

**Montreal Protocol  
on Substances that  
Deplete the Ozone Layer**Distr.: General  
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Original: English**Workshop on strengthening the effective  
implementation and enforcement of the  
Montreal Protocol**  
Bangkok, 2 July 2023**Open-ended Working Group of the Parties  
to the Montreal Protocol on Substances  
that Deplete the Ozone Layer**  
**Forty-fifth meeting**  
Bangkok, 3–7 July 2023  
Item 5 (b) of the provisional agenda\***Strengthening Montreal Protocol institutions, including  
for combating illegal trade (decision XXXIV/8):  
background documents prepared by the Secretariat in  
accordance with decision XXXIV/8****Background information paper on issues to be discussed at the  
workshop on strengthening the effective implementation and  
enforcement of the Montreal Protocol****Note by the Secretariat****I. Background**

1. The present paper has been prepared in accordance with subparagraph 4 (d) of decision XXXIV/8 on strengthening Montreal Protocol institutions, including for combating illegal trade, in which the Thirty-Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer requested the Secretariat to prepare a background information paper outlining issues to be discussed at the workshop and reflecting discussions at the forty-fourth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol and the Thirty-Fourth Meeting of the Parties, for consideration at the forty-fifth meeting of the Open-ended Working Group.

2. At the forty-fourth meeting of the Open-ended Working Group, parties considered institutional processes to further strengthen the effective implementation and enforcement of the Montreal Protocol. The discussion was based on the note prepared by the Secretariat for the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol in 2019, at the request of the Committee, on possible ways of dealing with illegal production of and illegal trade in controlled substances under the Montreal Protocol, identifying potential gaps in the non-compliance procedure, challenges, tools, ideas and suggestions for improvement.<sup>1</sup>

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\* UNEP/OzL.Pro.WG.1/45/1/Rev.1.

<sup>1</sup> UNEP/OzL.Pro.WG.1/44/3. The note was originally issued as annexes II and III to the report of the Implementation Committee on the work of its sixty-third meeting (UNEP/OzL.Pro/ImpCom/63/6). It was subsequently issued as document UNEP/OzL.Pro.34/8, for consideration under item 7 of the agenda of the Thirty-Fourth Meeting of the Parties, on institutional processes to strengthen the effective implementation and enforcement of the Montreal Protocol.

3. The Open-ended Working Group included a non-exhaustive list of ideas for areas for improvement in the report on the work of its forty-fourth meeting,<sup>2</sup> which was forwarded to the Thirty-Fourth Meeting of the Parties to the Montreal Protocol. In decision XXXIV/8, the Thirty-Fourth Meeting of the Parties requested the Secretariat to organize a one-day workshop on further strengthening effective implementation and enforcement of the Montreal Protocol, back to back with the forty-fifth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol, and to prepare the present paper.

4. The workshop on strengthening the effective implementation and enforcement of the Montreal Protocol will be convened on 2 July 2023 in Bangkok, immediately prior to the forty-fifth meeting of the Open-ended Working Group. The concept note containing the programme of the workshop is set out in document UNEP/OzL.Pro/Workshop.11/1 and is posted on the workshop portal (<https://ozone.unep.org/meetings/workshop-strengthening-effective-implementation-and-enforcement-montreal-protocol>).

## II. Scope and structure of the paper

5. The paper has been prepared in accordance with subparagraph 4 (d) of decision XXXIV/8. In outlining issues to be discussed at the workshop, the paper has attempted to reflect discussions at the forty-fourth meeting of the Open-ended Working Group and the Thirty-Fourth Meeting of the Parties, as well as previous consideration by the Meeting of the Parties and the Open-ended Working Group of other relevant issues.

6. Section III of the paper sets out issues relevant to the implementation and enforcement of the Montreal Protocol. To facilitate discussions at the workshop and subsequent discussions at the forty-fifth meeting of the Open-ended Working Group, the issues are organized around the four sessions of the workshop, namely:

- (a) Combating illegal trade;
- (b) Licensing and quota systems;
- (c) Implementation and enforcement of the Montreal Protocol (including in relation to illegal consumption and production);
- (d) Other considerations.

Each subsection describes the general scope and provides an overview of the key issues that parties may wish to discuss at the workshop and beyond.

## III. Issues to be discussed at the workshop

7. One of the overarching thoughts reflected in the list of ideas for areas for improvement related to institutional processes for strengthening the effective implementation and enforcement of the Montreal Protocol produced at the forty-fourth meeting of the Open-ended Working Group and forwarded to the Thirty-Fourth Meeting of the Parties was that the Montreal Protocol institutions, including the Implementation Committee, already work well. Other ideas reflected room for improvement to respond to specific challenges and areas of interest, such as opportunities to improve reporting, management of feedstock uses, exempted uses and stockpiling, sustaining compliance after phase-out, unexpected emissions of HFC-23,<sup>3</sup> and better facilitation of cooperation on capacity-building and sharing of information on best practices and experiences.

### A. Combating illegal trade

8. Parties to the Montreal Protocol have considered how the Montreal Protocol can be implemented in a manner that is effective in *discovering and preventing illegal trade* in controlled substances in several of its decisions, as outlined in the summary of the practices of illegal trade and

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<sup>2</sup> See UNEP/OzL.Pro.WG.1/44/4, annex II, sect. B.

<sup>3</sup> In accordance with decision XXXIV/7 on strengthening institutional processes with respect to information on HFC-23 by-product emissions, the Thirty-Fifth Meeting of the Parties will consider a report of the Technology and Economic Assessment Panel that will include information on the possible chemical pathways that could be used in the production of Annex C, Group I, or Annex F substances that may generate HFC-23 as a by-product; a compilation of information on the amount of HFC-23 generation and emissions from facilities that manufacture Annex C, Group I, or Annex F substances, the reporting of which is required under Article 7 of the Montreal Protocol; and best practices available to control these emissions.

the approaches taken by national authorities to identify and address such cases.<sup>4</sup> Parties may wish to revisit the measures to combat illegal trade that they have identified in previous decisions, including considering how the *quality of information on fully proved cases of illegal trade* that is voluntarily reported by countries can be improved and how such voluntary reporting can be increased.

