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**Open-ended Working Group of the Parties to
the Montreal Protocol on Substances that
Deplete the Ozone Layer
Resumed thirty-eighth meeting
Kigali, 8 October 2016
Item 3 of the provisional agenda*
Dubai pathway on hydrofluorocarbons (decision XXVII/1)**

Issues for discussion by and information for the attention of the Open-ended Working Group of the Parties to the Montreal Protocol at its resumed thirty-eighth meeting

Note by the Secretariat

I. Background

1. Decision XXVII/1, entitled “Dubai pathway on hydrofluorocarbons” (reproduced in annex I to the present note), was adopted by the Twenty-Seventh Meeting of the Parties in Dubai in November 2015. In paragraph 1 of the decision the Meeting of the Parties decided “to work to an HFC amendment in 2016 by first resolving challenges by generating solutions in the contact group on the feasibility and ways of managing HFCs”. That contact group was established by the Twenty-Seventh Meeting of the Parties as the result of an agreement reached at the resumed thirty-sixth meeting of the Open-ended Working Group on the mandate of the contact group. The progress made by the contact group in its deliberations at that point in time and the further progress that needed to be made were captured in decision XXVII/1, paragraphs 2 and 3, respectively.
2. In accordance with paragraph 4 of decision XXVII/1, a series of Open-ended Working Group meetings and other meetings, including the Third Extraordinary Meeting of the Parties, have been convened in 2016 to make progress on the Dubai pathway. The meetings held so far are:
 - (a) Thirty-seventh meeting of the Open-ended Working Group, Geneva, 4–8 April 2016;
 - (b) Resumed thirty-seventh meeting of the Open-ended Working Group, Vienna, 15 and 16 July 2016;
 - (c) Thirty-eighth meeting of the Open-ended Working Group, Vienna, 18–21 July 2016, which was suspended, resumed in the margins of the Third Extraordinary Meeting of the Parties solely to allow the continuation of the work on the Dubai pathway by the contact group and currently remains suspended, to be resumed just prior to the Twenty-Eighth Meeting of the Parties;
 - (d) Third Extraordinary Meeting of the Parties, Vienna, 22 and 23 July 2016.
3. During those meetings, the contact group continued its deliberations on the Dubai pathway and made further progress.

* UNEP/OzL.Pro.WG.1/resumed.38/1.

4. On the last day of the Third Extraordinary Meeting of the Parties, the contact group co-chair, also on behalf of the co-chairs of the Open-ended Working Group, reported on the outcome of the contact group's work.¹ Following the report by the contact group co-chair, the Third Extraordinary Meeting of the Parties:

(a) Adopted decision Ex.III/1, requesting the Technology and Economic Assessment Panel to prepare a report for consideration by the Twenty-Eighth Meeting of the Parties assessing the climate benefits, and the financial implications for the Multilateral Fund, of the schedules for phasing down the use of hydrofluorocarbons (HFCs) contained in the amendment proposals discussed by the parties at the thirty-eighth meeting of the Open-ended Working Group and the Third Extraordinary Meeting of the Parties;

(b) Endorsed the solutions to the challenges identified in the Dubai pathway (annex II to the report of the Third Extraordinary Meeting of the Parties (UNEP/OzL.Pro.ExMOP.3/7), reproduced in annex II to the present note) as a basis for discussion at the resumed thirty-eighth meeting of the Open-ended Working Group and the Twenty-Eighth Meeting of the Parties;

(c) Decided that the draft decision text in the two conference room papers submitted by Pakistan and the conference room paper submitted by India (annexes III, IV and V to the report of the Third Extraordinary Meeting of the Parties (UNEP/OzL.Pro.ExMOP.3/7), reproduced in annexes III, IV and V to the present note) would be considered by the Open-ended Working Group at its resumed thirty-eighth meeting and by the Twenty-Eighth Meeting of the Parties;

(d) Decided that the document developed by the contact group showing the baseline ranges and freeze date preferences of various parties and groups would be annexed to the report of the Third Extraordinary Meeting of the Parties (UNEP/OzL.Pro.ExMOP.3/7, annex VI, reproduced in annex VI to the present note) as information for all parties;

(e) Decided that the Secretariat would update the consolidation of proposals to amend the Montreal Protocol² based on the latest developments;³

(f) Decided that the thirty-eighth meeting of the Open-ended Working Group would remain suspended and resume immediately prior to the Twenty-Eighth Meeting of the Parties, subject to the making of additional contributions to the trust fund for the Montreal Protocol.

5. In accordance with the decision of the Third Extraordinary Meeting of the Parties, the thirty-eighth meeting of the Open-ended Working Group is scheduled to resume on 8 October 2016 immediately prior to the Twenty-Eighth Meeting of the Parties. It is expected that the outcome of the resumed Open-ended Working Group meeting will be reported at the Twenty-Eighth Meeting of the Parties under item 6 of the provisional agenda for the preparatory segment of the latter meeting, on the Dubai pathway. The parties may decide on the way forward as appropriate, taking into account that outcome.

