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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-ninth Meeting
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**DEVELOPMENT OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs IN
ARTICLE 5 COUNTRIES: DRAFT CRITERIA FOR FUNDING (DECISION 78/3)**

Background

1. The 78th meeting of the Executive Committee was held from 4 to 7 April 2017 to address only matters related to the Kigali Amendment to the Montreal Protocol (the Kigali Amendment).
2. Under agenda item 6(a)(i),¹ the Executive Committee started discussions on matters concerning the cost guidelines for the phase-down of HFCs based on the document UNEP/OzL.Pro/ExCom/78/5 and Corr. 1. The document provided information on all relevant elements of decision XXVIII/2, except for those related to enabling activities² (paragraph 20), institutional strengthening³ (paragraphs 20(b) and 21), and HFC-23 by-product control technologies⁴ (paragraph 15(b)(viii)), which were presented in separate documents. To further facilitate the work of the Executive Committee, Annex I of the document contained a draft template of the cost guidelines for the phase-down of HFCs.

Discussions at the 78th meeting

3. The Executive Committee discussions focused on matters concerning the Kigali Amendment and the Committee's role in fulfilling its mandate pursuant to decision XXVIII/2⁵ overarching principles and

¹ Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: draft criteria for funding.

² UNEP/OzL.Pro/ExCom/78/6.

³ UNEP/OzL.Pro/ExCom/78/7.

⁴ UNEP/OzL.Pro/ExCom/78/9.

⁵ See paragraphs 86 to 98 of document UNEP/OzL.Pro/ExCom/78/11 reproduced in Annex II to the present document. Issues discussed included the need to formulate a global strategy or policy on the phase-down of HFCs, the categorization of Article 5 countries into group 1 and group 2 according to their HFC consumption baseline years, and the rule that only one member from each constituency should speak on any single matter.

timelines;⁶ and each of the elements of decision XXVIII/2 relevant to the work of the Executive Committee.⁷

4. With regard to the procedures for the development of the HFC cost guidelines, several members mentioned that the Executive Committee could begin structuring a single decision that would ultimately contain the cost guidelines for the HFC phase-down. It could be a procedural decision indicating where progress had been made and requesting additional work to be undertaken on specific subjects where relevant. An annex to that decision could then be developed, as had been done for the cost guidelines for stage II of the HCFC phase-out management plans (HPMPs).

Decision 78/3

5. In concluding its deliberations on agenda item 6(a)(i), the Executive Committee adopted decision 78/3, which addressed both procedural and substantive matters related to the development of the cost guidelines for HFC phase-down. With regard to substantive matters, there was a common understanding among members that the text of the elements of decision XXVIII/2 on flexibility in implementation;⁸ cut-off date;⁹ second and third conversions;¹⁰ and incremental costs in the consumption manufacturing sector¹¹ should be moved to the draft template of the cost guidelines (decision 78/3(b), (c), (d) and (f)).

6. With regard to procedural matters, the Committee agreed to continue discussing matters related to the sustained aggregate reductions on HFC consumption (decision 78/3(e)), and the following elements of decision XXVIII/2: eligible incremental costs (consumption manufacturing, production sector, refrigeration servicing sector, and other costs), energy efficiency, capacity building to address safety, disposal and eligibility of Annex F substances subject to high-ambient-temperature exemptions (decision 78/3(i)).

Scope of the document

7. This document has been prepared pursuant to decision 78/3 and consists of three sections. For each section, where applicable, reference is made to the paragraphs of document UNEP/OzL.Pro/ExCom/78/5 describing each element of decision XXVIII/2,¹² and to the paragraphs of document UNEP/OzL.Pro/ExCom/78/11 reflecting the Executive Committee discussions, which are summarized, where relevant. For ease of reference, the actual text of the element of decision XXVIII/2 is also included.

⁶ See paragraphs 32 to 40 of document UNEP/OzL.Pro/ExCom/78/11 reproduced in Annex II to the present document. Issues discussed included the legal prerequisites for accessing Multilateral Fund funding, the suitable type of national strategy for HFC phase-down, the applicability of funding policies and guidelines for ODS phase-out and the continued use of institutions and capacities in Article 5 countries that had been developed with Multilateral Fund assistance.

⁷ See paragraphs 41 to 85 of document UNEP/OzL.Pro/ExCom/78/11 reproduced in Annex II to the present document. The elements discussed included: flexibility in implementation; the cut-off date for eligible capacity; second and third conversions; sustained aggregate reductions in HFC consumption and production; eligible incremental costs (consumption manufacturing sector, production, refrigeration servicing), and other costs; energy efficiency; capacity building to address safety, disposal; and eligibility of Annex F substances subject to high ambient temperature exemptions.

⁸ Paragraph 13 of decision XXVIII/2.

⁹ Paragraph 17 of decision XXVIII/2.

¹⁰ Paragraph 18 of decision XXVIII/2.

¹¹ Paragraph 15 (a) of decision XXVIII/2.

¹² As agreed by the Executive Committee at its 78th meeting, enabling activities and institutional strengthening, which are elements of decision XXVIII/2, are being considered separately not as part of this document.

8. These are the three sections of the document:

- Section I: Overarching principles and timelines: These principles were considered at the 78th meeting; as no consensus was reached, the Executive Committee decided to discuss them at a future meeting. As these principles could facilitate implementation of some of the decisions agreed at the 78th meeting (e.g., the submission of HFC-related projects in the manufacturing sector), the Executive Committee might wish to discuss them at the 79th meeting.
- Section II: Further discussions on specific elements of decision XXVIII/2: Presents the elements of decision XXVIII/2 about which common understanding by Executive Committee members has been reached; and presents the elements of decision XXVIII/2 that the Executive Committee had agreed to further discuss.
- Section III: Recommendation: A comprehensive recommendation is proposed based on all the matters discussed, noting that decision 78/3 did not address all elements of decision XXVIII/2, and that the Secretariat has sought further advice on some of the sub-paragraphs of decision 78/3.

9. The document also contains the following three annexes:

- Annex I: Draft template of the cost guidelines for the phase-down of HFCs as at the close of the 78th meeting. This draft contains the text of the elements of decision XXVIII/2 where common understanding by Executive Committee members was reached at the 78th meeting. It will continue to be updated pursuant to further discussions on the elements of decision XXVIII/2.
- Annex II: Discussions by Executive Committee members under agenda item 6(a)(i), Draft criteria for funding extracted from the Report of the 78th meeting of the Executive Committee.
- Annex III: Decision 78/3 on the cost guidelines for the phase-down of HFCs in Article 5 countries.

Section I: Overarching principles and timelines

10. Adapting the Executive Committee approach used in the development of the cost guidelines for HCFC phase-out¹³, the following aspects mentioned in document UNEP/OzL.Pro/ExCom/78/5¹⁴ could be agreed prior to finalizing the cost guidelines for HFC phase-down: the legal prerequisites for accessing Multilateral Fund funding; the most suitable type of national strategy for providing assistance for HFC phase-down; the applicability of the existing Multilateral Fund funding policies and guidelines for ODS phase-out; the continued use of institutions and capacities in Article 5 countries that had been developed

¹³ At the 53rd meeting (December 2007), the Executive Committee considered a discussion document on options for assessing and defining eligible incremental costs for HCFC consumption and production phase-out activities (UNEP/OzL.Pro/ExCom/53/60). Based on that document, the Committee took decision 53/37, which included guideline-related aspects on prerequisites for assessing Multilateral Fund funding for HCFC phase-out, the applicability of existing policies and guidelines, the use of existing institutions and capacities, and maintaining classification of low-volume-consuming (LVC) countries and small and medium-sized enterprises, as well as additional work on specific matters to be undertaken by the Secretariat so that the Executive Committee would be able to finalize the cost guidelines. Subsequently, from the 54th meeting (April 2008) to the 60th meeting (April 2010), at which the cost guidelines for HCFC phase-out were approved, the Committee considered various policy documents, including the progress on the development of the cost guidelines.

¹⁴ Paragraphs 16 to 25.

with Multilateral Fund assistance; and the continued use of the definitions for low-volume-consuming (LVC) countries and small and medium-sized enterprises.

11. Document UNEP/OzL.Pro/ExCom/78/5 highlights that, during the phase-out of HCFCs, the Executive Committee approved projects prior to the finalization of the cost guidelines, and addressed new issues arising during the implementation of HCFC phase-out management plans (HPMPs) as needed. For example, four stand-alone HCFC phase-out investment projects were approved at the 59th meeting prior to the finalization of the cost guidelines for stage I of HPMPs at the 60th meeting. Similarly, Article 5 countries were allowed to submit stage II of their HPMPs prior to a decision on the criteria for funding of stage II of HPMPs, on the understanding that the proposals would be based on the existing guidelines for stage I, and the funding level approved would not be modified on the basis of the criteria adopted for funding stage II.¹⁵

12. At the 78th meeting, it was recognized that the Kigali Amendment struck a delicate balance, and that it was essential that the outcomes achieved at the Twenty-eight Meeting of the Parties be accurately reflected in the guidelines for HFC phase-down. Members highlighted issues regarding the applicability of the existing policies and guidelines, the continued use of the capacities and institutions developed using Multilateral Fund resources, and the determination of the most suitable national strategies.

13. Subsequently, the Executive Committee considered a conference room paper submitted by the Chair,¹⁶ containing the following elements of a proposed draft decision, based on the discussions:

- (a) “To develop guidelines for financing the phase-down of HFC consumption and production for submission to the Thirtieth Meeting of the Parties in 2018, and to finalize the guidelines as soon as possible thereafter, taking into account the views and input provided by the Parties;
- (b) That, in line with paragraph 11 of decision XXVIII/2, the Chair of the Executive Committee would report:
 - (i) To the Twenty-Ninth Meeting of the Parties on the progress of the Executive Committee in developing cost guidelines for funding HFC phase-down; and
 - (ii) To future Meetings of the Parties on cases where Executive Committee deliberations had resulted in a change in a national strategy or a national technology choice submitted to the Executive Committee;
- (c) That the review of the rules of procedures of the Executive Committee requested in paragraph 12 of decision XXVIII/2 should be an ongoing process, which would be revisited in future when the Executive Committee had gained more experience with regard to funding activities related to HFC phase-down;
- (d) To agree on the following prerequisites for an Article 5 country to access Multilateral Fund funding other than for enabling activities for the phase-down of HFC consumption:
 - (i) Ratification, acceptance, or accession to the Kigali Amendment; and

¹⁵ Paragraph 56 of document UNEP/OzL.Pro/ExCom/78/5. The Executive Committee may wish to refer to Annex II of that document, which contains a set of decisions adopted by the Executive Committee and the Parties that could be used as a reference during the discussion of the elements of the cost guidelines for the phase-down of HFCs.