9. In addition, parties may wish to consider further the issue of *controlled substances used on ships*. The Twenty-Third Meeting of the Parties took up the issue of the treatment of ozone-depleting substances (ODS) used to service ships, including ships from other flag states under the Montreal Protocol.<sup>5</sup> In decision XXIII/11, the Twenty-Third Meeting of the Parties recognized that ships used equipment and technologies containing ODS onboard during operations in national and international waterways, but was mindful that many parties registered as flag States were unsure of the reporting requirements for ships under the Montreal Protocol. It expressed concern that differing party interpretations of the Montreal Protocol with regard to the sale of ozone depleting-substances to ships might result in the miscalculation of consumption or disparities in the reporting of consumption. At the Twenty-Fourth Meeting of the Parties, the matter was considered under agenda item 7, on a proposal on trade of controlled substances with ships sailing under a foreign flag. In decision XXIV/9, the Twenty-Fourth Meeting of the Parties decided to revisit the issue at the thirty-third meeting of the Open-ended Working Group. At its thirty-third meeting, the Working Group took note of the report of the Technology and Economic Assessment Panel on transport refrigeration in the maritime sector<sup>6</sup> and agreed to defer further consideration of the issue pending the availability of additional information. Parties have yet to return to this issue.

10. Parties may also wish to revisit current guidance on free trade zones, trans-shipment and import and re-export (outlined in paragraphs 11–14 below) and consider whether, based on discussions at the workshop and the forty-fifth meeting of the Open-ended Working Group, they may wish to reiterate or recommend further action to address these challenges.

11. As is pointed out in the Secretariat’s note on possible ways of dealing with illegal production of and illegal trade in controlled substances under the Montreal Protocol,<sup>7</sup> trade through *free trade zones* is not fully tracked under the Protocol. The term “free trade zones” is not defined under the Montreal Protocol. Chapter 2 of specific annex D to the International Convention on the Simplification and Harmonization of Customs Procedures (as amended) defines the term “free zone” as “a part of the territory of a Contracting Party where any goods introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the Customs territory.”

12. In “‘Extraterritoriality’ of Free Zones: The Necessity for Enhanced Customs Involvement”, the World Customs Organization highlights existing literature that points to the fact that “Free Zones attract not only legitimate business but also illicit trade or other illicit activities that take advantage of the regulatory exemptions of Free Zones.”<sup>8</sup>

13. Article 7 data reporting guidelines<sup>9</sup> provide that countries with free trade zones inside their territories should make a special effort to include in their data reporting production, import and export figures for such zones. Parties have not required reporting of trade through free-trade zones.<sup>10</sup>

<sup>4</sup> UNEP/OzL.Pro/Workshop.11/2/Add.1–UNEP/OzL.Pro.WG1/45/5/Add.1.

<sup>5</sup> Under sub-item 4 (e) of the agenda of the meeting, on the treatment of ODS used to service ships.

<sup>6</sup> See chap. 7 (on information on the use of controlled substances on ships) of vol. I of the May 2013 report of the Technology and Economic Assessment Panel, available at [https://ozone.unep.org/system/files/documents/TEAP\\_Progress\\_Report\\_May\\_2013.pdf](https://ozone.unep.org/system/files/documents/TEAP_Progress_Report_May_2013.pdf). The report updated the estimated ODS inventory and refrigerant leakage rates in the maritime sector. The report indicated that more detailed information was required from the fishing sector to clarify future developments in the use of ODS, and that the Panel was making an effort to further review refrigerant options for existing and new equipment in the various types of vessels with a target for completing an update on that issue in April 2014.

<sup>7</sup> UNEP/OzL.Pro.34/8, para. 11.

<sup>8</sup> World Customs Organization, WCO Research Paper No. 47 (Sept. 2019), p. 2, available at [www.wcoomd.org/-/media/wco/public/global/pdf/topics/research/research-paper-series/47\\_free\\_zones\\_customs\\_involvement\\_omi\\_en.pdf](http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/research/research-paper-series/47_free_zones_customs_involvement_omi_en.pdf). See also sections 2.2 and 2.3 and OzonAction, United Nations Environment Programme, “Free Trade Zones and trade in ODS”, July 2015, available at [www.unep.org/ozonaction/resources/factsheet/free-trade-zones-and-trade-ods](http://www.unep.org/ozonaction/resources/factsheet/free-trade-zones-and-trade-ods).

<sup>9</sup> UNEP/OzL.Pro.3/11, annex XI, para. 7 and UNEP/OzL.Pro.5/11, annex I, para. 7.

<sup>10</sup> See UNEP/OzL.Pro.34/8, para. 32 (e).

14. Decision IV/14 of the Fourth Meeting of the Parties clarifies the difference between *trans-shipment* of controlled substances through a third country and *imports and subsequent re-exports*. As regards trans-shipment, the country of origin of the controlled substances is to be regarded as the exporter and the country of final destination is to be regarded as the importer. In such cases, the responsibility for reporting data is to lie with the country of origin as the exporter and the country of final destination as the importer. In contrast, cases of import and re-export should be treated as two separate transactions, whereby the country of origin would report shipment to the country of intermediate destination, which would subsequently report the import from the country of origin and export to the country of final destination, while the country of final destination would report the import. This clarification was reiterated in decision IX/34 of the Ninth Meeting of the Parties, on compliance with the Montreal Protocol. Parties may wish to examine the extent to which this clarification has been helpful in Article 7 reporting.

15. Among the actions to improve the monitoring of trade and to prevent illegal trade, parties have previously identified the effective implementation of advance cargo information,<sup>11</sup> the use of the informal prior informed consent mechanism,<sup>12</sup> and lessons learned from prior informed consent procedures under the Basel and Rotterdam conventions.<sup>13</sup> Presentations on these tools for exchanging information on imports and exports of controlled substances that can assist in the detection and prevention of illegal trade will be made at the workshop.

## B. Licensing and quota systems

16. Under Article 4B of the Montreal Protocol each party is required to establish and implement a licensing system for the import and export of new, used, recycled and reclaimed controlled substances in Annexes A, B, C and E (para. 1) and for the import and export of new, used, recycled and reclaimed controlled substances in Annex F (para. 2 bis) within the time frames specified in paragraphs 1 and 2 for controlled substances in Annexes A, B, C and E, and in paragraph 2 bis for controlled substances in Annex F. The specific features of each licensing system are left to the discretion of each party. Under paragraph 3 of Article 4B, each party is required to report to the Secretariat on the establishment and operation of its licensing system within three months of the date of introducing that system. The secretariat is not mandated to review national licensing systems. However, according to paragraph 3 of decision IX/8 of the Ninth Meeting of the Parties, the Secretariat and implementing agencies should take steps to assist parties in the design and implementation of appropriate national licensing systems.

17. In decision IX/4, on further amendment of the Protocol, the Ninth Meeting of the Parties adopted an amendment to the Protocol to add Article 4B on licensing systems to the Montreal Protocol. In decision IX/8, on the licensing system, the Ninth Meeting of the Parties decided that the licensing system to be established by each party should:

- (a) Assist collection of sufficient information to facilitate parties' compliance with relevant reporting requirements under Article 7 of the Protocol and decisions of the parties;
- (b) Assist parties in the prevention of illegal traffic of controlled substances, including, as appropriate, through notification and/or regular reporting by exporting countries to importing countries and/or by allowing cross-checking of information between exporting and importing countries.

