



**United Nations  
Environment  
Programme**

Distr.  
GENERAL

UNEP/OzL.Pro/ExCom/89/16  
18 June 2022

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Eighty-ninth Meeting  
Montreal, 7-11 March 2022  
Postponed to 16, 18 and 20 May 2022 (part I) and  
16-18 June 2022 (part II)<sup>1</sup>

**REPORT OF PART II OF THE EIGHTY-NINTH MEETING  
OF THE EXECUTIVE COMMITTEE**

Introduction

1. In view of the coronavirus disease (COVID-19) pandemic and the related directives of the Governments of Canada and Quebec, on 18 January 2022, the Secretariat informed the Executive Committee that the 89<sup>th</sup> meeting, planned to be held from 7 to 11 March 2022 in Montreal, could not take place.
2. Accordingly, the Executive Committee agreed that the 89<sup>th</sup> meeting would be held in two parts:
  - (a) Part I would take place virtually on 16, 18 and 20 May 2022; and
  - (b) Part II would take place in person at the headquarters of the International Civil Aviation Organization in Montreal, from 16 to 18 June 2022.
3. However, as some members of the Executive Committee remained unable to attend the meeting in person because of restrictions related to COVID-19, the Secretariat made arrangements for part II to take place in a hybrid format.
4. Part II of the 89<sup>th</sup> meeting was attended by representatives of the following Parties, members of the Executive Committee in accordance with decision XXXIII/11 of the Thirty-Third Meeting of the Parties to the Montreal Protocol:
  - (a) Parties operating under paragraph 1 of Article 5 of the Protocol (Article 5 Parties): Bahrain (Chair), Brazil, Chad, Cuba, Guyana, India and Zimbabwe; and

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<sup>1</sup> Owing to the coronavirus disease pandemic, part I of the 89<sup>th</sup> meeting was held online, while part II was held in a hybrid format.

- (b) Parties not operating under paragraph 1 of Article 5 of the Protocol (non-Article 5 Parties): Belgium, Canada, Finland, Italy, Japan, Romania and the United States of America (Vice-Chair).

5. In accordance with the decisions taken by the Executive Committee at its second and eighth meetings, representatives of the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) as both implementing agency and Treasurer of the Multilateral Fund, the United Nations Industrial Development Organization (UNIDO) and the World Bank attended the meeting as observers.

6. The Executive Secretary of the Ozone Secretariat, the President and the Vice-President of the Implementation Committee and members of the Technology and Economic Assessment Panel also participated.

7. Representatives of the Environmental Investigation Agency, the Institute for Governance and Sustainable Development, Natural Resources Defense Council and the Refrigerant Gas Manufacturers' Association of India also attended as observers.

#### **AGENDA ITEM 1: OPENING OF THE MEETING**

8. The meeting was opened by the Chair, Mr. Hassan Ali Mubarak, at 10 a.m.<sup>2</sup> He welcomed the members of the Executive Committee to the first in-person meeting to be held since 2019 owing to restrictions imposed in response to the COVID-19 pandemic.

9. He noted that the activities of the Fund were at a pivotal moment, with the start of a new work cycle and the impending implementation of the first Kigali HFC implementation plans (KIPs), for which funding had been approved. The HFC cost funding guidelines would allow consistent, fair determination of the first phase-down targets for Article 5 countries. Progress in that regard would be reported to the Thirty-Fourth Meeting of the Parties. He expressed gratitude to all members for their active engagement despite the COVID-19 pandemic and to the conveners of contact groups and online meetings, which had made it possible to keep abreast of documents and of concerns raised by members. The challenges of remote participation had tired everyone, complicating simple issues and further complicating difficult ones, weakening participants' connection to those issues and to one another. He thanked the Secretariat for organizing a refresher session the previous day, at which an update had been provided on the status of discussions on the HFC cost and funding guidelines. He also thanked the members of the Executive Committee in advance for their continued support for, and commitment to, the successful management of the Fund and expressed his hope that, through collective efforts, substantive progress would be made at the meeting in advancing policy matters.

#### **AGENDA ITEM 2: ORGANIZATIONAL MATTERS**

##### **(a) Adoption of the agenda**

10. The Chair invited members to consider the agenda for part II of the 89<sup>th</sup> meeting on the basis of the provisional agenda for the 89<sup>th</sup> meeting as a whole contained in document UNEP/OzL.Pro/ExCom/89/1:

1. Opening of the meeting.
2. Organizational matters:
  - (a) Adoption of the agenda;

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<sup>2</sup> All times mentioned are Montreal time: UTC -4.

- (b) Organization of work.
- 3. Secretariat activities.
- 4. Overview of current monitoring, reporting, verification and enforceable licensing and quota systems developed with support from the Multilateral Fund (decision 84/85).
- 5. Review of institutional strengthening projects, including funding levels (decision 74/51(d)).
- 6. Update of the analysis of the implications of parallel or integrated implementation of HCFC phase out and HFC phase-down activities (decision 84/86(b)(i)).
- 7. Matters related to the Kigali Amendment to the Montreal Protocol:
  - (a) Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding (decision 83/65(d));
  - (b) Potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth and sustainable reductions in HFC consumption (decision 88/75);
  - (c) Analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector (decision 88/76);
  - (d) Synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2 (decision 84/87(b));
  - (e) Analysis of and information on the incremental costs and their duration, and the cost-effectiveness of all approved investment projects in the relevant manufacturing sectors and sub-sectors (decision 84/87(a));
  - (f) Energy efficiency:
    - (i) Paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88);
    - (ii) Report identifying options, including the relevant procedures and conditions for mobilizing financial resources for maintaining and/or enhancing energy efficiency when replacing HFCs with low global warming potential alternatives (decision 87/51);
  - (g) Key aspects related to HFC-23 by-product control technologies (decision 83/67(d)).
- 8. Report of the Sub-group on the Production Sector.
- 9. Other matters.
- 10. Adoption of the report.
- 11. Closure of the meeting.

11. One member proposed that item 8, on the report of the Sub-group on the Production Sector, should be addressed at the 90<sup>th</sup> meeting of the Executive Committee.

12. The Executive Committee adopted the agenda as verbally amended.

**(b) Organization of work**

13. The Chair recalled that, as the membership of the Committee was new, the composition of the Sub-group on the Production Sector needed to be decided; however, that matter would be considered at the 90<sup>th</sup> meeting of the Committee, in accordance with the amendment made to the provisional agenda.

