



**United Nations  
Environment Assembly of the  
United Nations Environment  
Programme**

**Ad hoc open-ended expert group  
on marine litter and microplastics  
Stocktaking of existing activities and action  
(subparagraph 7a)**

**Provisional Summary of the stocktake of existing activities and  
action towards the long-term elimination of discharges into the  
oceans, to reduce marine plastic litter and microplastics**

**Note by the Secretariat**

1. The ad hoc open-ended expert group (AHEG) was established through the United Nations Environment Assembly (UNEA) resolution 3/7 paragraph 10. Its mandate was extended through UNEA resolution 4/6 paragraph 7, which also requested the group to, amongst other things, through subparagraph 7(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”*

2. The third ad hoc open-ended on marine litter and microplastics<sup>1</sup> requested the Secretariat, , to consider relevant work undertaken by UNEP, as well as other relevant existing bodies of work, such as information submitted as part of studies undertaken by, for example, the Group of 20, the Organisation for Economic Cooperation and Development, the Regional Seas Programmes and the Basel Convention; invite voluntary contributions to the stocktaking exercise through the survey tool or through other submissions, such contributions need not be exhaustive and may address any activity considered relevant by respondents; capture a wide range of activities, bearing in mind that the exercise will not be exhaustive; and provide guidance for the submission process and provide support as needed.

3. This document aims to provide a summary of the submissions to the stocktake of existing activities and action towards the long-term elimination of discharges into the oceans, to reduce marine plastic litter and microplastics. The ultimate objective of the stocktaking exercise is to provide an inventory of activities for the long-term on the elimination of discharges into the oceans and reduction of marine plastic litter and microplastics. The stocktaking exercise will be aligned with a revised methodology to analyse 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 mandated under UNEA resolution 4/6 subparagraph 7(d) and described in document UNEP/AHEG/2020/4/4. The results of the stocktaking describe the current focus of actions and will help define future desired actions / activities and response options.

## **Introduction**

4. The stocktaking exercise has been prepared with the aim of gathering information on ongoing and planned activities by stakeholder groups that deal with marine litter and microplastics directly and indirectly. The findings of the stocktake exercise aims to assist in building the long-term capacity that would allow for a more strategic engagement in the overall process, including identification of areas with the greatest transformative potential.

## **Method**

5. This document aims to report on the submitted existing actions and activities starting from 1 January 2018, with the stocktaking exercise and analysis running through the period of December 2019 to July 2020. A stocktake affords an opportunity to provide a snapshot of the current situation and ongoing work. It enables member states, major groups and stakeholders to understand characteristics of current activities and actions and analyse partnerships and challenges. Results have also contributed to identify best practice case studies that use partnership approaches.

6. To achieve a stocktake, as requested in subparagraph 7a of resolution 4/6, , governments, agencies related to regional and global instruments, international organizations, the private sector, non-governmental organizations and other relevant actors were invited to submit information on their existing actions and activities. The following section describes the method of data capture.

## **Data Capture**

7. Actions and activities were captured for the stocktake via three routes. Figure 1 shows the data sources and where the data will be made available. Information could be entered via a dedicated, tailor-made online survey entitled ‘A Stocktake: Reducing Marine Plastic Litter and Microplastics’. This survey was open to submissions between 18 December 2019 and 31st July 2020. Information could also be submitted by completing a narrative Template [‘Template for country updating (information sharing) for the implementation Framework for Actions on Marine Plastic Litter’] via the UNEA papersmart portal .

8. Recognising that member states have already submitted information on actions taken towards long term elimination of discharges into the oceans, desk research on prior

work was carried out to capture these actions from reports and websites of groups such as the Basel Convention, the Stockholm Convention, ASEAN, Regional Seas Programmes, as well as previous submissions to AHEG 1 and 2, etc.

9. Insights and data from the stocktake will be accessible from three sources:
  - a. This document which is a summary of Phase 1 and 2 of the stocktaking of existing activities and actions.
  - b. The information document (UNEP/AHEG/2020/4/INF/5) which reports on the complete data for Phase 1 and 2 and includes an overview of the narrative submissions and prior work.
  - c. A UNEP online searchable platform (to be provided) will display the existing actions and activities. The platform consists of two outputs; 1) An online, open – access inventory where the collected data is stored and managed. The inventory of actions/activities will be presented through a visual dashboard of key attributes, such as; focus from source-to-sea, type of pollutant and lifecycle phase. The inventory also includes the narrative submissions. 2) A stocktaking dashboard which includes a range of graphical representations visualizing trends in actions/activities as reported to the stocktake online survey. The dashboard enables comparison on country/region level and downloading of the visuals or survey input.

