



**Open-ended Working Group of the Basel Convention
on the Control of Transboundary Movements of
Hazardous Wastes and Their Disposal
Twelfth meeting**

Geneva (online), 22–25 June 2020*

Item 3 (b) (iv) of the provisional agenda**

**Matters related to the work programme of the
Open-ended Working Group for the biennium
2020–2021: scientific and technical matters:
plastic waste**

**Background information related to a possible future assessment of
the effectiveness of the measures taken under the Basel Convention
to address plastic waste and to possible further activities that could
be conducted under the Basel Convention**

Note by the Secretariat

1. In paragraph 34 of decision BC-14/13, the Conference of the Parties decided to include, among other activities pertaining to plastic waste, in the work programme of the Open-ended Working Group for 2020–2021, the consideration of the following:

(a) Whether, how and when the COP should assess the effectiveness of the measures taken under the Convention to address the plastic waste contributing to marine plastic litter and microplastics;

(b) Which further activities could possibly be conducted under the Convention in response to developments in scientific knowledge and environmental information related to plastic waste as a source of land pollution, marine plastic litter and microplastics.

2. As is mentioned in the note by the Secretariat on further actions to address plastic waste under the Basel Convention (UNEP/CHW/OEWG.12/7), annex I to the present note provides background information related to a possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste and to possible further activities that could be conducted under the Convention.

3. Furthermore, annex II to the present note sets out draft elements for consideration by the Conference of the Parties to the Basel Convention at its fifteenth meeting on this matter. The present note, including its annexes, has not been formally edited.

* Owing to the electronic correspondence procedure to be applied during the twelfth meeting of the Open-ended Working Group, the meeting may run beyond 25 June (but no later than 5 July 2020).

** UNEP/CHW/OEWG.12/1.

Annex I

Background information related to a possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste and to possible further activities that could be conducted under the Basel Convention

I. Possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste

A. Overview of existing mechanisms to assess the effectiveness of multilateral environmental agreements and other international frameworks

1. Effectiveness evaluations have been conducted in a variety of contexts. In some cases, the effectiveness of legally binding multilateral environmental agreements (MEAs) or of non-binding international frameworks is evaluated, while in other instances, it is the effectiveness of specific measures or mechanisms within those agreements or frameworks that is assessed.
2. Effectiveness can be evaluated in various ways. Some processes focus on the content and design of the agreement or framework in question, thereby examining the extent to which an obligation induces changes in behaviour that support the goals of an agreement, a framework or a particular measure as well as the extent to which those goals have been achieved as a consequence thereof. Other processes focus on an assessment of the degree to which the agreement or framework in question is being successfully implemented and are therefore akin to a review of the effective implementation of the treaty, framework or measure.
3. From a theoretical point of view, an agreement or a framework may be implemented in a very successful manner but still fail to achieve its objectives due to its design or content; conversely, the design of an MEA may be highly supportive of achieving the objective in question, but a lack of implementation may result in a failure to achieve such an objective.
4. This section reviews different types of effectiveness evaluations undertaken in the context of various legally-binding MEAs and non-binding international frameworks so as to draw insights that may be of relevance in considering whether, how and when the Conference of the Parties to the Basel Convention (COP) should assess the effectiveness of measures taken under the Basel Convention to address plastic waste contributing to marine plastic litter and microplastics.

1. Strategic framework for the implementation of the Basel Convention

5. The strategic framework for the implementation of the Basel Convention for 2012–2021 was adopted at the tenth meeting of the Conference of the Parties to the Basel Convention (COP) by decision BC-10/2. As is clear from that decision, the evaluation of the framework pertains to the implementation of the Convention, rather than being a process for evaluating the Convention itself.
6. The strategic framework includes goals, objectives and indicators, such as the number of Parties with national strategies or plans in place to reduce the generation and ensure the environmentally sound management (ESM) of hazardous and other wastes.¹ The framework foresaw an evaluation, to be conducted through reports prepared by the Secretariat, assisted by Parties, on the continued relevance of and progress in relation to the strategic framework, through the creation of a baseline, as well as a mid-term evaluation considered by the COP at its thirteenth meeting in 2017 and final evaluation to be considered by the COP at its fifteenth meeting in 2021. The baseline was set out in document UNEP/CHW.12/INF/5.
7. At its thirteenth meeting, the COP decided to forego the mid-term evaluation, due to the low level of responses to the request for information in support of the indicators and a lack of financial contributions for the purpose of retaining a consultant to collect data and prepare the report. In accordance with decision BC-13/1, a small intersessional working group was set up to support the Secretariat in preparing the final evaluation. The Secretariat, in consultation with the working group, identified relevant sources of information related to the indicators to be used for the preparation of the final evaluation.² These sources included: Basel Convention (and regional centres) publications,

¹ Decision BC-10/2, annex.

² UNEP/CHW.14/INF/5.

decisions adopted by the COP, responses to various surveys, national legislation transmitted by Parties, activities of the Committee Administering the Mechanism for Promoting Implementation and Compliance (ICC), and reports on relevant activities conducted by the Secretariat.³

8. Indicators in the strategic framework include specific actions by Parties to support the objectives of the Convention. For example, in assessing the effective implementation of the obligation to prevent and combat illegal trade in hazardous and other wastes under the Convention, the following sub-indicators are included: the number of Parties that develop and execute training programmes for the staff involved and the number of controls and inspections carried out. The objectives of reducing the generation and ensuring the ESM of waste are measured against several indicators including the number of Parties with national strategies or plans in place to achieve these objectives. Activities by Parties conducted cooperatively, and the number of technical guidelines agreed to under the Convention, also serve as indicators for these objectives.

9. A draft final evaluation of the strategic framework, using the compilation of relevant sources of information and information provided by Parties relevant to the indicators, will be presented at the twelfth meeting of the Open-ended Working Group.⁴ A final version of the report will be considered by the COP at its fifteenth meeting.

10. The current strategic framework finishes in 2021 and Parties have not yet decided on a possible future strategic framework. At its fifteenth meeting, the COP might wish to consider whether there would be merit in developing a new strategic framework or another framework for assessing the effectiveness of the Convention, as foreseen in paragraph 7 of Article 15 of the Convention.

2. Committee Administering the Mechanism for Promoting Implementation and Compliance

11. In 2002, a mechanism for promoting implementation and compliance with the Basel Convention, operated by a standing subsidiary body, ICC, was established.⁵ Its objective is to assist Parties to comply with their obligations under the Convention and to facilitate, promote, monitor and aim to secure the implementation of and compliance with the obligations under the Convention.

12. The objective is achieved through two different procedures: the review of specific issues of implementation, and the review of general issues of implementation. It is under the latter procedures that the ICC has, over the years, reviewed issues of implementation pertaining to a variety of obligations under the Convention, such as the designation of country contacts, the control system for transboundary movements of wastes, the development of legal frameworks, national reporting, and preventing and combating illegal traffic. In the case of national reporting, the ICC is mandated to classify compliance performance against specific targets set by the COP.

3. Other processes under the Basel Convention

13. The COP has also initiated a number of other processes that involve an evaluation of the operation of the Basel Convention or the mechanisms intended to enhance implementation of the Convention, for example the review of the operation of the Basel Convention regional and coordinating centres and the development and review of strategic plans.⁶

14. Furthermore, the Basel Convention includes a provision for effectiveness evaluation. Paragraph 7 of Article 15 of the Convention provides that the COP shall undertake three years after the entry into force of the Convention, and at least six years thereafter, an evaluation of its effectiveness. The evaluation required under paragraph 7 of Article 15 is part of the continuous process of review and evaluation of the effectiveness of the Convention envisaged under paragraph 5 of the same Article.