14. He proposed that all the agenda items should be opened on the first day to ensure maximum time for contact groups during the following two days. To build on the progress made in part I of the meeting, he proposed that two items, namely item 5 on review of institutional strengthening projects, including funding levels, and item 7(c), on analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector, should be brought forward so that, if members so decided, contact groups could be re-established on those issues as soon as possible. He further proposed that document UNEP/OzL.Pro/ExCom/89/1/Add.3 (annotated provisional agenda) should be used as the main working document, as it provided a summary of the issues and the proposed actions to be considered.

15. He recalled that the discussion of agenda item 3 had been concluded in part I of the meeting with the adoption of decision 89/1. One member, recalling that he had noted, in part I of the meeting, that observations regarding risk management in the 2019 Assessment of the Multilateral Fund by the Multilateral Organisation Performance Assessment Network (MOPAN) had not been fully addressed in the Secretariat's report contained in document UNEP/OzL.Pro/ExCom/89/2/Add.1, requested that the matter should be discussed at the current meeting. Following bilateral consultations in the margins of the meeting, it was agreed that there was no need to reopen agenda item 3, as the matter was covered in decision 89/1.

16. The Executive Committee agreed to the organization of work proposed by the Chair.

**AGENDA ITEM 3: SECRETARIAT ACTIVITIES**

17. The discussion held on the item was concluded at part I of the 89<sup>th</sup> meeting with the adoption of decision 89/1.

**AGENDA ITEM 4: OVERVIEW OF CURRENT MONITORING, REPORTING, VERIFICATION AND ENFORCEABLE LICENSING AND QUOTA SYSTEMS DEVELOPED WITH SUPPORT FROM THE MULTILATERAL FUND (DECISION 84/85)**

18. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/3, which was based on document UNEP/OzL.Pro/ExCom/88/66 and from which the following suggestions had been removed: reporting by Article 5 countries to the Secretariat of seizures of illegal trade; recommendations related to free-trade zones; and the identification of countries to which pre-blended polyols were exported. Paragraph 75 of document UNEP/OzL.Pro/ExCom/88/66 summarized the Secretariat's observations related to monitoring, reporting, verification and enforceable licensing and quota systems.

19. In the discussion that followed, it was observed that it would be important for the Executive Committee to carefully consider the long-term sustainability of activities supported by the Multilateral Fund, as had been highlighted by MOPAN. It was also suggested that, rather than naming those countries without production phase-out agreements, there should be a general invitation to such countries to request funding for annual verification and monitoring of HCFC production under other projects, as recommended by the Secretariat. However, it was also pointed out that such an invitation could not be extended to one country as

it was subject to sanctions by the United Nations Security Council. In addition, it was suggested that the observation on the need to sustain final phase-out targets should be clarified.

20. With respect to the Secretariat's observations, members sought clarification on the verification of pre-blended polyols and their export, the return of funds in case of non-compliance with their Agreement, continued reporting under the production sector, and verification under multi-year agreements. It would also be important for the Executive Committee to first consider the cases of countries that had failed to sustain the final phase-out target before applying any specified penalties, and for the Secretariat to examine the feasibility for and additional costs of broadening the terms of reference of verifications to include previously phased out controlled substances. In addition to that, the analysis to be presented to the 92<sup>nd</sup> meeting should include those controlled substances not yet addressed under a project, and possible additional funding to ensure that bilateral and implementing agencies could assist Article 5 countries that requested such assistance in case of non-compliance with their Agreement.

21. It was observed by some countries that the document covered a range of complex issues, some of which were likely beyond the mandate of the Executive Committee and would be better addressed by the Meeting of the Parties. The role of the Executive Committee was to ensure compliance by Article 5 countries with project-specific agreements, and any changes regarding the matters included in the summary presented in document UNEP/OzL.Pro/ExCom/89/3 should not impose additional burdens on those countries. Article 5 countries should not be singled out, as the matters included in the summary should apply to all Parties to the Montreal Protocol. Others said that, while many of the issues raised were common to all Parties, such as the problem of illegal trade, which would also be discussed by the Open-ended Working Group, the particular issues raised were within the Executive Committee's mandate, as they related to project funding and were important for strengthening the Multilateral Fund's activities.

22. The Executive Committee agreed to establish a contact group to discuss the Secretariat's observations related to monitoring, reporting, verification and enforceable licensing and quota systems.

23. Subsequently, the Executive Committee decided to defer further consideration of the overview of current monitoring, reporting, verification and enforceable licensing and quota systems developed with support from the Multilateral Fund, contained in document UNEP/OzL.Pro/ExCom/89/3, to the 91<sup>st</sup> meeting, taking into consideration any outcomes of the 44<sup>th</sup> Meeting of the Open-ended Working Group and the Thirty-Fourth Meeting of the Parties.

**(Decision 89/2)**

**AGENDA ITEM 5: REVIEW OF INSTITUTIONAL STRENGTHENING PROJECTS, INCLUDING FUNDING LEVELS (DECISION 74/51(D))**

24. The Chair, drawing attention to document UNEP/OzL.Pro/ExCom/89/4, recalled that agenda item 5 had been discussed in a contact group during part I of the 89<sup>th</sup> meeting. Subsequently, the Committee had agreed to continue discussing the item at the present meeting on the basis of the working text, which had been appended to the report of part I of the 89<sup>th</sup> meeting. He proposed that a contact group on the item should be reconstituted to facilitate further discussion.

25. One member commented that institutional strengthening projects had contributed to positive results in phasing out ozone-depleting substances. With the COVID-19 pandemic and the changing global economy, however, projects for institutional strengthening should be adapted to the new situation. Funding levels would have to be increased to achieve the goals in order to account for new realities. He considered that a new approach to institutional strengthening should be considered in order to meet the needs of countries severely affected by high inflation.

26. The Executive Committee agreed to establish a contact group to continue the discussions on the item.
27. Subsequently, the Executive Committee decided:
- (a) To note the review of funding of institutional strengthening projects, including funding levels (decision 74/51(d)), contained in document UNEP/OzL.Pro/ExCom/89/4;
  - (b) To request the Secretariat to discuss with the bilateral and implementing agencies matters related to reviewing the existing format of terminal reports and requests for extension of institutional strengthening funding, and to selecting a set of performance indicators that could be used consistently by all Article 5 countries, and to report back to the Executive Committee at its 91<sup>st</sup> meeting; and
  - (c) To defer consideration of the review of institutional strengthening projects, including funding levels, to the 91<sup>st</sup> meeting on the basis of the working text contained in Annex I to the present report.