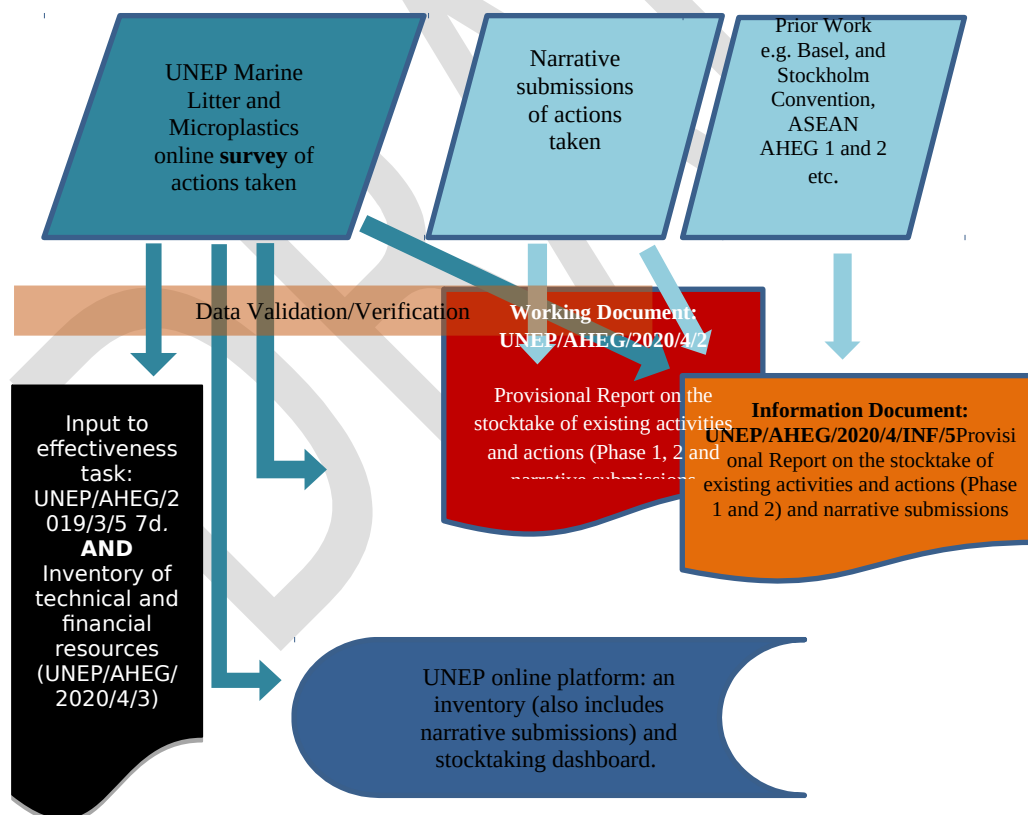


Fig 1: Overview of Stocktake efforts and data flow showing the three routes of data capture and their relationship to the two reporting documents UNEP/AHEG/2020/4/2, UNEP/AHEG/2020/4/INF/5 and online searchable platform (project inventory and dashboard) (to be provided).

### **The Online Survey, dissemination and invitations**

10. Following the third meeting of the ad hoc open-ended expert group on marine litter and microplastics, 18 - 22 November 2019, an invitation to member states and major groups was sent, on 18 December 2019, from the Chair of the ad hoc open-ended expert group, inviting inputs from member states and stakeholders to the working documents for the fourth meeting including voluntary inputs to the report on stocktaking through the web portal: <https://papersmart.unon.org/resolution/reporting-tool>. The survey was open and live to responses on 18 December 2019. In conjunction, invitations to Phase 1 were also disseminated via social media between 17 and 19 January 2020. A further series of invitations were extended between January and July 2020 and the online survey Phase 2 was closed on 31st July 2020. A dedicated email address for queries was also communicated through the webinar, guidance document and papersmart portal ([marinelitterstocktake@plymouth.ac.uk](mailto:marinelitterstocktake@plymouth.ac.uk)).

11. A Guidance Document was provided via the papersmart portal<sup>2</sup> and was linked to the survey. This explained what the survey is about, why organisations should complete the stocktake survey, who the right person is to complete the survey, what to prepare, definitions of actions/activities to reduce marine litter and microplastics, who is requesting help, the survey format, who to contact and Frequently Asked Questions (FAQ's).

12. On 20 January, a webinar<sup>3</sup> was held to explain the survey aims and procedure. This webinar was recorded and made available online via the papersmart page. Questions asked by participants further informed the FAQ section in the guidance document. On 21st May 2020 a further webinar<sup>4</sup> was held to communicate initial findings and invite more submissions.

