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

Note by the Secretariat

I. Introduction

1. Section II of the present note sets out a summary of the issues on the provisional agenda for the thirty-eighth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. It does not include information from or recommendations by the Technology and Economic Assessment Panel regarding several issues that will be discussed in the Panel’s 2016 report. The 2016 report, which is described more fully in paragraph 18 below, is expected to be posted on the meeting portal for the thirty-eighth meeting at the beginning of June 2016. The Secretariat will prepare an addendum to the present note that will summarize the Panel’s findings on the relevant issues on the provisional agenda.

2. Section II of the present note differs from the corresponding sections of the notes by the Secretariat for previous meetings of the parties. Each of those previous notes had a standard section entitled “Matters that the Secretariat would like to bring to the parties’ attention”, which the reader will not find in the present note. The Secretariat has decided that, henceforth, it will follow a new procedure for presenting matters that it wishes to bring to the parties’ attention. The intention of the Secretariat is to issue a stand-alone document once or twice a year that will describe in detail the substantive activities and initiatives of the Secretariat.

3. Section III of the present note sets out information on progress in the implementation of other relevant decisions or the provisions of the Montreal Protocol. It contains updates on the implementation of decision XXVI/8, on measures to facilitate the monitoring of trade in hydrochlorofluorocarbons (HCFCs) and substituting substances, as well as on the organization of the Twenty-Eighth Meeting of the Parties in accordance with decision XXVI/22. It also includes information on the phase-out of chlorofluorocarbons (CFCs) achieved this year.

* UNEP/OzL.Pro.WG.1/38/1.
II. Summary of issues for discussion by the Open-ended Working Group at its thirty-eighth meeting

Agenda item 3
Report by the Technology and Economic Assessment Panel on updated and new information on alternatives to ozone-depleting substances (decision XXVII/4)

4. In decision XXVII/4 of the Twenty-Seventh Meeting of the Parties, the Technology and Economic Assessment Panel was requested “to prepare a report for consideration by the Open-ended Working Group at its thirty-seventh meeting, and thereafter an updated report to be submitted to the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer in 2016, that would:

(a) Update, where necessary, and provide new information on alternatives to ozone-depleting substances, including not-in-kind alternatives, based on the guidance and assessment criteria provided in subparagraph 1 (a) of decision XXVI/9 and taking into account the most recent findings on the suitability of alternatives at high-ambient temperatures, highlighting in particular:

(i) The availability and market penetration of these alternatives in different regions;
(ii) The availability of alternatives for replacement and retrofit of refrigeration systems in fishing vessels, including in small island countries;
(iii) New substances in development that could be used as alternatives to ozone-depleting substances and that could become available in the near-future;
(iv) The energy efficiency associated with the use of these alternatives;
(v) The total warming impact and total costs associated with these alternatives and the systems where they are used;

(b) Update and extend to 2050 all the scenarios in the decision XXVI/9 report.”

5. The Panel and its task force have organized their work to ensure that relevant information can be presented for consideration by the parties at the two Open-ended Working Group meetings in 2016 and that the updated final report is ready for consideration by the Twenty-Eighth Meeting of the Parties in accordance with decision XXVII/4.

6. The initial report was prepared for the thirty-seventh meeting of the Open-ended Working Group, held in Geneva in April 2016. The report provided an update on new refrigerant alternatives introduced, information on research studies on alternatives for use under high-ambient-temperature conditions and the extension of the mitigation scenarios for the refrigeration and air-conditioning sector from the decision XXVI/9 report to 2050. A summary of the presentation, prepared by the presenters, can be found in annex I to the report of the thirty-seventh meeting.

7. During the thirty-seventh meeting, interested parties met informally with members of the Panel in the margins of the meeting to present questions, share information and provide guidance for the second report. The outcome of the informal discussions was reported in plenary by Mr. Lambert Kuijpers, co-chair of the task force, who indicated that the Panel and the task force would do their best, within the time available, to incorporate into the next version of the report as many of the additional elements suggested by parties as possible. Those elements are listed in annex I to the

---

1 The Technology and Economic Assessment Panel and its technical options committees and task forces normally issue their reports around May each year to enable parties to consider them at the mid-year meeting of the Open-ended Working Group. Taking into account the additional meetings being held in 2016, the Panel and its task force will issue three reports: an initial report for the thirty-seventh meeting of the Open-ended Working Group (http://conf.montreal-protocol.org/meeting/oewg/oewg-37/presentation/Bacground_documents/TEAP%20TF%20XXVII-4%20Report%20March%202016.pdf), a second report for the thirty-eighth meeting of the Open-ended Working Group; and a final update for the Twenty-Eighth Meeting of the Parties.