II. Status of the work on the Dubai pathway on HFCs in the contact group

6. During the resumed thirty-seventh meeting of the Open-ended Working Group, the contact group on the feasibility and ways of managing HFCs (contact group on HFCs) worked on generating solutions to challenges identified in the Dubai pathway. The solutions were agreed to by the Open-ended Working Group and subsequently endorsed by the Third Extraordinary Meeting of the Parties.

7. The agreed solutions (annex II to the present note) relate to the eight main challenges and include specific text and elements as well as an indication of how those elements would be incorporated into the continuing discussion of the amendment proposals, any amendment that might be adopted and any decisions to be taken by the parties in conjunction with an amendment. The solutions document also includes:

(a) Text of the specific agreed solutions on funding issues and flexibility of implementation (annex II, appendix I), including specific guidance to the Executive Committee of the Multilateral Fund on elements that are eligible to be included in the calculation of costs in the development of new guidelines on methodologies and cost calculation, with two items in square

¹ A written version of the report is set out in annex I, UNEP/OzL.Pro.ExMOP.3/7.

² UNEP/OzL.Pro.WG.1/resumed.37/INF/1-UNEP/OzL.Pro.WG.1/38/INF/1-UNEP/OzL.Pro.ExMOP/3/INF/1.

³ To be issued as UNEP/OzL.Pro.WG.1/resumed.38/INF/1-UNEP/OzL.Pro.28/INF/1.

brackets to indicate that they are to be taken up in the negotiations and resolved prior to the adoption of any amendment;

(b) Text on flexibility in implementation (annex II, appendix II), including with regard to overarching principles and timelines for revising the procedures, criteria and guidelines for the Multilateral Fund, to principles on second and third conversions, to sustained aggregate reductions and to enabling activities;

(c) Text relating to a high ambient temperature exemption (annex II, appendix III), including a specific reference to possible amendment text as part of new control measures for HFCs (Article 2 J, para. 7).

8. During the thirty-eighth meeting of the Open-ended Working Group and in the margins of the Third Extraordinary Meeting of the Parties the contact group on HFCs discussed issues related to the proposed amendments to the Protocol in respect of HFCs, including the calculation of baselines, the year in which any freeze should commence and reduction steps, including the estimation of amounts and timing of the peak year for production and consumption, for both parties operating under paragraph 1 of Article 5 (Article 5 parties) and parties not so operating (non-Article 5 parties).

9. Various preferences expressed by parties or groups of parties on the baselines and freeze for Article 5 parties are captured in a table (annex VI to the present note) for the information of the parties. The understanding of the contact group reflected in that table is as follows:

(a) The HFC component of the baseline should be the average of consumption/production over three consecutive years expressed in CO₂ equivalent;

(b) The baseline should include a percentage of the HCFC consumption/production baseline or actual consumption/production, added to the HFC component;

(c) The phasedown schedule for Article 5 parties would hinge on the schedule for non-Article 5 parties and both needed to be considered together.

10. In addition, the contact group proposed that the Secretariat be requested to update the document consolidating the four amendment proposals⁴ to reflect the latest developments during the discussions that took place in Vienna. The Third Extraordinary Meeting of the Parties decided that the Secretariat would prepare such an update, which is to be issued as document UNEP/OzL.Pro.WG.1/resumed.38/INF/1-UNEP/OzL.Pro.28/INF/1.

11. The contact group has yet to consider the following proposals by India and Pakistan:

(a) Submission by India: "Text for consideration by the parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol on Substances that Deplete the Ozone Layer" (annex III to the present note);

(b) Submission by Pakistan: "Text for consideration by the parties for inclusion in decisions related to the phasedown of HFCs under the Montreal Protocol on Substances that Deplete the Ozone Layer" (annex IV to the present note);

(c) Submission by Pakistan: "Text for consideration by the parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol on Substances that Deplete the Ozone Layer" (annex V to the present note).

12. The contact group on HFCs is expected to continue its work at the resumed thirty-eighth meeting of the Open-ended Working Group.

⁴ UNEP/OzL.Pro.WG.1/resumed.37/INF/1-UNEP/OzL.Pro.WG.1/38/INF/1-UNEP/OzL.Pro.ExMOP/3/INF/1.