**(Decision 89/3)**

**AGENDA ITEM 6: UPDATE OF THE ANALYSIS OF THE IMPLICATIONS OF PARALLEL OR INTEGRATED IMPLEMENTATION OF HCFC PHASE-OUT AND HFC PHASE-DOWN ACTIVITIES (DECISION 84/86(b)(i))**

28. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/5, which focused on the operational needs related to the implementation of the Kigali Amendment and the additional burden that the Fund institutions would face in upcoming years. The document had been prepared on the basis of an analysis of the implications of parallel or integrated implementation of HCFC phase-out and HFC phase-down activities. It presented an analysis of the gradual increase in workload associated with the preparatory activities for HFC phase-down being implemented concurrently with ongoing HCFC phase-out management plans (HPMPs), as well as the increasing number of countries ratifying the Kigali Amendment and taking subsequent steps to fulfil their obligations thereunder.
29. Potential funding increases would need to be assessed in the light of the additional information on the actual workload. The Secretariat recommended that the Executive Committee should request it to prepare an analysis related to the capacity of the Multilateral Fund institutions and Article 5 countries, and resources needed to address HFC phase-down, for the first meeting of the Executive Committee in 2023.
30. Several members highlighted the importance of the proposed analysis, which would complement other discussions, and suggested that it should be prepared for the 91<sup>st</sup> meeting of the Executive Committee, which would take place in 2022, rather than waiting until the first meeting of 2023.
31. One member said that the implementation of HCFC phase-out and HFC phase-down activities should not be integrated, while another member pointed out that other discussions on that subject were already being held separately.
32. In addition, a member pointed out that, regardless of whether implementation was parallel or integrated, it would require additional funding, and it was imperative for the Committee to take immediate action and move forward with funding. A request was made to the Secretariat to broadly use the lessons learned from the proposed analysis when preparing other documents.
33. Responding to questions, the representative of the Secretariat explained that the proposed analysis was on the operational needs for the Fund Secretariat, the Treasurer and the implementing agencies, whereas

specific discussions on the relevant funding associated with those needs would be conducted in the context of the specific budget document for each institution.

34. In the light of the additional information provided by the Secretariat, and given that the issue of the capacity of Article 5 countries was already being addressed through the ongoing discussions on institutional strengthening, one member suggested removing the reference to Article 5 countries in subparagraph (b) of the recommendation.

35. The Executive Committee decided:

- (a) To note the status of the analysis of the implications of parallel or integrated implementation of HCFC phase-out and HFC phase-down activities contained in document UNEP/OzL.Pro/ExCom/89/5; and
- (b) To request the Secretariat to prepare an analysis related to the capacity of the Multilateral Fund institutions to address HFC phase-down, for the consideration of the Executive Committee at its 91<sup>st</sup> meeting.

**(Decision 89/4)**

#### **AGENDA ITEM 7: MATTERS RELATED TO THE KIGALI AMENDMENT TO THE MONTREAL PROTOCOL**

**(a) Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding (decision 83/65(d))**

36. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/6, pointing out that the cost guidelines for the phase-down of HFCs had not been discussed since the 84<sup>th</sup> meeting owing to the COVID-19 pandemic. Table 1 of the document contained the status of progress in the discussion of the elements of the cost guidelines, with suggested actions to achieve further progress.

37. Another representative of the Secretariat recalled document UNEP/OzL.Pro/ExCom/82/66, which had been considered at the 82<sup>nd</sup> meeting and which included relevant information and key considerations that could assist the Executive Committee in determining a methodology for establishing the starting point for sustained aggregate reductions in HFC consumption and production.

38. One member pointed out that there was no mention in the document of the special considerations regarding funding for low-volume-consuming (LVC) countries.

39. Another member said that documents UNEP/OzL.Pro/ExCom/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1 would serve as background documentation for the contact group on cost guidelines, and he did not see the need for separate substantive discussions of those documents under agenda item 7(e). It was his understanding that the key issues to be addressed under agenda item 7(a) were the starting point for sustained aggregate reductions in HFC consumption and production, the cost-effectiveness thresholds, and the duration and level of incremental operating costs. He was open to discussing disposal but preferably outside the context of the cost guidelines.

40. Two other members agreed that the starting point was among the most important issues to be addressed but said that they were also open to addressing the issue of disposal. Another member lamented the fact that disposal had yet to be addressed and reminded the Committee that it would have to make a decision on disposal eventually.

41. A member pointed out that the global situation had changed drastically, and that the past three years had been extremely difficult for countries with small economies. It was therefore important to be flexible and to take the current situation into account when deciding, for example, the starting point for sustained aggregate reductions. There was no time to wait for analyses, as immediate action should be taken.

42. The Executive Committee agreed to continue its deliberations on the cost guidelines for the phase-down of HFCs in Article 5 countries in the light of document UNEP/OzL.Pro/ExCom/89/6 in a contact group and to discuss the issue of disposal in plenary under agenda item 7(d).

43. Subsequently, the convener of the contact group expressed her appreciation for the excellent work carried out by the previous convener of the contact group, Mr. Alain Wilmart, who had established a solid and firm foundation from which to take the work forward. She further reported that the group had held discussions on cost-effectiveness thresholds, the starting point for HFC phase-down, and disposal, as per decision XXVIII/2.

44. She reported that members had requested a more precise methodology for determining cost-effectiveness thresholds, so that some countries could start their work. The contact group had agreed that in the interim, for the aerosol, fire extinguishing, metered-dose inhaler, solvent and mobile air-conditioning sectors, cost-effectiveness would be considered on a case-by-case basis, and that on an interim basis, for the domestic refrigeration manufacturing sector, the cost-effectiveness threshold of US \$13.76/kg would be used. The group had not finalized its discussions on the cost-effectiveness for commercial refrigeration and had also agreed that special consideration was needed for small-sized enterprises for this sector.

45. With regard to disposal, she reported that there were discussions for revisions to the recommendations proposed by the Secretariat to further clarify how this activity might be taken forward in servicing sector plans. The concept of a funding window was also brought up, but needed to be further discussed.