18. Subsequent decisions of the Meeting of the Parties contain recommendations for the full and effective implementation and active enforcement of parties' licensing systems and set out measures that parties can implement domestically on a voluntary basis.<sup>14</sup>

19. While a quota system is not required under the Montreal Protocol, the establishment of import quotas can contribute to compliance with the control measures under the Protocol. The licensing systems analyzed by the Secretariat showed general use of a quota allocation mechanism combined with the licensing system.<sup>15</sup>

<sup>11</sup> See the report of the forty-fourth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (UNEP/OzL.Pro.WG.1/44/4), annex II.

<sup>12</sup> Information on the informal prior informed consent mechanism is available at <https://www.unep.org/ozonaction/informal-prior-informed-consent-mechanism>.

<sup>13</sup> See UNEP/OzL.Pro.WG.1/44/4, para. 97.

<sup>14</sup> See, for instance, the measures set out in para. 3 of decision XIX/12, on preventing illegal trade in ODS.

<sup>15</sup> See the summary of common features of licensing systems (UNEP/OzL.Pro/Workshop.11/2/Add.2–UNEP/OzL.Pro.WG.1/45/5/Add.2), para. 30.

20. Parties may wish to consider *key features of licensing and quota systems* that may assist parties in improving these systems and strengthening implementation of the Montreal Protocol, drawing on the summary of common features of licensing systems and discussions in session II of the workshop, which will include presentations on licensing and quota systems. To promote exchange of information to improve implementation and enforcement of their licensing systems in order to combat illegal trade more effectively, parties may wish to encourage the submission to the Secretariat of information on features of domestic licensing and quota systems, including links to relevant regulations, which could be posted under parties' country profiles on the Ozone Secretariat website.<sup>16</sup>

### C. Implementation and enforcement of the Montreal Protocol (including in relation to illegal consumption and production)

21. Implementation and enforcement of any multilateral agreement, whether relating to environmental protection or other issues of global concern, have both *international and domestic components*. Control measures and related requirements and procedures can be fully effective only if there are institutional and legal measures developed, implemented and enforced at the domestic level.<sup>17</sup> Despite the close link between legal provisions and guidelines at international level and the domestic laws and regulations that enable their implementation, it is useful, for purposes of comprehensively considering areas for improvement, to distinguish between implementation and enforcement at international level and domestic implementation, including enforcement measures. Parties have acknowledged the importance of differentiating between these two dimensions by indicating, as one of the overarching thoughts and challenges included on the list of ideas for areas for improvement related to institutional processes for strengthening the effective implementation and enforcement of the Montreal Protocol developed by the Open-ended Working Group at its forty-fourth meeting and forwarded to the Thirty-Fourth Meeting of the Parties,<sup>18</sup> the need to consider the differences between legal obligations as a Montreal Protocol party and compliance with domestic law.

22. In relation to the international dimension of the implementation and enforcement of the Montreal Protocol, parties may wish to consider possible options for strengthening the effectiveness of the *monitoring, reporting, verification and enforcement mechanisms* to sustain the achievements of the Montreal Protocol, drawing on the list referred to in paragraph 21 above. Areas that parties have previously identified include the *lack of definitions for illegal consumption and production*,<sup>19</sup> challenges relating to control measures, such as the *potential diversion of controlled substances* from the uses which they were licensed or permitted,<sup>20</sup> and specific challenges relating to *data reporting*.<sup>21</sup>

23. As regards *data reporting*, one of the areas that parties may wish to revisit is the means to enhance cooperation in clarifying import and export data submitted to the Ozone Secretariat. In the Article 7 data reporting format revised by decision XVII/16, parties exporting controlled substances were requested to submit to the Ozone Secretariat information on countries of destination. However, there was no request in that decision for parties importing controlled substances with regard to the country of origin. The Twenty-Fourth Meeting of the Parties, in decision XXIV/12, noted *differences in data on imports and exports* of controlled substances submitted by the parties under Article 7 of the Montreal Protocol. It recognized that while such differences might have had plausible explanations, such as shipments over the end of a calendar year or the submission of incomplete data, they might

<sup>16</sup> <https://ozone.unep.org/countries>.

<sup>17</sup> See Benedikt Heid and Laura Márquez-Ramos, "International environmental agreements and imperfect enforcement: evidence from CITES", *Journal of Environmental Economics and Management*, vol. 118, 102784 (March 2023) (available at [www.sciencedirect.com/science/article/pii/S0095069623000025#d1e943](http://www.sciencedirect.com/science/article/pii/S0095069623000025#d1e943)): "mere membership in an agreement is not enough; instead, an agreement is effective if its members commit to its rules and enforce them. Therefore, empirical evaluations of international environmental agreements should take into account not only whether countries sign up to them but also the level of de facto enforcement of their rules."

<sup>18</sup> See UNEP/OzL.Pro.WG.1/44/4, annex II, sect. B.

<sup>19</sup> Ibid.

<sup>20</sup> UNEP/OzL.Pro.WG.1/44/3, para. 6 (c). See also decision VI/19, in which the request in para. 6 to exporting parties to take, where appropriate, steps to correctly label previously used substances hints at one of the risks relating to the export of previously used substances, i.e., that they are not of the nature claimed. In same decision, in para. 4, parties with reclamation facilities are requested to submit to the Secretariat, prior to the Seventh Meeting of the Parties and every year thereafter, a list of the reclamation facilities and their capacities available in their countries. Exporting parties are also requested, in para. 6, to make best efforts to require their companies to include in documentation accompanying such exports the name of the source firm of the used controlled substance and whether it was recovered, recycled or reclaimed and any further information available to allow for verification of the nature of the substance.

<sup>21</sup> Decision VI/19, para. 8.

also have resulted from illegal trade activities or from not complying with domestic legislation. The Twenty-Fourth Meeting of the Parties requested the Ozone Secretariat to revise the reporting format to include in the data forms an annex indicating the exporting party for the quantities reported as import but noted that the annex was excluded from the reporting requirements under Article 7 and that the provision of the information in the annex would be done on a voluntary basis. The Ozone Secretariat was requested to compile, every January, aggregated information on controlled substances by annex and group received from the importing/re-importing party and to provide this uniquely and solely to the exporting party concerned when requested, in a manner that would maintain information deemed to be confidential in accordance with decision I/11.