15. At its third meeting in 1992, three years after the entry into force of the Convention, the COP received a study on the "Evaluation and Effectiveness of the Basel Convention and the Control of Transboundary Movements of Hazardous Wastes and their Disposal".⁷ Having considered that study, the COP adopted decision III/10, by which non-Parties were invited to ratify the Convention to promote its global application, but no subsequent evaluation of the effectiveness of the Basel Convention was carried out.

³ UNEP/CHW.14/INF/5.

⁴ UNEP/CHW/OEWG.12/INF/3.

⁵ Decision VI/12.

⁶ UNEP/CHW.9/38.

⁷ UNEP/CHW.3/INF.7.

4. Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

16. Apart from the general mandate given to the Conference of the Parties to the Rotterdam Convention (COP) to keep under continuous review and evaluation the implementation of the Convention,⁸ the Rotterdam Convention does not establish a mechanism for evaluating the effectiveness of the Convention nor does it envision a process for evaluating the effectiveness of the measures set out therein. The Convention however provides for that the COP shall, as soon as practicable, develop and approve procedures and institutional mechanisms for determining non-compliance with the provisions of this Convention and for treatment of Parties found to be in non-compliance, a step that was taken by COP-9 in 2019 with the adoption of a new Annex VII to the Convention that will allow among other things, for the examination of systemic issues of general compliance of interest to all Parties.

17. At its eighth meeting, the COP adopted decision RC-8/8, thereby establishing the intersessional working group on enhancing the effectiveness of the Rotterdam Convention. The intersessional working group was mandated to identify a set of prioritized recommendations for enhancing the effectiveness of the Convention, based on the report prepared by the Secretariat on the legal and operational implications of the priority actions received through the online survey and comments provided on the report; and to prepare a report identifying further steps for consideration by the COP at its ninth meeting. At its meeting from 4 to 6 June 2018, the intersessional working group recommended that the Secretariat compile information on effectiveness evaluation practices under other chemicals and wastes conventions, taking into account the specificities of the Rotterdam Convention, and prepare options for a framework on the assessment of the effectiveness of the Rotterdam Convention for consideration at the ninth meeting of the COP. The annex to document UNEP/FAO/RC/COP.9/INF/22 sets out such information on effectiveness evaluation practices under other conventions compiled by the Secretariat.

18. At its ninth meeting, the COP to the Rotterdam Convention took note of the information provided in document UNEP/FAO/RC/COP.9/INF/22.⁹

5. Stockholm Convention on Persistent Organic Pollutants

19. According to paragraph 1 of Article 16 of the Stockholm Convention on Persistent Organic Pollutants (POPs), the Conference of the Parties to the Stockholm Convention (COP) is to periodically evaluate the effectiveness of the Convention. The evaluation includes an assessment of whether the combination of measures adopted by Parties provides, at the aggregate level and a timely improvement in the situation prevailing before the Convention entered into force.¹⁰

20. The Global Monitoring Plan on POPs established under the Convention provides an institutional framework through which information on the levels of POPs in the environment (air, water) and biota (breast milk and blood) is collected.¹¹ This information and the information submitted by Parties through national reports pursuant to Article 15, on the measures they have taken to implement the provisions of Convention, provide main data for the effectiveness evaluation.¹²

21. The effectiveness evaluation of the Stockholm Convention is guided by a framework and is conducted in two stages.¹³ The first stage consists of a compilation of information by the Secretariat to support the evaluation. In the second stage of the process, the Effectiveness Evaluation Committee established by the COP evaluates the available information to assess the effectiveness of the Convention.

22. The evaluation is based on process and outcome indicators as described in the framework. Process indicators assess implementation such as the domestic adoption of legal and administrative measures or the development of national implementation plans. Outcome indicators measure the desired impact such as reductions in the quantities of POPs released. The most recent evaluation was conducted in 2017.¹⁴

⁸ Article 18, paragraph 5.

⁹ Decision RC-9/6.

¹⁰ UNEP/POPS/COP.9/20/Add.1.

¹¹ Decision SC-8/19.

¹² Stockholm Convention, Article 16, para. 3.

¹³ UNEP/POPS/COP.9/20/Add.1.

¹⁴ UNEP/POPS/COP.8/INF/40.

23. Furthermore, the Convention includes a provision for review of the effectiveness of the financial mechanism.¹⁵

6. Minamata Convention on Mercury

24. The Minamata Convention on Mercury requires the Conference of the Parties to the Minamata Convention (COP) to evaluate its effectiveness beginning no later than six years after the date of entry into force of the Convention and periodically thereafter.¹⁶ A report of the ad hoc technical expert group sets out the proposed framework for the effectiveness evaluation, including proposed indicators.¹⁷

25. According to the framework, the assessment of the effectiveness of the Minamata Convention on Mercury is to be organized around the following questions: whether the Parties have taken actions to implement the Convention; whether those actions have resulted in changes in mercury supply, use, emissions and releases into the environment; whether those changes have resulted in changes in levels of mercury in the environment that can be attributed to the Convention; and to what extent existing measures under the Minamata Convention are meeting the objective of protecting human health and the environment from mercury.¹⁸

26. The evaluation should be informed by comparable monitoring data on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations.¹⁹ Proposed indicators include changes in supply, demand, emissions and releases of mercury.²⁰ Sources of information include reports and other monitoring information provided to the COP, national reports, information and recommendations provided by the Implementation and Compliance Committee, and reports and other relevant information on the operation of the financial assistance, technology transfer and capacity-building arrangements put in place under the Convention. The ad-hoc technical expert group proposed that after information is identified, compiled, and synthesized, and a study on attribution is conducted, the Effectiveness Evaluation Committee would integrate the information to formulate its findings for the consideration of the COP. The ad hoc technical expert group has also proposed options for a future evaluation cycle of 6, 8 and 10 years.²¹

27. In its decision on the arrangements for the first effectiveness evaluation of the Minamata Convention on Mercury, the COP at its third meeting invited Parties to submit views on the indicators for the effectiveness evaluation and requested the secretariat to compile those views in advance of the fourth meeting of the COP.

7. Convention on Biological Diversity

28. Article 4 of the Convention on Biological Diversity (CBD) stipulates that the Conference of the Parties (COP) shall keep under review the implementation of the Convention. At its sixth meeting, the COP to the CBD adopted the text of the Strategic Plan for the Convention on Biological Diversity. For this Strategic Plan, targets are developed (e.g., targets for 2011-2020 are known as the “Aichi Targets”) and used to measure the effectiveness of the implementation (as opposed to the design of the Convention itself).²² One of the targets relevant to plastic waste is Target 8: “by 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.” Indicators for Aichi Target 8 addressing pollution include measuring trends in hypoxic zones and algal blooms, water quality, pollution deposition rates, and emission to the environment of pollutants relevant for biodiversity.²³ Another effectiveness review mechanism within the CBD is embedded in the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, and the first effectiveness

¹⁵ Stockholm Convention, Article 13, para. 8.

¹⁶ Minamata Convention, Article 22, para.1.

¹⁷ UNEP/MC/COP.3/14.

¹⁸ UNEP/MC/COP.3/14.

¹⁹ Minamata Convention, Article 22, para.2.

²⁰ UNEP/MC/COP.3/14.

²¹ <http://www.mercuryconvention.org/tabid/8091/Default.aspx>.

²² Conference of the Parties to the Convention on Biodiversity, decisions VI/26 and X/2.