¹⁶ UNEP/OzL.Pro/ExCom/78/CRP.1, available on the intranet site for the 78th meeting; Summary of agenda item 6(a): Elements for consideration of the Executive Committee related to the Kigali Amendment to the Montreal Protocol arising from decision XXVIII/2 of the Meeting of the Parties.

- (ii) Establishment of an agreed starting point for a sustained aggregate reduction in HFC consumption, on the understanding that any phase-out of HFCs resulting from any project that might be approved by the Executive Committee would be deducted from the country's starting point;
- (e) That institutions and capacities in Article 5 countries developed with Multilateral Fund assistance for the phase-out of ODS should be used to the extent possible for the phase-down of HFCs, as appropriate; and
- (f) That the existing policies and guidelines of the Multilateral Fund for funding the phase-out of ODS would be applicable to the funding of HFC phase-down unless decided otherwise by the Executive Committee.”

14. In response, some Executive Committee members indicated that it was too early to consider a decision, as some aspects needed further discussion and consultations with their respective governments. They requested more time and a structured discussion before decisions could be reached on the above-mentioned guideline-related aspects. The Committee agreed to continue discussions at a future meeting.

For discussion at the 79th meeting

15. The Executive Committee might wish to continue discussions at the 79th meeting, noting that the above aspects could facilitate implementation of some of the decisions agreed at the 78th meeting. For example, the submission of HFC-related projects in the manufacturing sector under decision 78/3(g) are subject to a set of conditions similar to the guideline-related aspects proposed in document UNEP/OzL.Pro/ExCom/78/5, e.g.: that countries submitting a project should have ratified the Kigali Amendment or submitted a letter indicating their governments' intention to ratify; that no further funding would be available until the instrument of ratification had been received; and that any amount of HFC associated with the project would be deducted from the starting point for aggregate reduction on consumption.

16. Furthermore, in line with decision 78/3(g), the UNDP and UNIDO work programmes¹⁷ submitted to the 79th meeting include eight requests for preparation of project proposals for the phase-down of HFCs in the manufacturing sector in five Article 5 countries¹⁸, and two investment projects for the phase-down of HFC-134a used as a refrigerant in the manufacturing of domestic refrigerators in Bangladesh¹⁹ and Colombia.²⁰

Section II: Further discussions on specific elements of decision XXVIII/2

Elements of decision XXVIII/2 with common understanding among members

17. At the 78th meeting, there was a common understanding among members to move to the draft template of the cost guidelines the text of the elements of decision XXVIII/2 on: flexibility in implementation that enables parties to select their own strategies and priorities in sector and technologies; the cut-off date for eligible capacity; second and third conversions; and eligible incremental cost in the consumption manufacturing sector (decision 78/3(b), (c), (d) and (f)). The text of each element can be found in the draft guidelines contained in Annex I to the present document.

¹⁷ UNEP/OzL.Pro/ExCom/79/21 and UNEP/OzL.Pro/ExCom/79/23.

¹⁸ China (3), Ecuador (1), Lebanon (1), Mexico (2) and Viet Nam (1).

¹⁹ Conversion from HFC-134a to isobutane as a refrigerant in the manufacturing of household refrigerators and the conversion of the associated reciprocating compressor line in Walton Hi-Tech Industries Limited.

²⁰ Conversion from HFC-134a to isobutane as a refrigerant in the manufacturing household refrigerators.

Elements of decision XXVIII/2 for further discussion

18. At the 78th meeting, the Executive Committee decided to continue discussing the following elements of decision XXVIII/2: sustained aggregate reductions in HFC consumption and production, eligible incremental costs (consumption manufacturing, production sector, refrigeration servicing sector, and other costs), energy efficiency, capacity building to address safety, disposal, and eligibility of Annex F substances subject to high-ambient-temperature exemptions.

Sustained aggregate reductions in HFC consumption and production²¹

Paragraph 19, decision XXVIII/2: “To request the Executive Committee to incorporate the following principle related to sustained aggregate reductions into Multilateral Fund policies: remaining eligible consumption for funding in tonnage will be determined on the basis of the starting point of national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for HFC phase-down plans, consistent with Executive Committee decision 35/57”.

19. At the 78th meeting, the Executive Committee concluded that further discussion was required before including paragraph 19 of decision XXVIII/2 in the draft template of the cost guidelines for the phase-down of HFCs, due to the complexity involved in determining the formula by which the starting point would be calculated, including whether it would be expressed in CO₂ equivalents, metric tonnes, or both. This included consideration that a starting point comprising the average HFC consumption for the period 2020 to 2022 plus 65 per cent of the HCFC consumption baseline may be too high; however, basing a starting point solely on HFC consumption may be too low, as HCFC phase-out projects might not address projected growth.

For discussion at the 79th meeting

20. The Executive Committee might wish to continue discussing the outstanding issues related to sustained aggregate reductions in HFC consumption and production at its 79th meeting or at a future meeting, in particular, whether the paragraph 19 of decision XXVIII/2 should be moved to the draft template of the cost guidelines for the phase-down of HFCs, agreeing on a methodology for determining the starting point for sustained aggregate reduction for HFC phase-down, and whether the starting point should be expressed in CO₂ equivalents, metric tonnes, or both.

Eligible incremental costs: Consumption manufacturing sector²²

21. The Executive Committee recognized the need for more information before establishing the level of incremental capital costs (ICCs), the duration of incremental operating costs (IOCs), and the cost-effectiveness threshold for the consumption manufacturing sector. Those levels should be based on actual incremental costs and savings, drawing on experience in phasing out HCFCs while recognizing that the costs of phasing down HFCs may be different. Additional information on costs could come from various sources, including conversion from HCFCs to low-global warming potential (GWP) alternatives, or through new investment projects to phase out HFC consumption, on the understanding that detailed reporting on the ICCs and IOCs incurred during the conversion be provided. The possibility of developing a method for calculating the level of ICCs, the duration of IOCs and the cost-effectiveness threshold, rather than setting levels at this point was also suggested. It was also observed that technical assistance activities had been approved on a number of occasions: through the Compliance Assistance

²¹ Information contained in paragraphs 32 to 39 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 44 to 49 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

²² Information contained in paragraphs 41 to 87 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 51 to 57 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

Programme, as stand-alone activities, as part of institutional strengthening and as part of multi-year agreements. Therefore, it would be useful if the Secretariat could analyse the different types of technical assistance activities that had been funded to better understand their effectiveness.

22. Subsequently, the Executive Committee agreed to move the text of the elements of decision XXVIII/2 on the consumption manufacturing sector to the draft template of the cost guidelines for the phase-down of HFCs (decision 78/3(f)). The Committee also decided to consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries, on the understanding: that any Article 5 country that submitted a project should have ratified the Kigali Amendment or submitted a formal letter indicating the government's intention to ratify the Amendment; that no further funding action would be available until the instrument of ratification had been received by the depositary at the United Nations Headquarters in New York; and that any amount of HFC reduced as a result of the project would be deducted from the starting point. The Committee also decided to consider costs and savings related to opportunities for further avoiding HFCs in HCFC phase-out activities and how they could be addressed (decision 78/3(g) and (h)).

For discussion at the 79th meeting

23. To facilitate the submission and implementation of the limited number of investment projects in line with decision 78/3(g) and (h), the Executive Committee might wish to consider providing further guidance to the Secretariat and the bilateral and implementing agencies by *inter alia* specifying the criteria and scope for such projects (i.e., which industrial sectors or subsectors would be prioritized and appropriate geographic distribution); specifying the total funding to be made available for these, including project preparation and agency support costs; limiting the duration of the implementation of the projects to a maximum of two years from the time of approval; requesting the return of any remaining funds no later than one year after the project completion date; and requesting the submission of comprehensive reports upon project completion including detailed information on the incremental costs and associated savings incurred during the conversion.

24. The summary document prepared by the Chair at the 78th meeting proposed additional work to be undertaken in the following areas:

- (a) A request to the Secretariat to prepare a document for the [80th meeting] that included a table summarizing the projects approved so far, including information on the technology used, the ICC and IOC approved, cost-effectiveness, and the lessons learned, including cases where low-GWP technologies could not be selected;
- (b) A request to the Secretariat to prepare a document for the [80th meeting] that collected information on the various types of technical assistance activities that had been so far approved by the Multilateral Fund, including the level of funding approved;
- (c) Additional options for gathering information for determining the ICC and IOC of conversions, including, but not limited to:
 - (i) A review by the Secretariat, in consultation with the bilateral and implementing agencies;
 - (ii) Consulting independent experts, with terms of reference to be decided; and
 - (iii) Developing a list of major equipment items required for conversions by sector, and their likely costs.

25. The Executive Committee might wish to consider whether or not additional work is still required in light of its decision with regard to the submission of a limited number of HFC-related projects in the manufacturing sector to gain experience with the ICCs and IOCs associated with those projects.

Eligible incremental costs: Production sector²³

Paragraph 15, decision XXVIII/2: “To request the Executive Committee, in developing new guidelines on methodologies and cost calculations, to make the following categories of costs eligible and include them in the cost calculation: Production sector (paragraph 15(b)): lost profit due to the shutdown/closure of production facilities, as well as production reduction; compensation for displaced workers; dismantling of production facilities; technical assistance activities; research and development related to the production of low-GWP or zero-GWP alternatives to HFCs with a view to lowering the costs of alternatives; costs of patents and designs or incremental costs of royalties; costs of converting facilities to produce low-GWP or zero-GWP alternatives to HFCs when technically feasible and cost-effective; and costs of reducing emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting it to other environmentally safe chemicals; such costs should be funded by the Multilateral Fund to meet the obligations of Article 5 Parties specified under the Amendment”.

26. During the discussions at the 78th meeting on matters related to the production sector under agenda item 6(a)(i), it was recognized that although the categories included the conversion of existing or establishment of new production facilities to produce substitutes when technically feasible and cost-effective, the Executive Committee had thus far always approved funding for the production sector on the basis of plant closure, which was considered the most cost-effective and efficient option. With regard to emissions of HFC-23, it was noted that one way to address those emissions would be to provide funding to close down production of HCFC-22. However, in order to take that decision it would be important to have a report by the Secretariat on the estimated costs of closing the remaining HCFC swing plants, using the cost-effectiveness of the approved projects in production sector as a reference.