2 During December 2015 and in early 2016 the Panel established a task force to prepare the report called for in decision XXVII/4. In accordance with the terms of reference of the Technology and Economic Assessment Panel, the nomination of members to the task force was carried out in full consultation with the parties of which the nominated members are nationals.

3 UNEP/OzL.Pro.WG.1/37/7.
present note. In addition, it was agreed at the thirty-seventh meeting that parties wishing the Panel to consider additional information or suggestions would submit such information or suggestions to the Secretariat by 19 April 2016 and that the submissions would be posted on the Secretariat website. In that regard, no further written comments have been received by the Secretariat.

8. The Panel and its task force are working on the second report for the thirty-eighth meeting of the Open-ended Working Group, covering the other issues listed in decision XXVII/4. The second report is expected to include further updates of information for the refrigeration and air-conditioning sector and to respond to other parts of the decision, such as by providing information on alternatives for refrigeration systems on fishing vessels and updating and extending scenarios for sectors other than the refrigeration and air-conditioning sector. The report will also take into account as far as possible the further guidance of the parties set out in annex I to the present note. Some of the suggestions in that guidance are that the Panel should provide information on not-in-kind technologies; further consider the issue of safety; elaborate on the term “environmentally sound”; provide information on the testing of alternatives under high-ambient temperature conditions, including on positive and negative results, costs and risk assessment; and provide an overview of the status of alternatives with regard to high-ambient temperature considerations, as well as for additional uses (such as in industrial equipment and transport air-conditioning); further consider regulations, growth rates and regional demands in the scenarios; and provide information on the magnitude of HFC banks. The executive summary of the second report will be reproduced in the addendum to the present note so that it is available in the six official languages of the United Nations for consideration by the Working Group.

9. The further updated report to be prepared for the Twenty-Eighth Meeting of the Parties will take into account the discussions at the thirty-seventh and thirty-eighth meetings of the Open-ended Working Group as well as any additional information available to the task force.

Agenda item 4
“Dubai pathway on hydrofluorocarbons” (decision XXVII/1)

10. The following paragraphs summarise chronologically the main activities that have taken place so far on the “Dubai pathway on hydrofluorocarbons” (decision XXVII/1), set out in annex II to the present note.

11. The Dubai pathway was adopted by the Twenty-Seventh Meeting of the Parties, in Dubai in November 2015. In paragraph 1 of the decision 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 a result of an agreement reached at the resumed thirty-sixth meeting of the Open-ended Working Group, and it discussed the eight challenges that were listed in its mandate (set out in annex I to decision XXVII/1). In paragraph 2 of decision XXVII/1 the Meeting of the Parties recognized the progress made on those challenges at the Twenty-Seventh Meeting of the Parties, including the 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. In the same paragraph it also endorsed the concepts listed in annex II to the decision.

12. In paragraph 3 of decision XXVII/1 the Meeting of the Parties recognized that further progress was needed, in particular with regard to other challenges identified in the contact group mandate, including in respect of conversion costs, technology transfer and intellectual property rights. Annex I to the decision also listed nineteen challenges that had been identified at the thirty-fifth meeting of the Open-ended Working Group, which took place in Bangkok in April 2015 (as listed in annex II to the report of that meeting, UNEP/OzL.Pro.WG.1/35/3).

13. In accordance with paragraph 4 of decision XXVII/1, a series of Open-ended Working Group meetings and other meetings, including an Extraordinary Meeting of the Parties, are being convened in 2016. The first such meeting was the thirty-seventh meeting of the Open-ended Working Group, held in Geneva in April 2016. At that meeting, the contact group continued its deliberations on the Dubai pathway and addressed, in accordance with its mandate set out in decision XXVII/1, the following issues under agenda item 4 of its agenda:4

- Resolving challenges by generating solutions on the feasibility of managing HFCs;

---

4 UNEP/OzL.Pro.WG.1/37/1.
- Ways of managing HFCs, including the amendment proposals submitted by parties; and
- Work within the Montreal Protocol to an HFC amendment in 2016 under decision XXVII/1: process for moving forward.

14. The contact group at the thirty-seventh meeting of the Open-ended Working Group concluded a first review of all the challenges listed in its mandate and discussed a conference room paper submitted by African States setting out explanatory text and a draft decision on certain funding issues. The contact group made progress in generating solutions, including a text proposal on an exemption for high-ambient-temperature countries and the solutions to some aspects of challenges related to funding and flexibility in implementation.

15. On the last day of the thirty-seventh meeting of the Open-ended Working Group, parties agreed to suspend the meeting and to resume it prior to the thirty-eighth meeting of the Working Group for the purpose of continuing its work under agenda item 4 of the agenda, on the “Dubai pathway on HFCs”. The three sub-items listed in paragraph 13 above feature under agenda item 3 of the resumed meeting, which is scheduled to take place on 15 and 16 July 2016, immediately prior to the thirty-eighth meeting.

