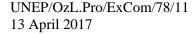
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EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL Seventy-eighth Meeting Montreal, 4-7 April 2017

REPORT OF THE SEVENTY-EIGHTH MEETING OF THE EXECUTIVE COMMITTEE

Introduction

- 1. The 78th meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol was held at the headquarters of the International Civil Aviation Organization, Montreal, Canada, from 4 to 7 April 2017.
- 2. The meeting was attended by representatives of the following countries, members of the Executive Committee in accordance with decision XXVIII/14 of the Twenty-Eighth Meeting of the Parties to the Montreal Protocol:
 - (a) Parties not operating under paragraph 1 of Article 5 of the Protocol: Australia, Austria (Chair), Belgium, Germany, Japan, Slovakia and the United States of America; and
 - (b) Parties operating under paragraph 1 of Article 5 of the Protocol: Argentina, Bosnia and Herzegovina, Cameroon, China, Lebanon (Vice-Chair), Mexico and Nigeria.
- 3. In accordance with the decisions taken by the Executive Committee at its Second and Eighth meetings, representatives of the United Nations Development Programme (UNDP), United Nations Environment Programme both as implementing agency and as Treasurer of the Fund, the United Nations Industrial Development Organization (UNIDO) and the World Bank attended the meeting as observers.
- 4. The Executive Secretary and staff of the Ozone Secretariat and members of the Replenishment Task Force of the Technology and Economic Assessment Panel (TEAP) were also present.
- 5. Representatives of the European Commission, the Alliance for Responsible Atmospheric Policy, the Environmental Investigation Agency, the Institute for Governance and Sustainable Development, the Environmental Protection Institute (IPA) of Mexico, the Kigali Cooling Efficiency Program, the Natural Resources Defense Council, the Refrigeration and Air-Conditioning Manufacturers' Association of India, and the Refrigerant Gas Manufacturers' Association of India also attended as observers.

AGENDA ITEM 1: OPENING OF THE MEETING

- 6. The meeting was opened by the Chair, Mr. Paul Krajnik, who welcomed members to the special four-day meeting, the first of three meetings planned for 2017. He reminded members that the Executive Committee had decided to convene the 78th meeting to address matters related to the Kigali Amendment and potential additional contributions to the Multilateral Fund. He further indicated that it was the first time since the Fourth meeting of the Executive Committee in June 1991 that an Executive Committee meeting agenda had included only policy matters. At the Fourth meeting, the challenge had been to kick-start the Interim Multilateral Fund to phase out CFCs; at the 78th meeting, the challenge was to develop new guidelines for HFC phase-down within two years of the adoption of the Kigali Amendment. The Chair expressed the hope that the hallmark equal participation of Article 5 and non-Article 5 countries, which had underpinned the success of the Multilateral Fund for over two decades, would make it possible to achieve that goal.
- 7. The Chair went on to list the policy papers to be considered by the Executive Committee at the meeting, pointing out that the relatively small number of documents belied the extreme complexity of the agenda, with each item requiring careful consideration. While taking this unique opportunity to focus on HFC policy matters, it was important to keep in mind that a large number of HCFC phase-out projects would have to be approved before the end of the 2015–2017 triennium, which meant that the 79th and 80th meetings would already have very full agendas. It was therefore of the utmost importance to make substantive progress on the crucial policy matters on the agenda of the present meeting.

AGENDA ITEM 2: ORGANIZATIONAL MATTERS

(a) Adoption of the agenda

- 8. One member said that, under agenda item 5, Available information on HFC consumption and production in Article 5 countries, he wished to discuss information on HFC consumption and production in non-Article 5 countries too. Furthermore, in relation to agenda item 7, Procedures for Article 5 countries that have HFC consumption baseline years from 2020 to 2022 in accessing additional contributions for enabling activities, he 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. Funding should therefore be available to all Article 5 countries.
- 9. Following confirmation from the Chair that those matters could indeed be discussed under those agenda items, the Executive Committee adopted the following agenda for the meeting on the basis of the provisional agenda contained in document UNEP/OzL.Pro/ExCom/78/1:
 - 1. Opening of the meeting.
 - 2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work.
 - 3. Secretariat activities.
 - 4. Status of additional contributions to the Multilateral Fund.
 - 5. Available information on HFC consumption and production in Article 5 countries.
 - 6. 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:

- (a) Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries:
 - (i) Draft criteria for funding;
 - (ii) Enabling activities;
 - (iii) Institutional strengthening;
- (b) Identification of issues to be considered in relation to existing HCFC phase-out activities;
- (c) Key aspects related to HFC-23 by-product control technologies.
- 7. Procedures for Article 5 countries that have HFC consumption baseline years from 2020 to 2022 in accessing additional contributions for enabling activities.
- 8. Other matters.
- 9. Adoption of the report.
- 10. Closure of the meeting.