46. The convenor also reported that discussion started on the units of measurement and a methodology for determining the starting point for sustained reductions of HFCs. The Secretariat was requested to prepare for the 90<sup>th</sup> meeting various scenarios in relation to the possible units of measurement and methodologies that might be used in determining the starting point.

47. Subsequently, the Executive Committee agreed to continue the discussions on the item at the 90<sup>th</sup> meeting, on the basis of working texts on cost-effectiveness thresholds, disposal and the starting point for sustained reductions of HFCs, comprising a compilation of the textual proposals made by members, prepared by the Secretariat and contained in Annex II, Annex III and Annex IV, respectively, to the present report.

**(b) Potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth and sustainable reductions in HFC consumption (decision 88/75)**

48. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/7, which contained a note by the Secretariat followed by the original text of document UNEP/OzL.Pro/ExCom/88/71, as an attachment.

49. It was pointed out that, for Article 5 countries, there was a need for full flexibility in achieving the HFC phase-down, a need to respect national circumstances and a need for compensation when adopting low-GWP alternatives. Article 5 countries also needed to focus on the phase-down of HFCs to achieve a 10 per cent reduction in consumption, and flexibility in the implementation of a country-driven approach, which might even entail growth in their HFC needs. Policies, strategies and commitments limiting HFC use



were a sensitive topic for Article 5 countries; proposals to limit growth in HFC consumption went beyond the Kigali commitments and did not offer the full flexibility provided for in decision XXVIII/2. A broad timeline for implementation was needed to supply the development needs of Article 5 countries. There were no alternatives available for some sectors, many conversions were difficult, and many mixtures only lowered the GWP of the alternatives. There were also problems with new technologies that sometimes could not be integrated into the existing infrastructure. It was suggested that, instead of metric tonnes, the alternative measure of CO<sub>2</sub>-equivalent should be used, and, with reference to paragraph 36 of document UNEP/OzL.Pro/ExCom/88/71, that there would be a need to “front-load” funding for Article 5 countries to be able to start the KIP preparatory process. All countries wanted to comply with their obligations under the Kigali Amendment and ultimately would do so, but given the collapse in GDP caused by the pandemic, there should be flexibility in the determination of the starting points.

50. Other members suggested that document UNEP/OzL.Pro/ExCom/88/71 was a good basis for discussing integrated implementation in the servicing sector; it had originally contained recommendations on a number of sectors and a recommendation for an integrated compliance strategy document. That would be useful for the development of the KIPs, after which the individual sector recommendations could be considered. While the flexibility for growth permitted by the Kigali Amendment should be respected, the document had been prepared to inform the KIPs, and countries that wished for funding to phase down consumption of HFCs should be allowed to ask for that assistance even before their KIP was ready, even if it had the effect of limiting their growth, as no country was required to ask for such assistance.

51. One member noted that, since the study had been requested by the Executive Committee in 2019, the situation had changed, in that many Group I countries would need to take action imminently to ensure compliance with the 2024 HFC freeze. In fact, a recent study by the Climate and Clean Air Coalition indicated that as many as 55 Group I countries would be above their HFC baseline levels over the following three years unless action was taken to reduce their consumption. In that regard, the member encouraged implementing agencies to expedite the preparation of KIPs for such countries and consider submitting stand-alone investment projects ahead of KIPs when possible. For countries that might have more time to comply with the HFC freeze, the member noted that any KIP proposals submitted in the near future should clearly demonstrate how the proposed activities would ensure overall sustained reductions in HFC consumption, or at least constrain the growth of such consumption.

52. The Executive Committee decided to encourage bilateral and implementing agencies and Article 5 countries, in accordance with their national circumstances, to take into account, where appropriate and feasible, the ideas and suggestions contained in document UNEP/OzL.Pro/ExCom/88/71, while designing HFC phase-down strategies, including developing Kigali HFC implementation plans, taking into account the compliance obligations as per the agreed HFC phase-down schedule for Article 5 Parties.

**(Decision 89/5)**

**(c) Analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector (decision 88/76)**

53. The Chair opened the discussion, recalling that the item had been discussed in a contact group during part I of the meeting. The Secretariat had been asked to provide additional information and had issued an addendum to document UNEP/OzL.Pro/ExCom/89/8. He invited the Secretariat to introduce the item, focusing on the additional information provided in the addendum (UNEP/OzL.Pro/ExCom/89/8/Add.1).

54. The representative of the Secretariat presented the addendum, which contained adjustments to the third modality of funding set out in document UNEP/OzL.Pro/ExCom/89/8. Non-LVC countries were categorized into four groups on the basis of their HCFC consumption and level of manufacturing. Different levels of funding were proposed for each group, special cases were identified, and specific modalities of

funding were proposed for each one. In addition, the overall level of funding for the servicing sector for all Article 5 countries was calculated according to the level of funding proposed for each group of countries.

55. One member commented that the additional information covered most of the important elements. Reduction of HFC in the refrigeration servicing sector would require additional funding, as equipment that existed for HCFC phase-out was now obsolete, and inflation, costs and the number of technicians had evolved. He considered that the issue was urgent, and decisions were needed. Flexibility should be used in order to reflect the reality in many developing countries where economic activity had been suspended for the past two years. Therefore, the baseline years as a reference for the starting point would be very low.

56. Several members requested more time to analyse the report. One member commented that the proposed funding for the servicing sector would have to take into consideration the flammability of refrigerants with low global-warming potential, which was different from the situation for HCFCs, for which there were more alternatives that were not flammable. Capacity-building was necessary not only for technicians but for the entire supply chain for refrigerants, from architects, supervisors and air-conditioning suppliers and manufacturers to those handling and storing refrigerants. That position was supported by another member, who reiterated the importance of flexibility and suggested that the issue should be addressed in terms of CO<sub>2</sub>-equivalent.

57. One member said that he was still considering the two options provided in the addendum for the allocation of funding to non-LVC countries and recognized that the two options would ensure tailored assistance to different types of non-LVC countries. Another member welcomed the graduated levels of funding listed in Table 2 of the document, providing extra funding for smaller non-LVC countries.