27. In addition to the broad discussion under agenda item 6(a)(i), the Executive Committee had a substantive discussion on matters related to emissions of HFC-23 under agenda item 6(a)(iii), Key aspects related to HFC-23 by-product control technologies,²⁴ based on documents UNEP/OzL.Pro/ExCom78/9 and Corr.1. During the discussions, several members pointed out that the HFC-23 control obligations on 1 January 2020 made the matter under consideration a priority. Members noted that there were different options for complying with the HFC-23 control obligations, including incineration, closure, capture and use for controlled uses or feedstock, and capture and off-site destruction. It was important for countries to retain the flexibility to choose their preferred approach. From an environmental perspective, funding the closure of HCFC-22 production facilities would be the most effective way to control HFC-23 emissions. The Committee *inter alia* requested the Secretariat to submit an updated document of key aspects related to HFC 23 by-product control technologies to the 79th meeting, including:

- (a) Information relevant to the cost of closure of HCFC-22 production swing plants;
- (b) A description of existing policies and regulations supporting the control and monitoring of HFC-23 emissions and requirements for sustaining those measures in Article 5 countries;
- (c) Further analysis of methods to control HFC-23 emissions based on the additional information provided by Executive Committee members and any other available

²³ Information contained in paragraphs 88 to 95 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 58 to 62 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

²⁴ Paragraphs 112 to 121 of document UNEP/OzL.Pro/ExCom/78/11.

information to the Secretariat, including information from the Clean Development Mechanism;

- (d) The current levels of HCFC-22 production and HFC-23 emissions, and information on management practices, per line, in each facility in Article 5 and non-Article 5 countries, including information on approved monitoring methodologies under the United Nations Framework Convention on Climate Change; and
- (e) Exploration of possible options for monitoring HFC-23 emissions, such as those approved for continuous monitoring under the United Nations Framework Convention on Climate Change, including the associated costs (decision 78/5(f)).

28. In response to decision 78/5(f), the Secretariat submitted to the 79th meeting an updated document of key aspects related to HFC-23 by-product control technologies²⁵ under agenda item 11(d).

For discussion at the 79th meeting

29. The summary document prepared by the Chair at the 78th meeting proposed that the Executive Committee continue discussions at the 79th meeting on the issue of funding the closure of HCFC-22 swing plants; and requested the Secretariat to prepare for consideration at the 79th meeting a document providing estimated costs of closure of HCFC-22 production plants, which were not eligible for funding under the current HCFC production sector guidelines, using as a reference the cost-effectiveness of existing HCFC-22 closure projects funded in China.

30. The Secretariat notes that substantive discussions on matters related to HFC-23 by-product control technologies occurred under agenda item 6(a)(iii) after the document prepared by the Chair was issued. Those discussions concluded with the Executive Committee adopting decision 78/5 which included *inter alia* the preparation of a document providing information relevant to the cost of closure of HCFC-22 production plants (i.e., similar to the document included in the summary document prepared by the Chair).

31. Therefore, at its 79th meeting the Executive Committee might wish to:

- (a) Consider eligible the categories of costs listed in paragraph 15(b) of decision XXVIII/2 and to include them in the cost calculation associated with the phase-down of HFCs in the production sector; and
- (b) Discuss any other matter related to the production sector it deems appropriate.

Eligible incremental costs: Refrigeration servicing sector²⁶

Paragraph 15, decision XXVIII/2: “To request the Executive Committee, in developing new guidelines on methodologies and cost calculations, to make the following categories of costs eligible and include them in the cost calculation: Refrigeration servicing sector (paragraph 15(c)): public-awareness activities; policy development and implementation; certification programmes and training of technicians on safe handling, good practice and safety in respect of alternatives, including training equipment; training of customs officers; prevention of illegal trade of HFCs; servicing tools; refrigerant testing equipment for the refrigeration and air-conditioning sector; and recycling and recovery of HFCs”.

²⁵ UNEP/OzL.Pro/ExCom/79/48.

²⁶ Information contained in paragraphs 93 to 104 and Annex IV of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 63 to 68 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

Paragraph 16, decision XVIII/2: “To request the Executive Committee to increase in relation to the servicing sector the funding available under decision 74/50 above the amounts listed in that decision for Parties with total HCFC baseline consumption up to 360 metric tonnes when needed for the introduction of alternatives to HCFCs with low-GWP and zero-GWP alternatives to HFCs and maintaining energy efficiency also in the servicing/end-user sector”.

32. It was pointed out at the 78th meeting, that the refrigeration servicing sector was one of the most important sectors being addressed, as it would be the main one affected by the HFC phase-down in the majority of Article 5 countries and their main funding source for meeting their compliance obligations. The HFC phase-down cost guidelines should address the same priorities in this sector as those addressed by the HCFC guidelines, with some exceptions, and further consider issues as flammability, toxicity and cost of alternative refrigerants. This would require more in-depth analysis of the incremental costs in the sector, which should encompass existing capacity that had already been built in ODS phase-out, synergies between HFC phase-down and HCFC phase-out, and consideration of what activities had been planned by the private sector as they shifted to more efficient and complex systems. It was recalled that at the 77th meeting, the Secretariat had proposed to prepare two documents, one covering all aspects of the refrigeration servicing sector, taking into account policy documents, case studies, monitoring and evaluation reviews, and the work undertaken in developing and implementing training and technical assistance programmes; and another covering key aspects needed when developing a set of training modules for customs officers and refrigeration and air-conditioning service technicians that would be used as the basis for training programmes provided under the Multilateral Fund.

For discussion at the 79th meeting

33. The Executive Committee might wish to consider eligible the categories of costs listed in paragraph 15(c) of decision XXVIII/2 and to include them in the cost calculation associated with the phase-down of HFCs in the refrigeration manufacturing sector.

34. As proposed in the summary document prepared by the Chair at the 78th meeting, the Executive Committee might also wish:

- (a) To request the Secretariat to prepare a preliminary document for a future meeting [taking into account the results of the evaluation of the Senior Monitoring and Evaluation Officer (SMEO) and] in cooperation with bilateral and implementing agencies, on all aspects related to the refrigeration servicing sector, taking into account:
 - (i) Previous policy documents, case studies, and monitoring and evaluation reviews, the work undertaken by bilateral and implementing agencies in developing and implementing training and technical assistance programmes, in particular the partnership that Compliance Assistance Programme had established with world-recognized training and certification institutes;²⁷
 - (ii) Analysis of the existing capacities in Article 5 countries with the funding approved so far for the refrigeration servicing sector and how those could be utilized for HFC phase-down; results of funded recovery, recycling and reclamation activities and their potential to reduce refrigerant emissions; and the extent of the involvement of the private sector (e.g. equipment, components and refrigerant suppliers) in introducing and adopting low-GWP technologies in the servicing sector; and

²⁷ Preparation of this document was proposed in document UNEP/OzL.Pro/ExCom/77/70/Rev.1.

- (b) To request the Secretariat to prepare a preliminary document for a future meeting [taking into account the results of the evaluation of the SMEO and] in cooperation with bilateral and implementing agencies, covering key aspects for the development of a set of specific modules for customs officers and refrigeration and air-conditioning service technicians that would be used as the basis for training programmes provided under the Multilateral Fund in Article 5 countries, including costs and implementation modalities.²⁸

35. In considering any request of additional work related to the refrigeration servicing sector, the Executive Committee may wish to take into consideration how the information collected would complement the evaluation of the refrigeration servicing sector that the Committee requested the SMEO to include in the amended monitoring and evaluation work programme for 2017 (decision 77/7(b)). The terms of reference and associated budget for this evaluation are being presented to the 79th meeting in document UNEP/OzL.Pro/ExCom/79/7.

Other costs²⁹

Paragraph 25, decision XXVIII/2: “The Parties may identify other cost items to be added to the indicative list of incremental costs emanating as a result of the conversion to low-GWP alternatives”.

For discussion at the 79th meeting

36. Noting that no views on the matter were expressed at the 78th meeting, the Executive Committee might wish to include the text in paragraph 25 of decision XXVIII/2 in the cost calculation associated with the phase-down of HFCs.

Energy efficiency³⁰

Paragraph 22, decision XXVIII/2: “To request the Executive Committee to develop cost guidance associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down HFCs, while taking note of the role of other institutions addressing energy efficiency, when appropriate.”

37. With regard to the discussion on the issue of energy efficiency at the 78th meeting, several members emphasized the importance of adhering to the mandate set out in paragraphs 16 and 22 of decision XXVIII/2. There was a shared aspiration to take advantage of opportunities to maintain or enhance energy efficiency in the implementation of the HFC phase-down, with the understanding that the focus should remain on the HFC phase-down, given that Parties’ legal obligations pertained thereto, and not to energy efficiency. There were other funding mechanisms for energy efficiency, and the potential for financing or co-financing from other institutions, both national and international, should be explored, although members acknowledged that there may be challenges involved in accessing these. Several members expressed concern about covering incremental costs for energy efficiency, and proposed that an attempt be made to quantify economic benefits that offset the upfront cost of improved energy efficiency of appliances. It was mentioned that costs resulting from energy efficiency improvement during HFC phase-down project implementation should be considered as an eligible incremental cost and not passed on to the consumer; and that development in the refrigeration and air-conditioning sector was affected by decisions taken under the Montreal Protocol, therefore it was important to incorporate energy efficiency

²⁸ Preparation of this document was proposed in document UNEP/OzL.Pro/ExCom/77/70/Rev.1.

²⁹ Information contained in paragraph 105 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 69 and 70 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

³⁰ Information contained in paragraphs 107 to 115 and Annex V of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 72 to 79 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

considerations into the policies and guidelines of the Protocol. It was proposed that the Secretariat be requested to do additional work on the various aspects of energy efficiency in the context of the HFC phase-down in order to assist the Committee in its deliberations.

For discussion at the 79th meeting

38. The Executive Committee might wish to consider the summary document prepared by the Chair at the 78th meeting, which included a request for the Secretariat to:

- (a) Prepare, for the [81st meeting], a document on issues associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment when phasing down HFCs, including:
 - (i) Incremental costs for maintaining and/or enhancing energy efficiency in the manufacturing and servicing of refrigeration and air-conditioning equipment, including in situ manufacturing;
 - (ii) Pay-back periods and economic benefits associated with energy-efficiency improvements in the refrigeration and air-conditioning sector;
 - (iii) Possible modalities for funding, including operational modalities for co-funding with other institutions at the national and global level, in order to maintain and/or enhance energy efficiency and address associated challenges in the refrigeration and air-conditioning sector;
 - (iv) Requirements for establishing minimum energy-efficiency standards, including the testing and verification of energy efficiency in equipment;
 - (v) The institutional and regulatory framework needed in Article 5 countries to support and monitor improvements in energy efficiency, including in the refrigeration and air-conditioning servicing sector;
- (b) To consider, when preparing the document, the four European Union directives for reducing greenhouse gas emissions in Europe on Energy Efficiency, Ecodesign, Energy Performance of Buildings and Industrial Emissions, to determine the best available technologies.

39. The Secretariat notes that technical experts with experience on the requirements for enhancing energy efficiency of key components of refrigeration and air-conditioning equipment including modification to manufacturing production lines would be required to accomplish the tasks identified above. The Executive Committee might wish to consider allocating additional resources to the Secretariat, accordingly.

Capacity-building to address safety³¹

Paragraph 23, decision XXVIII/2: “To request the Executive Committee to prioritize technical assistance and capacity-building to address safety issues associated with low-GWP or zero-GWP alternatives”.