²³ Convention on Biodiversity (2014). A review of current approaches and future opportunities for tracking progress towards the Aichi Biodiversity Targets. CBD Technical Series 72.

review includes elements such as the extent of implementation of the provisions of the Protocol and the establishment of a reference point to measure effectiveness.²⁴

8. Montreal Protocol on Substances that Deplete the Ozone Layer

29. Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer requires Parties to assess, every four years, the “control measures... on the basis of available scientific, environmental, technical, and economic information.”²⁵ The Protocol’s Scientific Assessment Panel, Environmental Effects Assessment Panel, and Economic Assessment Panel prepare periodic assessment reports. The Secretariat also provides a synthesis of these assessment reports.²⁶ Parties have tightened regulatory controls significantly on the basis of these reviews.²⁷ However, because these reports are scientific and technical in nature, they do not assess institutional effectiveness.

9. Paris Agreement under the United Nations Framework Convention on Climate Change

30. Article 7.2 (d) of the United Nations Framework Convention on Climate Change (UNFCCC) stipulates that the Conference of the Parties to the UNFCCC assess, on the basis of all information made available to it in accordance with the provisions of the Convention, the implementation of the Convention by the Parties, the overall effects of the measures taken pursuant to the Convention, in particular environmental, economic and social effects as well as their cumulative impacts and the extent to which progress towards the objective of the Convention is being achieved.

31. Article 14 of the Paris Agreement under the United Nations Framework Convention on Climate Change stipulates that the Conference of the Parties to the Paris Agreement (COP) serving as the meeting of the Parties to the Agreement shall periodically take stock of the implementation of the Agreement to assess the collective progress towards achieving the purpose of the Agreement and its long-term goals.²⁸ This process is referred to as the global stocktake.

32. The first global stocktake is scheduled to be undertaken in 2023 and every five years thereafter, unless otherwise decided by the COP serving as the meeting of the Parties to the Agreement. As per decision 1/CP.21, paragraphs 99 and 101, the ad hoc working group on the Paris Agreement (APA), is currently identifying additional sources of input for, and developing modalities of, the global stocktake. In addition, the Subsidiary Body for Scientific and Technological Advice (SBSTA) was requested (see paragraph 100 of the same decision) to provide to the APA advice on how the assessments of the Intergovernmental Panel on Climate Change (IPCC) can inform the global stocktake.²⁹

10. Ad hoc open-ended expert group on marine litter and microplastics

33. While conceptually different from an evaluation of the effectiveness of an MEA, the United Nations Environment Assembly (UNEA) of the United Nations Environment Programme (UNEP) has mandated an Ad Hoc Open-Ended Expert Group on Marine Litter and Microplastics created by resolution UNEP/EA.3/res.7, building on its previous work, to, among things, analyse the effectiveness of existing and potential response options and activities on marine litter and microplastics at all levels to determine their contribution in solving the global problem.³⁰

34. The review is not solely focused on measures already taken, but also those that could be taken. Nor is the review limited to assessing measures taken pursuant to a specific legal regime, but instead covers all relevant activities at all levels. An initial proposed methodology for this analysis was prepared and presented during the third meeting of the ad hoc open-ended expert group on marine litter and microplastics (Bangkok, 18–22 November 2019).³¹

²⁴ CBD/NP/MOP/DEC/2/4. Decision adopted by the Parties to the Nagoya Protocol on access and benefit-sharing 2/4 Assessment and review of the effectiveness of the Protocol (Article 31).

²⁵ Montreal Protocol, Article 6.

²⁶ See, e.g., UNEP/OzL.Pro.31/8 29.

²⁷ Raustiala, Kal (2001). Reporting and review institutions in 10 multilateral environmental agreements. UNEP.

²⁸ United Nations (2015). Paris Agreement. Retrieved 17 March 2020 from https://unfccc.int/sites/default/files/english_paris_agreement.pdf

²⁹ United Nations Framework Convention on Climate Change (2020). Global Stocktake (referred to in Article 14 of the Paris Agreement). Retrieved 17 March 2020 from <https://unfccc.int/topics/science/workstreams/global-stocktake-referred-to-in-article-14-of-the-paris-agreement>.

³⁰ UNEA resolution 4/6, para 7 (d).

³¹ UNEP/AHEG/2019/3/5; UNEP/AHEG/2019/3/INF/3.

35. In response to comments, a revised methodology was proposed subsequently which would qualitatively assess whether response options and activities: define what is to be achieved, how it will be achieved and how achievement will be measured; provide for local capacity building, monitoring, reporting and reviewing and how they are funded; engage stakeholders domestically or fund international programmes; and include additional benefits to society, the economy, or the environment. A “bowtie” analysis would be applied to the response options, using information from the working group’s stocktaking exercise to identify whether the response option is aimed at prevention or mitigation, the life-cycle phase it involves, the stressors that increase the likelihood of plastic leaking into the environment, and the external factors that act as a barrier or support.³²

36. Following further intersessional consultations, the updated methodology, including pilot studies applying the updated methodology, is to be made available to the fourth meeting of Ad Hoc Open-Ended Expert Group on Marine Litter and Microplastics³³. The methodology will be made available to the fifth session of UNEA, scheduled to take place in February 2021.

37. Prior to this exercise, the United Nations Environment Programme has conducted an analysis of voluntary commitments targeting marine litter and microplastics pursuant to UNEA resolution 3/7.³⁴

11. Strategic Approach to International Chemicals Management

38. The Strategic Approach to International Chemicals Management (SAICM) is a global voluntary policy framework. It has conducted three implementation reviews, guided by 20 process-based indicators³⁵ for which an on-line questionnaire was designed to solicit data. The responses to the questionnaire were low and decreased between the second and third review.

39. SAICM also commissioned an independent evaluation of the Strategic Approach from 2006 to 2015, based on a literature review of SAICM and academic papers, online surveys, focus group discussions and one-on-one interviews.³⁶ The independent assessment was more qualitative in nature and discussed the following topics: the impact of the Strategic Approach; strengths, weaknesses and gaps in implementing the Strategic Approach; progress towards targets; and efficacy of the institutional arrangements within the voluntary multi-sectoral and multi-stakeholder approach of the Strategic Approach. The independent review found that the earlier implementation reviews had a number of weaknesses, including “methodological issues related to a lack of clarity” on the questionnaires and the fact that “the 20 indicators are outputs based, with the absence of a complementary set of indicators that assesses outcome and impact.”³⁷

B. Consideration of a possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste

40. Evaluations of effectiveness provide a structural framework through which Parties can consider, for instance, whether the agreement or framework in question achieves its objectives, whether implementation is successful, and whether and which changes may consequently be needed. Despite their limitations, many evaluations have resulted in amendments or new decisions by Parties or other stakeholders designed to improve the overall treaty or framework, the measures set out therein, or their implementation. Effectiveness reviews can therefore be advantageous, but many considerations arise in determining how an effectiveness review could be conducted.

41. The following section highlights some of the insights and lessons learned from existing mechanisms that could be relevant to the consideration of a possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste contributing to marine plastic litter and microplastics.

³² Intersessional Consultation Webinar: Approaches to analyse effectiveness pursuant to UNEA Resolution 4/6 paragraph 7(d), 11 February 2020: https://papersmart.unon.org/resolution/uploads/unea4_7d_revised_methodology-webinar.pdf

³³ The fourth meeting was originally scheduled to take place in May 2020 but has been postponed without a definite new date yet as of 21 April 2020.

³⁴ UNEP/EA.4/11.

³⁵ SAICM/ICCM.2/15, annex III.

³⁶ SAICM/IP.3/9.

³⁷ SAICM/IP.3/9.

1. Modalities for a possible future assessment

42. Effectiveness evaluations can be guided by frameworks, which identify the goals, objectives and indicators and sets out the process for conducting the evaluation. In the case of MEAs, a subsidiary body is usually charged with evaluating the information, drawing conclusions, and making recommendations to the Conference of the Parties (COP). To assist it in evaluating the information, the subsidiary body may commission reports for this purpose. Terms of reference can provide clarity with respect to the reviewing body's responsibilities.

