigenous communities.** Funders could also assess gender implications of funding programmes, highlight good practices, and advocate for gender-sensitive approaches to tackling marine plastic litter and microplastics.

(g) **Increased financial resources for strategic initiatives to remove from the economy the types or plastic that pose the greatest risks, and to use circularity approaches for other types, accelerating the shift to a circular economy for plastics.** An evidence-based approach should be adopted to ensure that financial resources are allocated as a priority to the types of plastic with the greatest risk of environmental, social and economic impact.

(h) **Addressing funding gaps in sectors, including textiles and agriculture, which are responsible for high levels of plastic pollution but have received less attention.** This approach could include consideration of plastic pollution in agricultural policies and financing.

20. The range of views on scientific, educational and informational responses included:

(a) **Coordinate scientific research internationally, including socio-economic research and research on microplastics (including nanoplastics), and coordinate sharing of scientific knowledge.**

(b) **Increase collaboration and exchange among existing conventions (particularly the Basel Convention), organizations and fora in order to address marine litter and microplastics in a coherent and complementary manner.**

(c) **Establish a scientific and technical advisory group on marine litter and microplastics, which would benefit from the work of existing mechanisms such as the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP).**

(d) **Establish an intergovernmental scientific panel to enhance science-based decisions and policies, drawing on scientific research and knowledge from all relevant institutions.**

21. Establishment of a global knowledge mechanism

(a) **A global knowledge hub could initiate activities and serve as a source of (and clearinghouse for) national source inventories, improved waste management practices, and assessments, and conceptual and practical guidance materials to support governments, organizations and private entities in addressing aspects of marine litter prevention and environmentally sound and risk-based recovery.** Its work could include:

(i) development of harmonized monitoring methodologies;

(ii) collection, collating and open sharing of global monitoring data and information from all actors and sources, including citizen science initiatives;

(iii) ensuring access to robust, reliable science and sound scientific practices, such as those that address additives;
(iv) development of guidelines for sampling and analysis of marine macro- and microplastics;
(v) identification of demonstration projects and their linkages with regional activities;
(vi) mapping of actors, initiatives and approaches.

22. Establishment of an intergovernmental panel of experts/scientific body

(a) Establishment of a scientific and technical panel or body which functions could include:

(i) assess and track the state of environment and the extent of the problem of marine litter and microplastics, as well as progress in meeting global goals and agreed international initiatives, particularly the 2030 Agenda for Sustainable Development (the 17 Sustainable Development Goals) and the Paris Agreement on climate change.

(ii) collate state-of-the-art knowledge to provide scientific and/or technical advice/inputs for decision-making and implementation (science-policy interface).

(iii) share, guide and collaborate on research, innovation, and scientific studies. A strategic centralized platform might be established for sharing information, knowledge and best practices.

(iv) support other relevant agreed international initiatives

(v) coordinate standardized monitoring and reporting with an emphasis on comparability, inter-operability, measurement of global progress across the life cycle, including production, consumption, recyclability, recovery and leakage elimination.

(vi) develop common rules and regulations including calculation methods, definitions and standards, with particular attention given to the types of plastic products that are most prone to leakage and pose particular risks to the environment, including single-use plastics, fishing gear and primary microplastics.

(vii) coordinate and organize scientific information and harmonize and standardize monitoring methodologies, including through data collection common language, common units, material flow certification, and metrics to measure outcomes to support transparency, as well as mechanisms to increase access to relevant data.

(viii) convene existing scientific advisory initiatives and compile available scientific data and information in order to prepare assessments of the sources, pathways and hazards of marine litter.

(ix) enhance scientific knowledge, transfer marine technology, and promote innovative solutions to combat marine debris.

(x) ensure coordination and cooperation between various existing scientific platforms in order to harmonize reporting needs and data collection methods and prevent duplicative efforts and divergences where possible.

(xi) establish common standards, including methodologies for monitoring, regular reporting and stock-taking, to measure countries’ progress, facilitate data comparison and track progress.

(xii) Standardize global, regional and national reporting on production, consumption and final treatment of plastics along the life cycle to facilitate comparability, interoperability and effective measurement of global progress in addressing marine plastic pollution throughout the life cycles of products against agreed indicators (to be developed).

(xiii) establish a mechanism for monitoring and reporting on transboundary plastic waste flows, especially in international waters including guidelines for monitoring methods of relevant indicators such as those developed for harmonizing ocean surface microplastics

(xiv) Innovative data collection through e.g. the use of new technologies such as earth observation. It can be standardized, so that comparable data are generated at
local, national, regional and global levels to further improve and develop existing models on plastics dispersion.