(b) Organization of work

- 10. One member, noting the overlap between the issues to be discussed under agenda item 6(a)(ii), Enabling activities, and agenda item 6(a)(iii), Institutional strengthening, proposed that the two topics be discussed together. The Chair clarified that the agenda items could be discussed separately or together, depending on the wish of the Executive Committee when the time came.
- 11. The Executive Committee <u>agreed</u> to consider under agenda item 8, Other matters, the dates and venue of the 80th meeting of the Executive Committee in 2017.

AGENDA ITEM 3: SECRETARIAT ACTIVITIES

- The Chief Officer welcomed the members of the Executive Committee and all other participants 12. to the present meeting. He also extended a warm welcome to Mr. Munyaradzi Chenje, who had been selected for the post of Deputy Chief Officer of the Secretariat. Mr. Chenje would be taking up his duties in May 2017. The Chief Officer also welcomed Ms. Xiaofang Zhou, who had recently been appointed Director of the Montreal Protocol Unit of UNDP, and was attending her first Executive Committee meeting as the implementing agency's representative. The Chief Officer then introduced document UNEP/OzL.Pro/ExCom/78/2, which provided an overview of the work done by the Secretariat since the 77th meeting to address decision 77/59 on matters related to the Kigali Amendment arising from decision XXVIII/2, and potential additional contributions to the Multilateral Fund by 16 non-Article 5 countries to provide fast-start support for the implementation of the Kigali Agreement. The Chief Officer also drew the members' attention to the inter-agency coordination meeting that had been held in Montreal in February 2017, at which the Ozone Secretariat had provided information related to the Kigali Amendment and relevant decisions by the Parties. The Secretariat, together with the bilateral and implementing agencies and the Treasurer, had discussed matters linked to the Kigali Amendment and relevant Executive Committee decisions, which had facilitated preparations for the 78th meeting of the Executive Committee.
- 13. The Executive Committee <u>took note</u> with appreciation of the report on Secretariat activities contained in document UNEP/OzL.Pro/ExCom/78/2.

AGENDA ITEM 4: STATUS OF ADDITIONAL CONTRIBUTIONS TO THE MULTILATERAL FUND

- 14. The Treasurer introduced the report on the status of additional contributions to the Multilateral Fund contained in documents UNEP/OzL.Pro/ExCom/78/3 and Corr.1. Of the 16 non-Article 5 countries that had agreed to make additional contributions, four had already signed bilateral agreements with the Treasurer and one had confirmed payment of its contribution. Another three countries had indicated the method and timetable for their contributions, while the Treasurer was waiting for a response from the remaining nine countries.
- 15. He also said that the Government of Germany had suggested using its additional contribution for bilateral projects and that that contribution amounted to US \$3.2 million, on the basis of the distribution list outlining the share of contributions among the 16 countries.
- 16. Following a discussion on that distribution list and the amounts pledged, it was accepted that there might be differences between the amounts pledged and those actually received, owing, *inter alia*, to exchange-rate fluctuations or potential additional contributions. As none of the additional contributions had been received, the issue was hypothetical, and the Executive Committee agreed only to note with appreciation the status of pledged additional contributions as reported by the Treasurer as opposed to specifying their value.
- 17. In response to a query on how the additional funds would be processed, the Treasurer said that the same procedure as that used for other contributions received for the Multilateral Fund would be followed.
- 18. The Executive Committee decided:
 - (a) To note the report by the Treasurer on the status of the additional contributions to the Multilateral Fund as contained in documents UNEP/OzL.Pro/ExCom/78/3 and Corr.1;
 - (b) Further to note with appreciation the status of pledged additional contributions distributed among the 16 non-Article 5 Parties to provide fast-start support for implementation of the Kigali Amendment; and
 - (c) To request the Treasurer to report to the Executive Committee on the additional contributions received for fast-start support separately from the other pledged contributions to the Multilateral Fund at the 79th meeting.