Paragraph 3, decision XXVIII/2: “To recognize the importance of timely updating of international standards for flammable low-global-warming potential (GWP) refrigerants, including IEC60335-2-40,

³¹ Information contained in paragraph 116 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 80 and 81 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

and to support promoting actions that allow safe market introduction, as well as manufacturing, operation, maintenance and handling, of zero GWP or low-GWP refrigerant alternatives to HCFCs and HFCs". (This paragraph, while not having a mandate for the Executive Committee, is related to the subject).

40. Document UNEP/OzL.Pro/ExCom/78/5 pointed out that matters related to capacity-building to address safety were being addressed in the context of the consumption manufacturing and the refrigeration servicing sectors, as well as in the document on enabling activities.³² Furthermore, at the 78th meeting, the Executive Committee had no additional comments to the discussions on the matter that had already taken place. The Chair noted that the discussions on the matter would continue when the Committee considered technical assistance activities and the refrigeration servicing sector.

For discussion at the 79th meeting

41. The Executive Committee might wish to consider whether matters related to capacity-building to address safety should be considered under the consumption manufacturing and refrigeration servicing sectors, or separately.

Disposal³³

Paragraph 24, decision XXVIII/2: "To request the Executive Committee to consider funding the cost-effective management of stockpiles of used or unwanted controlled substances, including destruction".

For discussion at the 79th meeting

42. Noting that no views were expressed at the 78th meeting, the Executive Committee might wish to consider whether or not to further discuss this matter at the 79th meeting.

Eligibility of Annex F substances subject to high ambient temperature exemptions³⁴

43. The Parties to the Montreal Protocol made available an exemption for Parties with high ambient temperature conditions where suitable alternatives do not exist for the specific sub-sector of use, as described in paragraphs 26 to 40 of decision XXVIII/2. Specifically on issues related to funding, the Parties indicated in paragraph 35 of the decision *"that amounts of Annex F substances that are subject to the high ambient temperature exemption are not eligible for funding under the Multilateral Fund while they are exempted for that party."*

For discussion at the 79th meeting

44. Noting that no views on the matter were expressed at the 78th meeting, the Executive Committee might wish to include the text in paragraph 35 of decision XXVIII/2 in the draft template of the cost guidelines for the phase-down of HFCs.

³² UNEP/OzL.Pro/ExCom/78/6.

³³ Information contained in paragraphs 117 to 124 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 82 and 83 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

³⁴ Information contained in paragraphs 125-131 of document UNEP/OzL.Pro/ExCom/78/5. Discussions by Executive Committee members are contained in paragraphs 69 and 70 of document UNEP/OzL.Pro/ExCom/78/11 and reproduced in Annex II to the present document.

Section III: Recommendation

45. The Executive Committee may wish:

- (a) To take note of the draft criteria for funding HFC phase-down contained in Annex I of document UNEP/OzL.Pro/ExCom/79/46;

In relation to overarching principles and timelines

- (b) To develop guidelines for funding the phase-down of HFC consumption and production for submission to the Thirtieth Meeting of the Parties in 2018, and to finalize the guidelines as soon as possible thereafter, taking into account the views and input provided by the Parties;
- (c) To agree that, in line with paragraph 11 of decision XXVIII/2, the Chair of the Executive Committee would report in relation to the HFC phase-down:
 - (i) To the Twenty-Ninth Meeting of the Parties on the progress of the Executive Committee in developing cost guidelines for funding HFC phase-down;
 - (ii) To future Meetings of the Parties on cases where Executive Committee deliberations had resulted in a change in a national strategy or a national technology choice submitted to the Executive Committee;
- (d) To agree on the following prerequisites for an Article 5 country to access Multilateral Fund funding other than for enabling activities for the phase-down of HFC consumption:
 - (i) Ratification, acceptance, or accession to the Kigali Amendment;
 - (ii) Establishment of an agreed starting point for a sustained aggregate reduction in HFC consumption, on the understanding that any phase-down of HFCs resulting from any project that might be approved by the Executive Committee would be deducted from the country's starting point;
- (e) To agree that institutions and capacities in Article 5 countries developed with Multilateral Fund assistance for the phase-out of ODS should be used to the extent possible for the phase-down of HFCs, as appropriate;
- (f) To agree that the existing policies and guidelines of the Multilateral Fund for funding the phase-out of ODS would be applicable to the funding of HFC phase-down unless decided otherwise by the Executive Committee;

In relation to elements of decision XXVIII/2 with common understanding reached at the 78th meeting

- (g) To note that the text of the elements of decision XXVIII/2 contained in paragraph 13 on flexibility in implementation that enables parties to select their own strategies and priorities in sectors and technologies; paragraph 17 on cut-off date for eligible capacity; paragraph 18 on second and third conversions; and paragraph 15(a) on eligible incremental costs in the consumption manufacturing sector, have been moved to the draft template of the cost guidelines contained in Annex I to the present document;

In relation to sustained aggregate reductions in HFC consumption and production

- (h) To include paragraph 19 of decision XXVIII/2 in the relevant section of the draft cost guidelines for the phase-down of HFCs;
- (i) To use the following methodology [to be proposed by the Executive Committee] for determining the starting point for sustained aggregate reduction in HFC consumption and production, noting that the starting should be expressed in [CO₂ equivalents and/or metric tonnes];

In relation to eligible incremental costs

Consumption manufacturing sector

- (j) To note that paragraphs (k) to (n) supersede decision 78/3(g) and (h);
- (k) To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Executive Committee to gain experience in the incremental capital costs and incremental operating costs that might be associated with phasing down HFCs, on the understanding:
 - (i) That any Article 5 country that submitted a project should have ratified the Kigali Amendment or submitted a formal letter to the Fund Secretariat indicating the government's intention to ratify the Amendment;
 - (ii) That no further funding would be available to any Article 5 country that submitted a project until the instrument of ratification, acceptance or approval had been received by the depositary at the United Nations Headquarters in New York;
 - (iii) That any amount of HFC reduced as a result of the project would be deducted from the starting point;
 - (iv) That potential projects should be included in the bilateral and implementing agencies' 2018 to 2020 business plans for submission at the 80th meeting or 2019 to 2021 business plans for submission at the last meeting of 2018;
 - (v) That priority would be given to project proposals related to the air-conditioning and refrigeration manufacturing sectors, and project proposals in other manufacturing sectors would be considered on a case-by-case basis;
 - (vi) That the submitted projects should consider appropriate geographic distribution;
 - (vii) That projects must be fully implemented no later than two years from the time of their approval; the relevant project completion reports would be comprehensive with detailed information on the eligible incremental capital costs (ICC) and incremental operating costs (IOC) incurred during the conversion; and that any remaining funds would be returned to the Multilateral Fund no later than one year after the date of project completion as per the project proposals;
 - (viii) That a total funding of [US \$ to be decided] would be available for such project proposals and would include project preparation and agency support costs;

- (l) To consider costs and savings related to opportunities for further avoiding HFCs in HCFC phase-out activities and how they could be addressed;
- (m) To consider whether or not to request to the Secretariat to undertake the following additional work:
 - (i) To prepare a document for the [81st meeting] featuring a table summarizing the projects approved so far for the consumption manufacturing sector, and including information on the technology used, the ICC and IOC approved, cost-effectiveness, and the lessons learned, including cases where low-global warming potential (GWP) technologies could not be selected;
 - (ii) To prepare a document for the [81st meeting] compiling information on the various types of technical assistance activities approved so far by the Multilateral Fund, including the level of funding approved;
- (n) To gather additional information for determining the ICC and IOC of conversions, through [requesting a review by the Secretariat, in consultation with the bilateral and implementing agencies/consulting independent experts, with terms of reference to be decided/developing a list of major equipment items required for conversions by sector and their likely costs];

Production sector

- (o) In accordance with paragraph 15(b) of decision XXVIII/2 to make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the production sector contained in [Annex ##] to the Report of the 79th meeting of the Executive Committee:
 - (i) Lost profit due to the shutdown/closure of production facilities, as well as production reduction;
 - (ii) Compensation for displaced workers;
 - (iii) Dismantling of production facilities;
 - (iv) Technical assistance activities;
 - (v) Research and development related to the production of low-GWP or zero-GWP alternatives to HFCs with a view to lowering the costs of alternatives;
 - (vi) Costs of patents and designs or incremental costs of royalties;
 - (vii) Costs of converting facilities to produce low-GWP or zero-GWP alternatives to HFCs when technically feasible and cost-effective;
 - (viii) Costs of reducing emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting it to other environmentally safe chemicals; such costs should be funded by the Multilateral Fund to meet the obligations of Article 5 Parties specified under the Amendment;

- (p) To consider whether to continue discussing cost guidelines for the production sector or to request the Sub-group on the Production Sector to do so and to report back to the Executive Committee once the draft guidelines have been finalized;

Refrigeration servicing sector

- (q) In accordance with paragraph 15(c) of decision XXVIII/2 to make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the refrigeration servicing sector contained in [Annex ##] to the Report of the 79th meeting of the Executive Committee:
- (i) Public-awareness activities;
 - (ii) Policy development and implementation;
 - (iii) Certification programmes and training of technicians on safe handling, good practice and safety in respect of alternatives, including training equipment;
 - (iv) Training of customs officers;
 - (v) Prevention of illegal trade of HFCs;
 - (vi) Servicing tools;
 - (vii) Refrigerant testing equipment for the refrigeration and air-conditioning sector;
 - (viii) Recycling and recovery of HFCs;
- (r) To request the Secretariat to prepare a preliminary document for a future meeting [taking into account the results of the evaluation of the SMEO and] in cooperation with bilateral and implementing agencies, on all aspects related to the refrigeration servicing sector, taking into account:
- (i) Previous policy documents, case studies, monitoring and evaluation reviews, the work undertaken by bilateral and implementing agencies in developing and implementing training and technical assistance programmes, in particular the partnership that the Compliance Assistance Programme had established with world-recognized training and certification institutes;
 - (ii) Analysis of the existing capacities in Article 5 countries with the funding approved so far for the refrigeration servicing sector and how those could be utilized for HFC phase-down; results of funded recovery, recycling and reclamation activities and their potential to reduce refrigerant emissions; and the extent of the involvement of the private sector (e.g. equipment, components and refrigerant suppliers) in introducing and adopting low-GWP technologies in the servicing sector;
- (s) To request the Secretariat to prepare a preliminary document for a future meeting [taking into account the results of the evaluation of the SMEO and] in cooperation with bilateral and implementing agencies, covering key aspects for the development of a set of specific training and testing modules for customs officers and refrigeration and air-conditioning service technicians that would be used as the basis for training programmes provided under the Multilateral Fund in Article 5 countries, including costs and implementation modalities;

In relation to other costs

- (t) To include paragraph 25 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HFCs contained in [Annex ##] of the Report of the 79th meeting of the Executive Committee;