### ***Data received, Quality Assurance and Data Storage***

13. As of 31st July 2020, 226 submissions to the **online survey** had been received, of which 220 were usable. Sixty three submissions were received via the **narrative submission** route. Survey data (csv file, SPSS and Excel) are stored on University of Plymouth servers and laptops (UoP are the data processors, UNEP are the data controllers), password protected and backed up regularly. There are two sets of data: a) personal contact data and b) data on the actions and activities. Participants confirmed during the survey that the latter data on actions can be made publicly available. The latter data are shared for the searchable online platform and with four partner universities who currently engage in additional data validation and verification (see Fig. 1).

## **Results**

### ***Overview of Actions Submitted Via the Online Survey***

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<https://papersmart.unon.org/resolution/stocktaking>

3

<https://vimeo.com/386661665>

4

<http://wedocs.unep.org/handle/20.500.11822/32594>

14. A provisional overview of the data from the survey is presented here. Further data is presented with a more detailed analysis in UNEP/AHEG/2020/4/INF/5.

#### *Overview of Survey Actions*

15. **Online survey** respondents informed us of 220 existing activities and actions towards long-term elimination of discharges into the oceans. Submissions were received from 51 government entities, 41 UN entities, 32 Major Groups and Stakeholders, 21 Intergovernmental organisations and 75 Other Stakeholder Entities. One hundred and four actions were continuous with a longer than 3-year duration, 65 were between 1 to 3 years duration, 12 were less than one year and 23 were a single event (with 16 ‘other’ or ‘not applicable’ responses).

16. The geographical focus of actions and activities was reported as follows: 70 national actions (covering one entire country), 54 sub-national actions (covering part of one country), 30 transnational (including bilateral actions), 26 global, 20 regional actions. There were 4 global actions which, although global in scope, had actions ongoing in specific areas and 16 ‘other’ category actions, which were described as: actions affecting only schools or smaller areas, individual cities or communities, or a particular sea. Actions and activities were mapped to show the location of ‘at least one’ action happening in member states (Fig 2).



Figure 2: Pinpoints indicate locations by country for which at least ONE existing action was reported. Blue pins indicate UN locations of actions. The maps on this website are intended to visualize geographically the locations reported in the stocktaking survey. The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries..

#### *Categories of Actions (Definitions)*

17. The online survey asked respondents to report actions using one of four main categories (highlighted below in bold) and also indicate which further subcategories applied:

18. **Legislation, Standards, Rules:** Official agreements, policy change or development, high-level strategy, legislation or regulations, voluntary commitments, new standard(s) or guideline(s), change in taxes/subsidies, subsidy/financial incentives, ban(s),

package of measures combining incentives and infrastructure (e.g. deposit reward schemes).

19. **Working with People:** Awareness raising and behaviour change (information campaign/ programme(s), community engagement, stakeholder engagement, citizen science, creative/arts events), education and training (curriculum development, professional training, lifelong learning, institutional development), workshops, conferences.

20. **Technology and Processes:** New product design, change in service provision, environmental social planning, change in practice, change in operations, industrial or production standard, different environmental management of land based environments, different environmental management of aquatic environments, research and development (reducing the environmental impact, developing a new material, developing a new process, manufacturing and production, standards, waste management, compostable plastic, bio-based plastic, bio-degradable plastic), new infrastructure, the use of compostable plastic, the use of bio-based plastic, the use of biodegradable plastic.

21. **Monitoring and Analysis:** Monitoring on or near the ocean surface/water column/seafloor/shoreline, biota/air, review and synthesis (environmental, economic, materials).

22. Note that, for the purposes of the survey, the UNEP/AHEG/2019/3/2 terminology was amended slightly to make it more accessible to respondents, following feedback and discussion at the AHEG-3 meeting in Bangkok. The ‘normative’ category of action became ‘legislation, standards, rules’; ‘capacity building’ was labelled ‘working with people’, and ‘evidential’ was labelled ‘monitoring and assessment’. Further, ‘technology and processes’ was included as a category of action to facilitate the synergies and coordination with the preparation of the report “Report of the inventory of technical and financial resources and mechanisms for supporting countries in addressing marine plastic litter and microplastics” (UNEP/AHEG/2020/4/3).

23. Out of 220 actions, the ‘working with people’ actions were the most frequently reported<sup>5</sup> category of action existing since 1 January 2018. ‘Legislation, standards, rules’ were next in frequency but ‘monitoring and analysis’ and ‘technology and process’ less frequent (Fig 3).

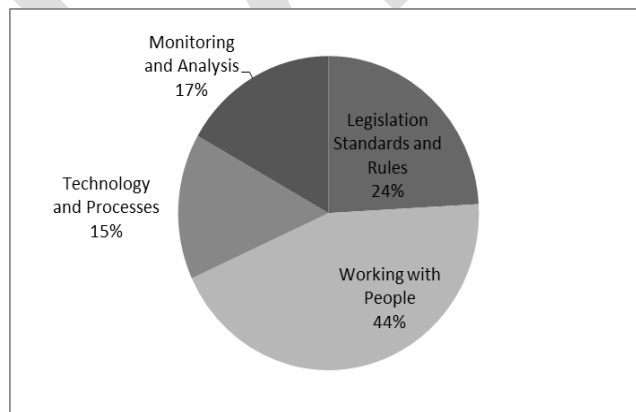


Fig 3: Frequency of actions reported to the online survey by type of action.