(**Decision 78/1**)

AGENDA ITEM 5: AVAILABLE INFORMATION ON HFC CONSUMPTION AND PRODUCTION IN ARTICLE 5 COUNTRIES

19. The representative of the Secretariat introduced documents UNEP/OzL.Pro/ExCom/78/4 and Corr.1, which had been prepared pursuant to decision 77/59(b)(i). They presented an analysis of HFC consumption and production in Article 5 countries based on TEAP Task Force reports (section I) and preliminary information on HFC consumption from the ODS alternatives survey reports that had been submitted by implementing agencies as at 28 February 2017 (section II). In presenting the data from the ODS alternatives surveys, she said that it had not been possible to calculate an overall projection of HFC consumption in the countries concerned owing to the limited data available. A more comprehensive report comprising additional ODS alternatives surveys would be presented to the 79th meeting, on the understanding that such analysis might still be limited by the absence of data from some of the largest HFC-consuming countries, where funding for the preparation of such surveys had not been requested.

- 20. Some members expressed concern at the limited number of ODS alternatives survey reports that had been received by the Secretariat. Assurance was sought that a sufficient number of surveys would be submitted to allow the Secretariat to make a more comprehensive report to the Executive Committee at its 79th meeting. It was suggested that it might be more efficient for countries unable to complete such surveys to return any unspent funds and to reconsider the need to gather such data when developing enabling activities for implementation of the Kigali Amendment. The Secretariat was also asked to clarify how the reporting format had been used and how any gaps in information had been addressed, especially those relating to energy efficiency.
- 21. One member noted that, while the provision of information on HFC consumption as part of the ODS alternatives surveys was voluntary for Article 5 countries, it would be useful if data on HFC consumption and production from non-Article 5 countries could also be made available to ensure greater transparency. It was clarified that the subject under discussion was the availability of reports of surveys funded by the Multilateral Fund at the request of Article 5 countries. Furthermore, within the context of the Executive Committee, non-Article 5 countries had never been requested to provide detailed consumption and production data as it was not relevant for the operation of the Executive Committee. In this regard, the member further emphasized that there was no differentiation in the Montreal Protocol with regard to access to information. Article 5 and non-Article 5 countries should therefore provide such information.
- 22. It was also observed that the reporting of HFC data by non-Article 5 countries was already being addressed at the meetings both of the Parties to the Montreal Protocol and of the Open-ended Working Group, and the Executive Committee did not have the mandate to request that information from non-Article 5 countries.
- 23. One member proposed that the Secretariat obtain such data from reports provided by non-Article 5 Parties to the United Nations Framework Convention on Climate Change.
- 24. The representative of the Secretariat said that, in order for any additional information from the surveys to be included in the report being prepared for the 79th meeting, the ODS alternatives survey reports would have to be received no later than 8 May 2017. She explained that the reports submitted had used the format agreed at the 75th meeting, and noted that many reports had even included the data tables that were not required for submission, but which enabled more robust analysis. With regard to energy efficiency, she also clarified that, while there was also a column to report that information, on a voluntary basis, in the aforementioned format, no such information had been received. She confirmed that the data contained in the document consisted of preliminary estimates from the countries, as none had a licensing system that included HFCs.

25. The Executive Committee decided:

- (a) To note the report on the available information on HFC consumption and production in Article 5 countries contained in documents UNEP/OzL.Pro/ExCom/78/4 and Corr.1;
- (b) To urge bilateral and implementing agencies to work with relevant Article 5 countries to complete and submit, no later than 8 May 2017, as many ODS alternatives survey reports as possible; and
- (c) To request the bilateral and implementing agencies to return to the 81st meeting unspent balances for those surveys of ODS alternatives that had not been submitted to either the 79th or 80th meeting of the Executive Committee.

(Decision 78/2)

AGENDA ITEM 6: 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

26. The Chair introduced the item, noting that it comprised three sub-items: information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries; identification of issues to be considered in relation to existing HCFC phase-out activities; and key aspects related to HFC-23 by-product-control technologies.