In relation to energy efficiency

- (u) To include paragraph 22 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HFCs contained in [Annex ##] of the Report of the 79th meeting of the Executive Committee;
- (v) To request the Secretariat to prepare, for the [81st meeting], a document on issues associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment when phasing down HFCs, including:
 - (i) Incremental costs for maintaining and/or enhancing energy efficiency in the manufacturing and servicing of refrigeration and air-conditioning equipment, including in situ manufacturing;
 - (ii) Pay-back periods and economic benefits associated with energy-efficiency improvements in the refrigeration and air-conditioning sector;
 - (iii) Possible modalities for funding including operational modalities for co-funding with other institutions at national and global level, in order to maintain and/or enhance energy efficiency and address associated challenges in the refrigeration and air-conditioning sector;
 - (iv) Requirements for establishing minimum energy-efficiency standards, including the testing and verification of energy efficiency in equipment;
 - (v) The institutional and regulatory framework needed in Article 5 countries to support and monitor improvements in energy efficiency, including in the refrigeration and air-conditioning servicing sector;
 - (vi) To consider, when preparing the document, the four European Union directives for reducing greenhouse gas emissions in Europe on Energy Efficiency, Ecodesign, Energy Performance of Buildings and Industrial Emissions, to determine the best available technologies;
- (w) To consider whether or not to allocate [US \$ to be decided] to the Secretariat to accomplish the tasks identified in subparagraph (v) above;

In relation to capacity building to address safety

- (x) To note that capacity building to address safety is being addressed in the context of the consumption manufacturing and the refrigeration servicing sectors;

In relation to disposal

- (y) To consider whether to further discuss matters related to disposal at a future meeting; and

In relation to the eligibility of Annex F substances subject to high ambient temperature exemptions

- (z) To include paragraph 35 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HFCs contained in Annex I to the present report.

Annex I

DRAFT TEMPLATE OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs (For discussion at the 79th meeting)

Background

1. The present annex contains the draft cost guidelines for the phase-down of HFCs based on the relevant elements of decision XXVIII/2 agreed by the Parties at their Twenty-eight Meeting. For the following elements there was a common understanding by the Executive Committee to move the relevant text to the draft cost guidelines: flexibility in implementation that enables parties to select their own strategies and priorities in sector and technologies; cut-off date for eligible capacity; second and third conversions; and eligible incremental cost (consumption manufacturing sector). The draft cost guidelines will be updated pursuant to further discussions at the 79th and future meetings on the elements of decision XXVIII/2 by the Executive Committee.

Draft guidelines as at the close of the 78th meeting

Flexibility in implementation that enables parties to select their own strategies and priorities in sectors and technologies

1. Article 5 countries will have flexibility to prioritize HFCs, define sectors, select technologies and alternatives and elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country-driven approach.

Cut-off date for eligible capacity

2. The cut-off date for eligible capacity is 1 January 2020 for those parties with baseline years from 2020 to 2022 and 1 January 2024 for those parties with baseline years from 2024 to 2026.

Second and third conversions

3. To apply the following principles for second and third conversion projects:

- (a) First conversions, in the context of a phase-down of HFCs, are defined as conversions to low-GWP or zero-GWP alternatives of enterprises that have never received any direct or indirect support, in part or in full, from the Multilateral Fund, including enterprises that converted to HFCs with their own resources;
- (b) Enterprises that have already converted to HFCs in phasing out CFCs and/or HCFCs will be eligible to receive funding from the Multilateral Fund to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
- (c) Enterprises that convert from HCFCs to high-GWP HFCs, after the date of adoption of the Amendment, under HPMPs already approved by the Executive Committee will be eligible to receive funding from the Multilateral Fund for a subsequent conversion to low-GWP or zero-GWP alternatives to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
- (d) Enterprises that convert from HCFCs to high-GWP HFCs with their own resources before 2025 under the Amendment will be eligible to receive funding from the

Multilateral Fund to meet agreed incremental costs in the same manner as enterprises eligible for first conversions; and

- (e) Enterprises that convert from HFCs to lower-GWP HFCs with Multilateral Fund support when no other alternatives are available will be eligible to receive funding from the Multilateral Fund for a subsequent conversion to low-GWP or zero-GWP alternatives if necessary to meet the final HFC phase-down step.

Sustained aggregate reductions in HFC consumption and production

Eligible incremental cost

Consumption manufacturing sector

4. In accordance with paragraph 15(a) of decision XXVIII/2, to make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the consumption manufacturing sector:

- (a) Incremental capital costs (ICCs);
- (b) Incremental operating costs (IOCs) for a duration to be determined by the Executive Committee;
- (c) Technical assistance activities;
- (d) Research and development, when required to adapt and optimize alternatives to HFCs with low or zero global-warming potential;
- (e) Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective;
- (f) Costs of the safe introduction of flammable and toxic alternatives.

Production sector

Refrigeration servicing sector

Other costs

Energy efficiency

Capacity building to address safety

Disposal

Eligibility of Annex F substances subject to high ambient temperature exemptions

Annex II

**DISCUSSIONS BY EXECUTIVE COMMITTEE MEMBERS UNDER AGENDA ITEM 6(A)(I),
DRAFT CRITERIA FOR FUNDING EXTRACTED FROM THE REPORT OF THE 78TH
MEETING OF THE EXECUTIVE COMMITTEE
(UNEP/OzL.Pro/ExCom/78/11-paragraphs 27 to 98)**

27. The representative of the Secretariat introduced documents UNEP/OzL.Pro/ExCom/78/5 and Corr.1, which presented information relevant to the development of criteria for funding the phase-down of HFCs. He highlighted Table 1 of document UNEP/OzL.Pro/ExCom/78/5 in which the elements of the cost guidelines for the phase-down of HFCs in Article 5 countries were listed, alongside the relevant paragraphs of decision XXVIII/2. Further information on specific elements was contained in documents UNEP/OzL.Pro/ExCom/78/6 (enabling activities), UNEP/OzL.Pro/ExCom/78/7 (institutional strengthening), and UNEP/OzL.Pro/ExCom/78/9 (Key aspects related to HFC-23 by-product control technologies). Furthermore, Annex I of document UNEP/OzL.Pro/ExCom/78/5 contained a proposed draft template of the cost guidelines for the phase-down of HFCs. The template included text relating to the following elements of decision XXVIII/2 already agreed by the Parties: flexibility in implementation, cut-off date, second and third conversions, other costs, and eligibility of Annex F substances subject to high-ambient-temperature exemptions.

28. Several members offered an overview of the task before the Committee. One member, supported by others, said that some of the issues would be relatively straightforward to address, while others were more complex and would require more time and support from the Secretariat in the form of additional, in-depth evaluations and studies, some of which had been recommended by the Secretariat at the 77th meeting of the Executive Committee. One member said that some aspects were of particular importance, including the matter of energy efficiency in the context of compliance.

29. One member said that the principle related to sustained aggregate reductions in HFC consumption in decision XXVIII/2 should be marked in Table 1 as already agreed to by the Parties, as had been done for the other principles adopted by the Parties under that decision. Referring to information provided to Executive Committee members on the elements of decision XXVIII/2, she added that those elements were clearly defined in the decision itself, and any reinterpretation or addition of unfamiliar concepts should be avoided, given the complexity of the task before the Committee and the relatively short time frame in which to achieve it. One member highlighted the particular challenge confronting small enterprises, which faced high levels of risk due to lack of access to funding and new technologies. In such matters, the Committee should adopt a cautious approach in order to avoid repetition of past errors.

30. One member said that, while application of the cost thresholds and principles followed in the phase-out of CFCs and HCFCs would simplify the discussions on cost guidelines for the phase-down of HFCs, they were not necessarily applicable, given the very different nature of the HFC challenge. He also expressed his dissatisfaction that information on consumption and production of HFCs had been sought from Article 5 countries, but not from non-Article 5 countries, given the need to manage HFCs equitably across the globe.

31. Regarding the organization of the discussions on the elements of the cost guidelines for phase-down of HFCs, there was general support among the Committee members for an approach whereby the elements in the guidelines were considered sequentially as laid out in Table 1 of document UNEP/OzL.Pro/ExCom/78/5, except for enabling activities and institutional strengthening, which would be discussed under agenda items 6(a)(ii) and (iii), respectively.

Overarching principles and timelines

32. The representative of the Secretariat introduced paragraphs 16 to 25 of document UNEP/OzL.Pro/ExCom/78/5. He drew members' attention to guideline-related aspects on which the Committee could, if it wished, take decisions prior to reaching agreement on the cost guidelines themselves. Those aspects were: the legal prerequisites for accessing Multilateral Fund funding; the most suitable type of national strategy for providing assistance for HFC phase-down; the applicability of the existing Multilateral Fund funding policies and guidelines for ODS phase-out; the continued use of institutions and capacities in Article 5 countries that had been developed with Multilateral Fund assistance; and the continued use of the definitions for low-volume-consuming (LVC) countries and small and medium-sized enterprises. Decision 53/37, contained in Annex II of the document, indicated how those aspects had been dealt with for the phase-out of HCFCs.

33. During the ensuing discussion, a number of issues were highlighted, particularly regarding the applicability of existing guidelines for the reduction of ODS under the Montreal Protocol. A number of members recognized that the Kigali Amendment struck a delicate balance, and that it was essential that the outcomes achieved in Kigali be faithfully reflected in the guidelines for HFC phase-down. Two members underscored the importance of the flexibility that the Kigali Amendment permitted Parties in their choice of technology during implementation. Two members mentioned cost-effectiveness as an important consideration, and another said that energy efficiency was paramount. One member also mentioned agreement on a starting point for sustained aggregate reductions in HFC consumption and production as an overarching principle for the guidelines. Another member cautioned against a proposal to introduce emissions reporting, saying that emissions fell within the purview of the United Nations Framework Convention on Climate Change, whereas the Montreal Protocol dealt in the concepts of consumption and production, and the climate benefit of HFC phase-down would derive from reductions therein.

34. One member noted that, in terms of the process, the Committee had two years to develop the guidelines, after which they would be submitted to the Meeting of the Parties so that the Parties could provide their input. Additional time would be required subsequently to finalize the guidelines on the basis of the input from the Parties, thereby extending the timeline beyond the two years mentioned in decision XXVIII/2.

35. Many of those who spoke said that they felt that more time and a structured discussion were needed before final decisions could be reached on the additional aspects raised by the Secretariat, most notably the determination of the most suitable national strategies, the applicability of the existing policies and guidelines and the continued use of the capacities and institutions in Article 5 countries developed using funding from the Multilateral Fund. A few members suggested that the existing guidelines, institutions and rules of procedure could be used as a starting point, and that the required changes would become clearer as the discussions progressed and even as implementation began. One member proposed that rather than employing the approach of comprehensive plans, as seen in its recent history, the Committee should consider initially taking a project-by-project approach to generate additional information and inform the discussion on the guidelines.