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26. Working with people actions most frequently involve awareness raising and education. Legislation, standards and rules actions most frequently focus on legislation, regulation, policy change/development. Fewer actions involving incentives, infrastructure measures, financial incentives, taxes or subsidies were reported to the survey. In terms of technology actions, changing practices and/or operations as well as new product design featured highly in the types of actions taken, in contrast industry or production standards and using bio-based, biodegradable or compostable technology actions were reported least frequently. Accordingly, Research and Development (R & D) actions made up 13 out of 33 technology actions with an R & D focus on waste management and production processes. Development of new materials makes up elements of 5 actions. Four actions focused on compostable, bio degradable or bio based action. ‘Monitoring and analysis’ actions focus most frequently on the shoreline (22 actions) and involve an environmental review and synthesis (14 actions), as opposed to monitoring of biota (4 actions) or at the water column (3 actions). Monitoring data is open source and readily available in 71% of the monitoring actions. However, out of 37 monitoring actions reported to the survey, over 25 different monitoring protocols were cited.

### *Geographic Focus, Environmental Zone, Lifecycle Phase, Reporting and Evaluation by Category of Action*

25. In line with document UNEP/AHEG/2019/3/2, the major categories of actions (legislation, standards, rule; working with people; technology and processes and monitoring and analysis) are presented below by four crosscutting themes (**Geographic Focus, Environmental Zone, Lifecycle Phase, Reporting and Evaluation**). Respondents submitted data on a) the geographic focus of the action (see also Fig 2/Table 1 for detail), b) which place in the environmental zone or source-to-sea their action targeted, c) which specific part of the lifecycle/plastic supply chain was targeted by the action, d) whether they report on the action and/or evaluate outcomes. Table 1 contains a summary, by category of action described above.

26. Actions are predominantly national or subnational<sup>6</sup> in **geographic focus** rather than global, transnational and regional (see Fig). Working with people and legislation, standards and rule actions make up 71% of national actions whilst 15% are technology and process activities. Whereas 33% of actions in the global focus category were ‘technology and process’ actions.

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The total number of national and subnational actions combined were significantly more than would be expected (compared to regional/global/transnational actions) as shown by a goodness of fit test;  $\chi^2$  value of 9.49, DF = 1,  $p = 0.002$

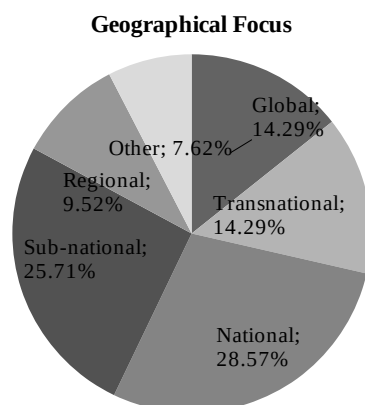


Fig 4: Geographical focus of actions.

27. **Environmental zone:** the most frequent actions happen at the coastal zone or urban environment and focus on working with people. Legislation, standards and rules are being actioned to affect the urban environment, coastal zone, maritime areas, entire water catchment and rivers. Technology and processes also actions focus frequently on the urban environment, coastal zone with work happening at waste disposal sites.

	Legislation Standards Rules	Working with People	Technology & Processes	Monitoring & Analysis
Total Actions per Main Category	53 (24%)	97 (44%)	33 (15%)	37 (17%)
Geographic Focus (respondents were asked to select only one)				
Global	6	6	9	5
Global with elements in specific areas	1	1	1	1
Regional	7	9	2	2
Transnational	5	10	6	9
National	23	27	11	9
Sub-national	11	32	3	8
Other	0	12	1	3
Environmental Zone or 'Source to Sea' (respondents were asked to select all that apply)				
Mountains and Upland Area	7	8	3	2
Agricultural land/soil	6	7	4	2
Entire Water Catchment	13	14	7	3
Forests or Mangroves	7	15	3	3
Freshwater rivers and lakes	10	28	8	6
Urban Environment	21	42	11	8
Waste Disposal Sites	13	26	12	7
Coastal Zone	16	60	10	25
Maritime Area within Nat. Jurisdiction	15	31	4	9
Areas beyond Nat Jurisdiction	4	8	0	4
Open Ocean and High Seas	4	14	5	5
Air	1	2	0	0
All of the above	6	4	4	4
Not applicable	9	12	1	0
Other	8 <sup>7</sup>	7 <sup>8</sup>	6 <sup>9</sup>	9 <sup>10</sup>



Reporting and Evaluation				
Yes, we report on the action	32	81	26	26
No, we do not report on the action	11	7	2	0
Reporting not applicable	10	9	5	11
Yes, outcomes are evaluated	30	64	20	22
No, outcomes are not evaluated	13	25	5	14
Other comments on evaluation <sup>11</sup>	8	8	7	1

Table 1: Summary of situational analysis of the four major categories of activities and actions by crosscutting themes (geographic focus, environmental zone, and reporting and evaluation).