43. Should the COP decide to assess the effectiveness of the measures taken under the Convention to address plastic waste contributing to marine plastic litter and microplastics, such a framework can be developed for possible adoption by the COP. In addition, the COP could consider whether a subsidiary body (existing or new) could assist the COP in its task.

2. Scope and objectives of a possible future assessment

44. The effectiveness of an MEA or non-binding international framework can be distinguished from the effectiveness of its implementation. If Parties are implementing their obligations or voluntary measures but the objectives of the agreement or framework have not been achieved, then the nature of the obligations or voluntary measures may not be designed in such a way as to meet the objectives. On the other hand, the obligations or voluntary measures may be designed in an effective way, but effectiveness is not achieved due to a lack of implementation of these obligations or voluntary measures.

45. Even if Parties fail to implement their obligations, the obligations may still have an effect on the Parties which results in some degree of changed behaviour. Identifying the degree to which a measure has contributed to an environmental outcome is difficult, and effectiveness reviews handle this issue in different ways.

46. In terms of its scope, a possible future assessment could cover the effectiveness of the amendments adopted in decision BC-14/12; the further actions adopted in decision BC-14/13; other related decisions; and relevant provisions of the Basel Convention. It could assess either the effectiveness of these decisions/provisions, the effectiveness of their implementation, or both.

47. In terms of its objective, a possible future assessment could, in a first instance, aim to evaluate whether and how far the measures taken contributed towards achieving the Convention's objective of protecting human health and the environment against the adverse effects of hazardous wastes and other wastes. The objective could be dissected further by looking at more specific objectives. For example, in paragraph 3 of decision BC-14/13, the Conference of the Parties to the Basel Convention commits itself to working to support efforts to achieve the prevention, the minimization and the ESM of plastic waste, as well as the effective control of its transboundary movement.

3. Indicators for a possible future assessment

48. Effectiveness may be measured according to process indicators, such as the number of national reports transmitted by Parties or the adoption of legal measures at the national level, or outcome indicators, such as the amount of hazardous waste managed in an environmentally sound manner or changes in human health and the environment. However, some consider that process indicators "do not provide information on the results achieved in protecting human health and the environment"³⁸ and it is therefore often not possible to ascertain whether the objectives have been achieved using these indicators alone.

49. Many options exist for both process and outcome indicators relevant for assessing the effectiveness of measures taken under the Basel Convention to address plastic waste. An outcome indicator of the effectiveness of activities under the Convention to address plastic waste could be, for example, the proportion of plastic waste managed in an environmentally sound manner or the presence of plastics in the marine environment. Process indicators could include, for example, the number of tools developed towards controlling the transboundary movement and ESM of plastic waste or the number of members of the Basel Convention Partnership on Plastic Waste working group.

4. Availability and limitation of data and information for a possible future assessment

50. Data collected for effectiveness reviews can include scientific, legal, environmental, technical and economic information. Some of this information may be collected from national reports.

³⁸ UNEP (2019). Global Chemicals Outlook II, p. 334.

However, the limited data available from national reports can be a key challenge in assessing the effectiveness of the relevant measures.

51. Some conventions provide for an institutional framework for the collection of monitoring data, which is used in effectiveness evaluations. Some effectiveness reviews are also based on other sources of information, including studies conducted specifically for the purpose of the review, reports from compliance reviews, information from monitoring programs, and reports related to the financial mechanism, technology transfer, and capacity building under the agreement or framework.

(1) Availability of data and information within the Basel Convention

52. Should the assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste include, among others, the reduction of the generation of plastic waste, the availability of data could be limited since reporting of waste generation by Parties is optional and Annex II wastes are reported as an aggregate number in national reports.³⁹ Consideration may be given to how the limited data availability could be addressed in this context.

53. With respect to a potential assessment of the effectiveness of measures to control transboundary movements of plastic waste, the amendments to Annexes II and VIII adopted in decision BC-14/12 imply that national reports will include data for each import and export of plastic wastes falling within the scope of the Convention (the amount exported/imported, the category, characteristics, destination/origin, any transit country and disposal method). Thus, it will be possible to assess changes in the transboundary movements of plastic wastes falling within the scope of the Convention.

54. The national reporting format also provides for the transmission of information on disposals which did not proceed as intended; efforts to achieve a reduction of the amount of hazardous wastes or other wastes subject to transboundary movement; information on the measures adopted in the implementation of the Convention; information on disposal options operated; and information on measures undertaken for development of technologies for the reduction and/or elimination of production of hazardous wastes and other wastes. Should specific information with respect to plastic wastes be provided, this information could provide additional data for assessing the effectiveness of relevant measures.

55. The first national reports containing information addressing the new plastic waste entries will be available for the year 2021, to be transmitted to the Secretariat by 31 December 2022, in advance of the sixteenth meeting of the Conference of the Parties to the Basel Convention (COP) in 2023 and could contribute to setting baseline information for an evaluation.

56. Information on the implementation of the Convention as it relates to plastic wastes can also be available from the work of the Basel Convention Committee administering the mechanism for promoting implementation and compliance. Until now, the Committee's work to review general issues of implementation and compliance has not been waste-stream specific, but should the COP decide to mandate the Committee to focus its work on the implementation of obligations pertaining to plastic waste (e.g. the control of transboundary movements, adequate legal frameworks, preventing and combating illegal traffic), the Committee would be in a position to provide valuable information on the nature and extent of difficulties faced by Parties to implement their obligations in relation to plastic wastes and on how to overcome them.

57. Within the scope of the Basel Convention Partnership on Plastic Waste, the COP at its fourteenth meeting adopted the workplan for the working group of the Partnership for the biennium 2020-2021. Under the topic "policy and regulatory framework" of the workplan, an activity is proposed to consider how information and data could be gathered, within the scope of the Convention, about the generation, disposal and, where relevant, transboundary movements of plastic waste, including the development of voluntary indicators relevant to all stakeholders. The Partnership on Plastic Waste working group held its first meeting from 2 to 5 March 2020 and established four project groups to be tasked with implementing the Partnership workplan. The four project groups will focus on the following topics: 1. prevention and minimization; 2. plastic waste collection, recycling and other recovery including financing and related markets; 3. transboundary movements; and 4. outreach, education and awareness raising. The project groups initiated the development of their individual workplans at the first meeting, with the finalization of the workplans expected by 30 April 2020. Information gathering exercises are foreseen in the activities of the project groups, however the extent to which voluntary indicators may be developed is yet to be determined.

³⁹ UNEP/CHW/OEWG.11/INF/22, para. 23.

(2) Data and information collected to measure progress with the Sustainable Development Goals

58. Data collected to measure progress with Sustainable Development Goal (SDG) 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development) could be useful for assessing the effectiveness of measures taken under the Basel Convention to address plastic waste. Target 14.1 is to “prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution” by 2025. This target will be measured through indicator 14.1.1 on the index of coastal eutrophication and floating plastic debris density, as informed by indicators such as beach litter, plastic in the sea column, plastic on the seafloor, and plastic ingested by biota.⁴⁰

59. SDG target 12.4 of SDG 12 (Ensure sustainable consumption and production patterns) seeks to “achieve the ESM of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.” This will be measured by indicator 12.4.1 on the “number of Parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement” and indicator 12.4.2 on “hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment”. Target 12.5 seeks to “substantially reduce waste generation through prevention, reduction, recycling and reuse” which will be measured through indicator 12.5.1 by the national recycling rate and tons of material recycled.

60. Target 11.6, indicator 11.6.1 of SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable) will measure the “proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities”.