(a) Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries

(i) Draft criteria for funding

- 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 UNEP/OzL.Pro/ExCom/78/7 (enabling activities). (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 template for draft 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. of Secretariat 25 of The representative the introduced paragraphs 16 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 HCFC phase-out management plans (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 <u>agreed</u> 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 template for draft 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 template for draft 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 template for draft 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.
- There was overall agreement with the principle applied in decision XXVIII/2, whereby remaining 45. 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 CO_2 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 template for draft 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.

<u>Technical assistance activities</u>

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

<u>Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective</u>

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.
- 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 template for draft 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.
- 99. Following the comprehensive discussions on information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries, the Executive Committee <u>decided</u>:
 - (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;

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

(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 HFCs 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 HFCs 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 HFCs 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 HFCs;

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 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 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.

(**Decision 78/3**)

- (ii) Enabling activities
- (iii) Institutional strengthening
- 100. The Executive Committee decided to deal with the agenda sub-items on enabling activities and institutional strengthening together, owing to the interlinkages between the two matters and because paragraph 20 of decision XXVIII/2 had included institutional strengthening as an enabling activity.
- 101. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/78/6 on enabling activities, following which another representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/78/7 on institutional strengthening.
- 102. One member suggested that the discussion on the matters of enabling activities and institutional strengthening be structured in three parts: first, what enabling activities were needed; second, when they were needed; and third, how they would be delivered. Included in the first element were those activities needed immediately in order to assist Article 5 countries in starting the HFC phase-down process, including ratifying the Kigali Amendment, initiating the supporting institutional arrangements, establishing a licensing system for HFCs under Article 4B, conducting consultations with stakeholders and government agencies, and developing data-collection methodologies. Other activities, including refrigeration and air-conditioning servicing training programmes and customs training, were important but not critical for start-up. Flexibility was needed, however, as not all countries would have the same requirements in the same sequence. Ensuring the appropriate scheduling and sequencing of activities was complicated, given the range of requirements of Article 5 countries, although ratification and licensing system activities were of high priority. The manner of delivery could draw on the experience in implementing such activities in the past, including through institutional strengthening, the Compliance Assistance Programme and HPMP preparation activities, and could also occur through stand-alone enabling activity projects. It was important to avoid duplication of activities and to ensure clarity regarding which mechanisms were to be used and in what circumstances. Finally, the member suggested that the Secretariat could prepare draft guidelines for enabling activities for consideration by the Executive Committee at a future meeting.
- 103. Several other members supported the approach outlined, and concurred with the priority placed on early ratification of the Kigali Amendment. There was general recognition that a flexible approach was needed to reflect the variety of country circumstances, and the legal and political structure of individual countries. One member said that it was important to develop a mechanism that would assess the country's needs for enabling activities, with support for such activities as and when required. Another member said that the potential role of the Compliance Assistance Programme in supporting enabling activities warranted further consideration in the context of the review of the overall structure of the Compliance Assistance Programme with regard to new challenges, to be considered at the 79th meeting.