28. **Lifecycle phase:** There is much activity in all categories on use /consumption and after use (sorting and management of plastics collected). Fewer actions were reported on the design, production, manufacture and raw material phase (Fig 5).

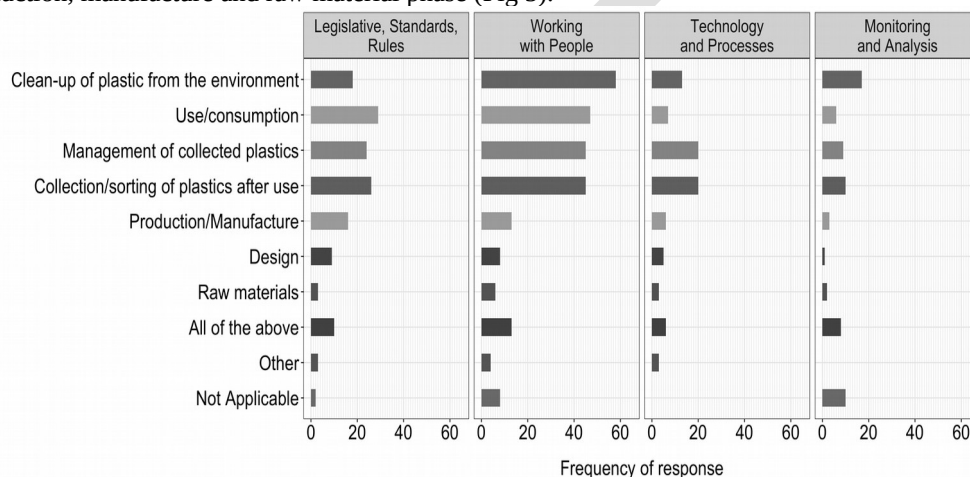


Figure 5: The specific part of the lifecycle/plastic supply chain which is targeted by action type. (Respondents were asked to choose all that applied).

29. Additionally, there is a different pattern of emphasis by type of action with ‘legislation, standards’ and ‘working with people’ actions targeting reduce, reuse and recycle actions whereas the ‘technology and process’ actions are more frequently targeting recycling activities (Fig 6).

7

The Baltic Sea, Nova Scotia, Plastic value chain rather than places or areas.

8

Source waste reduction and prevention, waste from school compounds, sporting facilities

9

The Baltic Sea, National marine environment, working with communities not zones

10

Beaches, Coastal and Marine Areas within state jurisdiction, urban storm water, freshwater litter, waste prevention, rural communities

11

No response (n = 3).

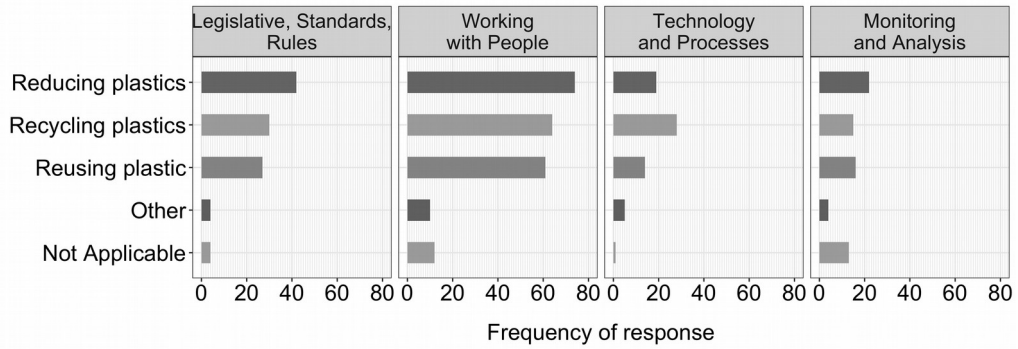


Figure 6: Number of actions targeting Reduce, Reuse and Recycle (by category of action) Respondents were asked to choose all that applied.

30. **Reporting and evaluation:** Actions were reasonably well reported across the categories. with 60% of actions on 'legislation, standards, rules', 84% of actions in the 'working with people category, 79% of actions in the 'technology and processes' category, and 70% of actions in the monitoring and analysis action being reported (Table 1).

*Pollutants and Impacts*

31. Respondents told us which pollutants were targeted in their actions (Figure 7). There was a stronger focus on targeting macroplastics across all categories of actions.