(xv) map the interrelationship and linkages between different approaches and models

(xvi) identify and put into effect innovative approaches for the generation and collection of primary data to use in calibrating technical resources, such as marine litter calculation models and tools. Examples of this type of data are:

- numbers on dumpsite leakage;
- leakage from production sites;
- riverine litter monitoring results;
- results from earth observation technologies and remote sensing (drones, satellites, automated measurements at sea);
- broad spatial and temporal information that provides data coverage not only on the marine environment, but also on terrestrial and in freshwater systems.

(xvii) Harmonize and agree on standard monitoring and develop minimum standards for reporting by countries related to their national, regional and global commitments. These could include global standards for monitoring plastic production, consumption and management, including recyclability and recovery back into the circular loop, and elimination of leakage.

(xviii) Harmonize data collection methodologies, standards, common language, common units, material flow certification, metrics to measure outcomes to support transparency, and mechanisms to increase access to relevant data.

23. The range of views on multi-stakeholder engagement, coordination and cooperation

(a) streamline of stakeholder’s initiatives and objectives in order to avoid duplication of activities and addressing the gaps to ensure effective implementation.

(b) recognize and build on the current work undertaken by the Global Partnership on Marine Litter to reduce marine plastic litter. The work undertaken by the Global Partnership on Marine Litter should be given further attention and strengthened to improve its reach and effectiveness.

(c) take into account work and progress on various issues made by the partnership for plastic under the Basel Convention when discussing response option

(d) Harness initiatives undertaken by various other actors

24. The range of views on public-private partnerships

(a) Public-private partnerships can be a mechanism that facilitates cooperation between governments and private sector.

(b) The private sector can support improvements to waste and wastewater management systems by reducing inputs into these systems, enhancing collection rates for used plastics, creating value for waste reuse, and supporting an integrated approach along the value chain.

(c) Apply a participatory and inclusive approach in which the general public, including local communities, private sector, civil society organizations, and local authorities are involved in the development and implementation of efforts to reduce marine plastic litter.

(d) Private sector engagement and investment can be further complimented by engaging foundations and nongovernmental organizations

(e) All stakeholders should be informed and educated to change behaviours to:

(i) encourage transformative business models that take into consideration the use of source materials, production and design of plastic products

(ii) reduce single-use or unnecessary plastic

(iii) manage waste/recovery of materials back into a circular loop

(iv) establish long-term solutions to address the challenge of marine plastic litter.
Existing, enhanced, or new public private partnerships that can promote targeted actions and capacity building or assist with resource mobilization should be further considered.

Removal of barriers, such as investment and tax barriers for industry to promote innovative solutions to material recovery and recycling.

Consider mandatory reporting/verification of companies’ compliance with regulations or commitments, including those on ecolabelling.

### III. Regional response options

25. The range of views on legal and policy responses included:

(a) Any new global framework should be flexible enough to take into account national circumstances as well as region-specific challenges.

(b) Examples of existing regional framework include UN Regional Seas Conventions, protocols, and action plans including regional action plans on marine litter, fisheries bodies, water basin committees, G20/G7, ASEAN/EAS.

(c) Consider ways to facilitate the development and support of regional and national action plans to combat marine debris and microplastic effectively, guided by a global framework.

(d) Various regional programs as well as the national interventions should be aligned and build on each other. Regional governance/coordinating bodies should create synergy among themselves. These could include strengthening communication and coordination among programs, rationalizing plans to avoid duplications and address gaps, consolidation information and minimizing redundant reporting (including on production, consumption and final treatment of plastics, address the whole life cycle).

(e) Should consider options, including existing forums, for collaboration tailored to spur regional, national, sub-national and local action and to include appropriate participation by non-governmental actors.

(f) Harmonize international legal instruments and approaches (as in Regional Seas programmes).

(g) There is a need to standardize regional reporting on production, consumption and final treatment of plastics in order to address the whole life cycle.

(h) Relevant existing instruments should be reviewed, revised and built on.

26. The range of views on technological responses included:

(a) There is a need to establish regional projects such as the removal of fishing gear.

(b) There is also a need to establish regional sharing platforms on knowledge and best practices, as well as collaborative networks for research and strengthening of economic gains.

(c) Map and monitor the flow and source of marine litter at regional level.

27. The range of views on financial responses included:

(a) Establish regional funds and engage regional economic communities.

(b) Mobilize regional development banks and other regional funding mechanisms.

28. The range of views on educational and informational responses at the regional level include:

(a) Increase collaboration among Member States with regard to existing conventions, organizations and fora.

(b) Map and monitor sources and flows of marine litter at regional level.

(c) Galvanize action through existing instruments such as Regional Seas programmes, regional fisheries bodies and river basin committees.