36. The members subsequently considered a conference room paper containing elements of a proposed draft decision based on the earlier discussion. During the discussion on the paper, one member, speaking on behalf of the members from Article 5 countries, said that it was too early to consider recommendations in the form of a decision as some aspects needed further discussion. The text had essentially been proposed by the Chair, he said, and members would have to discuss it with their governments. Two members asked whether there was another proposed way forward, and one of them

added that, if members intended to discuss the proposed draft decision with their governments, then it would be important first to ensure that it accurately reflected the Committee's discussion on the matter.

37. One member, supported by another, noted that the Committee had not thoroughly debated how progress on the mandate should be structured, and had not agreed to use conference room papers for the various elements of the mandate. He proposed instead taking the approach used for HPMPs, where there had been only one decision containing all the guidelines for the financing of phase-out activities. Thus, the Committee could begin structuring a single decision that would ultimately contain all the guidelines for the HFC phase-down process. As a way forward, he therefore suggested having a procedural decision indicating where progress had been made and requesting the Secretariat to carry out additional work on specific subjects where pertinent. An annex to that decision could then be developed, as had been done for the guidelines for stage II of HPMPs. Such an approach would allow the progress made to be documented and the various elements of the mandate to be decided on in a holistic way.

38. One member, supported by another, cautioned that it might be challenging to include everything in a single decision, and proposed that a decision nevertheless be taken immediately on the timeline for the development of the guidelines, to avoid confusion among Parties who might be expecting the Committee to produce final guidelines at the Twenty-Ninth Meeting of the Parties. The second member also remarked that the Committee needed to move forward on some issues, and should therefore give careful thought to whether it really wanted to put everything into one decision.

39. For clarification purposes, the Chief Officer provided background information on how the agenda and meeting had been constituted. The Secretariat had been given a very specific mandate to convene a special meeting to discuss issues with regard to the Kigali Amendment and additional contributions from some donor countries, and had developed a full agenda on that basis. The Secretariat had also been asked to prepare a number of documents with only preliminary information on aspects of the Kigali Amendment. As a result, in most of the documents, the recommendation was simply to take note of relevant document. While the discussions under the agenda item had been very rich, with some consensus with regard to the cost guidance, new elements and considerations had also emerged, along with activities to be further developed by the Secretariat, and it had been very difficult for the Chair to draft recommendations from the podium, even with the assistance of the Secretariat. The elements on which it was understood there to be common understanding would be incorporated into the draft report, but in order to avoid lengthy discussions during the adoption of the report, it had been considered advisable to prepare a conference room paper for the overarching principles, as they were outside the cost guidelines, as well as for highly complex elements like energy efficiency and HFC-23 emissions. In fact, in line with what some members had suggested, the final report would contain a very long decision on aspects of the cost guidelines, including those elements for which there was agreed text.

40. Following a discussion, the Chair noted that consensus on the matter had not been reached. The Committee therefore agreed to continue discussions at a future meeting.

Flexibility in implementation that enables Parties to select their own strategies and priorities in sectors and technologies

41. The Chair introduced paragraphs 26 to 29 of document UNEP/OzL.Pro/ExCom/78/5. He recalled that, in accordance with paragraph 14 of decision XXVIII/2, the proposed draft template of the cost guidelines contained in Annex I to document UNEP/OzL.Pro/ExCom/78/5 included the text of paragraph 13 of that decision on the flexibility of Article 5 parties to prioritize HFCs, define sectors, select technologies and alternatives, and elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country-driven approach.

Cut-off date for eligible capacity

42. The Chair introduced paragraph 30 of document UNEP/OzL.Pro/ExCom/78/5. He drew the attention of the Executive Committee to the fact that paragraph 17 of decision XXVIII/2, which stated that the cut-off date for eligible capacity was 1 January 2020 for those Parties with baseline years from 2020 to 2022, and 1 January 2024 for those Parties with baseline years from 2024 to 2026, had been included in the proposed draft template of the cost guidelines contained in Annex I to document UNEP/OzL.Pro/ExCom/78/5.

Second and third conversions

43. The Chair, introducing paragraph 31 of document UNEP/OzL.Pro/ExCom/78/5, referred to paragraph 18 of decision XXVIII/2, which requested the Executive Committee to incorporate into funding guidelines specific text on the principles relating to second and third conversions. He noted that that text had also been included in the proposed draft template of the cost guidelines contained in Annex I to document UNEP/OzL.Pro/ExCom/78/5.

Sustained aggregate reductions in HFC consumption and production

44. The representative of the Secretariat introduced paragraphs 32 to 39 of document UNEP/OzL.Pro/ExCom/78/5.

45. There was overall agreement with the principle applied in decision XXVIII/2, whereby remaining eligible consumption for funding would be determined on the basis of the starting point of national aggregate consumption. One member said that Article 5 countries had been in favour of the inclusion of that principle because a sector- or substance-specific approach would limit the opportunities for funding, owing to the lack of flexibility. That was especially the case where new technologies were not available. She stressed that this stance was consistent with the text of decision XXVIII/2, whereby eligible consumption for funding was defined without any distinction in terms of substance or sector. Another member said that, in the context of a phase-down rather than a phase-out, limiting consumption and production reduction to particular sectors or substances would constrain a country's ability to take advantage of alternatives to HFCs that had a low-global warming potential (GWP), with considerable impact on conversion and market decisions, and indeed on the sectoral and national economy. Another member said that the phase-down of HFC was more complex than the phase-out of ODS, given the greater proportion of blends than of pure substances, requiring a more flexible approach. Another member stated that it was clear from decision XXVIII/2 that reductions were to be based on national aggregate consumption, rather than sector- or substance-specific amounts, so there was no need to incorporate that as a specific principle in the guidelines. One member stressed that the two key elements of the discussion were flexibility and sustainability.

46. There was general recognition of the complexity involved in determining the formula by which the starting point would be calculated. One member said that, in the past, for phase-out of ODS, the starting point had been the baseline of consumption, or a year close to the baseline. In the present instance, a baseline comprising the average HFC consumption for the period 2020 to 2022, plus 65 per cent of the HCFC consumption baseline, would be too high as a starting point for funding eligibility. A starting point based solely on HFC consumption, however, could be considered too low, as phase-out projects might not address all the projected growth. Further discussion was therefore required on the approach for determining the starting point.

47. One member said that, in the past, funding had been made available for phase-out of consumption of controlled substances while new enterprises were still being established, which increased consumption. The principle of sustained aggregate reduction had been established to ensure that the Multilateral Fund assisted Article 5 countries in meeting their obligations. He stated that the inclusion of HCFCs in the formula for setting the baseline confounded the matter of how the starting point might be determined, and was different from what had been done previously. It was noted that the starting point for a country should be identified at the time of the first funded reduction project. Another member said that, historically, a clear distinction between consumption in the investment and non-investment sectors had been applied for calculating funding levels, and such a distinction might prove useful if distinction by sub-sector was considered too constraining.

48. There was some discussion of whether the starting point should be defined in terms of CO₂ equivalent, metric tonnes or both, and it was agreed that the matter should be considered further.

49. In subsequent discussions, there was some debate on the inclusion in the draft template of the cost guidelines of paragraph 19 of decision XXVIII/2, which requested the Executive Committee to incorporate the principle that remaining eligible consumption for funding in tonnage would be determined on the basis of the starting point of national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for HFC phase-down plans. One member said that the language of the Kigali Amendment made it clear that that principle should be included among the principles already agreed by the Parties. The Executive Committee agreed to defer further consideration of the matter to a future meeting.

Enabling activities

50. The Chair introduced paragraph 40 of document UNEP/OzL.Pro/ExCom/78/5 and noted that the matter would be taken up under agenda item 6(a)(ii), Enabling activities.

Eligible incremental costs

Consumption manufacturing sector

51. The representatives of the Secretariat introduced paragraphs 41 to 64 of document UNEP/OzL.Pro/ExCom/78/5 regarding eligible incremental costs in the consumption manufacturing sector. Incremental capital costs (ICCs) and incremental operating costs (IOCs) were introduced separately.

52. A number of issues were raised during the discussion on ICCs, including: that the six categories of incremental costs outlined in decision XXVIII/2 would necessarily be eligible incremental costs; that more information was required in order to be able to set figures for the level of ICCs, for the duration of IOCs, and for the cost-effectiveness threshold; that the Executive Committee should consider figures based on actual incremental costs and savings, drawing on lessons learned and experience with incremental costs in phasing out HCFCs; that technology and markets for alternatives were constantly evolving and might generate new circumstances that would suggest the need to consider incremental cost calculations made too far in advance of project proposals; and that it might be wiser to create a method for calculating the level of ICCs, the duration of IOCs and the cost-effectiveness threshold, rather than setting levels for them at this point.

53. It was also pointed out that the additional information required to be able to reach a decision on eligible incremental costs could come from various sources. One source was the Secretariat, which could be asked to provide a table showing lessons learned from the conversion of HCFC technology to

low-GWP alternatives (including ICCs, IOCs, cost-effectiveness of the conversions, and cases where a low-GWP alternative was available but not chosen, in order to identify barriers to the adoption of low-GWP technology). Another way of obtaining the necessary data would be to have countries submit investment projects, through bilateral and implementing agencies, for individual consideration, on the understanding that the projects approved would have to provide detailed reports on the ICCs and IOCs incurred during the conversion to the chosen low-GWP technology. The conditions for such projects could include: the country's ratification of the Kigali Amendment; only the conversion of manufacturing facilities being eligible; and the deduction of any amount of HFCs eliminated from the country's starting point for aggregate reductions.

54. During the discussion on IOCs, it was pointed out that the original purpose of IOCs was to provide incentives for early adoption of alternatives, and prevent enterprises that phased out early from being at a competitive disadvantage. One member said that the approach to IOCs in the context of HCFC phase-out was appropriate, and that there was no compelling argument for using a different approach to IOCs in the context of HFC phase-down. Clarification was requested regarding the possibility of considering energy efficiency gains as part of the calculation of IOCs. The representative of the Secretariat replied that energy efficiency had not been directly considered in previous calculations of IOCs, and was a matter for further discussion by the Executive Committee. In response to a question about how the promotion of not-in-kind technology might affect IOCs, the representative of the Secretariat explained that that would depend on the project proposed; some project proposals might have higher IOCs, and others lower IOCs. The impact of not-in-kind technology would therefore be assessed by the Executive Committee when it considered the cost-effectiveness of each proposal.