Annex I

Decision XXVII/1: Dubai pathway on hydrofluorocarbons

Recognizing the Montreal Protocol's history of success in achieving collaborative and consensus-based outcomes and that hydrofluorocarbons (HFCs) are replacements for ozone-depleting substances that parties to the Montreal Protocol are already successfully phasing out,

1. To work within the Montreal Protocol to an HFC amendment in 2016 by first resolving challenges by generating solutions in the contact group on the feasibility and ways of managing HFCs during Montreal Protocol meetings;
2. To recognize the progress made at the Twenty-Seventh Meeting of the Parties on the challenges identified in the mandate of the contact group agreed at the resumed thirty-sixth meeting of the Open-ended Working Group (listed in annex I to the present decision,) on the feasibility and ways of managing HFCs, including development of a common understanding on issues related to flexibility of implementation, second and third stage conversions, guidance to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, enabling activities for capacity-building and the need for an exemption for high-ambient-temperature countries, and to endorse the concepts listed in annex II to the present decision;
3. To recognize that further progress still needs to be made, in particular with respect to other challenges identified in the contact group mandate, for example conversion costs, technology transfer and intellectual property rights;
4. To hold in 2016 a series of Open-ended Working Group meetings and other meetings, including an extraordinary meeting of the parties;
5. To continue consideration at the meetings mentioned in paragraph 4 above of items 6 and 7 of the agenda for the Twenty-Seventh Meeting of the Parties (UNEP/OzL.Pro.27/1), including the submissions set out in documents UNEP/OzL.Pro.27/5, UNEP/OzL.Pro.27/6, UNEP/OzL.Pro.27/7 and UNEP/OzL.Pro.27/8);

Annex I to decision XXVII/1

Mandate for a possible contact group on the feasibility and ways of managing HFCs

The Open-ended Working Group of the Parties to the Montreal Protocol at its thirty-fifth meeting held in Bangkok from 22 to 24 April 2015, agreed that "it would continue to work intersessionally in an informal manner to study the feasibility and ways of managing HFCs, including, inter alia, the related challenges set out in annex II to the [report of the thirty-fifth meeting of the Open-ended Working Group], with a view to the establishment of a contact group on the feasibility and ways of managing HFCs at the thirty-sixth meeting of the Open-ended Working Group" (UNEP/OzL.Pro.WG.1/35/6, para. 128).

The informal meeting was convened on the 12-13 of June in Vienna on the above mentioned basis.

The parties have recognised in their interventions the success of the Montreal Protocol and its institutions in phasing out ODSs.

The management of HFCs is applicable to both A5 and non-A5 parties.

Parties agree that nothing should be considered agreed until everything is agreed.

Parties agree that they shall first resolve the challenges mentioned below by generating solutions in a contact group.

- Relevance and recognition of the special situation of developing countries and the principles under the Montreal Protocol which have enabled sufficient additional time in the implementation of commitments by A5 countries;
- Maintain the MLF as the financial mechanism, and to agree that additional financial resources will be provided by non-A5 parties to offset costs arising out of HFC management for A5 parties if obligations are agreed to. In this regard, key elements for financial support from the MLF for A5 parties will be developed by the contact group to provide guidance to the ExCom of the MLF, taking into account the concerns of parties,

- The elements in paragraph 1(a) of decision XXVI/9 including IPR issues in considering the feasibility and the ways of managing HFCs,
- Flexibility in implementation that enables countries to set their own strategies and set their own priorities in sectors and technologies,
- Exemption process and a mechanism for periodic review of alternatives including the consideration of availability or lack of availability of alternatives in all sectors in A5 countries and special needs for high ambient countries, based on all the elements listed in paragraph 1(a) of decision XXVI/9,
- Relationship with the HCFC phase out,
- Non-party trade provisions, and
- Legal aspects, synergies and other issues related to the UNFCCC in the context of HFC management under the MP,

Then, the parties will discuss in the contact group the ways of managing HFCs including the amendment proposals submitted by the parties.

Annex II of the report of the 35th Open-ended Working Group meeting

Challenges to be addressed

- Energy efficiency
- Funding requirements
- Safety of substitutes
- Availability of technologies
- Performance and challenges in high ambient temperatures
- Second and third conversions
- Capacity-building
- Non-party trade provisions
- Synergies with the United Nations Framework Convention on Climate Change (legal, financial aspects)
- Relationship with the HCFC phase-out
- Ecological effects (effects on fauna and flora)
- Implications for human health
- Social implications
- National policy implications
- Challenges to the production sector
- Rates of penetration of new alternatives
- Exemptions and ways to address lack of alternatives
- Technology transfer
- Flexibility in implementation

Annex II to decision XXVII/1

Issues raised and discussed in detail as part of the challenges during the contact group will be further discussed, in a direction consistent with the record of the discussion.

Funding

Maintain the MLF as the financial mechanism and agree that additional financial resources will be provided by non A5 parties to offset costs arising out of HFC management for A5 parties if obligations are agreed to.

Flexibility

A5 parties will have flexibility to prioritize HFCs, define sectors, select technologies/alternatives, elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country driven approach.

The ExCom shall incorporate the principle in the above mentioned paragraph in relevant guidelines and its decision making process.

2nd and 3rd conversions

Enterprises that have already converted to HFCs in phasing out CFCs and/or HCFCs will be eligible to receive funding from the MLF to meet agreed incremental costs in the same manner as enterprises eligible for 1st conversions.

Guidance to the ExCom

It is understood that guidelines and/or methodologies will have to be developed on the following issues related to HFC control measures, if agreed:

- Determination of incremental costs
- Calculation of incremental costs
- Cost effectiveness thresholds
- Energy efficiency and climate impacts of projects

Enabling activities

Enabling activities will be supported by the MLF in any HFC phase down agreement.