- 104. One member said that the capacity-building and institutional strengthening activities supported by the Multilateral Fund during the phase-out of ODS could serve as a good model and a framework for compliance. Institutional strengthening projects had played an important role in helping countries to achieve compliance with the Montreal Protocol; with the Kigali Amendment, there would be a need for increased support. Equitable, stable and sufficient funding was necessary for Article 5 countries to ensure the long-term sustainability of HFC phase-down. However, funding for capacity-building activities should not compromise availability of funds for other activities.
- 105. One member highlighted the importance of support for institutional strengthening, and drew a distinction between that and enabling activities, defined as those activities that would empower or enable national ozone units to fulfil the obligations with regard to the HFC phase-down. Such activities could include assistance with licensing systems, data reporting, development of national strategies, demonstration projects, training and capacity building. Activities such as demonstration projects could be stand-alone projects, while others could be implemented by the national ozone unit within the context of institutional strengthening projects. Another member concurred with the useful distinction made between those enabling activities, and those activities that would assist the national ozone unit through institutional strengthening support after ratification to help compliance with the new obligations in the long term.
- 106. One member said that the Executive Committee did not have the mandate to differentiate between Article 5 Parties that had chosen to be included in the group 1 or group 2 phase-down schedules for HFCs set out in decision XXVIII/2, and another mentioned that Article 5 countries as a whole were in urgent need of funding to support enabling activities. The Chair clarified that those groupings remained as defined under the Kigali Amendment; no member at the present meeting had cast doubt on that, and activities discussed under the agenda item were relevant for all Article 5 countries without consideration of their group.
- 107. One member noted that there appeared to be agreement that support for Article 5 countries in their efforts to ratify the Kigali Amendment was the first priority when considering enabling activities. Such efforts might include support for the preparation of national legislation to enable commencement of ratification, and the establishment of a licensing and quota system for HFCs. He stated that institutional strengthening offered continuing support, and it was logical to consider an increase in institutional strengthening after a country had ratified the Kigali Amendment. Another member suggested that the level of institutional strengthening support should be reviewed on a regular basis.
- 108. Following a discussion, the Executive Committee decided:
 - (a) To request the Secretariat to prepare a document providing draft guidelines on enabling activities for consideration by the Executive Committee at its 79th meeting, taking into account the discussions on the matter at the 78th meeting; and
 - (b) To consider increasing funding for institutional strengthening at a future meeting in accordance with paragraph 20 of decision XXVIII/2.

(Decision 78/4)

(b) Identification of issues to be considered in relation to existing HCFC phase-out activities

- 109. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/78/8 and gave an overview of the key issues identified during approval and implementation of stages I and II of the HPMPs for Article 5 countries.
- 110. Following the introduction of the document, one member highlighted the issue of challenges in adopting low-GWP alternatives. It was important to keep in mind that, while experience had been gained

in that respect, it did not mean that there were no obstacles to the adoption of such alternatives. Not all countries had the requisite conditions for the adoption of low-GWP alternatives, including natural refrigerants. In some circumstances, however, it might be possible to create synergies and take early action in stage III of the HPMPs by phasing out HCFCs and/or facilitating adoption of low-GWP alternatives thus bypassing transition to HFCs.

111. Following the discussion, the Executive Committee <u>took note</u> of document UNEP/OzL.Pro/ExCom/78/8 on identification of issues to be considered in relation to existing HCFC phase-out activities.

(c) Key aspects related to HFC-23 by-product control technologies

- 112. The representative of the Secretariat introduced documents UNEP/OzL.Pro/ExCom/78/9 and Corr.1, describing the key aspects related to HFC-23 by-product-control technologies.
- 113. Several members pointed out that the HFC-23 control obligations in 1 January 2020 were the earliest control obligations under the Kigali Amendment, making the matter under consideration a priority. Members also 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. The view was expressed that it was important for countries to retain the flexibility to choose their preferred approach. It was also stated that, from an environmental perspective, funding the closure of HCFC-22 production facilities would be the most effective way to control HFC-23 emissions. In this regard, one member noted that, for those countries that had many production lines, including those that produced HCFC-22 for feedstock purposes, plant closure might not be an option and HFC-23 would still have to be destroyed. In addition, for some plants, incineration facilities had been put in place under the Clean Development Mechanism, but the equipment was more than 10 years old and maintenance costs were increasing.
- 114. A number of members drew attention to the wide range of IOCs reported by different countries and destruction facilities, and stressed that further information was required. It was pointed out that cost guidelines for the destruction of HFC-23 by-product would need to rely on plant-level information from Article 5 countries as it was necessary to address various options to address HFC-23. It was therefore suggested that Executive Committee members be invited to provide the Secretariat with plant-level information regarding HCFC-22 production facilities in their countries to feed into the Secretariat's analysis of: current HFC-23 management practices; the approximate amount of HFC-23 generated, collected and used, destroyed and/or emitted annually per plant; and current or planned domestic regulations, including domestic crediting systems. The Secretariat's analysis should address: process optimization; incineration; transformation; closure of HCFC-22 production; monitoring and verification; and on-site capture of HFC-23 for shipping to an off-site destruction or conversion facility (which could be a stop-gap measure for lines that planned to close).
- 115. Further information requested by members related to: two technical assistance projects under the HPPMP for China; the co-destruction of HFC-23 and other substances (such as ODS and persistent organic pollutants); whether destruction facilities could be used for other HFCs or other substances in order to offset costs, or to provide an alternate funding stream; the cost of disposing of and monitoring hazardous waste produced in the process of destroying HFC-23; the cost and potential earnings associated with the irreversible transformation of HFC-23 into other compounds with a commercial use; the impact of HCFC-22 swing plant closures; existing policies and incentives for HFC-23 destruction; control options and technologies that seemed promising, but for which no cost information, or only minimal cost information, existed; potential technical assistance for legislation development to ensure that emissions of HFC-23 and other HFCs were monitored, and that fugitive emission rates were known; the ramifications of ratification of the Kigali Amendment on continued monitoring of emissions; policies that could ensure