58. The Executive Committee agreed to establish a contact group to continue the discussions on the item.

59. Subsequently, the convener of the contact group reported that the group had discussed proposals on funding for LVC countries and had exchanged views on methodologies, the realities that Article 5 countries were facing and the principles of financing that the Fund had applied in the past. While the group had not agreed on any concrete figures, several members had expressed an interest in doing so, which suggested that further discussions on the matter at the 90<sup>th</sup> meeting of the Executive Committee would prove fruitful.

60. The Executive Committee agreed to continue the discussions on the item at its 90<sup>th</sup> meeting.

**(d) Synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2 (decision 84/87(b))**

61. The representative of the Secretariat recalled that document UNEP/OzL.Pro/ExCom/89/9 had been prepared in response to decision 84/87(b) for consideration at the 85<sup>th</sup> meeting. It had been presented to the 86<sup>th</sup> meeting, but the discussion of it had been postponed owing to the COVID-19 pandemic, and it would be considered for the first time at the present meeting. The document presented an analysis of lessons learnt from previously approved pilot projects on ODS disposal, elements to be considered in operationalizing paragraph 24 of decision XXVIII/2 and options for consideration in funding activities for environmentally sound management of waste of ODS and other controlled substances.

62. In the ensuing discussion, members welcomed the comprehensive report prepared by the Secretariat, noting that the ODS pilot projects had provided important lessons, despite their mixed results. Several members expressed support for the proposed recommendations. Some members suggested revisions to the recommendation to include strategies for environmentally sound management of ODS waste in plans that were currently being implemented and also future plans for HFCs. Countries that considered making such revisions would require approval from the Executive Committee to ensure that the strategies were cost-effective.

63. Support was also expressed for the development of a framework for countries to undertake inventories of banks of controlled substances, which was considered a first step in the sustainable management of those substances and would facilitate the identification of future actions, which could include disposal. Some members expressed agreement with the integrated waste management approach but called for consideration of the situation in small countries, which would require a mechanism and resources that allowed them, and especially LVC countries, to include such activities in their national phase-out plans. While members welcomed the proposed activities, they emphasized that they should not impose an additional burden on Article 5 countries, should be based on national circumstances and should be supported with the necessary financial resources.

64. Interest was expressed in continuing the discussion in a contact group. Some members encouraged the inclusion of the topic in the discussion on HFC cost guidelines, as paragraph 24 was an integral part of decision XXVIII/2. Other members considered that the issue should be discussed separately.

65. After further discussion, the Executive Committee agreed to include the issue in the deliberations of the contact group on the HFC cost guidelines under agenda item 7(a).

66. Subsequently, the Executive Committee agreed to continue the discussions on the item at its 90<sup>th</sup> meeting, on the basis of a working text deliberated by members in the contact group, and appended to the present report (see paragraph 47 above).

**(e) Analysis of and information on the incremental costs and their duration, and the cost-effectiveness of all approved investment projects in the relevant manufacturing sectors and sub-sectors (decision 84/87(a))**

67. The representative of the Secretariat introduced documents UNEP/OzL.Pro/ExCom/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1. Document UNEP/OzL.Pro/ExCom/89/10/Rev.1 was a reissue of previously prepared documents, with some necessary updates, while UNEP/OzL.Pro/ExCom/89/10/Add.1 presented a preliminary analysis of the incremental capital costs and incremental operating costs incurred in the completion of the first four HFC investment projects approved under decision 78/3(g). That analysis was only partial; the Secretariat would provide further information in that regard to the 91<sup>st</sup> meeting of the Executive Committee.

68. It was observed that the document developed by the Secretariat was useful on cost issues generally and not only for the cost guidelines; it provided a helpful analysis of the previous policy and practice of the Multilateral Fund. While it should still be treated as a background document, it also revealed that the Executive Committee already had significant experience with introducing low-GWP alternatives to HCFCs and CFCs within the existing cost-effectiveness thresholds.

69. The Executive Committee took note of the document on the analysis of the incremental capital costs and incremental operating costs and their duration, and the cost-effectiveness of all approved investment projects in the relevant manufacturing sectors and sub-sectors, contained in documents UNEP/OzL.Pro/ExCom/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1.

70. The Executive Committee further agreed to take into account the information contained in the two documents during the discussion of the development of the cost guidelines for the phase-down of HFCs in Article 5 countries in the contact group constituted under agenda item 7(a).

**(f) Energy efficiency**

**(i) Paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88)**

71. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/11, noting that the matter had previously been discussed in a contact group at the 83<sup>rd</sup> and 84<sup>th</sup> meetings of the Executive Committee, but that, while significant progress had been made, agreement had not been reached on the funding levels for implementing the activities identified. Owing to constraints related to the COVID-19 pandemic, the Committee had deferred consideration of the matter until the present meeting.

72. During part I of the 89<sup>th</sup> meeting, held online in May 2022, the Executive Committee had agreed to keep the discussion under a separate agenda item rather than considering it in the context of its deliberations on the level and modalities of funding for HFC phase-down in the refrigeration servicing sector. The recommendation contained in paragraph 13(d) of the document included additional text in bold on the revision of the HPMP Agreement to include the additional funding for the agreed additional activities, which the Executive Committee might wish to address during its discussion.

73. The Executive Committee agreed to establish a contact group to continue the discussions on the item.

74. Subsequently, the convener of the contact group reported that the group had managed to reach consensus, in particular on a number of additional activities for inclusion in existing and future HPMPs and on the important issue of a table of funding for such activities. One member, thanking the convener for his efforts in achieving consensus, noted that the additional activities on which the group had agreed were strictly voluntary, with no obligation imposed on implementing agencies or Article 5 Parties.