16. Under agenda item 4 of the thirty-eighth meeting, the Open-ended Working Group will consider the outcome of the resumed thirty-seventh meeting. The co-chairs of the contact group that will take up the discussions on the “Dubai pathway” at the resumed thirty-seventh meeting are expected to report on the outcome of those discussions. On the basis of that report, the Open-ended Working Group may decide on how to take the issue forward under agenda item 4.

17. Various documents have been made available on the meeting portal for reference by the parties, including the briefing notes prepared by the Secretariat for the thirty-seventh meeting on exemption mechanisms under the Montreal Protocol, funding-related issues identified in the Dubai pathway, intellectual property rights and the Montreal Protocol: past practices and current challenges, legal aspects of HFC management under the Montreal Protocol, and non-party trade provisions; an information document (UNEP/OzL.Pro.WG.1/resumed.37/INF.1) that consolidates the four amendment proposals, showing how each of the proposals would affect the text of the Montreal Protocol; additional briefing notes and background documents including the initial and second reports of the Technology and Economic Assessment Panel on decision XXVII/4, issued in April and June 2016, respectively; and previous meeting reports, including those of the Twenty-Seventh Meeting of the Parties (UNEP/OzL.Pro.27/7) and the thirty-seventh meeting of the Open-ended Working Group (UNEP/OzL.Pro.WG.1/37/7).

**Agenda item 5**  
**Technology and Economic Assessment Panel 2016 report**

18. The Technology and Economic Assessment Panel is expected to finalize its 2016 report by the beginning of June 2016. The volumes of the Panel’s 2016 report are:

- Volume I. Technology and Economic Assessment Panel 2016 Progress Report, which includes the following chapters:
  - Chapter 1: Introduction (includes highlights from each technical options committee)
  - Chapter 2: Foams
  - Chapter 3: Halons (includes follow-up to decision XXVI/7)
  - Chapter 4: Methyl bromide
  - Chapter 5: Medical and chemical (includes essential-use nomination report)
  - Chapter 6: Refrigeration and air-conditioning
  - Chapter 7: Decision XXVII/7: Investigation of carbon tetrachloride discrepancy
  - Annexes on the membership and administration of the Technology and Economic Assessment Panel and its technical options committees, matrix of needed expertise and decision XXVI/7: availability of recovered, recycled or reclaimed halons
• Volume II. June 2016 critical-use nominations report  
• Volume III. Decision XXVII/5: working group report: issues related to the phase-out of HCFCs  

19. The Technology and Economic Assessment Panel will make a presentation on its 2016 report under agenda item 5. The presentation will cover various issues under the agenda items of the thirty-eighth meeting. The Panel will give a separate presentation on updated and new information on alternatives to ozone-depleting substances prepared in response to decision XXVII/4, under agenda item 3.

20. The information and recommendations of the Panel set out in the various parts of its 2016 report that are relevant to matters on the provisional agenda for the thirty-eighth meeting will be summarized in an addendum to the present note to be issued before the meeting.

**Agenda item 6**  
**Issues related to exemptions under Articles 2A–2I of the Montreal Protocol**

**(a) Nominations for essential-use exemptions for 2017**

21. In accordance with decision IV/25, China submitted one request for an essential-use exemption, for the use of 65 tonnes of carbon tetrachloride for the testing of oil in water (a laboratory and analytical use) for 2017. The Medical and Chemicals Technical Options Committee met from 8 to 11 March 2016 in Washington D.C. and, among other things, reviewed the request by China. The Committee’s recommendation will be set out in the 2016 report of the Technology and Economic Assessment Panel and summarized in an addendum to the present note. No other nominations for essential uses were received in 2016. The last essential use nomination for CFCs was received in 2014, for an exemption that was authorized for 2015. For 2016 there are no exemptions authorized for essential uses of CFCs. While parties could require essential use exemptions for CFCs in future years, it may be concluded that the phase-out of the use of new CFCs has been completed. Further details on CFC phase-out are provided in paragraphs 45-47 below.

**(b) Nominations for critical-use exemptions for 2017 and 2018**

22. In 2016, three parties operating under paragraph 1 of Article 5, Argentina, China and South Africa, submitted five nominations for critical-use exemptions in 2017 and two parties not operating under paragraph 1 of Article 5 of the Protocol, Australia and Canada, submitted one nomination each for 2018 and 2017, respectively. The Methyl Bromide Technical Options Committee met in Mar del Plata, Argentina, from 3 to 7 March 2016 and, among other things, reviewed the critical-use nominations as well as additional information submitted by the nominating parties in response to the first round of questions by the Committee. The interim recommendations on the quantities of methyl bromide eligible for exemption will be included in the report of the Committee to be made available as part of the 2016 report of the Technology and Economic Assessment Panel. When the report becomes available the interim recommendations and associated information will be summarized in an addendum to the present note. In the meantime, the parties submitting critical-use exemption nominations in 2016 and the quantities that they have nominated for 2017 and 2018 are listed in table 1 below.