61. Target 3.9, indicator 3.9.2 of SDG 3 (Ensure healthy lives and promote well-being for all at all ages) will measure mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene. Depending on the methodology for collecting this data, it could be relevant to an effectiveness review of measures to address plastic waste under the Basel Convention.

(3) Data and information from other sources

62. Relevant national data is collected under the Regional Seas Programme.⁴¹ Various guidelines are available for monitoring and assessing marine plastic litter. Information from global models is also relevant, such as models of plastic patches throughout the world’s oceans (provided by the European Space Agency and National Aeronautics and Space Administration) and models for beach litter originating from national land-based sources (provided by UNEP Ocean Parcels).⁴² As with other indicators, a challenge would lie in assessing the degree to which a potential decrease in the presence of plastics in the marine environment could be attributed to measures taken under the Basel Convention.

(4) Harmonization of data

63. Data management can be strengthened with better harmonization. UNEA has recommended indicators to harmonize monitoring, reporting and assessment methodologies, taking into account key sources of marine litter, including plastic litter and microplastics in cooperation with relevant international organizations.⁴³ The Global Chemicals Outlook II provided recommendations for developing a coherent and results-oriented global indicators and reporting framework.⁴⁴ As an example of data harmonization at the regional level, the European Commission has developed the European Marine Observation and Data Network (EMODnet), a platform that includes data on marine litter, specifically from the shoreline, seafloor (trawl surveys) and sea surface (microplastics).

⁴⁰ UNEP (2018). Global manual on ocean statistics, towards a definition of indicator methodologies. https://environmentlive.unep.org/media/docs/statistics/egm/colombia_ocean_statistics_global_manual_ocean_statistics_final_draft.pdf; see also UN STATS, metadata for 14.1 (updated October 2019) <https://unstats.un.org/sdgs/metadata/files/Metadata-14-01-01.pdf>.

⁴¹ UNEP and IOC-UNESCO have jointly produced Guidelines on Survey and Monitoring of Marine Litter, which include operational guidelines for beach litter surveys and are used as guidance by several Regional Seas Programmes. <http://stg-wedocs.unep.org/handle/20.500.11822/10739>.

⁴² <http://oceanparcels.org>; see also <http://topios.org>.

⁴³ UNEA resolution 4/6, para 1(c).

⁴⁴ UNEP (2019). Global Chemicals Outlook II, p. 647.

5. Periodicity and timelines

64. After a sufficient period of time has passed since the measures to be assessed have been in place (for example, 4-6 years) and once relevant data is available (e.g. from national reporting, reports from the Implementation and Compliance Committee or information gathered by the Partnership on Plastic Waste working group), the first evaluation can be conducted.

65. Evaluations of the effectiveness of MEAs or other frameworks and/or their implementation can be conducted periodically or as one-time events. Some of the potential advantages of conducting evaluations on a periodic basis are that the data generated can be compared over time and the institutional frameworks developed for conducting the assessment can be strengthened over time based on their experience. In addition, a consistent practice of reflection may strengthen accountability with regard to compliance with relevant provisions. Some disadvantages of a periodic review could be the added time and expenses required to conduct the multiple reviews and the potential for decreasing participation in the process over time.

6. Coordination with other relevant processes

66. A possible future assessment would benefit from building on and being complimentary to a possible new strategic framework. As mentioned above, the work of the Implementation and Compliance Committee could directly support a process for measuring the effectiveness of the measures taken under the Basel Convention to address plastic waste. If not specifically addressing plastic waste, the review of implementation by Parties of their obligations (e.g. the control of transboundary movements, adequate legal frameworks, preventing and combating illegal traffic) would still provide valuable information.

67. To avoid duplication of work and contradictory findings, a possible future assessment would also benefit from building on and being complementary to ongoing work mandated by UNEA, including both past and ongoing work. Of particular relevance is the ongoing work by the ad hoc open-ended expert group to 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 solve the global problem, pursuant to UNEA resolution 4/6.

68. Coordination with other relevant process would also prove beneficial with regard to the collection and interpretation of data and information. This includes data collected for the purpose of measuring progress towards implementing the 2030 Agenda, in particular target 14.1 on marine pollution, data collected under the Regional Seas Programmes, and other relevant frameworks and initiatives.

II. Possible further activities that could be conducted under the Basel Convention in response to developments in scientific knowledge and environmental information related to plastic waste as a source of land pollution, marine plastic litter and microplastics

A. Recent scientific knowledge and environmental information about plastics

69. This section provides a brief and non-exhaustive description of selected developments in scientific knowledge and environmental information related to plastic waste as a source of land pollution, marine plastic litter and microplastics.

1. Sources and fate of plastic waste

70. As outlined in a report by the Joint Group of Experts on Scientific Aspects of Marine Environmental Protection (GESAMP),⁴⁵ macro- and microplastics are generated from numerous diffuse as well as point sources, namely plastic producers, fabricators and recyclers in terms of producers/converters; agriculture, fisheries, aquaculture, construction, transportation, shipping, tourism, textile and sport in terms of economic sectors; packaging, cosmetics and personal care products, and textiles and clothing in terms of individual consumers; and solid waste, and waste and wastewater in terms of waste management. Entry points to the ocean include freshwater systems, wastewater run-offs and littering around the coastline, losses or discards at sea and atmospheric transport.

⁴⁵ GESAMP (2015). Sources, Fate and Effects of Microplastics in the Marine Environment: Part 2 of a Global Assessment. ISSN: 1020-4873.

71. A study published in 2015 estimated the amount of plastic waste generated in 2010 at 275 million metric tons, of which between 4.8 and 12.7 entered the ocean.⁴⁶ A number of studies have been published in recent years aiming to identify and quantify plastic waste flows. For instance, the amount of imported plastic, newly produced plastic and plastic components in Nigeria was estimated at more than 23 million tons between 1996 and 2014, with less than 12 % of the resulting waste having undergone recycling.⁴⁷ A study analysing the situation in Austria found that the majority of the total plastic waste amount was incinerated, while approximately 21 % were recycled mechanically and 10 % were recycled chemically.⁴⁸

72. Plastics have been found throughout the marine environment, along coasts, in the open ocean, and in deep ocean trenches across the Pacific Rim, as deep as 10,890 meters below sea level.⁴⁹ Microplastics can travel through the atmosphere, ending up in remote, sparsely inhabited areas,⁵⁰ such as the surface of an Italian glacier,⁵¹ in lakeshore sediment in high altitude lakes of the Tibet Plateau,⁵² on floating ice in the Arctic,⁵³ and in more than 90 per cent of rainwater samples taken from across the state of Colorado in the United States of America, including in a national park at more than 3,000 metres high.⁵⁴ The extent to which plastic waste has pervaded the environment provides a strong basis for continuing activities to address this risk.

2. Plastic additives

73. The ESM of plastic waste is complicated by the fact that some plastics include additives that may be hazardous to the environment and/or to human health, including POPs, such as certain brominated flame retardants and short-chain chlorinated paraffins.⁵⁵ In addition, plastic debris can also adsorb POPs such as PCB, DDT, dioxins and furans.⁵⁶ Recycled products can leach toxic additives from the original plastics. Research has documented that additives can for example migrate via food contact materials.⁵⁷

74. According to UNEP, assessing the adverse human health effects of additives is challenging due to constantly changing patterns of production and the confidentiality of the composition of plastics.⁵⁸ An OECD policy paper outlined that the lack of information and transparency regarding the use of additives in some plastic waste streams is a barrier to increased recycling of those products.⁵⁹

⁴⁶ Jambeck, J. R., R. Geyer, C. Wilcox, T. R. Siegler, M. Perryman, A. Andrady, R. Narayan and K. L. Law (2015). Plastic waste inputs from land into the ocean. *Science* 347(6223): 768-771.