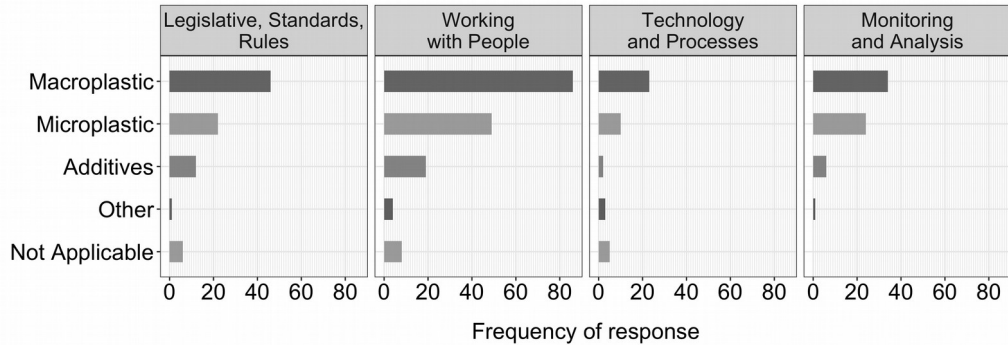


Figure 7: Type of Pollutant targeted by Actions/Activity, by category of action. ('Other' category included actions targeting Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG), End of Life Boats (ELB), Expanded Polystyrene (EPS) and Extruded Polystyrene (XPS) and all waste, rather than plastic only). Respondents were asked to choose all that applied.

32. Figure 8 shows the types of impacts by category of action. In terms of measuring the elimination of plastics discharged to the oceans, whilst technology and process actions account for 15% of the submissions to the online survey, 63% of technology and process activities have specific measures of success (for example, kilos of marine litter collected in the ocean, tonnes of plastic waste sustainably treated and diverted from landfill, percentage of waste reduction in a city locale). In contrast, 'legislation standards and rules', 'working with people' and 'monitoring and analysis' categories of actions report a 45%, 49% and 46% use of specific measures of success, respectively.

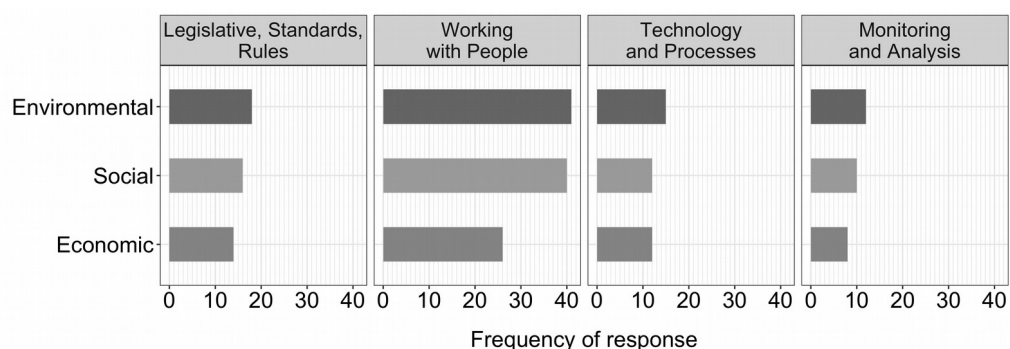


Figure 8: Types of impacts that are evaluated. Respondents were asked to choose all that applied.

## Funding Sources and Partnerships

33. Public finance plays an important role in financing the actions, with private sector finance and voluntary donations also contributing (Table 2). The private sector particularly finances ‘working with people’ actions which goes towards awareness raising activities (33/35 actions) and education (25/35). Twenty two out of these 35 actions, funded by the private sector, are clean ups of the environment. In contrast, 4 actions that receive private sector finance target raw material and 4 target design.

34. In terms of working with partners, 82 of the ‘working with people’ category of actions were alongside partners, 34 of the ‘legislation, rules’ category, 25 in ‘technology and processes’ and 27 in ‘monitoring and assessment’. A minor number of actions reported having no partners and 16 reported partner involvement as not applicable. Looking a little deeper into this data, it is small-medium enterprises that take responsibility for actions ( $n = 27$ ), more frequently than larger corporations.

	Legislative, Rules Standards	Working with People	Technology and Processes	Monitoring and Analysis	Total
Crowdfunding	1	6	1	1	9
Voluntary donations	8	25	6	4	43
Public Financing	25	39	15	12	91
Private Sector	5	35	11	5	56
Mixed	7	14	8	3	32
All of the Above	0	2	3	1	6
Not Applicable	10	5	3	7	25
Other	1	16	2	8	27

Table 2: Funding types by category of actions (Respondents were asked to choose all that applied).