- Capacity building and training for handling HFC alternatives in the servicing sector, the manufacturing and production sectors
- Institutional Strengthening
- Article 4b Licensing
- Reporting
- Demonstration projects
- Developing national strategies

HAT Exemption

The need for an exemption for high ambient temperature countries.

It is understood that the remaining challenges will be further discussed.

Annex II¹

Solutions to challenges identified under the Dubai pathway

Following discussions in the contact group on HFCs, the Open-ended Working Group at its resumed thirty-seventh meeting agrees on the following solutions to the challenges set out in the Dubai Pathway on HFCs:

Challenge 1: *Relevance and recognition of the special situation of developing countries and the principles under the Montreal Protocol which have enabled sufficient additional time in the implementation of commitments by A5 countries*

The Open-ended Working Group acknowledges the discussions held during the thirty-seventh meeting of the Working Group in Geneva in April 2016, where it reached the conclusion that challenge 1 was broad in scope and thus many of the issues arising under it could therefore be dealt with in connection with the other challenges.

What is remaining with regard to the special situation of developing countries can be dealt with during the discussion of the amendment proposals.

Challenge 2: *Maintain the MLF as the financial mechanism, and to agree that additional financial resources will be provided by non-A5 parties to offset costs arising out of HFC management for A5 parties if obligations are agreed to. In this regard, key elements for financial support from the MLF for A5 parties will be developed by the contact group to provide guidance to the ExCom of the MLF, taking into account the concerns of parties*

The text of the agreed solutions is set out in appendix I to the present document. It should be noted that in resolving the challenges in this category, the Open-ended Working Group agrees that the items in brackets in the solutions document shall be taken up while negotiating the amendment and resolved prior to adoption of an amendment to the Montreal Protocol. It also should be noted that with regard to patents for the production sector, both process and application patents are covered.

Challenge 3: *The elements in paragraph 1(a) of decision XXVI/9 including IPR issues in considering the feasibility and the ways of managing HFCs*

The Open-ended Working Group notes that the availability of alternatives is being addressed under other challenges and particularly in the context of exemptions. However, the Open-ended Working Group agrees on specific language for the safety and flammability issues to address barriers in international safety standards, as follows:

“Parties recognize the importance of timely updating international standards for flammable low-GWP refrigerants including IEC60335-2-40 and support promoting actions that allow safe market introduction, as well as manufacturing, operation, maintenance and handling of zero-GWP or low-GWP refrigerant alternatives to HCFCs and HFCs.”

The Open-ended Working Group also agrees as a solution under challenge 3:

“Conduct periodic reviews of alternatives using criteria set out in paragraph 1 (a) of decision XXVI/9 and parties will further discuss this issue at the OEWG 38”.

Challenge 4: *Flexibility in implementation that enables countries to set their own strategies and set their own priorities in sectors and technologies*

Regarding this challenge, the Open-ended Working Group agrees that the solution was agreed by the Twenty-Seventh Meeting of the Parties as part of the Dubai Pathway and reconfirmed at the thirty-seventh meeting of the Open-ended Working Group, as reflected in annex IV to the report of the meeting of the thirty-seventh meeting and which is reproduced in the present document as appendix II. Some parts of the flexibility issue are also being addressed under the second challenge, on funding issues and flexibility of implementation and hence are included in appendix I of this document.

Challenge 5: *Exemption process and a mechanism for periodic review of alternatives including the consideration of availability or lack of availability of alternatives in all sectors in A5 countries and special needs for high ambient countries, based on all the elements listed in paragraph 1(a) of decision XXVI/9*

¹ See UNEP/OzL.Pro.WG.1/38/7 and Corr.1.

The Open-ended Working Group agrees that the solution with regard to the exemption for high-ambient-temperature countries was as agreed at the thirty-seventh meeting of the Open-ended Working Group, as reflected in annex III of the report of the respective meeting, which is reproduced in appendix III to the present document. It is reiterated in this context that the definition of high ambient temperature and the corresponding list of high ambient temperature countries is to be reviewed by TEAP with an eye to whether additional countries could be added to the list, noting that those countries already identified as high ambient temperature countries will remain on the high ambient temperature exemption list. Interested parties can participate in the review.

In addition to the exemption for the high ambient temperature countries, the Open-ended Working Group agrees as follows:

- To allow for exemptions, such as for essential uses and critical uses, in any HFC amendment;
- To consider mechanisms for such exemptions in 20XX including multi-year exemptions mechanisms; and
- To provide information and guidance to the TEAP for its periodic review of sectors where exemptions may be required.

Challenge 6: Relationship with the HCFC phase out

The Open-ended Working Group agrees as follows:

“Parties acknowledge the linkage between the HFC and HCFC reduction schedule relevant to sectors and preference to avoid transitions from HCFC to high GWP HFC and are willing to provide flexibility if no other technically proven and economically viable alternatives are available.