24. At its thirtieth meeting, the Open-ended Working Group had discussed the issue<sup>22</sup> of whether ODS associated with *pre-blended polyols* were to be considered controlled substances under the Montreal Protocol. The issue of polyols had arisen in connection with the eligibility for funding of HCFC-141b phase-out projects involving pre-blended polyols. At its sixty-first meeting, the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol had considered the matter and had agreed on a framework on eligible incremental costs for parties operating under paragraph 1 of Article 5 of the Montreal Protocol in their transition from the use of HCFCs in pre-blended polyols.<sup>23</sup> The Twenty-Second Meeting of the Parties considered the matter further<sup>24</sup> and affirmed that the issue of the use of HCFCs in pre-blended polyols had been addressed to the satisfaction of the parties.<sup>25</sup> However, at the eighty-ninth meeting of the Executive Committee of the Multilateral Fund, it was noted that there was no consistent approach among Article 5 parties in reporting the export of controlled substances contained in pre-blended polyols, with some Article 5 parties reporting such exports as exports, and others considering the exported pre-blended polyol a product and therefore not reporting such exports.<sup>26</sup> Parties may wish to note that, although some parties include HCFC-141b contained in pre-blended polyols as part of their reporting under Article 7 of the Montreal Protocol, the Secretariat excludes any such quantities reported from the calculation of a party's HCFC production and consumption to the extent that these quantities can be separately identified.

25. With regard to strengthening implementation of the Montreal Protocol, including the Kigali Amendment to the Protocol, at domestic level, parties may wish to consider key strategies to strengthen domestic implementation and enforcement of the Montreal Protocol and the challenges relating to domestic implementation. Parties may wish to share their experiences in developing *domestic laws and regulations*, such as on national prohibitions, as appropriate, on the use of controlled substances either prior to or after their phase-out, and on the recovery of controlled substances contained in stationary commercial and industrial refrigeration and air-conditioning equipment, mobile refrigeration and mobile air-conditioning equipment, fire protection systems and cleaning machinery containing solvents during servicing and maintenance as well as prior to equipment dismantling or disposal, for purposes of recycling, reclamation or destruction to prevent releases of controlled substances into the atmosphere.<sup>27</sup>

26. Parties may also wish to consider existing *strategies and tools* such as joint enforcement action (e.g., through DEMETER operations organized by the World Customs Organization),<sup>28</sup> the establishment of effective container selections and controls to prevent illicit cross-border activities

<sup>22</sup> Under agenda item 6 (c), on treatment of polyols in calculating consumption of HCFCs.

<sup>23</sup> See decision 61/47 of the Executive Committee of the Multilateral Fund.

<sup>24</sup> Under agenda item 6, on the status of HCFCs blended in polyols as controlled substances under the Montreal Protocol.

<sup>25</sup> Decision XXII/9, para. 2.

<sup>26</sup> See the overview of current monitoring, reporting, verification and enforceable licensing and quota systems developed with support from the multilateral fund (decision 84/85) (UNEP/OzL.Pro/ExCom/89/3), para. 68. See also UNEP/OzL.Pro.WG.1/44/3, para. 6 (d).

<sup>27</sup> The Fourth Meeting of the Parties encouraged parties to recover controlled substances contained in stationary commercial and industrial refrigeration and air-conditioning equipment, mobile refrigeration and mobile air-conditioning equipment, fire protection systems and cleaning machinery containing solvents during servicing and maintenance as well as prior to equipment dismantling or disposal, for purposes of recycling, reclamation or destruction to prevent releases of controlled substances into the atmosphere (para. 4 of decision IV/24, on recovery, reclamation and recycling of controlled substances). A list of reclamation facilities reported by Parties can be found on the Ozone Secretariat website at <https://ozone.unep.org/countries/additional-reported-information/reclamation-facilities>.

<sup>28</sup> See [www.wcoomd.org/en/media/newsroom/2022/december/operation-demeter-viii.aspx](http://www.wcoomd.org/en/media/newsroom/2022/december/operation-demeter-viii.aspx).



through using risk analysis and other proactive techniques,<sup>29</sup> and utilizing tools and technologies for tracking enforcement.<sup>30</sup>

27. Parties have acknowledged that an important first step toward effective monitoring of transboundary movements of ODS between Parties would be better implementation and enforcement of existing mechanisms.<sup>31</sup> A key component of improving implementation and enforcement of existing mechanisms is ensuring that those who have the responsibility and authority to implement and enforce existing mechanisms are aware of the *legal and technical tools* available to them and have the knowledge and skills to apply these tools. Parties may wish to share information on good practices relating to *training and capacity-building* and consider how current efforts<sup>32</sup> could be enhanced, replicated or upscaled.

28. Parties may wish to share their experiences with challenges relating to *phase-down of hydrofluorocarbons (HFCs) and reporting* (on, for example, multiple blends and HFC-23 emissions) that did not exist in relation to the phase-out of ODS and consider what measures may be appropriate for addressing these specific challenges.<sup>33</sup>

29. Continued compliance with phase-out and phase-down obligations requires *sustaining the phase-out or phase-down* achieved. Means to monitor and verify sustained phase-out and phase-down are particularly important for parties that have production for non-controlled uses (e.g., exempted uses). These parties must control and track their production to ensure that there is no diversion to controlled uses.<sup>34</sup> Specific regulatory measures that Article 5 parties have established to ensure the sustainability of the phase-out of ODS include bans on the import of specific substances or equipment containing a controlled substance after finalization of the total conversion of the relevant manufacturing sector. Licensing and quota systems must also consider these non-controlled uses.<sup>35</sup> In the case of Article 5 parties, verification under the Multilateral Fund ceases upon completion of the phase-out or phase-down projects.

30. Information on measures taken by parties not operating under paragraph 1 of Article 5 (non-Article 5 parties) to sustain phase-out and phase-down is not as readily available. Parties may wish to consider how they can promote the sharing of information on effective steps taken by them to sustain phase-out or phase-down, including means that would incentivize such measures.

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<sup>29</sup> See, for example, the United Nations Office on Drugs and Crime–World Customs Organization Container Control Programme, at [www.unodc.org/unodc/en/ccp/ccp-programme-details.html](http://www.unodc.org/unodc/en/ccp/ccp-programme-details.html) and [www.unodc.org/unodc/en/ccp/ccp-programme-details.html](http://www.unodc.org/unodc/en/ccp/ccp-programme-details.html).

<sup>30</sup> See, for instance, the key investigative techniques and technologies that countries should consider adopting and/or developing as part of pollution enforcement efforts identified by the Environmental Security Programme of the International Criminal Police Organization (INTERPOL), as described in “The nexus between organized crime and pollution crime”, 2022. Available at [www.interpol.int/Crimes/Environmental-crime/Pollution-crime](http://www.interpol.int/Crimes/Environmental-crime/Pollution-crime).

<sup>31</sup> Decision XIX/12, on preventing illegal trade in ODS, fifth preambular para.