the sustainability of measures implemented by countries to destroy or avoid HFC-23 emissions; and legislation regarding plant closures and HFC-23 elimination.

- 116. It was also pointed out that there were, as yet, no approved destruction technologies for HFC-23. If an appropriate mechanism could be found, TEAP and the Scientific Assessment Panel should be consulted about appropriate destruction technologies and options for monitoring emissions of HFC-23, including associated costs. The Chair advised that it was not possible for the Secretariat to consult those panels directly, as they reported to the Parties. It was further stated that the Parties should begin addressing the issue of destruction technologies in 2017, bearing in mind that assistance from the Multilateral Fund would have to begin in 2018 to meet the 2020 control obligation. It would therefore be ideal to obtain, at the 79th meeting, an update from the Secretariat on its progress in gathering the information requested by the Executive Committee. An updated report on key aspects related to HFC-23 by-product-control technologies would then be submitted by the Secretariat to the 80th meeting. The suggestion was also made that a preliminary review of the production-line information gathered by the Secretariat should be provided at the 79th meeting, to be considered by the Sub-group on the Production Sector in order to preserve the confidentiality of business information.
- 117. With regard to funding for HFC-23 by-product destruction, it was mentioned that production lines in Article 5 countries might have a higher HFC-23 generation rate than lines in non-Article 5 countries, and that support would be needed for technology transfer to reduce the HFC-23 generation rate, as well as for monitoring and verification of HFC-23 destruction. On the matter of whether such funding should come from the additional voluntary contributions to the Multilateral Fund in 2017, it was expressed that it might be complicated to earmark a part of the funds for HFC-23 destruction before the funds were allocated. However, there was no reason for countries that obtained those funds to be prevented from using them for enabling activities associated with HFC-23 emissions control.
- 118. At the end of the discussion, it was stated that a principle of the Multilateral Fund should be to focus its funding on filling in gaps where there would otherwise be no HFC-23 controls. Members were also reminded that the agreed language in the Kigali Amendment called for destruction of HFC-23 to the extent practicable.
- 119. During a discussion of proposed wording on obtaining cost estimates for the closure of HCFC-22 production swing plants, it was pointed out that average cost-effectiveness would allow an estimated cost to be developed. Absent such an average, and since no technical audits had been conducted, the Secretariat would only be able to provide information relevant to cost estimates, rather than the cost estimates themselves. The breadth of the desired information on continuous monitoring of HFC-23 emissions was also the object of differing wording proposals, with one member wishing to limit the information to costs, and another member wishing to obtain information on costs and options.
- 120. A proposed study by a technical expert to be submitted to the 81st meeting also raised a number of questions. Responding to queries by one member, the representative of the Secretariat explained that the choice to focus the study on seven plants in two Article 5 countries had been made to reflect the previous discussion to the effect that process optimization was particularly relevant for countries that had a large number of production lines, including lines producing HCFC-22 for feedstock purposes. The number of plants had been kept to seven in order to make the costs of the desk and field study manageable. It was proposed that it might be preferable to have a desk study only, to gather existing information in the literature on process optimization, thus minimizing the cost of the study.
- 121. Some members requested clarification in relation to wording proposed by one member regarding the costs associated with the management of cross-media impacts, or emissions of all compounds. A proposal for funding demonstration projects for the conversion of HFC-23 by-product to useful products was supported by some members, but considered premature by others. Recognizing that many of the proposed amendments to the draft decision required more discussion, clarification and consideration in

order to meet with consensus, the Executive Committee <u>agreed</u> to establish a contact group to consider the matter further.