**Table 1**  
**Summary of the nominations for 2017 and 2018 critical-use exemptions for methyl bromide submitted in 2016 (metric tonnes)**

<table>
<thead>
<tr>
<th>Parties not operating under paragraph 1 of Article 5 and sectors</th>
<th>Nomination for 2017</th>
<th>Nomination for 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Australia Strawberry runners</td>
<td>29.760</td>
<td></td>
</tr>
<tr>
<td>2. Canada Strawberry runners</td>
<td>5.261</td>
<td>29.760</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>5.261</strong></td>
<td><strong>29.760</strong></td>
</tr>
</tbody>
</table>
Agenda item 7
Issues related to the phase-out of hydrochlorofluorocarbons (decision XXVII/5)

23. In decision XIX/6, the Meeting of the Parties decided to address certain issues related to the phase-out of HCFCs as specified in paragraphs 12, 13 and 14 of the decision:

   (a) In paragraph 12, the Meeting of the Parties decided to address the possibilities or need for essential-use exemptions for HCFCs, no later than 2015 for parties not operating under paragraph 1 of Article 5 of the Protocol and no later than 2020 for parties operating under that paragraph (Article 5 parties);

   (b) In paragraph 13, the Meeting of the Parties decided to review in 2015 the need for the 0.5 per cent for servicing provided for in paragraph 3 of the same decision, which specifies the reduction steps for non-Article 5 parties, and to review in 2025 the need for the annual average of 2.5 per cent for servicing provided for in paragraph 4 (d) of the same decision, which specifies the HCFC reduction steps for Article 5 parties;

   (c) In order to satisfy basic domestic needs, in paragraph 14 the Meeting of the Parties decided to allow for up to 10 per cent of baseline levels of HCFC production until 2020 and, for the period after that, to consider no later than 2015 further reductions of production for basic domestic needs.

24. These three issues were discussed in 2015, and the Twenty-Seventh Meeting of the Parties adopted decision XXVII/5, by which it requested the Technology and Economic Assessment Panel, in relation to HCFCs listed in Annex C of the Montreal Protocol, to prepare a report that identified the sectors, including subsectors, if any, where essential uses for parties not operating under paragraph 1 of Article 5 might be needed after 2020, including estimates of the volumes of HCFCs to be used; assessed the future refrigeration and air-conditioning equipment servicing requirements between 2020 and 2030 of non-Article 5 parties and whether there would be a need for servicing in other sectors; and provided information on recent volumes of production to satisfy basic domestic needs and projected estimates of such future production and estimated needs of Article 5 parties 5 to satisfy basic domestic needs beyond 2020.

25. In paragraph 2 of the same decision, parties were invited to provide relevant information to the Ozone Secretariat by 15 March 2016 for inclusion in the Panel’s assessment. The Secretariat received information from two parties, Australia and Canada, and forwarded it to the Technology and Economic Assessment Panel for its consideration. The Panel’s report on the issue is currently being finalized. When it is ready the Secretariat will include a summary of it in the addendum to the present note.

Agenda item 8
Availability of recovered, recycled or reclaimed halons (decision XXVI/7)

26. In 2014 parties discussed their concerns about the availability of recovered, recycled or reclaimed halons for remaining fire safety uses, in particular in civil aviation. The Meeting of the Parties adopted decision XXVI/7 encouraging parties, on a voluntary basis, to liaise, through their national ozone officers, with their national civil aviation authorities to gain an understanding of how halons are being recovered, recycled or reclaimed to meet purity standards for aviation use and supplied to air carriers to meet ongoing civil aviation needs, as well as with regard to on any national actions being taken to expedite the replacement of halons for civil aviation uses (paragraph 1); to submit information on the matter to the Ozone Secretariat by 1 September 2015 (paragraph 2); and to
reassess any national import and export restrictions other than licensing requirements with a view to facilitating the import and export of recovered, recycled or reclaimed halons and the management of stocks of such halons with the aim of enabling all parties to meet remaining needs in accordance with domestic regulations even as they make the transition to halon alternatives (paragraph 3).