Parties also acknowledge these linkages with respect to certain sectors, in particular industrial process refrigeration, and the preference to avoid transitions from HCFCs to high-GWP HFCs, and are willing to provide flexibility if no other alternatives are available in cases where: (1) HCFC supply may be unavailable from existing allowable consumption, stocks as well as recovered/recycled material, and (2) if it would allow for a direct transition at a later date from HCFCs to low-GWP or zero GWP alternatives.

Prior to the commencement of any Article 5 HFC freeze or other initial control obligations and in light of the acknowledgment above, flexibility measures will be provided in relation to the HCFC phase-out relevant to certain sectors, in particular the industrial process refrigeration subsector in order to avoid double conversions.”

Challenge 7: Non-party trade provisions

The Open-ended Working Group agrees as follows:

“Non-party trade provisions for all countries enter into force five years after the freeze date for Article 5 parties”.

Challenge 8: Legal aspects, synergies and other issues related to the UNFCCC in the context of HFC management under the MP

The Open-ended Working Group agrees that this challenge has not yet been concluded and that it would be best to further address it during the negotiations on an HFC amendment, where greater clarity will be achieved regarding the approach that would be taken under the Montreal Protocol in accordance with the amendment.

The Open-ended Working Group notes that one party has said that the rights and obligations of parties under the UNFCCC should not be modified by the Montreal Protocol.

Appendix I

Vienna solutions for challenges on funding issues and flexibility of implementation

Issue	
Overarching principles and timelines	<p>To maintain the MLF as the financial mechanism and that sufficient additional financial resources will be provided by non-A5 parties to offset costs arising out of agreed HFC obligations for A5 parties.</p> <p>A5 parties will have flexibility to prioritize HFCs, define sectors, select technologies/alternatives, elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country driven approach. The ExCom shall incorporate the principle in the above mentioned paragraph in relevant guidelines and its decision making process.</p> <p>To request the ExCom to develop, within one year after the adoption of the HFC amendment, guidelines for financing the phase-down of HFC consumption and production, including cost-effectiveness thresholds.</p>
Guidance to the ExCom on incremental costs	
Consumption manufacturing sector	<p>In developing new guidelines on methodologies and cost calculations, the following categories of costs will be eligible and included in the cost calculation:</p> <ul style="list-style-type: none"> • Incremental capital costs, • Incremental operating costs • Technical assistance activities • Research and development when required to adapt and optimize low-GWP or zero-GWP alternatives to HFCs • Costs of patents and designs, and incremental cost of royalties, when necessary and cost-effective • Cost of safe introduction of flammable and toxic alternatives <p>The IOCs referenced above, including their possible duration noting the proposal for a duration of at least 5 years, would be negotiated in the context of an amendment.</p>
Production sector	<p>In developing new guidelines on methodologies and cost calculations, the following categories of costs will be eligible and included in the cost calculation:</p> <ul style="list-style-type: none"> • Loss profit due to shutdown/closure of the production facilities as well as production reduction • Compensation to displaced workers • Dismantling of production facilities • Technical assistance activities • Research and development related to the production of low-GWP or zero-GWP alternatives to HFCs with a view to lower the cost of alternatives • Costs of patents and designs or incremental cost of royalties • Costs of converting facilities to produce low-GWP or zero-GWP alternatives to HFCs when technically feasible and cost effective <p>Reduction of emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting to other environmentally safe chemicals, should be funded by the MLF, to meet the obligations of A5 countries specified under the HFC amendment</p>
Servicing sector	<p>In developing new guidelines on methodologies and cost calculations, the following categories of costs will be eligible and included in the cost calculation:</p> <ul style="list-style-type: none"> • Public awareness activities • Policy development and implementation • Certification programs and training of technicians on the safe handling, good practice and safety of alternatives, including training equipment • Training of customs officers • Preventing illegal trade of HFCs • Servicing tools • Refrigerant testing equipment for the RAC sector

Issue	
	<ul style="list-style-type: none"> • Recycling and recovery of HFCs • [Additional import costs]* • [Incremental cost of refrigerants for MVAC servicing/recharging]* <p>*These items in brackets above shall be taken up while negotiating the amendment and resolved prior to adoption of an amendment to the Montreal Protocol</p> <p>We recommend to the Contact Group that the finance group has generated solutions to the challenges and shall take up resolution of its remaining bracketed finance issues and IOCs while negotiating the amendment. On this basis, parties will move to negotiate an amendment.</p> <p>To increase the funding available under Executive Committee decision 74/50 up to a maximum of x % above the amounts listed in that decision for Parties with total HCFC baseline consumption up to 360 metric tonnes when needed for the introduction of alternatives to HCFC with low-GWP and zero-GWP alternatives to HFCs, and maintaining energy efficiency also in the servicing/end-user sector</p>
<i>Cut-off date for eligible capacity</i>	The MOP that decides the amendment will decide on the cut-off date.
<i>Energy Efficiency</i>	To request the ExCom to develop cost guidance associated with maintaining and/or enhancing energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down HFCs, while taking note of the role of other institutions addressing energy efficiency, when appropriate.
<i>Institutional strengthening</i>	To direct the ExCom to increase institutional strengthening support in light of new commitments related to HFCs.
<i>Disposal</i>	To consider funding the cost-effective management of stockpiles of used or unwanted controlled substances, including destruction.
<i>Capacity-building to address safety</i>	To request the ExCom to prioritize technical assistance and capacity building to address safety issues associated with low GWP or zero GWP alternatives
<i>Cost of importing alternatives</i>	<p>[Additional cost of importing alternative substance (of payment support) – should be supported]*</p> <p>*This item in brackets above shall be taken up while negotiating the amendment and resolved prior to adoption of an amendment to the Montreal Protocol.</p>
<i>Other activities</i>	The parties may identify other cost items to be added to the indicative list emanating as a result of the conversion to low-GWP alternatives.