(d) Facilitate regional capacity-building and information exchange regarding knowledge such as best practices, best available techniques/technologies through regional centres or nodes of the GPML, and promote collaborative network for research and strengthening economic gains.
Regional collaboration is needed in the removal of abandoned, lost or otherwise discarded fishing gear (ALDFG).

strengthen the work of the regional seas conventions (RSC) on monitoring and assessment through expanding their responsibility for managing global data based on harmonised monitoring and assessments.

IV. National response options

29. The range of views on legal and policy responses at the national level included:

(a) National action plans and reduction targets:
   (i) Facilitate and strengthen capacities for the development and implementation of national action plans;
   (ii) Set goals and targets at the national level;
   (iii) Introduce voluntary national reduction target(s) or compulsory, measurable, time-bound targets. They could include national targets for waste avoidance, diversion and recovery;
   (iv) Prepare a set of guidelines for how to design and implement action plans;
   (v) Develop best practices with associated policy toolkits which governments could use in designing and revising their national action plans.
   (vi) Develop national inventories, including:
       a. sources, pathways, and amounts of waste generated, reused, collected, recycled and properly disposed of;
       b. volumes of marine litter cleaned up;
       c. the scale of use of innovative technologies and materials including research and development (R&D) investment;
       d. the scale and/or effect of assistance to countries that need technical capacity development, including with regard to the increased amount of waste properly disposed of.

(b) Set differentiated targets and related indicators for developed and developing countries.

(c) Develop national policies and/or initiatives, including in these areas:
   (i) bans on microplastics in personal care and cosmetic products;
   (ii) encouragement and coordination of industry-led solutions and commitments;
   (iii) Extended Producer Responsibility (EPR) schemes at national level with industry engagement;
   (iv) engagement with the private sector, including the informal waste sector, to collaborate on improved waste management by developing innovative new recycling and recovery technologies, funding models, and new value streams to help end plastic waste in the environment;
   (v) promotion of investment in waste treatment facilities and other infrastructure for waste management and material recovery;
   (vi) creation of incentives to reduce demand/consumption for plastics, and introduction of taxes on waste disposal in the natural environment;
   (vii) promotion of indigenous design using local materials;
   (viii) promotion of behavioural change across all sectors through both formal and informal channels;
   (ix) encouragement of transformation of business models for source materials, production, design, sustainable production/waste/recovery management;
   (x) strengthening of reception facilities in ports and involvement of fishermen in collection of waste at sea;
(xi) establishment of river basin committees; establishment of an integrated waste management system to capture all used materials, including plastic packaging, and making access to such systems universal.

(d) Develop/establish national positions across responsible fora as input to regional conventions, organizations and fora for a coherent national positions across the responsible ministries

(e) Effectiveness and reporting
   (i) Develop a methodology to assess the effectiveness of the policy measures taken.
   (ii) Standardize national reporting on production, consumption and final treatment of plastics, addressing the whole life cycle.
   (iii) Include marine litter related aspects in national coastal plans.
   (iv) Establish national agencies dedicated to coastal management

30. The range of views on technological responses at the national level included:
   (a) Promote environmentally sound waste management (e.g. of dumpsites).
   (b) Promote improved waste management systems (e.g. upstream sorting, recycling and recovery).
   (c) Promote environmentally sound clean-up of marine plastic litter.
   (d) Deploy innovative mitigative solutions such as litter booms, wastewater treatment, drain traps.
   (e) Consider recycling rates for plastics, with a particular focus on the quality of recycled material and the existence of markets for that material.
   (f) Develop infrastructure, and incentivize and develop markets for scrap material to improve sustainable production, use and recovery into increasingly circular systems.
   (g) Conduct life cycle assessments of alternatives

31. The range of views on financial responses at the national level included:
   (a) increasing funding and improving outcomes by financing all phases of integrated waste management systems;
   (b) enabling innovative, transparent funding approaches;
   (c) incentivizing entrepreneurial waste pickers;
   (d) transferring some of the cost of implementation to the actors responsible for leakage, for instance through:
      (i) restrictions on the sale of non-recyclable material; #
      (ii) product design requirements; #
      (iii) deposit schemes or other EPR measures;#
      (iv) operationalization of the polluter pays principle to cover a large part of the costs required to achieve the long-term goal by including the cost of preventing leakage in the price of the plastic products when sold all along the supply chain.

32. The range of views on scientific, educational and informational responses at the national level include:
   (a) facilitate informed choices among consumers (also in e-commerce) by sharing information about the lifecycle and sustainability to consumers
   (b) Implement awareness raising campaigns on impacts of marine litter and microplastics, labelling and/or certification schemes
   (c) Encourage consumers to adopt sustainable consumption practices, including by moving towards more sustainable uses, such as avoiding plastic products when possible, reusing them and, if this is not possible, switching to sustainable alternatives.