<sup>32</sup> As part of supporting the regulatory framework for controlled substances and the enforcement of these frameworks, the Multilateral Fund has provided support for the training of customs and law enforcement officers (e.g., border control and security officials, police, investigators, environmental officers) as part of each country’s national phase-out plan for ODS. Capacity-building and training has also been provided to technicians, as well as university staff and laboratory personnel. Such activities can be organized domestically as well as subregionally and regionally. Materials for these activities have also been developed and regularly updated. See para. 58 of document UNEP/OzL.Pro/ExCom/91/69, on an overview of current monitoring, reporting, verification and enforceable licensing and quota systems developed with support from the Multilateral Fund (decision 89/2).

<sup>33</sup> As indicated in the submission by the Environmental Investigation Agency to the online forum for the Thirty-Fourth Meeting of the Parties under item 7 of the agenda, on institutional processes to strengthen the effective implementation and enforcement of the Montreal Protocol, available at <https://online.ozone.unep.org/t/institutional-processes-of-the-mp-list-of-ideas/866>, the fact that the Kigali Amendment has introduced a phase-down and not a phase-out; that there are four, instead of two, phase-down schedules; that the carbon-dioxide-equivalent metric has been introduced; and that HFC phase-down is being undertaken by Article 5 parties simultaneously with HCFC phase-out introduces complexities that must be taken into account in any discussion on strengthening effective implementation and enforcement of the Montreal Protocol. See also Environmental Investigation Agency, “Preventing illegal trades in controlled substances: old and new challenges”, presentation at the fifth edition of Europe and Central Asia Montreal Protocol Award for Customs and Enforcement Officers, 29 March 2023. Available at [www.ozonactionmeetings.org/system/files/eia\\_presentation\\_on\\_preventing\\_illegal\\_trade\\_clare\\_perry.pdf](http://www.ozonactionmeetings.org/system/files/eia_presentation_on_preventing_illegal_trade_clare_perry.pdf).

<sup>34</sup> UNEP/OzL.Pro/ExCom/89/3, paras. 39 and 53.

<sup>35</sup> *Ibid.*, para. 60.

## D. Other considerations

31. The present subsection covers important considerations that do not fall under any of the previous sections. In particular, it will address substances and products, their uses and associated activities that are relevant to the Montreal Protocol and the attainment of its objectives but not directly relevant to the implementation of the control measures to phase out or phase down the production and consumption of controlled substances.

32. Many of the issues included in the subsection have been addressed by the parties in the past, to manage and reduce not only the production and consumption of controlled substances but also emissions from banks and processes. These issues are among the remaining challenges under the Montreal Protocol, which aims to control the global emissions of substances that deplete the ozone layer with the ultimate objective of their sound management to increase ozone and climate benefits. Addressing those challenges has the potential to advance the achievements of the Montreal Protocol towards its ultimate objective and further contribute to the global efforts to tackle climate change and other environmental and sustainable development issues.

### 1. Atmospheric monitoring and detection of emissions

33. In 2018, scientists detected that global emissions of trichlorofluoromethane (CFC-11) had been increasing unexpectedly since 2012, after the consumption and production phase-out date for that substance established under the Montreal Protocol.<sup>36</sup> The parties took immediate action, mobilizing themselves and their institutions, including the assessment panels of the Protocol, to address the unexpected emissions. At the request of the parties, the Scientific Assessment Panel and the Technology and Economic Assessment Panel provided reports on the emissions and their potential sources. From 2018 to 2020, parties discussed the matter extensively, including working with the Scientific Assessment Panel and the Ozone Research Managers on the identification of gaps in global coverage of atmospheric monitoring of controlled substances and exploring options for enhancing such monitoring and informing the parties of preliminary information indicating unexpected emissions of controlled substances.

34. During 2020 and 2021, a pilot project was developed, funded by the European Union, on the regional quantification of emissions of substances controlled under the Montreal Protocol, the implementation of which started in 2022. In 2022, the Scientific Assessment Panel reported at the forty-third meeting of the Open-ended Working Group and the Thirty-Third Meeting of the Parties that the decline in atmospheric concentrations of CFC-11 had accelerated after 2018, in 2019, 2020 and the first part of 2021. In 2020, global CFC-11 emissions had been lower than in 2019 and near expected levels, suggesting that a large proportion of the unexpected emissions from new use and production had stopped. The Scientific Assessment Panel cautioned, however, that the new CFC-11 banks that might have been created from the unexpected production could add to emissions for some time.

35. The parties agreed that the parties and the scientific community needed to remain vigilant regarding controlled substances, including HFCs, and that the situation with CFC-11 had revealed a need to ensure compliance, sustain phase-out and achieve reductions.<sup>37</sup> The need for related capacity-building, management of banks and national legislation to control emissions during destruction and disposal were also recognized.

36. The issue of enhancing the global and regional atmospheric monitoring of controlled substances is being considered by parties through a stand-alone work stream under the Montreal Protocol and is now a regular agenda item in the meetings of the Open-ended Working Group and the Meeting of the Parties. The issue is also of key importance under the Vienna Convention for the Protection of the Ozone Layer. At its forty-fifth meeting, the Open-ended Working Group is expected to have a dedicated discussion on this matter under item 7 of the provisional agenda of the meeting (UNEP/OzL.Pro.WG.1/45/1/Rev.1).<sup>38</sup>

<sup>36</sup> Stephen A. Montzka and others, “An unexpected and persistent increase in global emissions of ozone-depleting CFC-11”, *Nature*, vol. 557, 413 (17 May 2018) (available at [https://www.nature.com/articles/s41586-018-0106-2.epdf?author\\_access\\_token=8WwMj3QsF2jrtiiQpgZ5odRgN0jAjWe19jnR3ZoTv0ObYgkb7dfDTYXtPv1emzLB SjYIO6a3LBkIW2dKNwR2ISU4wIlyG\\_182oTfpfKEEH500StOkfRARNKMBkQjvS80uAinlNaxqjhGH1iSKujQQ%3D%3D](https://www.nature.com/articles/s41586-018-0106-2.epdf?author_access_token=8WwMj3QsF2jrtiiQpgZ5odRgN0jAjWe19jnR3ZoTv0ObYgkb7dfDTYXtPv1emzLB SjYIO6a3LBkIW2dKNwR2ISU4wIlyG_182oTfpfKEEH500StOkfRARNKMBkQjvS80uAinlNaxqjhGH1iSKujQQ%3D%3D)).

<sup>37</sup> Decision XXX/3, para. 7 and document UNEP/OzL.Conv.12(II)/9/Rev.1–UNEP/OzL.Pro.33/8/Rev.1, para. 36.

<sup>38</sup> See paras. 40–46 of the note by the Secretariat on issues for discussion by and information for the attention of the Open-ended Working Group of the Parties to the Montreal Protocol at its forty-fifth meeting (UNEP/OzL.Pro.WG.1/45/2).