55. During a subsequent discussion on elements for further consideration, the members of the Executive Committee continued to address the conditions for submission of investment projects in the manufacturing sector that would be used to gain experience on the ICCs and IOCs associated with HFC phase-down in Article 5 countries. They discussed whether it was necessary for the country to have already ratified the Kigali Amendment, or whether the clear communication of definite intent to ratify, with a deadline for that ratification, would be sufficient. One member suggested that the approach that had been taken at the beginning of the HCFC process in this regard should be adopted for HFC phase-down. The members also discussed the deadline for submission of the investment projects; the inclusion of certain types of technology (e.g. not-in-kind technology and manufacturing on site); the need to avoid limiting the scope of the information-gathering exercise; and whether projects that leapfrogged HFC could provide relevant information. In discussing the content of the reports from those potential investment projects, one member stressed the need to include information on energy efficiency costs and savings. With regard to the timeline for project proposals, one member pointed out that, in order to meet the submission deadline, it would be necessary to request bilateral and implementing agencies to present concept notes or proposals as quickly as possible.

Technical assistance activities

Research and development, when required to adapt and optimize low-GWP or zero-GWP

Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective

Costs of the safe introduction of flammable and toxic alternatives

56. The Chair introduced paragraphs 65 to 87 of document UNEP/OzL.Pro/ExCom/78/5.

57. It was observed that technical assistance activities had been approved on a number of occasions by the Executive Committee: through the Compliance Assistance Programme, as stand-alone activities, as part of institutional strengthening and as part of multi-year agreements. It would therefore be useful if the Secretariat could analyse the different types of activities that had been funded, as well as the types of tonnage associated with those activities, so that the Executive Committee could have a better idea of the effectiveness of the technical assistance. It was also observed that the use of new refrigerants would imply the technicians being exposed to new risks, and thus each project had to make provision for safety equipment to address the flammability and toxicity of the new refrigerants. A new approach to safety issues was required for HFCs, different from the way that HCFCs had been dealt with in the past.

Production sector

58. The representative of the Secretariat introduced paragraphs 88 to 95 of document UNEP/OzL.Pro/ExCom/78/5. The incremental costs eligible for funding HFC production phase-down had been agreed in paragraph 15(b) of decision XXVIII/2. Although the categories included conversion of existing production facilities to produce substitutes as well as the cost of new production facilities, the Executive Committee had thus far always approved funding for the production sector on the basis of plant closure, which was considered the most cost-effective and efficient option.

59. One member noted that, in the past, the Executive Committee had been dealing with fluorinated alternatives and said that it was time to consider other alternative technologies, as had been noted in paragraph 15(b)(v) of decision XXVIII/2, as well as the energy efficiency of all the alternatives. Other members said that it was also important to consider the issue of HFC-23 as a by-product of the production of HCFC-22 process, and several members noted that the most efficient way to address HFC-23 emissions would be to provide sufficient funding to Article 5 countries to allow them to close down the production of HCFC-22 in their countries. It was important to remember that any other solution for addressing HFC-23 would still need to be funded by the Multilateral Fund, otherwise the Article 5 countries would find it difficult to meet their commitments under the Kigali Amendment. With respect to the production of HCFC-22 for use as feedstock, mechanisms to control HFC-23 emissions were required. However, those issues were specific to a certain type and number of plants only; the best solution for eliminating emissions of HFC-23 was to eliminate the production of HCFC-22.

60. It was suggested that the production sector should use as its starting point the elements agreed to by the Parties in paragraph 15(b) of decision XXVIII/2. Those elements could then be developed further by the Sub-group on the Production Sector. One member noted that the production of alternatives to HFCs could be an eligible cost. Other members noted that this was identified as an eligible cost in decision XXVIII/2, but stressed that the mandate of the Executive Committee was to address HFC phase-down by means of the most cost-effective option. It was proposed that the Secretariat also be asked to compile available information on costs and compensation in similar cases in the production sector.

61. Another member said, with respect to HFC-23 by-product controls, that it might be possible to explore the issue of funding for closure of HCFC-22 production swing plants that were not presently eligible for funding. That might be the most cost-effective solution for eliminating emissions of HFC-23. However, in order to take that decision it would be important to have a report by the Secretariat on the estimated costs of closing the remaining swing plants. It was suggested that the Secretariat could use as a starting point for that calculation the cost-effectiveness level established for stage I of the HCFC production phase-out management plan (HPPMP) for China, plus or minus 20 per cent.

62. Several members suggested that there was no need to reconstitute the Sub-group on the Production Sector at the present time, although that decision could be reconsidered when the Executive Committee addressed agenda item 6(c), Key aspects related to HFC-23 by-product-control technologies.

Refrigeration servicing sector

63. The representative of the Secretariat introduced paragraphs 96 to 104 and Annex IV of document UNEP/OzL.Pro/ExCom/78/5, which addressed eligible incremental costs in the refrigeration servicing sector. He recalled that phasing out ODS use in the refrigeration sector was one of the Executive Committee's priorities and that all the categories of eligible costs found in paragraph 15(c) of decision XXVIII/2 had been funded in the past as part of the refrigeration servicing sector. Many of the activities currently being implemented to phase out HCFCs in the refrigeration sector could have an impact on HFC phase-down, but, given that many of the low-GWP alternatives were classified as having some level of flammability or toxicity, Article 5 countries would need to consider strategies that focused on the safe introduction of those alternatives.

64. It was pointed out that the servicing sector was one of the most important sectors being addressed by the Executive Committee, one which was of particular importance to Article 5 countries as it would be the main sector affected by the HFC phase-down and their main funding source for meeting their compliance obligations. The HFC phase-out cost guidelines should address the same targets, with some exceptions, as those addressed by the HCFC guidelines, and build upon them to address such issues as the flammability, toxicity and cost of the alternatives. As an integrated approach was required, it would be useful to have an in-depth review of the subject by the Secretariat, although one member said that any work being requested of the Secretariat should also cover additional issues such as heating elements, heat pumps, mobile air-conditioners, supply chains, and energy efficiency and related costs.

65. One member suggested that a different approach to those costs was required for LVC countries, as had been acknowledged in paragraph 16 of decision XXVIII/2. A more in-depth analysis of the incremental costs in the servicing sector was needed, consistent with the Secretariat's observation that servicing needs varied according to national circumstances. It should encompass existing capacity that had already been built in ODS phase-out, especially in countries with large volumes of ODS, as well as existing infrastructure in countries that were more technologically advanced, and that had servicing infrastructure. More information was also required on the recovery, recycling and reclamation of HCFCs and the investments that had been made in relation to those activities.

66. The majority of countries were on the cusp of embarking on stage III of their HPMPs and, for the majority of them, only the servicing sector remained to be addressed. Adequate funding was required to make use of low- or zero-GWP alternatives, some of which were flammable, toxic, expensive or required high-pressure systems for their use. There was also limited capacity in Article 5 countries for the use of natural refrigerants, and agreed standards were required for their use in those countries. While a similar approach could be used to that in stage II of the HPMPs, the phase-down of the HFCs was different from the phase-out of HCFCs; the alternatives were more complex and more expensive and needed additional analysis. There was also a need to leverage potential resources and reflect on the actual needs of the Article 5 countries.

67. The Secretariat should be requested to undertake supplementary analysis of past practices so that a holistic approach could be developed that addressed all the necessary elements for the servicing sector. That required a good understanding of what had been done in the past and what would be needed for the HPMPs in the future. It would also require an understanding of what activities had been planned by the private sector in Article 5 countries, as they shifted to more efficient and complex systems. The activities of the Multilateral Fund should not be looked at in isolation and the Secretariat should be asked to investigate the synergies between the activities being undertaken in the private sector and those being supported by the Multilateral Fund.

68. One member indicated that, at the 77th meeting, the Secretariat had made two useful proposals which should again be circulated to the Executive Committee. The first was to request the Secretariat to prepare a document on all aspects of the refrigeration servicing sector, taking into account previous policy documents, case studies, monitoring and evaluation reviews, and the work undertaken by bilateral and implementing agencies in developing and implementing training and technical assistance programmes. The second was a request to the Secretariat to prepare a paper, in cooperation with bilateral and implementing agencies, that covered the key aspects that needed to be included when developing a set of training modules for customs officers and refrigeration and air-conditioning service technicians that would be used as the basis for training programmes provided under the Multilateral Fund.

Other costs

69. The Chair introduced paragraph 105 of document UNEP/OzL.Pro/ExCom/78/5 on other eligible incremental costs and said that the text of paragraph 25 of decision XXVIII/2 had been included in the proposed draft template of the cost guidelines contained in Annex I to document UNEP/OzL.Pro/ExCom/78/5.

70. There was no discussion of the matter by the Executive Committee.

Institutional strengthening

71. The Chair introduced paragraph 106 of document UNEP/OzL.Pro/ExCom/78/5, and noted that the matter would be taken up under agenda item 6(a)(iii), Institutional strengthening.

Energy efficiency

72. The representative of the Secretariat introduced paragraphs 107 to 115 and Annex V of document UNEP/OzL.Pro/ExCom/78/5 regarding energy efficiency.

73. The Committee's mandate with respect to energy efficiency was set out in paragraphs 16 and 22 of decision XXVIII/2. During the discussion, several members emphasized the importance of staying within that set mandate. Some members questioned whether the guidance called for by the decision was to be developed for the direct financing of energy efficiency improvements or to be taken into account by countries and agencies when phasing down HFCs. One member also mentioned that energy efficiency aspects needed to be considered in relation both to production and to consumption. Overall, there was a shared aspiration to take advantage of opportunities to maintain or enhance energy efficiency in the implementation of the HFC phase-down, with the understanding that the focus should remain on the HFC phase-down, given that Parties' legal obligations pertained thereto, and not to energy efficiency.

74. A number of members highlighted the Committee's limited experience in handling energy efficiency matters, although it was pointed out that they had, at some stage, been discussed in relation to heat exchangers. One member underscored the need to prioritize the air-conditioning sector and to thoroughly understand the technical aspects of energy efficiency before developing the cost guidance, in part to be able to determine when technology upgrades were unavoidable or simply optional. That said, it was generally recognized that the primary aim of the Multilateral Fund was not to finance energy efficiency. There were other funding mechanisms for energy efficiency, and the potential for financing or co-financing from other institutions, both national and international, should be investigated, although members acknowledged that there were challenges involved.

75. Several members expressed concern about covering incremental costs for energy efficiency, and proposed that an attempt be made to quantify economic benefits that offset the upfront cost of improved

energy efficiency of appliances, such as payback periods. It was also mentioned that energy efficiency should be considered as an eligible incremental cost and not passed on to the consumer, as higher purchase costs limited the widespread adoption of new technologies. Furthermore, payback periods should not be taken into consideration, as they were not only highly dependent on a variety of factors specific to individual countries, and thus complex to calculate, but also less of a factor in the decision-making of consumers in developing countries.

76. It was also noted that industrial development in the refrigeration and air-conditioning sector was strongly affected by decisions taken under the Montreal Protocol, and that it was therefore important to incorporate energy efficiency considerations into the policies and guidelines of the Protocol.

77. One member spoke about the role played by minimum energy conservation standards in ensuring that there was a market for energy efficient air-conditioning and refrigeration equipment, along with testing and verification to ensure that products on the market met those standards. Another member, however, insisted that adoption of such standards remained voluntary, although enabling or capacity- building activities related to the adoption of such standards might be considered at some point.