- 122. Following discussions in the contact group, the Executive Committee <u>decided</u>:
 - (a) To take note of the key aspects related to HFC-23 by-product-control technologies contained in documents UNEP/OzL.Pro/ExCom/78/9 and Corr.1;
 - (b) To note the urgency of taking action to enable Article 5 countries to meet the HFC-23 reporting and control obligations by 1 January 2020;
 - (c) To reiterate, through the World Bank, its request to the Government of China that it provide to the 79th meeting reports on the status of the studies on "HFC-23 conversion/pyrolysis technologies" and on "investigation on reducing HFC-23 by-product ratio using best practices" that had been funded through the HCFC production phase-out management plan;
 - (d) To invite all relevant HCFC-22 producing parties to provide to the Secretariat, on a voluntary basis, information on quantities of HFC-23 in facilities producing HCFC-22 as well as their experience in controlling and monitoring HFC-23 by-product emissions, including relevant policies and regulations and the related costs, no later than 15 May 2017:
 - (e) To request the Secretariat to continue to explore whether there were HFC- or other HCFC-producing facilities in any party that generated HFC-23 emissions and to report back to the Executive Committee by 31 May 2018;
 - (f) To request the Secretariat to submit an updated document of key aspects related to HFC-23 by-product control technologies to the 79th meeting, including:
 - (i) Information relevant to the cost of closure of HCFC-22 production swing plants;
 - (ii) 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;
 - (iii) Further analysis of methods to control HFC-23 emissions based on the additional information provided by Executive Committee members and any other available information to the Secretariat, including information from the Clean Development Mechanism;
 - (iv) 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
 - (v) 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; and
 - (g) To consider the need for a desk and field study at the 79th meeting.

Constitution of the Sub-group on the Production Sector

- 123. The Executive Committee <u>agreed</u> to reconstitute the Sub-group on the Production Sector, with the following composition: Australia, Argentina, Austria, China, Germany, Lebanon, Mexico and the United States of America. That would allow work to begin at the 79th meeting, when the facilitator of the group would also be chosen.
- 124. There was some discussion on the division of work between the Sub-group and the plenary of the Executive Committee, given the importance of several production-sector-related issues, such as HFC-23 emissions, to the wider membership of the latter body. One member said that he could understand and accept policy issues being discussed by the entire Executive Committee in plenary, but when it came to the consideration of the specific project submissions, then they should be examined by the Sub-group only in order to help protect the confidentiality of the information therein.

AGENDA ITEM 7: PROCEDURES FOR ARTICLE 5 COUNTRIES THAT HAVE HFC CONSUMPTION BASELINE YEARS FROM 2020 TO 2022 IN ACCESSING ADDITIONAL CONTRIBUTIONS FOR ENABLING ACTIVITIES

- 125. The representative of the Secretariat introduced documents UNEP/OzL.Pro/ExCom/78/10 and Corr.1, which described possible funding modalities for enabling activities to be implemented in eligible Article 5 countries to facilitate fast-start actions for the implementation of the Kigali Amendment.
- 126. One member said that the Kigali Amendment did not differentiate between Article 5 group 1 countries and Article 5 group 2 countries with respect to funding. Funds should therefore be made available to all Article 5 countries.
- 127. In response to a query related to the concept of early action for HFC phase-down, the representative of the Secretariat explained that it concerned activities to facilitate early ratification of the Kigali Amendment through those activities listed in paragraph 14 of the document. She also said that, while ratification was a national process, the Executive Committee had previously required Article 5 countries to indicate their intention to ratify any new amendment to the Montreal Protocol as a prerequisite for accessing funds from the Multilateral Fund.
- 128. Some members observed that, while Article 5 countries could be required to declare their intention to ratify the Kigali Amendment as a requirement for funding, each country had the responsibility to decide on their own priorities among the suggested enabling activities. The current proposal for distributing the voluntary contributions to fund all the proposed fast-start activities might skew funding in favour of activities that could be funded from the next replenishment exercise, and some countries that wished to carry out early action to address HFCs might miss opportunities for funding. It was suggested that the entire amount of US \$27 million should be used to fund pilot projects that would yield valuable information on, *inter alia*, incremental capital and operating costs, the energy efficiency of the different alternatives, and future training and capacity building needs. Countries should be invited to submit projects through bilateral and implementing agencies with a special business plan that could then be assessed individually by the Executive Committee.
- 129. It was pointed out, however, that only limited funding would be available through the voluntary contributions and that past pilot and demonstration projects had not always provided useful information, or been implemented in a timely way. Assessment of the needs of each country to move national processes forward for ratification of the Kigali Amendment was required. Some members also said that both demonstration and investment projects should be considered as stand-alone activities and included in the list of possible enabling activities for funding.