## 2. Environmentally sound management of banks of ozone-depleting substances

37. Historically, ODS have been used in various types of user applications, such as refrigeration and air-conditioning systems and equipment, fire-fighting equipment, and foam products currently in use in buildings, equipment, appliances and various products. In addition, virgin, recovered, contaminated, unwanted and confiscated ODS are being held in stockpiles by companies and countries. The substances contained in existing equipment, products and stockpiles are referred to as “ODS banks”. While the Protocol does not control ODS banks, the relevant scientific and technical communities and the parties recognize that significant emissions of ODS would occur if the banks were not managed and disposed of properly. Such emissions would cause damage to the ozone layer and the global climate.

38. Significant uncertainties exist regarding the sizes, types and quantities of emissions from ODS banks. While it is difficult to estimate the magnitude of the banks, the Scientific Assessment Panel, in its 2022 quadrennial assessment,<sup>39</sup> showed that preventing emissions from banks would be one of the few actions that could be taken to further reduce the emissions of ODS into the atmosphere and thereby hasten the recovery of the ozone layer. Possible interventions to reduce or eliminate emissions from banks include prevention of leakages, recapture, recovery and destruction. However, accessing the banks may be difficult in some cases.

39. In the 2000s, especially the period before the start of the intense discussions on the HFC amendment proposals, one of the topics parties focused their attention on was the environmentally sound management of banks. During that period parties requested several assessments and studies to be undertaken by (a) the Technology and Economic Assessment Panel on, inter alia, the costs and technologies related to ODS bank management, reviewing possible synergies with other multilateral environmental agreements such as the Basel, Rotterdam and Stockholm conventions and a comprehensive cost-benefit analysis of destroying ODS banks; (b) the Executive Committee of the Multilateral Fund on the collection, recovery, recycling, reclamation, transportation, and destruction of unwanted ODS; and (c) the Ozone Secretariat, with the assistance of the Fund secretariat, to consult relevant funding experts on possible funding opportunities for the management and destruction of ODS banks.

40. The parties, in 2008, adopted decision XX/7, with emphasis on actions to find ways and means of financing the collection, transportation, storage and destruction of ODS in Article 5 parties and encouraging parties to prevent venting, leakage or emissions of ODS, as well as emphasis on the management of banks, including provisions to combat illegal trade by applying measures listed in decision XIX/12.<sup>40</sup> In paragraph 10 of decision XX/7, the Twentieth Meeting of the Parties outlined the following key aspects in the sound management of banks: recovery, collection, storage, transport, destruction and supporting activities. In the decision, the Twentieth Meeting of the Parties requested the Ozone Secretariat to convene a workshop to discuss technical, financial and policy issues related to the management and destruction of ODS banks. The workshop was convened in June 2009.<sup>41</sup>

41. In 2009, the parties adopted decision XXI/2, in which they noted the significant climate change and ozone layer benefits associated with destroying many types of ozone-depleting substances, requested the Executive Committee to continue its consideration of further pilot projects that covered collection, transportation, storage and destruction. In the decision, the Technology and Economic

<sup>39</sup> World Meteorological Organization, *Scientific Assessment of Ozone Depletion: 2022*, GAW Report No. 278 (Geneva, 2022).

<sup>40</sup> Paragraph 3 of the decision listed the following measures that parties might wish to consider implementing on a voluntary basis: (a) sharing information with other Parties, for example, by participating in an informal prior informed consent procedure or similar system; (b) establishing quantitative restrictions, for example, import and/or export quotas; (c) establishing permits for each shipment and obliging importers and exporters to report domestically on the use of such permits; (d) monitoring transit movements (trans-shipments) of ODS, including those passing through duty-free zones, for instance, by identifying each shipment with a unique consignment reference number; (e) banning or controlling the use of non-refillable containers; (f) establishing appropriate minimum requirements for labelling and documentation to assist in the monitoring of trade of ODS; (g) cross-checking trade information, including through private-public partnerships; (h) including any other relevant recommendations from the ODS tracking study. The tracking study referred to is Chatham House, Environmental Investigation Agency, “ODS Tracking: Feasibility Study on Developing a System for Monitoring the Transboundary Movement of Controlled Ozone-depleting Substances between the Parties” (2006), available at <https://ozone.unep.org/system/files/documents/ODS-Tracking-September-2006-1.pdf>. Many of the recommendations set out in that study have been incorporated in the list of measures enumerated above.

<sup>41</sup> Workshop on management and destruction of ozone-depleting substance banks and implications for climate change, Geneva, 13 July 2009. See <https://ozone.unep.org/meetings/workshop-management-and-destruction-ods-banks-and-implications-climate-change>.

Assessment Panel was requested to review some destruction technologies and their commercial and technical availability. The Ozone Secretariat was requested to host a seminar on the topic of how to identify and mobilize funds for ODS destruction. In subsequent years, the focus of the parties shifted to considering and approving destruction technologies for effective and efficient destruction of unwanted ODS. The Executive Committee continued approving and funding some pilot and demonstration projects on the destruction and disposal of ODS in Article 5 parties and reported on their results to the Meetings of the Parties until 2019.<sup>42</sup>

42. When the Kigali Amendment was adopted in 2016, parties also adopted decision XXVIII/2, that set out the principles, conditions, requirements and actions associated with the Kigali Amendment and its implementation. One of the elements agreed under the financial issues was disposal (para. 24). Parties requested the Executive Committee to consider funding the cost-effective management of stockpiles of used or unwanted controlled substances, including destruction. At its ninety-first meeting in 2022, the Executive Committee of the Multilateral Fund established a funding window for the preparation of national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction.

43. Parties may wish to discuss whether further action on the sound management of banks would be appropriate at the present time and, if so, what that action may be.

### 3. Trade in equipment and the prior informed consent procedure

44. At the Thirty-Third Meeting of the Parties to the Montreal Protocol in 2021, the group of African States proposed a draft decision on stopping environmentally harmful dumping of inefficient refrigerant and air-conditioning appliances using obsolete refrigerants. The parties discussed the proposal at the forty-fourth meeting of the Open-ended Working Group and the Thirty-Fourth Meeting of the Parties in 2022. The proponents expressed the view that the dumping of obsolete, new and used cooling appliances in Africa and other developing countries through exports by parties that had transitioned to more efficient, lower-global-warming-potential refrigerants during early phase-out or phase-down of controlled substances represented the exporting of poverty and non-compliance.