## Overview of Actions via Narrative Submissions

35. The stocktake data reported above is a first attempt to categorise and characterise current actions using more quantitative data. However, it needs to be seen alongside the other more narrative submissions, which took the format of a text template adapted from The Group of 20 template. The G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth have also collected member state narratives on actions and activities.

### The Narrative Submissions

36. As part of the current stocktake exercise, sixty-three submissions were received via the narrative submission route (26 from member states (Fig 9), 24 from major groups and stakeholders, 2 from intergovernmental organisations (IGO’s) and 11 from UN organisations.



Fig 9: Location of narrative submissions by UN region.

37. Additionally 13 narratives reported to the G20 were included in the stocktake. For a list and the current status of submissions see <https://papersmart.unon.org/resolution/stocktaking-submissions>) and <https://g20mpl.org/>.

38. The narrative submissions provide details of actions and activities presented as a narrative on **Policy Frameworks, Measures, Achievements and Best Practices**. The Word cloud in Figure 10 provides a summary of these narratives by showing the frequency of words used among the entire cohort of submissions. Notably, ‘waste management’ is frequently mentioned in the narratives.

39. Preliminary results from the Member States and the United Nations entity submissions show that Member States continue to update and develop their legislation, policies, standards, rules and strategies on marine plastic litter. National frameworks dominate approaches. The European Union’s Marine Strategy Framework Directive (MSFD) however was a more frequently referenced framework (referred to in nine member state submissions) for European ministries alongside their national frameworks. The narrative submissions also reported additions to national frameworks (such as those detailed in Table 3). New policies relate to waste management and resource circulation.

Member State	Policy, post Jan 2018
Australia	National Waste Policy (2018),
Brazil	National Plan to Combat Marine Litter (2019)
Finland	Reduce and Refuse, Recycle and Replace – A Plastics Roadmap for Finland (2018) Finnish Marine Strategy, including Monitoring Programme (2014 – 2020) Programme of Measures (2016–2021) Updated status assessment of the Finnish marine environment (2018) with targets that guide towards good environmental status, GES (2018 – 2024).
France	Biodiversity plan: Target – “0 plastic reaching the sea in 2025” National Roadmap against Marine Litter 2019-2025, Pending law on circular economy with a chapter devoted to plastics.
Japan	National Action Plan for Marine Plastic Litter (formulated in 2019).
Republic of Korea	The 3rd National Marine Litter Management Plan(2019-2023) (2019) Framework Act on Resources Circulation (2018) The 1st National Resource Circulation Plan (2018-2027) 2018
South Africa	Western Indian Ocean Regional Action Plan on Marine Litter (2018).
Spain	Spanish Marine Strategies Nov 2018,
Russia	Russia National Project “Environment” (approved in 2018 by the Russian Government).

Thailand	20-Year Pollution Management Strategy: Roadmap to tackle plastic waste 2018 – 2030. Pollution Management Plan 2017-2021, Master Plan on Waste Management 2016-2021, Plastic Debris Management Plan.
UK	The UK has added to its 25 year environment plan (since Jan 2018) to include bans on plastic drinking straws, cotton buds and stirrers and plastic bag charges, Fisheries Bill, 41 new Marine Conservation Zones. Dec 2018 Resources and Waste Strategy British-Irish Council 2019 action on marine litter. DFID Waste Pilot Programme and Technical Assistance Facility (TAF) Pilot June 2018 – 2021

Table 3: Examples of Post 2018 Policy Frameworks

40. Approximately 30 submissions reported **bans** affecting single use plastics (bags and straws, bud sticks, for example) and/or microplastics (microbeads in cosmetics, for example). From January 1<sup>st</sup> 2018 France forbid cosmetic products for exfoliation or cleansing containing solid plastic particles. Guyana agreed in 2018 its intention to institute a ban on the importation, manufacture, distribution and use of single use plastics, with effect from Jan 2021. This will target plastic carrier bags, straws, cups, plates, spoons forks, knives. Thailand established a ban on single use plastic bags starting Jan 2020. The Netherlands under the Single Use Plastics (SUO) EU Directive started the process to restrict the use of intentionally added microplastics in 2018. The Danish national plastic action plan sets out 27 initiatives e.g. a ban on handing out free carrier bags and a ban on non-degradable shot wads.

41. **Waste management** was mentioned by 50 entities from member states and the UN entities narratives. For example, the Belgian (Flemish) action plan focusses on all sources of waste, land, shipping, offshore activities, aquaculture, rivers, waterways and ports, plastics and microplastics and beach litter. The enhancement of management of land-based sources to build waste filtering curtains at rivers and estuaries, is detailed in The Netherland's narrative. Italy for example, reported the signing of agreements for the management of waste found on the seabed of ports and marine protected areas.

42. Seven submissions specifically referred to **EPR** (Extended Producer Responsibility) schemes and twenty-five submissions referred to taking a **circular economy** approach.