Appendix II

Solutions on challenges regarding funding issues and flexibility in implementation

Overarching principles and timelines

To address the HFC phase-down, the Parties agree to revise within one year after the adoption of the amendment, procedures, criteria and guidelines of the MLF.

In addressing the HFC phase-down, revise the rules of procedure of the ExCom with a view to building in more flexibility for Article 5 Parties.

The Chair of the Executive Committee must report back to the Meeting of the Parties on the progress made in accordance with this decision, including on cases where Executive Committee deliberations have resulted in a change in the national strategy or the national technology choice submitted to the Executive Committee.

Principles on 2nd and 3rd conversions

That first conversions, in the context of a phase-down of HFCs, is defined as conversions of enterprises to low-GWP or zero-GWP alternatives that have never received any direct or indirect support, in part or in full, from the MLF, including enterprises that converted to HFCs with their own resources.

That enterprises that have already converted to HFCs in phasing out CFCs and/or HCFCs will be eligible to receive funding from the MLF to meet agreed incremental costs in the same manner as enterprises eligible for 1st conversions.

That enterprises that convert from HCFCs to high-GWP HFCs, after the adoption of an HFC amendment, under HPMPs already approved by the ExCom will be eligible to receive funding from the MLF for a subsequent conversion to low-GWP or zero-GWP alternatives to meet agreed incremental costs in the same manner as enterprises eligible for 1st conversions.

That enterprises that convert from HCFCs to high-GWP HFCs with their own resources before the freeze date of HFC phase-down will be eligible to receive funding from the MLF to meet agreed incremental costs in the same manner as enterprises eligible for 1st conversions.

To agree that enterprises that convert from HFCs to lower-GWP HFCs with MLF support when no other alternatives are available will be eligible to receive funding from the MLF for a subsequent conversion to low-GWP or zero-GWP alternatives if necessary to meet the final HFC phase-down step.

Sustained aggregate reductions

Remaining eligible consumption for funding in tonnage will be determined on the basis of the starting point of the national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for HFC phase-down plans (Consistent with Dec. 35/57).

Enabling activities

Enabling activities will be supported by the MLF in any HFC phase-down agreement.

Capacity-building and training for handling HFC alternatives in the servicing sector, the manufacturing and production sectors

Institutional Strengthening

Article 4b Licensing

Reporting

Demonstration projects

Developing national strategies

Appendix III

High-ambient temperature exemption

Amendment Text

To be added as paragraph 7 of Article 2J:

“Paragraphs 1-4 of this Article will apply to calculated levels of production and consumption save to the extent that a high ambient temperature exemption applies based on criteria decided by the Parties.”

High Ambient Temperature

- I. A new exemption as described shall be available to Parties with high ambient temperature conditions where suitable alternatives do not exist for the specific sub-sector of use.
- II. The exemption shall be distinguished and separate from the essential use and the critical use exemptions under the Montreal Protocol.
- III. The exemption shall take effect and be available at the commencement of the HFC freeze or other initial control obligation and shall have an initial duration of 4 years.
- IV. The exemption applies for sub-sectors contained in Annex [X] in Parties: (1) with an average of at least two months per year over 10 consecutive years with a peak monthly average temperature above 35 degrees Celsius¹; and (2) that have formally notified use of this exemption by notifying the Secretariat no later than one year before the HFC freeze or other initial control obligation, and every 4 years thereafter should it wish to extend the exemption.
- V. Any party operating under the high ambient temperature exemption shall report separately production and consumption data for the sub-sectors to which a high ambient temperature exemption applies.
- VI. Any transfer of production and consumption allowances for the high ambient temperature exemption shall be reported to the Secretariat under Article 7.
- VII. The Technology and Economic Assessment Panel (TEAP) and a TEAP subsidiary body that includes outside expertise on high ambient temperatures shall assess the suitability of HFC alternatives for use where suitable alternatives do not exist based on criteria agreed by the Parties and can recommend to add or remove sub-sectors to Annex [X], that shall include, but not be limited to, the criteria listed in paragraph 1(a) of Decision XXVI/9,² and report this information to the Meeting of the Parties.
- VIII. The assessment shall take place periodically starting 4 years from the date of the commencement of any HFC freeze or other initial control obligation and every 4 years thereafter.
- IX. The Parties shall review, no later than the year following receipt of the TEAP report on suitability of alternatives, the need for an extension of this exemption for specific sub-sectors for a further period(s) of up to 4 years, and periodically thereafter. The Parties shall develop an expedited process to ensure the renewal of the exemption in a timely manner where there are no feasible alternatives, taking into account the recommendation of the TEAP and its subsidiary body.
- X. Amounts of Annex F substances that are subject to the HAT exemption are not eligible for funding under the Multilateral Fund while they are exempted for that Party.
- XI. That the Implementation Committee and Meeting of the Parties should, for 2025 and 2026, defer the consideration of the HCFC compliance status of any party operating under a high ambient temperature exemption in cases where it has exceeded its allowable consumption or production levels due to its HCFC-22 consumption or production for the sub-sectors listed in Annex [X], on the condition that the Parties concerned follow the phase-out schedule for consumption and production of HCFCs for other sectors, and the Party has formally requested a deferral through the Secretariat.