27. In paragraph 4 of the same decision the Meeting of the Parties requested the Technology and Economic Assessment Panel, through its Halons Technical Options Committee, to continue to liaise with the International Civil Aviation Organization to facilitate the transition to halon alternatives, to approach the International Maritime Organization regarding amount and purity of halons available from shipbreaking and report on global stocks of recovered halons in its 2015 progress report; and to report on existing and emerging alternatives to halons, particularly for aviation uses.

28. The report by the Panel on the matter is contained in chapter 8 of its June 2015 progress report and was presented to the Open-ended Working Group at its thirty-sixth meeting (20–24 July 2015, Paris). A summary of the Panel’s presentation can be found in annex II to the report of the meeting (UNEP/OzL.Pro.WG.1/36/7, annex II, paras. 39–43).

29. Decision XXVI/7 also requested the Ozone Secretariat to report to the parties, prior to the thirty-seventh meeting of the Open-ended Working Group, any information provided by parties in accordance with the decision. The Secretariat received information from Australia, Canada, European Union (on behalf of its 28 member States) and the United States of America. With the agreement of those parties, the information submitted was shared with the Technology and Economic Assessment Panel and its Halons Technical Options Committee for their consideration and discussion in the Panel’s 2016 report. When it becomes available, the Secretariat will summarize the key findings from the report in the addendum to the present note.

Agenda item 9
Terms of reference for the study on the 2018–2020 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

30. Since its interim phase-in 1990, the Multilateral Fund for the Implementation of the Montreal Protocol has operated with three-year funding cycles, and the parties have accordingly adopted decisions on the replenishment of the Fund in 1993, 1996, 1999, 2002, 2005, 2008, 2011 and 2014. The last replenishment decision, decision XXIV/10, was adopted by the parties in 2014 and covers the period 2015–2017. It has been the parties’ custom, in the year preceding the last year of each funding cycle, to develop terms of reference for a study designed to estimate the funds necessary to enable parties to achieve compliance during the forthcoming replenishment period. In 2016, therefore, the parties may wish to consider the terms of reference for a study of the funding needed for the replenishment period 2018–2020.

31. For the parties’ convenience, the terms of reference established for the 2014 replenishment study adopted in decision XXV/8 in 2013 are set out in annex III to the present note. The parties may wish to consider matters related to the 2018–2020 replenishment, including the identification of an appropriate body to carry out the replenishment study, and to forward their views to the Twenty-Eighth Meeting of the Parties for its deliberation and action. Traditionally, the Technology and Economic Assessment Panel has been requested by the parties to carry out the replenishment study in accordance with the terms of reference, and the Panel has established task forces to that end.

Agenda item 10
Report by the Technology and Economic Assessment Panel and the Scientific Assessment Panel on analysis of the discrepancies between observed atmospheric concentrations of carbon tetrachloride and reported data on carbon tetrachloride (decision XXVII/7)

32. In decision XXVII/7, the Parties reiterated their concern about the discrepancies between observed atmospheric concentrations and reported data on carbon tetrachloride, requested the Technology and Economic Assessment Panel and the Scientific Assessment Panel to continue their

---

5 http://conf.montreal-protocol.org/meeting/oewg/oewg-36/presession/Background%20Documents%20are%20available%20in%20English%20only/TEAP_Progress_Report_June_2015.pdf

6 Due to additional meetings of the Open-ended Working Group being convened in 2016 year, the thirty-seventh meeting was convened to discuss the “Dubai pathway on HFCs”, while the thirty-eighth meeting is the normal mid-year meeting at which the Working Group considers all issues. Thus the information reported in accordance with decision XXVI/7 will be considered at the thirty-eighth meeting of the Open-ended Working Group.
analysis of those discrepancies and to report on the results of their analysis, including an update on their previous findings, to the Twenty-Eighth Meeting of the Parties.

33. The Technology and Economic Assessment Panel and the Scientific Assessment Panel are looking into the issue with a view to reporting fully at the Twenty-Eighth Meeting of the Parties in October 2016. The Panels are expected to provide a progress report to the Open-ended Working Group at its thirty-eighth meeting.

Agenda item 11
Destruction of banks of ozone-depleting substances (UNEP/OzL.Pro.27/13, para. 114)

34. Ozone-depleting substances that exist in equipment and products, such as refrigerators, fire-fighting equipment and foams, and as chemical stockpiles (virgin, recovered, recycled, contaminated or confiscated) are referred to as “banks” of ozone-depleting substances. In 2005 the Technology and Economic Assessment Panel, in its supplement to the special report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel on safeguarding the ozone layer and the global climate system (2005), estimated that the quantity of ozone-depleting substance in such banks totalled 3.78 million ozone-depleting potential tonnes, or approximately 20 billion tonnes in CO₂-equivalence.