43. The use of **incentives** or disincentives was reported in 11 submissions from member states and UN entities, with incentives for local governments, rewards systems for fishing/shipping communities based on their voluntary efforts to address marine debris (Republic of Korea) and tax incentives for the avoidance of plastic in packaging (Germany, Guyana).

44. **Capacity building** is an important area (46 submissions). Education, awareness raising, workshops, conferences, behaviour change, information campaign, community engagement, citizen science, creative, stakeholder category, and citizen science projects were reported widely (France offers a citizen science platform on marine litter, to identify the marine litter, New Zealand has a system where the public can record details of litter through the Marine Debris tracker to both monitor and see results of work and where the public can effectively fill data gaps. There is also a citizen science project in New Zealand, to sample and analyse plastic in urban streams. At the Mississippi River a citizen science project is enabling a rich picture of extent, type and brand of plastic litter along the river.

45. **'Technology and processes'** were also reported in the narrative submissions

46. In terms of the **environmental zone** and the **lifecycle phase**, clean up at the shorelines and beach cleans continue, along with actions taken on land (including waste management and recycling) and at rivers to reduce the discharge of marine plastic litter towards the ocean.

47. There is much **monitoring** happening via the UN Entities and Member States with 32 mentions of monitoring in relation to use of monitoring assessments and protocols, harmonisation and development of methods and indicators and monitoring at coastlines, and in specified hotspots.

48. Countries reported on their **achievements**. Preliminary analysis shows the types of achievements typically reported were the quantifiable amounts of plastic waste which had been recovered, recycled or collected. Bans on products were widely reported as achievements as were the introduction of fiscal measures. Awareness raising actions were also given as examples of achievements offering the opportunity to learn from these as case study exemplars. The publication of guidelines, protocols, technical papers was also submitted as examples of achievements. Increase in funding was reported, for example \$20m funding for the removal, prevention and research initiatives in the U.S.

49. A preliminary analysis of the submissions show that fourteen submissions mentioned measures involving **biodegradable plastics**. These submissions reported laws and regulations (governing for example, waste disposal e.g. in the Maldives) or fiscal measures to incentivise the use and importation of bio-degradable plastics (e.g. Guyana). There is a focus on **knowledge** acquisition too. For example, the UK launched a call for evidence to examine the demand and benefits of the development of standards for bio-based and biodegradable plastics as well as to better understand their effects on the environment. Guidelines for the use of biodegradable products have been produced (Iran, Ethiopia). Similarly, the Food and Agriculture Organization is developing 26 case studies of sustainable bio economy interventions providing policy makers with guidance and lessons learned when implementing bioeconomy activities and the UNEP/Mediterranean Action plan are addressing and clarifying misconceptions on biodegradability of certain plastics. Several countries report on how the private sector/market forces have responded to their bans on plastic products by providing biodegradable alternative products (Eritrea, Trinidad and Tobago) and how they are engendering a culture of using biodegradable products (Mexico). Finally, some countries have focussed on a specific sector such as expanding the use and performance of biodegradable fishing gear (Korea).

50. **Best Practice.** Not all countries contributed a response to the Best Practice section of the G20 template. However, those who did, provided very useful insights, and the value of these insights is in cross referencing for common themes. Suggestions ranged from how to run campaigns and activities; running clubs/school activities, to suggestions for activities (a Refill Revolution to promote reuse and refill), to how to build a campaign around a forthcoming ban on products so that all stakeholders are involved, communicated with, aware and enabled. Some entities in particular provided detailed narratives of their learnings, for example on the benefits of citizen science programmes, where for instance, data on quality and quantity of clean ups can be collated, guidelines shared and links made between NGO's and interested members of the public.

### ***Comment on submissions:***

51. Submissions were made using the G20 Template. Some entities did not use the framework but submitted other documentation related to actions taken to reduce marine plastic litter and microplastics. Submissions did not always make clear which actions were new since January 2018 and extra analysis and interrogation will be needed to be certain of developments since January 2018.

52. Data collection via a survey does provide for comparability and categorization of actions.

53. Recognising that there are further existing actions and activities which have been reported to other agencies, the results of the desk research to summarise this prior work will be available in the UNEP/AHEG/2020/4/INF/5 document. This includes actions and activities undertaken through the Basel Convention, The Partnership on Plastic Waste, Sustainable Development Goals (SDGs), the International Maritime Organization (IMO), the Global Partnership on Marine Litter (GPML) and Clean Seas Campaign, Regional Seas Convention(s)/Programmes, Stockholm Convention, Rotterdam Convention, and the Association of Southeast Asian Nations ASEAN.

54. Further detailed analysis of all submissions, actions and activities is provided in UNEP/AHEG/2020/4/INF/5.