45. The discussions on the proposal culminated in the adoption of decision XXXIV/4 on the illegal import of certain refrigeration, air-conditioning and heat pump products and equipment. Due to a lack of time that prevented the consideration of the full text that had been proposed, Parties agreed on considering the issue further at the Thirty-Fifth Meeting of the Parties in 2023 and including the item on the agenda of the forty-fifth meeting of the Open-ended Working Group, taking into account the information requested from parties in decision XXXIV/4.<sup>43</sup>

46. During the discussions at the forty-fourth meeting of the Open-ended Working Group, several representatives referred to prior informed consent procedures that were in place under other multilateral environmental agreements such as the Basel Convention on Transboundary Movements of Hazardous Wastes and their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The prior informed consent procedure under the Basel Convention as it applies to the trade in equipment is briefly described below.

47. The prior informed consent procedure of the Basel Convention is the foundation of the Convention's control system. Paragraph 1 of Article 6 of the Basel Convention requires the State of export to notify, or to require the generator or exporter to notify the competent authority of the States concerned of any proposed transboundary movement of hazardous wastes or other wastes.<sup>44</sup> Under paragraph 2 of Article 6, the State of import may consent to the movement with or without conditions, deny permission for the movement, or request additional information. The State of export is not to allow the generator or exporter to commence the transboundary movement until it has received written confirmation that the notifier has received the written consent from the State of import and

<sup>42</sup> See the final report on the evaluation of the pilot demonstration projects on ODS disposal and destruction (UNEP/OzL.Pro/ExCom/84/11).

<sup>43</sup> In decision XXXIV/4, the Thirty-Fourth Meeting of the Parties invited parties that had restricted the manufacture and/or import of certain refrigeration, air-conditioning and heat pump products and equipment containing or relying on controlled substances, including with respect to energy efficiency, and that did not want to receive such products and equipment from other parties against payment or free of charge, to submit to the Secretariat by 1 May 2023 the relevant information as listed in the decision.

<sup>44</sup> The declarations and information that the notification must contain are set out in Annex V A to the Basel Convention. This notification must include information on the waste itself, the proposed disposal operation and other details relating to the proposed shipment.

confirmation from the State of import of the existence of a contract between the exporter and disposer specifying the environmentally sound management of the wastes in question (para. 3). Parties must require that each person who takes charge of a transboundary movement of hazardous wastes or other wastes sign the movement document either upon delivery or upon receipt of the wastes in question, and require the disposer to inform both the exporter and the competent authority of the State of export of receipt by the disposer of the wastes in question and, in due course, of the completion of disposal (para. 9). Finally, any transboundary movement of hazardous wastes or other wastes must be covered by insurance, bond or other guarantee as may be required by the State of import or any State of transit which is a Party to the Basel Convention (para. 11).

48. The technical guidelines on transboundary movements of electrical and electronic waste and used electrical and electronic equipment, in particular regarding the distinction between waste and non-waste under the Basel Convention,<sup>45</sup> were adopted by the Conference of the Parties to the Basel Convention on an interim basis at its fourteenth meeting, in decision BC-14/5. The guidelines apply to waste electrical and electronic equipment (known as e-waste) and used electrical and electronic equipment that may or may not be e-waste. They consider whole used equipment and components that can be removed from equipment, be tested for functionality and subsequently be directly reused, sent for failure analysis or reused after repair or refurbishment. The term “equipment” is defined on page 19 of the technical guideline as “electrical and electronic equipment that is dependent on electric currents or electromagnetic fields in order to work properly, including components that can be removed from equipment and can be tested for functionality and either be subsequently directly reused or reused after repair or refurbishment”.

49. As the notes to appendices II and III of the guidelines indicate, used equipment could include refrigeration equipment.

50. At its fifteenth meeting, in decision BC-15/18, the Conference of the Parties to the Basel Convention adopted amendments to Annexes II, VIII and IX of the Basel Convention. The amendments, which are expected to enter into force on 1 January 2025, will subject all transboundary movements of electrical and electronic wastes, whether hazardous or not, to the Convention’s prior informed consent procedure.

51. While trade in equipment among parties is not controlled under the Montreal Protocol, parties may wish to discuss the merits of controlling such trade for certain unwanted equipment. Decisions X/9 and XXVII/8 adopted by the parties instituted a procedure whereby parties that did not wish to import certain products and equipment that relied on the controlled substances listed in Annex A (chlorofluorocarbons and halons), Annex B (other chlorofluorocarbons, carbon tetrachloride and methyl chloroform) and Annex C (HCFCs) to the Convention, respectively, for continuing functioning, to voluntarily inform the Secretariat so that the information could be distributed to all parties and updated annually. The information received from the parties is posted on the Secretariat’s website.<sup>46</sup> Similarly, decision XXXIV/4 invited parties that had restricted the manufacture and/or import of certain refrigeration, air-conditioning and heat pump products and equipment containing or relying on controlled substances, including with respect to energy efficiency, and that did not want to receive such products and equipment from other parties against payment or free of charge, to submit to the Secretariat by 1 May 2023 the relevant information listed in the decision.

52. Parties may wish to discuss possible measures that may be taken to facilitate the prevention of unwanted trade, particularly in products and equipment that contain or rely on controlled substances and are energy-inefficient. As mentioned in paragraph 45, above, a discussion on decision XXXIV/4 may also take place at the forty-fifth meeting of the Open-ended Working Group under a dedicated agenda item on the issue.<sup>47</sup>

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<sup>45</sup> UNEP/CHW.14/7/Add.6/Rev.1. The expert working group on the tasks pertaining to the technical guidelines on transboundary movements of electrical and electronic waste and used electrical and electronic equipment, in particular regarding the distinction between waste and non-waste under the Basel Convention, was requested by the Conference of the Parties to the Basel Convention, in decision BC-14/5, to prepare updated technical guidelines, taking into consideration the amendments to Annexes II, VIII and IX to the Basel Convention adopted in decision BC-15/18 and paragraph 4 of decision BC-14/5, and to submit them for the consideration of the Conference of the Parties at its sixteenth meeting.

<sup>46</sup> See <https://ozone.unep.org/parties-not-wishing-receive-products-and-equipment-relying-annex-and-b-substances-decisions-x9> for information relating to decision X/9 and <https://ozone.unep.org/countries/additional-reported-information/unwanted-imports> for information relating to decision XXVII/8.

<sup>47</sup> See item 6 (b) of the provisional agenda of the forty-fifth meeting of the Open-ended Working Group (UNEP/OzL.Pro.WG.1/45/1/Rev.1), entitled “Illegal import of certain refrigeration, air-conditioning and heat pump products and equipment”.