⁴⁷ Babayemi, J. O., Ogundiran, M. B., Weber, R., Osibajo, O. (2018). *Journal of Health and Pollution, Vol. 8, No. 18, June 2018*.

⁴⁸ Van Eygen, E., Feketitsch, J., Laner, D., Rechberger, H., Fellner, J. (2016). Comprehensive analysis and quantification of national plastic flows: The case of Austria. *Resources, Conservation and Recycling, 117* (2017). 193-194.

⁴⁹ Jamieson, Alan J., et al. (2019). Microplastics and synthetic particles ingested by deep-sea amphipods in six of the deepest marine ecosystems on Earth. *Royal Society open science* 6.2: 180667.

⁵⁰ Allen, Steve, et al. (2019). Atmospheric transport and deposition of microplastics in a remote mountain catchment. *Nature Geoscience* 12.5: 339.

⁵¹ Ambrosini, Roberto, et al. (2019). First evidence of microplastic contamination in the supraglacial debris of an alpine glacier. *Environmental Pollution* 253: 297-301.

⁵² Zhang, Kai, et al. (2016). Microplastic pollution of lakeshore sediments from remote lakes in Tibet plateau, China. *Environmental pollution* 219: 450-455.

⁵³ Bergmann, Melanie, et al. (2019). White and wonderful? Microplastics prevail in snow from the Alps to the Arctic. *Science advances* 5.8: eaax1157.

⁵⁴ Wetherbee, Gregory A., Austin K. Baldwin, and James F. Ranville. (2019). It is raining plastic. No. 2019-1048. US Geological Survey.

⁵⁵ GESAMP (2019). Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean, Table 2.2.

⁵⁶ UNEP (2016). Marine plastic debris and microplastics - global lessons and research to inspire action and guide policy change; UNEP/CHW/OEWG.11/INF/22.

⁵⁷ Hahladakis, J. N., Velis, C. A., Weber, R., Iacovidou, E., Purnell, P. (2018). An overview of chemical additives present in plastics: Migration, release, fate and environmental impact during their use, disposal and recycling. *Journal of Hazardous Materials*, 344, pp. 179-199.

⁵⁸ UNEP (2017). Combating marine plastic litter and microplastics: An assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches. UNEP/AHEG/2018/1/INF/3.

⁵⁹ OECD (2018). Improving Plastics Management: Trends, policy responses, and the role of international co-operation and trade. OECD Environment Policy Paper No.12.

75. Recent scientific research has also addressed the occurrence and impacts of plastic additives in the environment.⁶⁰ The European Chemicals Agency has identified over 400 plastic additives and compared the release potential of some of them.⁶¹ Research also focuses on new additives, such as those with antimicrobial properties.⁶²

3. Effects of plastic waste

76. A report by UNEP estimated the environmental damage to marine ecosystems caused by plastic waste in the world's oceans at USD 13 billion per year. In terms of ecological impacts, GESAMP, finds impacts of microplastics on organisms at many levels of biological organization.⁶³ Microplastics can present a physical hazard, but can also be a source of hazardous chemicals to organisms. While microplastics have been found in various fish and shellfish, impacts on humans due to consumption thereof are yet under investigation.

77. The WHO conducted an assessment on microplastics in drinking water. The report noted "if plastic emissions into the environment continue at current rates, there may be widespread risks associated with microplastics to aquatic ecosystems ...with potentially concurrent increases in human exposure." The report identifies mishandled plastic wastes as a source of microplastics into fresh water but focuses on surface run-off and wastewater effluent as the main inputs of microplastics into fresh water. The report also identifies preventive measures to reduce the entry of plastics into the environment. In addition to drinking water, plastic waste has the potential to affect a wide range of aquatic environments and varies in size, including nanoplastic, microplastic, and a range of larger items.

78. The GESAMP report found the additives and chemical contaminants that accumulate on plastic to result in a cocktail of hazardous chemicals associated with plastic debris, making it a potential source of exposure to chemical pollutants for the environment and wildlife. The report notes various potential exotoxicological effects, while highlighting the need for further research. Studies have found evidence suggesting that hazardous chemicals in plastics may contribute significantly to the exposure of marine species.⁶⁴

4. Alternatives to plastics

79. As one approach to minimize the generation of plastic waste, scientists are exploring the development of alternatives to plastics. The UNEP 2015 report⁶⁵ examined the degradation process of different plastics and the fate of "biodegradable" plastics in the marine environment. Among others, the report highlights various remaining challenges with regard to the more widespread adoption of "biodegradable" plastics. The UNEP 2018 report⁶⁶ summarized research and provides case studies of alternatives including natural polymers and materials (e.g., seaweed), biomass-based compostable biopolymers, and reusable objects. It demonstrates that a number of alternative materials are either available commercially or in development, while also highlighting the need to take account of regional and local differences in the social, economic and environmental circumstances as well as the need to foresee and eliminate unintended consequences.

⁶⁰ Groh, Ksenia J., et al. (2019). Overview of known plastic packaging-associated chemicals and their hazards. *Science of the Total Environment* 651: 3253-3268; Hermabessiere, Ludovic, et al. (2017). Occurrence and effects of plastic additives on marine environments and organisms: A review. *Chemosphere* 182: 781-793.

⁶¹ <https://echa.europa.eu/plastic-additives-initiative>.

⁶² Huang, Keng-Shiang, et al. (2016). Recent advances in antimicrobial polymers: a mini-review. *International journal of molecular sciences* 17.9: 1578.

⁶³ GESAMP (2015). Sources, Fate and Effects of Microplastics in the Marine Environment: Part 2 of a Global Assessment. ISSN: 1020-4873.

⁶⁴ Gallo, F., Fossi, C., Weber, R., Santillo, D., Sousa, J., Ingram, I., Nadal, A., Romario, D. (2018). Marine litter plastics and microplastics and their toxic chemicals components: the need for urgent preventive measures. *Environmental Sciences Europe*, 30, 13.

⁶⁵ UNEP (2015), Biodegradable Plastics and Marine Litter. Misconceptions, concerns and impacts on marine environments. United Nations Environment Programme (UNEP).

⁶⁶ UNEP (2018), Exploring the potential for adopting alternative materials to reduce marine plastic litter. United Nations Environment Programme (UNEP).

80. Recent research examined, among others, the strength of biodegradable plastics,⁶⁷ the use of microbes that produce a plastic substitute as a by-product,⁶⁸ the potential risks of biodegradable plastic,⁶⁹ and the limits to biodegradation.⁷⁰

81. The OECD published a framework for considering the sustainability of plastics from a chemical perspective.⁷¹ It emphasises that even non-toxic plastics derived from non-toxic constituents are not sustainable plastics if they end up as litter and pollute land and oceans. It further highlights the need for a holistic and principle-based approach to material flows in moving towards sustainable plastics, including for example relying on a life-cycle perspective in the design and management of materials, products and processes and maximizing resource efficiency.

B. Activities related to plastic waste conducted under the Basel Convention

82. At its fourteenth meeting, the Conference of the Parties to the Basel Convention (COP) adopted decision BC-14/12 by which it amended Annexes II, VIII and IX to the Convention in relation to plastic waste.⁷² The COP also adopted decision BC-14/13 on further actions to address plastic waste under the Basel Convention.⁷³ These actions relate to preventing and minimizing the generation of plastic waste, improving its ESM and controlling its transboundary movement; reducing the risk from hazardous constituents in plastic waste; review of Annexes I and III; technical guidelines; Basel Convention Partnership on Plastic Waste; public awareness, education and information exchange; and further consideration.