35. Over the years, parties have expressed concern about managing and destroying the banks of ozone-depleting substances in an environmentally sound manner. In calculating the amount of production of ozone-depleting substances by each party for purposes of implementing the Montreal Protocol, controlled ozone-depleting substances destroyed through the use of technologies approved by the parties are subtracted. With regard to destruction technologies, parties are called upon in decision IV/11 “to facilitate access and transfer of destruction technologies in accordance with Article 10 of the Protocol, together with provision for financial support under Article 10 of the Protocol for parties operating under paragraph 1 of Article 5”. Furthermore, the indicative list of categories of incremental costs eligible for funding under the Multilateral Fund, endorsed by the parties in decision IV/11, includes as point (c) (ii) the “[c]ost of collection, management, recycling, and, if cost effective, destruction of ozone-depleting substances”.

36. The Meeting of the Parties has adopted several decisions on the destruction and management of banks of ozone-depleting substances, in which it has, among other things, requested the Technology and Economic Assessment Panel to carry out assessments and prepare reports on relevant issues and has mandated the Executive Committee to work on the issue. In accordance with those decisions, the Multilateral Fund has funded pilot and demonstration projects on the destruction of ozone-depleting substances. The Executive Committee has also developed guidelines for work in this area (decision 58/19 of the Executive Committee). The Multilateral Fund has funded thirty-seven projects on ozone-depleting-substance destruction, for a total of $12.4 million, including six bilateral cooperation projects totalling about $2 million.

37. At the Twenty-Seventh Meeting of the Parties, during the adoption of the agenda, the issue of destruction of ozone-depleting substances was raised as one of five issues for discussion under “other matters” on the agenda. During the discussion, the representative of one party said that the destruction of ozone-depleting substances presented a particular difficulty for developing countries with no destruction facilities of their own. The representative proposed that the matter be placed on the agenda of an appropriate meeting of the Open-ended Working Group in 2016, and the parties agreed to the proposal. The Open-ended Working Group at its thirty-eighth meeting may wish to address the issue and make recommendations as appropriate to the Twenty-Eighth Meeting of the Parties.

---

7 The Meeting of the Parties approved such technologies and processes in decisions IV/11, V/26, VII/35, XIV/6, XV/9 and XXIII/12. Decision XV/9 includes a code of good housekeeping on minimizing emissions of ozone-depleting substances through all media.

8 Some of the key decisions include decisions IV/11, XII/8, XIV/6, XV/9, XVII/17, XVIII/19, XX/7 and XXI/2. A workshop and a seminar were convened in July 2009 and June 2010, respectively, on the issue of environmentally sound management of banks of ozone-depleting substances.
Agenda item 12
Technology and Economic Assessment Panel: organizational matters

38. The annual report of the Technology and Economic Assessment Panel normally contains information on organizational and administrative issues of the Panel and its technical options committees. In addition to information on nominations, re-nominations, appointments and re-appointments of Panel and committee members there may be other issues that the parties may wish to address based on the report of the Panel. The Secretariat will include in the addendum to the present note any organizational and administrative issues discussed in the Panel’s report when it becomes available.

39. On the nominations to the Panel, the Secretariat received from India a nomination of an expert to serve on the Technology and Economic Assessment Panel as a senior expert member. In accordance with paragraph 2.3 of the terms of reference of the Panel, the parties may wish to consider the nomination for possible appointment by the Meeting of the Parties. The curriculum vitae of the nominated expert, Mr. Rajendra Shende, has been posted in the meeting portal under background documents.

III. Progress in the implementation of other relevant decisions or the provisions of the Montreal Protocol

A. Update on decision XXVI/8, on measures to facilitate the monitoring of trade in HCFCs and substituting substances

40. In decision XXVI/8, the Meeting of the Parties, among other things, requested the Secretariat to liaise with the World Customs Organization (WCO) to examine the possibility of designating individual Harmonized System codes for the most commonly traded fluorinated substitutes for HCFCs and CFCs and their substitutes classified under Harmonized System code 2903.39, for the sole purpose of preventing illegal trade in HCFCs and CFCs. The Secretariat was also requested to communicate to the parties the results of those consultations as soon as possible, but not later than at the thirty-sixth meeting of the Open-ended Working Group. The Secretariat communicated decision XXVI/8 to WCO in December 2014.

41. In response to decision XXVI/8, WCO agreed to include the request to designate individual Harmonized System codes for HFCs on the agenda for the forty-ninth session of the Harmonized System Review Subcommittee, which took place in November 2015, and the thirty-first session of the Scientific Subcommittee, which met in January 2016.