78. In light of the above, it was proposed that the Secretariat be requested to do additional work on the various aspects of energy efficiency in the context of the HFC phase-down in order to assist the Committee in its deliberations. One member noted the existence of four European Union directives addressing energy efficiency, including the heating and cooling sectors, and contributing to the achievement of the European Union's targets for the reduction of greenhouse gas emissions, and suggested that the Secretariat consider them when undertaking the proposed additional work. Another member said that, in view of the Kigali Amendment, consideration of energy efficiency should be in specific relation to the expected energy efficiency of equipment with new refrigerants only.

79. Several members expressed their desire to take up the issue of energy efficiency again when discussing other matters on the agenda of the present meeting, such as enabling activities.

Capacity building to address safety

80. The Chair introduced paragraph 116 of document UNEP/OzL.Pro/ExCom/78/5. He noted that the issue of capacity building to address safety was specifically addressed in paragraph 23 of decision XXVIII/2, and that paragraph 3 was also of relevance.

81. The members of the Executive Committee had nothing to add to the discussions on the matter that had already taken place. The Chair noted that the discussions on the matter would continue when the Committee considered technical assistance activities and the refrigeration servicing sector.

Disposal

82. The Chair introduced paragraphs 117 to 124 of document UNEP/OzL.Pro/ExCom/78/5.

83. There was no discussion on the matter by the Executive Committee.

Eligibility of Annex F substances subject to high-ambient-temperature exemptions

84. The Chair introduced paragraphs 125 to 131 of document UNEP/OzL.Pro/ExCom/78/5. He noted that the issue of eligibility of Annex F substances subject to high-ambient-temperature exemptions was

addressed in paragraph 35 of decision XXVIII/2, and that that text had been included in the proposed template contained in Annex I to document UNEP/OzL.Pro/ExCom/78/5.

85. There was no discussion on the matter by the Executive Committee.

General discussion on the matter of draft criteria for funding

86. During discussion of agenda item 6(a)(i), Draft criteria for funding, a general discussion took place on matters concerning the Kigali Amendment and the role of the Executive Committee in fulfilling its mandate pursuant to decision XXVIII/2.

87. One member said that the present discussions should contribute to the formulation of a global strategy or policy on the phase-down of HFCs, of which the present cost guidelines would constitute one part. Development of that strategy should be undertaken in a holistic and inclusive manner. Certain factors, however, were obstructing that process. For example, the Executive Committee had not been given the mandate to collect data on HFCs from non-Article 5 countries, which was not consistent with the goal of global phase-down. For the purposes of transparency, strategic decisions should be put before the Open-ended Working Group and considered in a step-by-step manner. In addition, the categorization, under the Kigali Amendment, of Article 5 countries into group 1 and group 2 according to their HFC consumption baseline years was based on their respective capabilities. The Executive Committee, however, in accepting the additional voluntary contributions of US \$27 million for fast-start action on the implementation of the Kigali Amendment for Article 5 countries that had HFC consumption baseline years from 2020 to 2022 had discriminated against group 2 countries. Finally, he said that the deliberations at the present meeting would be rendered more inclusive by relaxation of the rule that only one member from each constituency speak on any single issue. Another member expressed agreement with those viewpoints, and asked for clarification from the Secretariat whether previous offers of conditional funding had been accepted or rejected.

88. On the matter of the mandate of the Executive Committee and the inclusiveness of the process, one member stressed that the priority of the Executive Committee was to work within the mandate provided by the Meeting of the Parties to operationalize the cost guidelines and to do so in a manner that benefited all countries. Another member said that it was important to keep working in developing the cost guidelines and deciding what further information to seek from the Secretariat in preparation for the following meeting, while engaging in wider discussion on the vision framing the process.

89. On the matter of discrimination against particular categories of countries, one member said that none of the text or proposals at the present meeting had implied any discrimination against Article 5 countries on the basis of any grouping. Another member said that the process that had led to the group 1 and group 2 categorization in Kigali demonstrated the flexibility of the Parties and the principle of common but differentiated responsibilities. Another said that membership of group 1 or group 2 simply related to the timing of their obligations, and the earlier flow of funding to countries with earlier baseline years was for practical and not discriminatory reasons.

90. On the related matter of the additional funding of US \$27 million accepted by the Executive Committee, one member said that that funding, which was additional to the regular replenishment process, was intended to facilitate early action, without specific regard to any group of countries, and was consistent with the usual practice of the Multilateral Fund of providing support to countries a few years prior to their obligations coming into force. Another member suggested that the donation of US \$27 million could be further discussed to address any possible concerns. Another member said that the decision had been taken to assist Article 5 countries with near-term needs, and should be handled in accordance with the agreement reflected in decision 77/59. One member also said that the Kigali

Amendment did not differentiate between Article 5 group 1 countries and Article 5 group 2 countries with regard to access to funding.

91. Responding to the query about receiving funds outside the regular contributions to the Multilateral Fund containing conditionalities, the Chief Officer recalled that a proposed donation from the European Union containing a number of conditionalities had not been accepted by the Committee. On the other hand, the funding of US \$27 million for fast-start action by Article 5 countries that had HFC consumption baseline years from 2020 to 2022 had been accepted with appreciation by the Executive Committee.

92. With regard to the proposal for a global policy on HFCs, one member said that the Kigali Amendment had been developed to fulfil that role. The member who had initially raised the issue said that the envisioned policy should be based on global information on the current status of HFC consumption and production in various sectors, in order to inform planning for HFC phase-down. To obtain an accurate global picture, it was important to gather information on non-Article 5 countries as well as on Article 5 countries. Another member suggested that the TEAP could be a source of relevant information.

93. On the matter of the number of members in a particular constituency speaking on any specific issue, some members recalled the historical basis for that, both to maintain the balance of Article 5 and non-Article 5 representation, and to ensure consistency in the views expressed by a particular constituency. One member noted that the formation of contact groups gave all members the opportunity to express their individual opinions, while maintaining the integrity of each constituency in plenary sessions.

94. Regarding the matter of reporting to the Open-ended Working Group at each stage of the process of developing the cost guidelines, one member said that that could significantly delay the finalization of such guidelines.

95. Following an exchange of views, the Chair stressed that no party should or would be excluded from the Kigali Amendment implementation process. Historically, the ozone community had faced a number of challenges and had always arrived at solutions through a transparent, consensual dialogue. He called on members of the Executive Committee to try to find a way to overcome the difficulties they were facing in the present discussions.

96. Later in the meeting, one member reiterated the importance of gathering data on the consumption and production of HFCs, pursuant to item 5 on the agenda, but extending it to the collation of additional information from non-Article 5 countries, both in the interests of transparency and to ensure the development of strategies that were implementable. He urged the Secretariat to make appropriate efforts to gather those data.

97. Another member expressed the view that the Multilateral Fund was moving towards a more technical regime, rather than acting as a facilitator of the finance mechanism, in that the Secretariat was being asked to provide technical documentation, including through the engagement of outside consultants. Those were matters, it was again suggested, for which the expertise of the TEAP might be engaged. The Chief Officer clarified that TEAP had its own terms of reference and undertook only work requested by the Meeting of the Parties. If the Fund Secretariat was requested to provide information additional to that available from the reports of the TEAP, then it requested that information from other sources, or engaged independent consultants or experts to obtain that information. Another member said that the members of the Executive Committee had the capability to assess the best way forward in obtaining additional information, whether through the Secretariat, or through the engagement of external expertise, or through a request to the Meeting of the Parties, or by other means.

98. One member said that the matter of energy efficiency was of generic importance and should be seen as a cross-cutting issue to be included in any consideration of other issues.

Annex III

DECISION 78/3 ON THE COST GUIDELINES FOR THE PHASE-DOWN OF HCFCs IN ARTICLE 5 COUNTRIES¹

1. Following a comprehensive discussion on information relevant to the development of the cost guidelines for the phase-down of HCFCs in Article 5 countries, the Executive Committee decided (decision 78/3):

- (a) To take note of the information relevant to the development of the cost guidelines for the phase-down of HCFCs in Article 5 countries: draft criteria for funding contained in documents UNEP/OzL.Pro/ExCom/78/5 and Corr.1;

In relation to flexibility in implementation that enables Parties to select their own strategies and priorities in sectors and technologies

- (b) To include paragraph 13 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HCFCs contained in Annex I to the present report;

In relation to the cut-off date for eligible capacity

- (c) To include paragraph 17 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HCFCs contained in Annex I to the present report;

In relation to second and third conversions

- (d) To include paragraph 18 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HCFCs contained in Annex I to the present report;

In relation to sustained aggregate reductions in HFC consumption and production

- (e) To continue discussions on:
- (i) The methodology for determining the starting point, including whether it would be expressed in CO₂ equivalents, metric tonnes, or both;
- (ii) The inclusion of paragraph 19 of decision XXVIII/2 in the relevant section of the draft template of the cost guidelines for the phase-down of HCFCs;

In relation to eligible incremental costs

For the consumption manufacturing sector

- (f) In accordance with paragraph 15(a) of decision XXVIII/2, to make the following categories of costs eligible and to include them in the cost calculation associated with the

¹ Paragraph 99 of document document UNEP/OzL.Pro/ExCom/78/11

phase-down of HFCs in the consumption manufacturing sector contained in Annex I to the present report:

- (i) Incremental capital costs (ICCs);
 - (ii) Incremental operating costs (IOCs) for a duration to be determined by the Executive Committee;
 - (iii) Technical assistance activities;
 - (iv) Research and development, when required to adapt and optimize alternatives to HFCs with low- or zero-global warming potential;
 - (v) Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective;
 - (vi) Costs of the safe introduction of flammable and toxic alternatives;
- (g) To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries, on the understanding: that any Article 5 country that submitted a project should have ratified the Kigali Amendment or submitted a formal letter indicating the government's intention to ratify the Amendment; that no further funding action would be available until the instrument of ratification had been received by the depositary at the Headquarters of the United Nations in New York; and that any amount of HFC reduced as a result of the project would be deducted from the starting point;
- (h) To consider costs and savings related to opportunities for further avoiding HFCs in HCFC phase-out activities and how they could be addressed; and

For the other matters discussed in relation to documents UNEP/OzL.Pro/ExCom/78/5 and Corr.1

- (i) To request the Secretariat to prepare a document containing the elements of decision XXVIII/2 presented by the Chair of the Executive Committee in his written summary of discussions on agenda item 6(a), Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries, at the 78th meeting, for further consideration by the Executive Committee at its 79th meeting, including a summary of the issues pending, such as eligible incremental costs (consumption manufacturing, production sector, refrigeration servicing sector, and other costs), energy efficiency, capacity building to address safety, disposal and eligibility of Annex F substances subject to high-ambient-temperature exemptions.