83. The Plastic Waste Partnership established in paragraph 24 of decision BC-14/13 aims to improve and promote the ESM of plastic waste at the global, regional and national levels and prevent and minimize their generation so as to, among other things, reduce significantly and in the long-term eliminate the discharge of plastic waste and microplastics into the environment, in particular the marine environment. The terms of reference and the workplan for the working group for the biennium 2020–2021 are set out in annexes I and II to document UNEP/CHW.14/INF/16/Rev.1, respectively. A report on progress made in the implementation of the workplan of the Partnership is available in document UNEP/CHW/OEWG.12/INF/31.

84. In paragraph 35 of decision BC-14/13, the COP invited Parties and others to submit to the Secretariat, by 1 June 2020, information on certain plastic wastes referred to in entry Y48 in Annex II and entry B3011 in Annex IX to the Convention. The Secretariat will compile the information received from Parties and others for consideration by the COP at its fifteenth meeting and make it available on the website of the Convention by 1 September 2020.

85. In addition, the COP adopted other decisions specifically addressing plastic wastes: decisions BC-14/9 on cooperation with the World Customs Organization on the Harmonized Commodity Description and Coding System, BC-14/10 on national reporting, BC-14/18 on technical assistance, BC-14/19 on the Basel Convention Partnership Programme, BC-14/21 on international cooperation and coordination, and BC-14/23 on the clearing house mechanism for information exchange. The programmes of work activity factsheets provide further information on related activities to be undertaken in the biennium 2020-21.⁷⁴

⁶⁷ Zhao, Xiaoying, Katrina Cornish, and Yael Vodovotz. (2019). Synergistic Mechanisms Underlie the Peroxide and Coagent Improvement of Natural-Rubber-Toughened Poly (3-hydroxybutyrate-co-3-hydroxyvalerate) Mechanical Performance. *Polymers* 11.3: 565. (combining natural rubber with bioplastic).

⁶⁸ Perez, Jose M., et al. (2019). Funneling aromatic products of chemically depolymerized lignin into 2-pyrone-4-6-dicarboxylic acid with *Novosphingobium aromaticivorans*. *Green Chemistry* 21.6: 1340-1350.

⁶⁹ Sintim, Henry Y., et al. (2019). Release of micro- and nanoparticles from biodegradable plastic during in situ composting. *Science of The Total Environment* 675: 686-693; Haider, Tobias P., et al. (2019). Plastics of the future? The impact of biodegradable polymers on the environment and on society. *Angewandte Chemie International Edition* 58.1: 50-62; Markowicz, Florentyna, Grzegorz Król, and Agata Szymańska-Pulikowska (2019). Biodegradable package—innovative purpose or source of the problem. *Journal of Ecological Engineering* 20.1: 228-237.

⁷⁰ Napper, Imogen E., and Richard C. Thompson (2019). Environmental deterioration of biodegradable, oxo-biodegradable, compostable, and conventional plastic carrier bags in the sea, soil, and open-air over a 3-year period. *Environmental science & technology*.

⁷¹ OECD (2018). Considerations and criteria for sustainable plastics from a chemicals perspective – Background paper 1. Retrieved March 16 from <https://www.oecd.org/environment/waste/background-paper-sustainable-plastics-from-a-chemicals-perspective-considerations-and-criteria.pdf>.

⁷² Decision BC-14/12.

⁷³ Decision BC-14/13.

⁷⁴ UNEP/CHW.14/INF/44.

C. Activities related to plastic waste conducted by other international entities

86. This section provides a brief and non-exhaustive discussion of some activities by other international entities. UNEP, including under UNEA, and many other forums are addressing plastic waste and microplastics through various approaches involving different sectors and stakeholders. Other relevant international bodies and initiatives include, but are not limited to, the Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region, work undertaken by the World Trade Organization, the World Customs Organization (WCO), the International Criminal Police Organization (INTERPOL), the Arctic Council, the International Union for Conservation of Nature (IUCN).

87. The UNEP ad hoc open-ended expert group on marine litter and microplastics was established at the third session of the UNEA, following a series of resolutions⁷⁵ and reports⁷⁶ on marine litter and microplastics. The expert group's work currently includes a stocktaking survey and an analysis of the effectiveness of measures to address marine litter and microplastics, which will include an assessment of scientific knowledge and environmental information, assessing financial and technical resources and mechanisms, and presenting case studies and examples from relevant partnerships.⁷⁷ Further information on the activities of the expert group can be found in document UNEP/CHW/OEWG.12/INF/21.

88. The Global Partnership on Marine Litter is a multi-stakeholder partnership under UNEP, which includes projects involving scientific and environmental research related to plastic waste.⁷⁸ Its report on marine plastic debris and microplastics provides scientific and environmental information,⁷⁹ and is aimed at supporting objectives in the Honolulu Strategy, including “reduced amount and impact of land-based sources of marine debris introduced into the sea” through “legislation and policies to support solid waste prevention, minimization and management.”

89. The Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities is an intergovernmental mechanism for addressing marine pollution. The GPA holds an intergovernmental review meeting every five years to review the status of the implementation of the GPA and to decide on the action to be taken to strengthen its implementation.

90. Six Regional Seas Programmes have regional action plans on marine litter, and seven others are currently developing new regional action plans.⁸⁰

91. The regional centres of the Basel and Stockholm conventions established a small topic group on marine litter, identifying possible future activities such as technical assistance and capacity-building to support Parties and others to implement waste management and efficient waste collection measures to promote innovation and technology transfer and to avoid non-biodegradable plastics and support sound chemical substitution of toxic components in plastic packaging and other plastics.⁸¹

92. SAICM is a voluntary global policy multi-stakeholder instrument, where discussions are taking place to address chemicals and wastes beyond the instrument's current mandate to 2020. Recommendations for the post 2020 framework could include work on plastic.⁸²

93. GESAMP prepared two scientific reports summarizing the current information about the sources of marine plastic litter and microplastics, the ways they enter the sea and the impact on the marine environment.⁸³

94. The Food and Agriculture Organization of the United Nations (FAO) focuses on marine plastic litter originating from the fishing industry and on the impact of microplastics on fisheries, aquaculture

⁷⁵ UNEP/AHEG/2018/1/INF/2 (UNEA resolution 1/6, 2/11, and 3/7).

⁷⁶ See, e.g., UNEP/EA.3/INF/5.

⁷⁷ Outcome document from the third ad hoc open-ended expert group on marine litter and microplastics https://papersmart.unon.org/resolution/uploads/aheg_3_outcome_document.pdf.

⁷⁸ <http://marinelitternetwork.com/all-projects/>

⁷⁹ UNEP (2016). Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change. United Nations Environment Programme.

⁸⁰ <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes>.

⁸¹ UNEP/CHW.13/INF/29/Rev.1.

⁸² SAICM/IP.4/2.

⁸³ <http://www.gesamp.org/publications>.

resources, and human health through fish consumption. The Fisheries Committee developed voluntary guidelines on the marking of fishing gear in February 2018.

95. The World Economic Forum's work on plastic is aimed at creating an economy for plastic waste through improved recycling, reuse, and biodegradation and using non-fossil fuel feedstocks. The WEF's Global Plastic Action Partnership (GPAP) is a multi-stakeholder forum focused on a circular plastics economy.

D. Consideration of possible further activities that could be conducted under the Basel Convention

96. Recent developments in scientific knowledge and environmental information underscore that the high and rapidly increasing levels of marine plastic litter and microplastics represent a serious environmental problem on a global scale.

97. In considering possible further activities that could be conducted under the Basel Convention, it is worth acknowledging that a wide range of activities and initiatives addressing plastic waste are being undertaken by numerous stakeholders at all levels. Further activities under the Basel Convention could therefore build upon and take into account the work of other initiatives, including those mandated by UNEA, so as to enhance synergies and avoid duplication of efforts. For example, the stocktaking and the analysis of the effectiveness of measures by the ad hoc open-ended expert group on marine litter and microplastics could provide valuable information in considering such further activities.