- 130. One member said that it would be important to consider the training requirements for, and the market share and supply-chain of, low-GWP or zero-GWP alternatives in order to analyse how barriers to their adoption in Article 5 countries could be removed. Another member said that fast-start activities should address the capacity-building needs of Article 5 countries as they had different mechanisms and priorities, and would be better placed to assess which fast-start activities were most urgent in terms of their own national policies. There were suggestions to fund some HFC projects with strong energy-efficiency components in addition to the other enabling activities. One member said that it would be interesting to fund a demonstration project on the conversion of HFC-23 by-product as opposed to its destruction.
- 131. Members also discussed the need to determine the needs of Article 5 countries and to look at the lessons learned regarding the legal and technical barriers that limited the shift to low-GWP alternatives to HCFCs. The US \$27 million in voluntary contributions had been made available to finance fast-start activities in 2017 because no provision had been made for HFC activities in the present replenishment. It was proposed that, instead of pro-rata distribution, another option for distributing that voluntary funding would be to prioritize those countries that were prepared to move forward quickly. Some flexibility was possible requirements proposed with respect the document UNEP/OzL.Pro/ExCom/78/10, where the condition to complete ratification could be changed into a requirement to commence the process of ratification. One member emphasized that the requirement for a national commitment on early action for the implementation of the Kigali Amendment should be strictly enforced.
- 132. There was agreement that the fast-start funding should be used in 2017 for HFC projects and that enabling activities were needed to further the implementation of the Kigali Amendment as soon as possible. A limited number of demonstration projects might be funded from the voluntary contributions and the implementing agencies should include, in their "special" business plans, requests for funding for enabling activities presented by Article 5 countries. After further discussion, however, it was not possible to reach consensus on all of the elements of the procedures for accessing the additional voluntary funding. The Executive Committee therefore <u>agreed</u> to defer further consideration of the matter to its 79th meeting.
- 133. One member said that, although she understood and respected the needs of those Article 5 countries that would be establishing their HFC baselines after 2022, she wished to have the specific situation and needs of the Article 5 countries in her constituency reflected in the report of the meeting. Some of those countries had the political will to ratify the Kigali Amendment and were about to launch the procedures required to do so, or had already done so. A number of them were also in the process acceding to the European Union. Supporting enabling activities for them to ratify the Kigali Amendment was crucial. In light of that, and the agreement to defer discussion of the funding modalities for enabling activities until the 79th meeting, she asked whether the call by the Chair inviting Parties to submit project proposals was still valid. The Chair clarified that the issue would be revisited at the 79th meeting.

AGENDA ITEM 8: OTHER MATTERS

Dates and venue of the 80th meeting of the Executive Committee

134. Following an update from the Chief Officer, the Executive Committee <u>decided</u> to confirm that it would hold its 80th meeting in Montreal from 13 to 17 November 2017, back to back with the Twenty-Ninth Meeting of the Parties to the Montreal Protocol, scheduled to take place in Montreal from 20 to 24 November 2017.

(Decision 78/6)

AGENDA ITEM 9: ADOPTION OF THE REPORT

135. The Executive Committee adopted its report on the basis of the draft report contained in documents UNEP/OzL.Pro/ExCom/78/L.1 and Add.1.

AGENDA ITEM 10: CLOSURE OF THE MEETING

136. Following the customary exchange of courtesies, the Chair declared the meeting closed at 5.55 p.m. on Friday, 7 April 2017.

Annex I

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

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 continue to be updated upon further discussions on the elements of decision XXVIII/2 by the Executive Committee.

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 HCFC phase-out management plans 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.

Refrigeration servicing sector

Production sector

Energy efficiency

Other costs

Capacity building to address safety

Disposal

Eligibility of Annex F substances subject to high ambient temperature exemptions