¹ Spatially weighted average temperatures deriving the daily highest temperatures (using the Centre for Environmental Data Archival: http://browse.ceda.ac.uk/browse/badc/cru/data/cru_cy/cru_cy_3.22/data/tmx)

² insert criteria from XXVI/9 para (1) (a)

- XII. Parties should consider no later than 2026 whether to extend the compliance deferral in paragraph XI for an additional period of two years, and may consider further deferrals thereafter, if appropriate, for countries operating under the high ambient temperature exemption.

Annex [X]: List of Exempted Equipment for High Ambient Temperatures

- Multi-split air conditioners for commercial and residential
- Split ducted air conditioners (residential and commercial)
- Ducted commercial packaged (self-contained) air conditioners

List of countries operating under the high ambient temperature exemption

Algeria, Bahrain, Benin, Burkina Faso, Central African Republic, Chad, Cote d'Ivoire, Djibouti, Egypt, Eritrea, Gambia, Ghana, Guinea, Guinea-Bissau, Iran, Iraq, Jordan, Kuwait, Libya, Mali, Mauritania, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sudan, Syria, Togo, Tunisia, Turkmenistan, United Arab Emirates

Annex III

Text for consideration by the parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol on Substances that Deplete the Ozone Layer

Submission by India

The Meeting of the Parties,

Recognizing and recalling that the Montreal Protocol is a party-driven and party-guided process,

Recalling that the hallmark of the Protocol has been that the decisions of the Meeting of the Parties are based on scientific data and information on the one hand and on implementation after generating solutions through consensus on the other,

Noting that the success of the Protocol has generated interest among other institutions in emulating the processes and principles developed under the Protocol,

Noting also that the parties rely heavily on the excellent work and high standard of output of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol,

Noting further that the discussion on the proposals to amend the Protocol in respect of hydrofluorocarbons (HFCs) will be taken up after generating solutions for all identified challenges with a clear understanding that the reporting of emissions will continue under the United Nations Framework Convention on Climate Change,

Noting that, while generating solutions to challenges, the parties have directed a number of instructions and requests to the Executive Committee of the Multilateral Fund for the framing of guidelines on specific subjects, an indicative list of which is set out in the annex to the present decision,

Noting that the parties have requested the Executive Committee to develop these guidelines within one year of the adoption of any HFC amendment,

Recalling that the Chair of the Executive Committee presents a report annually on the activities of the Executive Committee to the Meeting of the Parties and noting that the parties have proposed that the Chair of the Executive Committee report to the Meeting of the Parties on the progress made in accordance with decision XXVII/1, including on cases where Executive Committee deliberations have resulted in a change in the national strategy or the national technology choice submitted to the Executive Committee,

Observing that it will be important for the Executive Committee to take the guidance from the parties into account while finalizing the guidelines,

Decides:

1. That the draft guidelines developed by the Executive Committee shall be presented to the parties for their views and input;
2. That the guidelines shall be finalized by the Executive Committee only after incorporation of the views and input of the parties.

Appendix

Indicative list of subjects on which instructions and requests on the development of guidelines have been directed to the Executive Committee of the Multilateral Fund

<i>Issue</i>	<i>Instruction/Request to the Executive Committee</i>
Overarching principles and timelines	Executive Committee to develop guidelines incorporating the principle of flexibility Executive Committee to develop, within one year after the adoption of an HFC amendment, guidelines on financing the phasedown of HFC consumption and production, including cost-effectiveness thresholds.
Guidance to the Executive Committee on incremental costs	Executive Committee to develop new guidelines on methodologies and cost calculations for the consumption manufacturing sector, production sector and servicing sector
Energy efficiency	Executive Committee to develop cost guidance associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down HFCs, while taking note of the role of other institutions addressing energy efficiency, when appropriate
Institutional strengthening	Executive Committee to increase institutional strengthening support in light of new commitments related to HFCs
Capacity-building to address safety	Executive Committee to prioritize technical assistance and capacity-building to address safety issues associated with low-GWP or zero-GWP alternatives

Annex IV

Text for consideration by the Parties for inclusion in decisions related to the phase-down of hydrofluorocarbons under the Montreal Protocol on Substances that Deplete the Ozone Layer

Submission by Pakistan

[**Explanatory note:** The present conference room paper is submitted for discussion by the Parties to the Montreal Protocol at the thirty-eighth meeting of the Open-ended Working Group, and any agreed elements of the proposal should be included in any proposals adopted on the phase-down of HFCs.]