75. The Executive Committee decided:

- (a) To note the paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 82/83(c)), contained in document UNEP/OzL.Pro/ExCom/83/40;
- (b) To consider the following additional activities for inclusion in existing and future HCFC phase-out management plans (HPMPs) for low-volume-consuming (LVC) countries, when needed for the introduction of alternatives to HCFCs with low or zero global-warming potential (GWP) and for maintaining energy efficiency in the refrigeration servicing sector:
  - (i) Pilot projects designed for and targeted towards end users, relating primarily to energy efficient small-capacity refrigeration, air-conditioning and heat-pump (RACHP) equipment using alternative low-GWP technologies to address challenges related to market acceptance;
  - (ii) Updating of training material to strengthen components related to good practices and energy efficiency during assessment, installation, maintenance and servicing of RACHP equipment, including safety considerations when addressing refrigerants with differing operating characteristics with regard to flammability, toxicity and pressure;
  - (iii) Coordination and collaboration between the national ozone units and relevant authorities and bodies to include appropriate consideration of low-GWP refrigerants during the development of cooling and energy efficiency plans, which among others

include minimum energy performance standards (MEPS) and, as appropriate, labelling and testing programmes, and standards for RACHP equipment;

- (iv) Development and implementation of competency-based certification schemes for technicians and the strengthening of national institutions for such systems including for energy efficiency and safety; and
  - (v) Awareness and outreach programmes to promote the introduction of MEPS and labelling systems; the mandatory certification of technicians; and the introduction of energy-efficient RACHP equipment operating with low- or zero-GWP refrigerants;
- (c) To provide the following funding, when needed, for the activities identified in subparagraph (b) above, on the understanding that Article 5 countries would have flexibility in using the additional funding to address specific needs that might arise during project implementation relating to introduction of alternatives to HCFCs with low- or zero-GWP refrigerants and for maintaining energy efficiency in the refrigeration servicing sector:

Consumption (mt)*	Additional funding (US \$)
Less than 120	100,000
120-360	120,000

\* Level of HCFC baseline consumption in the refrigeration servicing sector

- (d) To request bilateral and implementing agencies, when submitting an HPMP tranche request, to include in the tranche implementation plan, the specific actions, performance indicators and funding associated with the activities referred to in sub-paragraph (b) above; a progress report on implementation of those activities under the previous funding tranche; and a revised Agreement between the Government of the Article 5 country concerned and the Executive Committee.

**(Decision 89/6)**

- (ii) **Report identifying options, including the relevant procedures and conditions for mobilizing financial resources for maintaining and/or enhancing energy efficiency when replacing HFCs with low-global-warming-potential alternatives (decision 87/51)**

76. The representative of the Secretariat introduced document UNEP/OzL.Pro/ExCom/89/12, saying that the Secretariat had reviewed information provided in the report from the Technology and Economic Assessment Panel in 2018 and had held informal consultations with representatives from different institutions when preparing the report in response to decision 87/51.

77. The Secretariat had identified relevant potential projects and activities that could be undertaken and their impact. It had further identified three funding options, namely: regular contributions to the Multilateral Fund funding; funding through additional contributions by donor countries outside the Multilateral Fund replenishments; and negotiated funding arrangements with identified institutions. Existing processes used by bilateral and implementing agencies to access funds from different funding institutions that financed energy-efficiency-related initiatives could also be structured to fund energy efficiency while phasing down HFCs. As procedures for funding and implementing energy efficiency components varied across institutions, they would not be entirely compatible with Multilateral Fund procedures.

78. A number of members emphasized the importance of enhancing energy efficiency and exchanged views on the three funding options identified by the Secretariat. Preferences were expressed for each of the options, with several members indicating that they were not mutually exclusive. One of the members who

was in favour of option 1 emphasized the need to provide support to the Secretariat so that it could develop expertise in energy efficiency. One member expressed concern about the tremendous workload already facing the Secretariat and requested further information on the Secretariat's existing capacity to address energy efficiency.

79. Another member said that option 3 was the most viable, as institutions such as the Global Environment Facility (GEF) and the Green Climate Fund (GCF) were providing funding for projects related to energy efficiency. He added that collaboration with those institutions should be explored and that more information was needed from the Secretariat on the modalities put forward in the paper. The latter point was supported by another member. A third member mentioned that the cost-effectiveness of the projects, their environmental benefits and related challenges needed to be understood.

80. In addition, one member stated that funding should be in the form of grants, as envisaged under Article 10 of the Montreal Protocol, while another expressed his view that funding for enhancing energy efficiency did not fall under the incremental costs model set out in that Article. He noted that energy efficiency was not a compliance obligation. However, as part of the adoption of the Kigali Amendment, the Executive Committee had been requested to take action on the matter pursuant to decision XXVIII/2. If Article 5 countries were interested in working with the Multilateral Fund to enhance energy efficiency, the Committee should use that opportunity and consider what it might be willing to do to assist them. Such action would require additional financial resources, which was something that donor countries would need to take into consideration.

81. Several members showed interest in the proposed funding window for pilot projects, which could be used as a tool to encourage decision makers to take action quickly, both to fulfil obligations under the Kigali Amendment and to protect the environment. One member also pointed out that enhanced energy efficiency was an important incentive to help convince end users and enterprises to adopt low-global-warming-potential alternatives to HFCs.

82. The Executive Committee agreed to continue the discussions in the contact group established for agenda item 7(f)(i).

83. Subsequently, the Executive Committee agreed to continue the discussions on the item at its 90<sup>th</sup> meeting.

**(g) Key aspects related to HFC-23 by-product control technologies (decision 83/67(d))**

84. The representative of the Secretariat introduced agenda item 7(g) on key aspects related to HFC-23 by-product control technologies, contained in document UNEP/OzL.Pro/ExCom/89/13, and noted a typographical error in the document, namely that the word "practical" in the penultimate line of paragraph 16 and in paragraph 25(b)(i) should read "practicable".

85. In the ensuing discussion, one member recalled that the Committee had considered at its 82<sup>nd</sup> meeting a document on cost-effective options for controlling HFC-23 by-product emissions, including information relevant to the cost of closure of HCFC-22 production swing plants, and had decided to consider applying the procedures set out in decision 82/85 and the criteria for funding the activities related to the compliance obligations of Article 5 Parties, when agreed, with respect to HFC-23 controls in other Article 5 Parties. Since then, two projects to control HFC-23 by-product emissions had been approved. The member reiterated that any policy should be applicable to all Parties concerned, with no disincentives; however, the guidelines for the production sector were yet to be finalized. Another member noted that the guidelines were under the auspices of the Sub-group on the Production Sector, which would meet during the 90<sup>th</sup> meeting of the Executive Committee. She also noted that the Secretariat had referenced a new scientific study on HFC-23 that indicated that, contrary to expected reductions, atmospheric observations showed that

emissions of HFC-23 had increased and in 2018 were higher than at any time, and said that she looked forward to further considering the matter at the 44<sup>th</sup> meeting of the Open-ended Working Group.