42. The WCO secretariat presented two options to the two committees for the possible amendment of the Harmonized System nomenclature in respect of ozone-depleting substances and their substitutes. Under option 1 the structure of subheading 2903.3 would be maintained, with fewer subheadings for chemicals and products grouped under a single subheading. Under option 2 more subheadings would be added to distinguish between the separate chemicals and products listed under the subheading. The two options were first discussed during the forty-ninth meeting of the Harmonized System Review Subcommittee, in November 2015, at which most of the countries that contributed to the discussion seemed to favour option 2.

43. In an e-mail communication to all parties on 28 April 2016, the Ozone Secretariat informed the parties to the Montreal Protocol about the progress being made by WCO on this issue and invited them to express a preference for either option 1 or option 2 by 18 May 2016, with a view to presenting their views to the WCO secretariat in time for the next meeting of the Harmonized System Review Subcommittee, which was held at WCO headquarters in Brussels from 23 to 27 May 2016. The responses received by the Secretariat, from 51 parties, of which 50 expressed a preference for option 2 and one preferred option 1, were presented to the WCO Harmonized System Review Subcommittee at its meeting on 23 May 2016. During the deliberations on the issue, other parties to the Protocol that were represented in the Subcommittee meeting expressed a preference for either option 1 or option 2. Some of them also made suggestions for structural changes in the two options to better reflect how the new harmonized codes for the most commonly traded fluorinated substitutes for HCFCs and CFCs and their substitutes should be structured. At the end of the discussion it was decided that the views expressed by the committee members would be reflected in a new document to be prepared by the

---

9 Decision XXIV/8, annex: Terms of reference of the Technology and Economic Assessment Panel and its technical options committees and temporary subsidiary bodies.
WCO secretariat on the two options for further consideration by the Harmonized System Review Subcommittee at its next meeting, in November 2016.

B. **Organizational issues regarding the Twenty-Eighth Meeting of the Parties**

44. By paragraph 2 of decision XXVI/22, the Twenty-Sixth Meeting of the Parties decided to convene the Twenty-Eighth Meeting of the Parties in Kigali in November 2016. The Secretariat has been working with the Government of Rwanda to prepare for the meeting and associated activities.

C. **Achievement of the chlorofluorocarbon phase-out**

45. The final phase-out of CFCs has been achieved following the phase-out of CFC use in metered-dose inhalers. 2015 was the final year of essential-use exemptions for metered-dose inhalers. Affordable CFC-free alternatives for all inhaled treatments have been developed and are now available worldwide.

46. When CFC-based aerosols were phased out in developed countries, CFC-free replacement inhalers were not available for the hundreds of millions of patients with asthma and chronic obstructive pulmonary disease worldwide who relied on them; an essential-use exemption was therefore allowed for the production and consumption of CFCs for metered-dose inhalers until alternatives became available. Over the last 20 years, nominations by parties for essential-use exemptions for medical purposes have been evaluated on an annual basis by the Medical Technical Options Committee and the Technology and Economic Assessment Panel, and recommendations have been made to steadily reduce CFC production as CFC-free alternatives became available.

47. The safe phase-out of CFC metered-dose inhalers is an impressive achievement that has required two decades of coordinated activity involving the pharmaceutical industry, healthcare regulators and providers and strong patient involvement. The extensive educational campaign associated with this transition has had a positive impact on the health of patients by increasing the awareness of the benefits of inhaled therapy, which has doubled in the last 20 years.
Annex I

Summary of the informal consultations between members of the decision XXVII/4 task force and parties in the margins of the thirty-seventh meeting of the Open-ended Working Group

Parties provided comments on the report prepared for the current meeting in response to decision XXVII/4 and suggestions for the second report to be prepared under that decision in an informal discussion session with the Panel on Thursday 7 April from 1 to 2:30 p.m. The parties’ comments and suggestions are summarized below. All the comments will be taken into consideration by the task force created in response to the decision in the time remaining before the thirty-eighth meeting of the Open-ended Working Group, and the second report will be submitted for consideration by the Working Group at that meeting.

Update on refrigerants

- The report should include updates and information on not-in-kind (NIK) technologies.
- Further consideration should also be provided with regard to safety, with the aim of advancing technologies to meet current safety standards in relation to the new alternatives. With regard to servicing, the report should address whether use of the alternatives, including flammables, would require specialized training, including with regard to use under HAT conditions.
- A request was made to address criteria in paragraph 1 (a) of decision XXVI/9, including whether alternatives are “environmentally sound”, in order to avoid having to revisit in the future decisions that are made in selecting alternatives. Additionally, the term “environmentally sound” could be further elaborated.