The Meeting of the Parties,

Noting that Pakistan supports a gradual global phase-down of the production and consumption of hydrofluorocarbons (HFCs),

Recognizing that certain replacements for ozone-depleting substances have high global warming potential, and that some HFCs in particular lead to warming of the environment,

Recognizing also that, while the share of the contribution of HFCs to overall global greenhouse emissions is, at this moment in time, less than 0.2 per cent and does not pose an immediate threat, and certain other sectors such as aviation and shipping have emissions multiple times higher than those from HFCs emissions, nevertheless the growth of HFC use from the decade before and after 2050 may affect the global climate,

Recognizing further that the majority of developing countries have no role in increasing or contributing to emissions contributing to global warming,

Recognizing the accepted principle of common but differentiated responsibilities and respective capabilities,

Recognizing that some enactments and obligations placed on developing countries may be inappropriate and of unwarranted economic and social cost to these countries,

Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low, and that the share of global emissions originating in developing countries has to grow if their social and development needs are to be met,

Recognizing that the performance of technologies constituting alternatives to HFCs in countries with high ambient temperatures is comparatively poor, leading to higher energy requirements, and that in certain instances proven, advantageous and economical alternatives are not available,

Recognizing also that commercially viable solutions for vehicle air conditioners and some other sectors and applications are also not available, and that the recharging cost associated with alternative refrigerants would cause financial burdens in several low-income economies among the Article 5 countries,

Recognizing further that regulations, standards, policies and procedures have not been developed or adopted in Article 5 countries, especially in the context of the flammability and toxicity of the alternatives to HFCs,

Decides:

To set the phase-down target for the production and consumption of HFCs at 50 per cent of the agreed baseline, and that, for Article 5 countries, the phase-down shall, after reaching this target, be reviewed with respect to the availability of financially viable and technically proven alternate technologies.

Annex V

Text for consideration by the Parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol on Substances that Deplete the Ozone Layer

Submission by Pakistan

[**Explanatory note:** The present conference room paper is submitted for discussion by the Parties to the Montreal Protocol at the thirty-eighth meeting of the Open-ended Working Group, and any agreed elements of the proposal should be included in any related proposals adopted at the meeting.]

The Meeting of the Parties,

Recognizing that the rights and obligations of Parties as delineated under the United Nations Framework Convention on Climate Change should not be modified by the Montreal Protocol,

Noting that in principle the issue of hydrofluorocarbons lies within the ambit and mandate of the United Nations Framework Convention on Climate Change,

Noting also that in the outcome document of the resumed thirty-seventh meeting of the Open-ended Working Group of the Parties to the Montreal Protocol, the reporting of emissions of hydrofluorocarbons under the United Nations Framework Convention on Climate Change will continue,

Noting further that certain categories of cost elements under the Vienna solutions for challenges on funding issues and flexibility of implementation shall be taken up while negotiating the amendment and resolved prior to adoption of an amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer,

Noting that the Parties may identify other cost items to be added to the indicated list emanating as a result of conversion to low-GWP alternatives,

Decides:

That the additional costs associated with mitigation should be taken up by the Parties and resolved prior to adoption of an amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer.

Annex VI

Party proposals regarding baselines, freeze dates and first reduction steps

A5 baselines and freeze dates		
Proponents	Proposed range (HFC component of baseline)	Freeze date
GCC	2024–2026	2028
China, Pakistan	2019–2025	2025–2026
India	2028–2030	2031
African Group, Pacific Island Countries, Latin America like-minded*, EU and JUSSCANNZ	2017–2019	2021
Malaysia, Indonesia, Brazil, Argentina, ¹ English-speaking Caribbean, Cuba	2021–2023	2025
Iran	2024–2027	2029
Non-A5 baseline, freeze date/first reduction step		
EU and JUSSCANNZ	2011–2013	90% of baseline in 2019
Belarus and Russian Federation	2009–2013 ¹	100% of baseline in 2020

* Nicaragua, El Salvador, Guatemala, Venezuela, Chile, Colombia, Honduras, Costa Rica, Mexico, Dominican Republic, Haiti, Panama, Peru, Paraguay (as a basis)

¹ Subject to confirmation by Government

- The HFC component of the baseline should be the average of consumption/production over three consecutive years expressed in CO₂ equivalent
- The baseline should include a percentage of HCFC consumption/production baseline or actual consumption/production, added to the HFC component