86. Members proposed several further amendments to the text of the draft recommendation to clarify the production of HCFC-22 and the generation of HFC-23, and to refer to Annex C, Group I or Annex F substances, in line with the Protocol, rather than to HCFC-22.

87. Subsequently, the Executive Committee decided:

- (a) To note the key aspects related to HFC-23 by-product control technologies (decision83/67(d)) contained in document UNEP/OzL.Pro/ExCom/89/13;
- (b) To confirm:
  - (i) That HFC-23 by-product was destroyed to the extent practicable in the context of Multilateral Fund-supported projects when up to a maximum of 0.1 kg of HFC-23 by-product was emitted per 100 kg of the relevant Annex C, Group I or Annex F substance produced;
  - (ii) That HFC-23 by-product controls would be eligible independent of whether the relevant production that generated the HFC-23 was for controlled or for feedstock uses;
  - (iii) That the term “production” in the context of HFC-23 by-product emission control projects supported by the Multilateral Fund meant the total amount of relevant Annex C, Group I or Annex F substance produced for all uses, including controlled and feedstock uses, irrespective of any subsequent destruction, recycling, and reuse; and
- (c) When approving projects to control HFC-23 by-product emissions from production lines that would continue to produce the relevant Annex C, Group I or Annex F substance after the completion of the project, to invite the relevant Article 5 country to consider requesting additional funding for independent verification of the HFC-23 by-product generated, destroyed, sold, stored and emitted, under the subsequent stage of its HCFC phase-out management plan, until approval of its Kigali HFC implementation plan, at which time verification would continue under that plan.

**(Decision 89/7)**

## **AGENDA ITEM 8: REPORT OF THE SUB-GROUP ON THE PRODUCTION SECTOR**

88. The Executive Committee agreed at the time of adoption of the agenda to defer the convening of the Sub-group to the 90<sup>th</sup> meeting.

## **AGENDA ITEM 9: OTHER MATTERS**

89. No issues were raised at the time of adoption of the agenda.

## **AGENDA ITEM 10: ADOPTION OF THE REPORT**

90. The Executive Committee adopted the present report on the basis of the draft report contained in document UNEP/OzL.Pro/ExCom/89/L.2.

**AGENDA ITEM 11: CLOSURE OF THE MEETING**

91. Following the customary exchange of courtesies, the meeting was closed at 6.30 p.m. on Saturday, 18 June 2022.

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**Annex I**

**WORKING TEXT ON AGENDA ITEM 5: REVIEW OF INSTITUTIONAL STRENGTHENING  
PROJECTS, INCLUDING FUNDING LEVELS**

[The Executive Committee decided:

- (a) [To establish the level of funding for IS support taking into account the activities that Article 5 countries would need to undertake to initiate activities to implement the Kigali Amendment and meet the first control measures for phasing down HFCs during the period 2020-2030, while at the same time continuing implementation of HCFC phase-out management plans;] [+60 per cent]
- (b) To extend the duration of IS renewal implementation phases from the current two years to three years for IS renewal proposals submitted from the [90<sup>th</sup> meeting] onwards; and
- (c) [To request the Secretariat to submit a further review of IS projects including funding levels no later than the second meeting in [2025] [2029 taking into account the remaining HCFC obligations].]

Annex II

**WORKING TEXT ON AGENDA ITEM 7(a): DEVELOPMENT OF THE COST GUIDELINES  
FOR THE PHASE-DOWN OF HFCS IN ARTICLE 5 COUNTRIES:  
DRAFT CRITERIA FOR FUNDING (COST-EFFECTIVENESS THRESHOLDS)**

**Table 1: Cost-effectiveness (CE) thresholds for CFC and HCFC phase-out**

Sector	National ODS phase-out plans (UNEP/OzL.Pro/ExCom/16/20 para. 32)			HPMPs (decisions 60/44, 62/13 and 74/50)			TEAP (ExMOP 3)	Agreed CE (US\$/kg)
	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)		
Domestic refrigeration (refrigerant and PU foam panel components)	CFC-12	HFC-134a R-600a	13.76	n.a.	n.a.	n.a.	8-10 [13.76(Canada)]	13.76
	CFC-11	HCFC-141b cyclopentane		HCFC-141b	Cyclopentane	7.83*,**		
R/AC domestic							7-9	
Commercial refrigeration (refrigerant and PU foam panel components)	CFC-12	HFC-134a	15.21	HCFC-22	HFC-32, R-290, HFC-134a, carbon dioxide (CO <sub>2</sub> ), ammonia (NH <sub>3</sub> ), cascade systems	15.21*	10-15	[15.21*] [19] *special consideration for small enterprises [<20 mt?]
	CFC-11	HCFC-141b cyclopentane water		HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFO			
RAC Transport and industrial							10-15	
Rigid PU foam (including PU foam panel in commercial refrigeration)	CFC-11	HCFC-141b cyclopentane water	7.83	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced hydrofluoroolefins (HFOs)	7.83*,**	7-9	
Flexible PU foam	CFC-11	HCFC-141b cyclopentane water	6.23	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs	6.23*,**	7-9	
Integral skin	CFC-11	HCFC-141b cyclopentane water	16.86	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs	16.86*,**	7-9	
XPS foam	CFC-12	HFC-134a	8.22	HCFC-22/ HCFC-142b	HC, CO <sub>2</sub>	8.22*,**	7-9	
Aerosol	CFC-12/ CFC-11	HC	4.40	HCFC-22/ HCFC-141b	HC HFC-134a, HFC-152a, perchloroethylene, HFO	Case-by-case	4-6	case by case

Sector	National ODS phase-out plans (UNEP/OzL.Pro/ExCom/16/20 para. 32)			HPMPs (decisions 60/44, 62/13 and 74/50)			TEAP (ExMOP 3)	Agreed CE (US\$/kg)
	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)		
Fire extinguishing	Halon	ABC dry powder, CO <sub>2</sub>	1.48	HCFC-123	No projects approved yet	Case-by-case	3-5	case by case
Solvent	CFC-113	Heat cleaning, aqueous cleaning, trichlorethylene, HC, others	19.73	HCFC-141b	Iso-paraffin	Case-by-case		case by case
Solvent	TCA		38.50	n.a	n.a	n.a		
Metered dose inhaler (MDI)	CFC-12/ CFC-11	HFC-134a	n.a	n.a	n.a	n.a		case by case
Mobile AC	CFC-12	HFC-134a	n.a	n.a	n.a	n.a	4-6	5 case by case
Domestic AC manufacturing (room AC, domestic heat pumps)	n.a.	n.a	n.a	HCFC-22	R-410A HFC-32 R-290	Case-by-case	11-15 Stationary AC	
Other refrigeration and AC manufacturing (heat pumps, transport, chillers, industrial)	CFC-11/ CFC-12 (chillers)	HFC-134a/ HFC-123 (chillers)	n.a	HCFC-22	R-410A HFC-32 R-290 CO <sub>2</sub> , NH <sub>3</sub> , cascade systems	Case-by-case		

\* Funding of up to a maximum of 25 per cent above the cost effectiveness threshold will be provided for projects when needed for the introduction of low-GWP alternatives (decision 60/44(f)(iv)).