Testing of alternatives under high ambient temperature (HAT) conditions

- A Party that had proposed language regarding consideration of a HAT exemption in the contact group offered to share information with TEAP on the criteria and data used; the party also noted that it would welcome other alternative approaches.
- The section in the report that discusses the results of the testing of alternatives under HAT conditions were actually positive, and that positive outcome along with any negative outcomes of the testing should be better reflected in the executive summary of the report. The executive summary of the report, however, should also indicate that certain elements such as risk assessment were not included in the alternatives testing.
- The cost element should be reflected in a contextual manner to include the cost of in-kind replacement and full or partial system redesign.
- A couple of parties suggested that it would be helpful if the report could include an overview of the status of the various alternatives based on the testing, not in additional discussion within the report but perhaps in a table so that key information would be in one place.
- A party asked for HAT considerations to include some additional uses, including in industrial equipment, chillers and other sub-sectors such as transport air conditioning; additional uses mentioned were for cooling mines in South Africa and propane-driven technologies in Australia.

Scenarios

- A party said that some idea of the magnitude of current HFC banks would be helpful.
- A request was made on whether the TEAP reported annual production of HFCs could be split into specific values for HFC production by country.
- A party suggested that the report should clarify that only certain HFCs were included in the production figures.
- With regard to the business-as-usual (BAU) scenario, not all existing regulations were used, so the Panel was requested to investigate whether the report could further consider all relevant regulations in addition to a number of corporate commitments and changes in national procurement regulations.
- A party requested whether the report could show a BAU scenario that did not incorporate any regulatory actions.
- Further clarification is needed on the estimated growth rates that were used compared to refrigerant demand growth.
- A request was made as to whether the impacts of a manufacturing conversion period of 18 years could be calculated and incorporated.
- The decision XXVI/9 report included estimated costs and emissions reductions for the various mitigation scenarios; a request was made to include those costs and benefits in the second report to be prepared in response to decision XXVII/4.
- A party requested that the scenarios show demand (and refrigerant banks) on a regional basis.
Annex II

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 inter-sessionally 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 III


Recalling the parties’ decisions on previous terms of reference for studies on the replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol,

Recalling also the parties’ decisions on previous replenishments of the Multilateral Fund,

1. To request the Technology and Economic Assessment Panel to prepare a report for submission to the Twenty-Sixth Meeting of the Parties, and to submit it through the Open-ended Working Group at its thirty-fourth meeting, to enable the Twenty-Sixth Meeting of the Parties to take a decision on the appropriate level of the 2015–2017 replenishment of the Multilateral Fund;

2. That, in preparing the report referred to in paragraph 1 of the present decision, the Panel should take into account, among other things:

   (a) All control measures and relevant decisions agreed upon by the parties to the Montreal Protocol and the Executive Committee, in particular those pertaining to the special needs of low-volume- and very-low-volume-consuming countries, in addition to small and medium-sized enterprises, and the decisions of the Twenty-Fifth Meeting of the Parties and the Executive Committee at its seventieth and seventy-first meetings insofar as those decisions will necessitate expenditure by the Multilateral Fund during the period 2015–2017;

   (b) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 to maintain compliance with Articles 2A–2E, 2G and 2I of the Protocol;

   (c) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 to maintain or meet 2013, 2015 and 2020 compliance obligations in respect of Articles 2F and 2H of the Protocol, taking into account the extended commitment provided by parties operating under paragraph 1 of Article 5 under approved hydrochlorofluorocarbon phase-out management plans;

   (d) Dividing the funding relating to the 2020 target applicable to hydrochlorofluorocarbon consumption and production in an appropriate manner, including, but not limited to, one scenario that divides the funding relating to the 2020 target applicable to hydrochlorofluorocarbon consumption equally between the 2015–2017 and 2018–2020 replenishments;

   (e) Rules and guidelines agreed upon by the Executive Committee at all its meetings, up to and including its seventy-first meeting, for determining eligibility for the funding of investment projects and non-investment projects, including, but not limited to, institutional strengthening;

   (f) The need to allocate sufficient resources to the activities in the servicing sector in stage II of hydrochlorofluorocarbon phase-out management plans through technical assistance such as recovery, training and other necessary activities;

3. That, as a separate element to the funding requirement estimated in paragraph 2 of the present decision, the Panel should provide indicative figures for additional resources that would be needed to enable parties operating under paragraph 1 of Article 5 to gradually avoid high-global-warming-potential alternatives to ozone-depleting substances, taking into account the availability of safe, environmentally friendly, technically proven and economically viable technologies;

4. That, in preparing the said report, the Panel should consult widely all relevant persons and institutions and other relevant sources of information deemed useful;

5. That the Panel should strive to complete the report referred to above in good time to enable it to be distributed to all parties two months before the thirty-fourth meeting of the Open-ended Working Group;

6. That the Panel should provide indicative figures for the periods 2018–2020 and 2021–2023 to support a stable and sufficient level of funding, on the understanding that those figures will be updated in subsequent replenishment studies;