#### 4. Various “exemptions” under the Montreal Protocol

53. The Montreal Protocol has various “exemptions” which may be categorized into the following types:

(a) **Feedstock uses.** A feedstock use of a controlled substance refers to the controlled substance being used in a chemical process to manufacture other chemicals. In the process, the controlled substance is chemically transformed in its entirety. Thus any emissions of a controlled substance resulting from the feedstock use are expected to be small. The amount of controlled substances produced, exported or imported and used as feedstock should be excluded from the calculation of production and consumption;

(b) **Process agent uses.** In a process agent use, a controlled substance is added to a chemical process as a catalyst but does not undergo a chemical transformation as in the case of a feedstock use. It is expected that process agent uses do not result in significant emissions of controlled substances. Similarly as for feedstock uses, controlled substances produced, exported and imported and used entirely as process agents are excluded from the calculation of production and consumption. Such process agent uses must be included in the list of chemical processes that are approved as process agent uses for the purposes of the Protocol;

(c) **Quarantine and pre-shipment uses.** Quarantine use of methyl bromide refers to applying methyl bromide on commodities to prevent the introduction, establishment and/or spread of quarantine pests (including diseases) or to ensure their official control. Pre-shipment use of methyl bromide refers to non-quarantine applications applied to commodities within 21 days prior to export to meet phytosanitary or sanitary requirements of the importing or exporting country. As the spread of pests and diseases would have grave economic and environmental consequences, the Montreal Protocol exempts the quarantine and pre-shipment uses of methyl bromide which are required by some countries for trading certain commodities;

(d) **Essential uses.** Production or consumption of phased-out controlled substances is allowed when deemed necessary to satisfy uses that are agreed by the parties to be essential.<sup>48</sup> Criteria, conditions and procedures for nominating, evaluating (by the Technology and Economic Assessment Panel) and approving essential uses have been established and refined in several decisions by the parties. Relevant parties are required to report on production and imports of controlled substances used for approved essential uses and also submit accounting frameworks for amounts acquired, used and remaining as stocks;

(e) **Critical uses.** Production or consumption of phased-out methyl bromide is allowed when deemed necessary to satisfy uses that are agreed by the parties to be critical.<sup>49</sup> Criteria, conditions and procedures for nominating, evaluating (by the Technology and Economic Assessment Panel) and approving critical uses have been established and refined in several decisions by the parties. Relevant parties are required to report on production and imports of controlled substances used for approved critical uses and also submit accounting frameworks for amounts acquired, used and remaining as stocks;

(f) **Laboratory and analytical uses.** The global exemption mechanism permits uses of controlled substances for laboratory and analytical use as long as they fulfil the agreed conditions for those uses. Production of controlled substances for laboratory and analytical uses must be reported by the parties. Decision IX/17 states that data for consumption and production should be reported annually under a global essential-use exemption framework so that the success of reduction strategies may be monitored;

(g) **Exemption for high-ambient-temperature parties.** Thirty-four parties that have high ambient temperature conditions have been listed in appendix II to decision XXVIII/2, a decision related to the amendment for phasing down HFCs. Decision XVIII/2 includes, among other things, an exemption for HFCs for those high-ambient-temperature countries that can be used until suitable

<sup>48</sup> In accordance with para. 1 (a) of decision IV/25, on essential uses, a use of a controlled substance should qualify as “essential” only if it is necessary for health and safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and there are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health.

<sup>49</sup> In accordance with para. 1 (a) of decision IX/6, on critical-use exemptions for methyl bromide, a use of methyl bromide should qualify as “critical” only if the nominating Party determines that the specific use is critical because the lack of availability of methyl bromide for that use would result in a significant market disruption; and there are no technically and economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances of the nomination.

alternatives are found in the three subsectors specified in appendix I<sup>50</sup> to the same decision. Conditions and procedures for the exemption are set out in paragraphs 26–37 of the decision. The exemption may be applied from the start date of the freeze in production and consumption of HFCs.

54. The Montreal Protocol has used the above “exemptions” for uses of controlled substances where adequate alternatives are not available or technically or economically feasible, in order to ensure that the functioning of society is not disrupted or compromised (e.g., essential and critical-use exemptions and quarantine and pre-shipment applications). Some “exemptions” are used in cases where the emissions of the controlled substances are supposed to be negligibly small (e.g., feedstock, process agent, and laboratory and analytical uses).<sup>51</sup>

55. The Scientific Assessment Panel 2022 quadrennial assessment includes the following key findings:

(a) If all future ODS emissions were eliminated in 2023, the return of mid-latitude equivalent effective stratospheric chlorine to 1980 levels would be brought forward by about 16 years and the average of global stratospheric ozone in the period 2023–2070 would increase by about 2 Dobson units. These emissions are dominated by the release from current banks, with additional contributions from controlled future production and consumption of ODS, production for feedstock use, and quarantine and pre-shipment uses of methyl bromide.

(b) A new modelling approach in assessing the banks has led to larger bank estimates resulting in a delay of the projected return of mid-latitude equivalent effective stratospheric chlorine to 1980 levels by six years compared with the previous (2018) assessment.

(c) Total production of controlled substances for feedstock use is increasing. If all future feedstock-related emissions were eliminated, this would bring forward the return of mid-latitude equivalent effective stratospheric chlorine to 1980 levels by almost four years when compared to the baseline scenario. The mass of reported feedstock production has increased by 75 per cent over the last decade.

(d) Carbon tetrachloride emissions from feedstock production and use currently dominate the ODS influence on ozone from all feedstocks.

(e) If future emissions of quarantine and pre-shipment applications of methyl bromide could be eliminated, this would accelerate the return of mid-latitude equivalent effective stratospheric chlorine to 1980 levels by two years.

56. Parties may wish to discuss the merits of taking action on “exemptions” and whether any action by the parties could be appropriate.

57. The issues raised above may also be discussed under the relevant items included on the provisional agenda of the forty-fifth meeting of the Open-ended Working Group:

- (a) Agenda item 8 (b): Ongoing emissions of carbon tetrachloride (decision XXXIV/6);
- (b) Agenda item 8 (c): Quarantine and pre-shipment uses of methyl bromide for which alternatives are available (decision XXXIV/10, para. 4);
- (c) Agenda item 9: Stocks of methyl bromide (decision XXXIV/10, para. 3) (relevant to the issue of banks).

<sup>50</sup> Multi-split air conditioners (commercial and residential); split ducted air conditioners (commercial and residential); and ducted commercial packaged (self-contained) air conditioners.

<sup>51</sup> For more information on these “exemptions”, see <https://ozone.unep.org/sites/default/files/resources/Specific-uses-of-controlled-substances-under-the-Montreal-Protocol.pdf> and the “Briefing note on exemption mechanisms under the Montreal Protocol” available at [https://ozone.unep.org/sites/default/files/2020-06/Briefing\\_note\\_on\\_exemptions.pdf](https://ozone.unep.org/sites/default/files/2020-06/Briefing_note_on_exemptions.pdf).