\*\* For SMEs in the foam sector with consumption of less than 20 mt, the maximum would be up to 40 per cent above the cost-effectiveness threshold (decision 74/50(c)(iii)).

### Annex III

## WORKING TEXT ON AGENDA ITEM 7(a): DEVELOPMENT OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCS IN ARTICLE 5 COUNTRIES: DRAFT CRITERIA FOR FUNDING (DISPOSAL)

### Recommendations

1. [The Executive Committee may wish:

- (a) To note the synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2, contained in document UNEP/OzL.Pro/ExCom/89/9;

*Proposal by Canada:*

- (b) To provide flexibility to Article 5 countries that wish to do so to include activities related to the environmentally sound management of unwanted controlled substances, taking into account paragraphs 19 to 24 of document UNEP/OzL.Pro/ExCom/89/9 and lessons learned of ODS disposal projects implemented, into:

(i) refrigeration servicing sector plans under HPMPs, on the understanding that proposals for undertaking such activities will be submitted to the Executive Committee, either as part of new stages of HPMPs or subsequent tranches of existing HPMPs;

(ii) stage I Kigali HFC Implementation Plans.

*Proposal by India*

- (b)(bis) To request bilateral and implementing agencies to assist those Article 5 countries that wish to develop a strategy for the environmentally sound management of unwanted controlled substances including disposal of such unwanted controlled substances, to incorporate it into their refrigeration servicing sector plans, while developing HFC phase down plans, taking into account domestic regulations, and through integrating with hazardous waste rules/regulations. ; [taking into account the lessons learnt, but not limited to those summarized in document UNEP/OzL.Pro/ExCom/89/9] under current implementation; and

*Proposal by Canada*

- (b)(c) To request the Secretariat to develop for consideration at the 91<sup>st</sup> meeting of the Executive Committee criteria for a funding window to provide interested Article 5 countries with assistance to identify, conduct an inventory of, and if needed, develop a plan for collecting [and transporting] unwanted controlled substances];

*Proposal by India*

- (c)(bis) To create a funding window for cost-effective management, including inventory [transportation, [collection]] and destruction/disposal of unwanted controlled substances

- (d) To continue deliberations on operationalizing paragraph 24 of decision XXVIII/2 [including

[\(c\) above.](#) in the context of the discussion of the cost guidelines for the phase-down of HFCs in Article 5 countries [in light of document UNEP/OzL.Pro/ExCom/89/6.](#)]

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## Annex IV

### WORKING TEXT ON AGENDA ITEM 7(a): DEVELOPMENT OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs IN ARTICLE 5 COUNTRIES: DRAFT CRITERIA FOR FUNDING (STARTING POINT)

#### Methodology for determining the starting point for sustained aggregate reductions

1. In response to decision 81/67(e), the Secretariat prepared document UNEP/OzL.Pro/ExCom/82/66, “Key considerations for developing a methodology for establishing the starting point for sustained aggregate reductions for the consumption and production sectors under the Kigali Amendment.” Section IV of the document set out a number of key considerations that informed the discussions of the contact group on the cost guidelines in the margins of the 82<sup>nd</sup>, 83<sup>rd</sup> and 84<sup>th</sup> meetings. The issues discussed by the contact group included, *inter alia*:

(a) The unit of measurement, where some members proposed to use metric tonnes (mt) to reflect the actual amount of HFCs consumed or produced, others proposed the use of CO<sub>2</sub>-equivalent tonnes as best suited to measure the environmental impact of the phase-down activities, while others yet suggested using both units at first and making a definitive decision about which one to use once the pros and cons of each approach had been ascertained;—

- preference for mt as that is how we understand costs and consistent with thresholds;
- keep track separately of lower GWP alternatives that are phased in under projects funded by MLF;
- preference for CO<sub>2</sub>e as the obligations are in CO<sub>2</sub>e;
- keep track of both but note that costs are tied to mt;
- don't know what end-point is if in mt;
- second and third conversion is an important issue;
- preference for both initially;
- need to be consistent units between starting point and funding/cost effectiveness;
- provide incentive for final conversion;
- reductions to count toward compliance; use simpler approach]

(b) Possible options for determining the starting point, where it was proposed to use the HFC baseline including the HFC and HCFC components, the HFC component, or an intermediate value between the two. It was also proposed that Article 5 countries could choose as the starting point the HFC consumption from a number of previous years (e.g., the last year or the average of the last three years) or the year when the first HFC investment project had been approved by the Executive Committee;—

- add 5-10% of HFC consumption during the baseline years to account for growth;

- secretariat to present data of 2019-2021 CP data to compare CO2e and mt;
- choose best years before the pandemic;
- consider other years where data is available]

(a)(c) The inclusion in the starting point of HFCs contained in imported pre-blended polyols, and the exclusion of HFCs contained in exported pre-blended polyols, on the understanding that such consumption would be monitored and controlled by Article 5 countries;

(b)(d) The exclusion of the HFC phase-down tail (i.e., 20 per cent for Article 5 group 1 countries and 15 per cent for Article 5 group 2 countries) from the starting point as the phase-out of that consumption was not mandated by the Montreal Protocol. While there was no consensus, some members indicated that deducting the consumption associated with the tail would imply that the starting point would be based on the HFC baseline for compliance, which would include the totality of the HFC and HCFC components; and

(e)(e) Whether sustained reductions from the starting point should be accounted on a substance-by-substance basis. Different views were expressed, including that the starting point should be one unique number, and that reductions should be made by substance, but only for the most commonly used HFCs.