98. The mandate of the Basel Convention Partnership on Plastic Waste covers a broad range of activities.⁸⁴ The project groups established by the Partnership working group will initially focus on information gathering activities in relation to the subject matter of the project groups (for example, on prevention and minimization, transboundary movements, etc.). Furthermore, the workplan of the Partnership working group for the biennium 2020-2021, adopted by the Conference of the Parties to the Basel Convention (COP) at its fourteenth meeting, foresees the possible development of "voluntary indicators relevant to all stakeholders" particularly in relation to the generation, disposal and, where relevant, transboundary movements of plastic waste. A wide spectrum of further activities could be conducted within the framework of the Partnership, should this be decided by the COP. The Partnership's broad mandate also highlights the need for coordination with other initiatives in order to enhance synergies and avoid duplication of efforts.

99. Reflecting on the information on the recent scientific knowledge and environmental information and taking into account the activities conducted by the Basel Convention including the Plastic Waste Partnership and by other international entities, the following further activities could be considered under the Basel Convention without duplicating other efforts:

(a) Support Parties to quantify or estimate the quantities of plastic waste generated, managed, and traded at the national level. The information could be shared via the Secretariat, including through national reporting;

(b) Given the multiple sources of plastic waste and possibilities for leakage, undertake further action to address a comprehensive range of these sources and pathways;

(c) Enhance the support provided to Parties to implement actions towards the prevention and minimization of the generation of plastic waste. This could include support for innovation, including research and development, in particular on sustainable alternatives to plastics. Note that there is a project group on prevention and minimization of plastic waste under the Plastic Waste Partnership working group;

(d) While respecting the waste management hierarchy, support Parties in the final disposal of plastic waste, where necessary, including through research and development, innovation and technology transfer;

(e) Promote awareness-raising activities under the Convention about the prevalence of plastic waste and its impacts on the terrestrial and marine environments as a means to help Parties maintain and strengthen their capacity and public support to address plastic waste;

(f) Consider how synergies with the Stockholm Convention could be further strengthened to address additives, in particular POPs, in plastic products and plastic waste;

⁸⁴ UNEP/CHW.14/INF/16/Rev.1.

100. The COP at its fifteenth meeting may wish to consider the information received from Parties and others on certain plastic wastes referred to in entry Y48 in Annex II and entry B3011 in Annex IX to the Convention, as called for in paragraph 35 of decision BC-14/13.

101. These further activities could be directly mandated by the COP to relevant actors or be undertaken within the framework of the Partnership on Plastic Waste.

Annex II

Draft elements for consideration of a possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste and to possible further activities that could be conducted under the Basel Convention

1. Possible future assessment of the effectiveness of the measures taken under the Basel Convention to address plastic waste:

- (a) Note that the effectiveness of the measures can be assessed in various ways. Some existing mechanisms focus on the design and content of the agreement or framework in question, thereby examining the extent to which an obligation induces changes in behaviour that support the goals of an agreement, a framework or a particular measure and the extent to which those goals have been achieved as a consequence thereof. Others focus on an assessment of the degree to which the agreement or framework in question is being successfully implemented and are therefore akin to a review of the effective implementation of the treaty, framework or measure; Note that effectiveness evaluations can be guided by frameworks, which identify the goals, objectives and indicators and set out the process for conducting the evaluation. In the case of MEAs, a subsidiary body is usually charged with evaluating the information, drawing conclusions, and making recommendations to the Conference of the Parties. To assist it in evaluating the information, the subsidiary body may commission reports for this purpose. Terms of reference can provide clarity with respect to the reviewing body's responsibilities;
- (b) Recommend further consideration of the following:
- (i) Modalities of the assessment: Should the Conference of the Parties to the Basel Convention (COP) decide to assess the effectiveness of the measures taken under the Convention to address the plastic waste contributing to marine plastic litter and microplastics, a framework to guide such assessment can be developed for possible adoption by the COP. In addition, the COP could consider whether a subsidiary body (existing or new) could assist the COP in its task;
 - (ii) Scope of the assessment: The assessment could cover the effectiveness of the amendments adopted in decision BC-14/12, the further actions adopted in decision BC-14/13, such as the work under the Basel Convention Partnership on Plastic Waste, and other related decisions; relevant provisions of the Basel Convention. It could assess either the effectiveness of the nature of these decisions/provisions, the effectiveness of their implementation, or both;
 - (iii) Objective of the assessment: The objective could be to assess whether the measures taken contributed towards achieving the Convention's objective of protecting human health and the environment against the adverse effects of hazardous wastes and other wastes. It could be dissected further by focusing on more specific objectives, e.g. those listed in decision BC-14/13;
 - (iv) Indicators for the assessment: Indicators could include process indicators, e.g. the number of tools developed to strengthen the ESM of plastic waste, and outcome indicators, e.g. the share of plastic waste that is managed in an environmentally sound manner;
 - (v) Availability and limitation of data and information: Data and information may be available within the Basel Convention through national reports, provided that information specific to plastic waste is reported by Parties. Information relating to the implementation of the measures by Parties may also be available from the Implementation and Compliance Committee should the COP entrust this body with a mandate focused on the review of implementation of the Convention in relation to plastic wastes. Information gathering activities conducted by the project groups of the Partnership on Plastic Waste working group could also be considered. Data and information collected from other sources such as those relevant to SDGs could be considered;
 - (vi) Periodicity and timelines: After a sufficient period of time has passed since the measures to be assessed have been in place (for example, 4-6 years) and once relevant data is

available (e.g. from national reporting and the Implementation and Compliance Committee), the first evaluation can be conducted;

- (vii) Coordination with other relevant review processes: A possible future assessment would benefit from building on, avoiding duplication of efforts with, and being complementary to a possible new strategic framework of the Basel Convention and the work of the Implementation and Compliance Committee, as well as similar work by other bodies e.g. the ad hoc open-ended expert group on marine litter and microplastics analysing the effectiveness of existing and potential response options and activities with regard to marine litter and microplastics at all levels, and collection of information and measuring of progress under the 2030 Agenda.

2. Possible further activities that could be conducted under the Basel Convention:

(a) Note that the recent developments in scientific knowledge and environmental information underscore that the high and rapidly increasing levels of marine plastic litter and microplastics represent a serious environmental problem on a global scale;

(b) Acknowledge that the wide range of activities and initiatives addressing plastic waste is being undertaken by numerous stakeholders at all levels;

(c) Emphasize that further activities under the Basel Convention should build upon and take into account the work of other initiatives, including those mandated by UNEA, so as to enhance synergies and avoid duplication of efforts;

(d) Note that a wide spectrum of further activities could be conducted within the framework of the Plastic Waste Partnership established in paragraph 24 of decision BC-14/13;

(e) Note that the COP at its fifteenth meeting may wish to consider the information received from Parties and others on certain plastic wastes referred to in entry Y48 in Annex II and entry B3011 in Annex IX to the Convention, as called for in paragraph 35 of decision BC-14/13;

(f) Recommend further consideration on the following possible further activities that could be conducted under the Basel Convention:

- (i) Support Parties to quantify or estimate the quantities of plastic waste generated, managed, and traded at the national level;
- (ii) Conduct further actions to address a comprehensive range of multiple sources and pathways of plastic waste;
- (iii) Support Parties to implement actions towards the prevention and minimization of the generation of plastic waste;
- (iv) Support Parties in the final disposal of plastic waste;
- (v) Awareness-raising;
- (vi) Address additives, in particular POPs in plastic products and plastic waste, in cooperation with the Stockholm Convention.