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**Open-ended Working Group of the Parties to
the Montreal Protocol on Substances that
Deplete the Ozone Layer
Thirty-third meeting
Bangkok, 24–28 June 2013**

Report of the thirty-third meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer

I. Opening of the meeting

1. The thirty-third meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer was held at the United Nations Conference Centre in Bangkok, from 24 to 28 June 2013. The meeting was co-chaired by Mr. Patrick McInerney (Australia) and Mr. Javier Camargo (Colombia).
2. The meeting was opened at 10.15 a.m. on Monday, 24 June 2013, by Mr. McInerney.
3. Mr. Marco González, Executive Secretary of the Ozone Secretariat, made an opening statement in which he recalled that the Open-ended Working Group had been instrumental in efforts to ensure that the Montreal Protocol provided for the phase-out of ozone-depleting substances.
4. He remarked that, since its inception in 1989, the Working Group had served as a platform to share proposals, get to understand issues and test the strength of arguments. Twenty-four years ago the Working Group began negotiations on a dual framework for amending the Protocol – to turn it from a phase-down to a phase-out treaty, and at the same time creating a multilateral fund to facilitate implementation of the new treaty provisions. After four meetings of the Working Group in that single year, the parties had created an amendment package that would forever change the Montreal Protocol and the course of international environmental law. The success of the Protocol had since served as an inspiration, shaping the architecture of modern multilateral environmental agreements.
5. Underlining the contribution of the Protocol to sustainable development, he said that one of the key results of the United Nations Conference on Sustainable Development (Rio+20) had been the renewed global efforts in defining sustainable development goals. The Ozone Secretariat had been contributing information on the Protocol's achievements to the annual report on the Millennium Development Goals, prepared by the United Nations Secretary-General. In that context, he drew attention to the note by the Secretariat on embedding ozone protection in the sustainable development agenda (UNEP/OzL.Pro.WG.1/33/INF/4).
6. He noted that, at the current meeting, parties would be considering proposals to amend the Protocol to deal with the issue of hydrofluorocarbons (HFCs). In that regard, he welcomed the high-level declarations made at a number of recent major forums, including Rio+20, the summit meetings of the Group of Eight, the Major Economies Forum on Energy Security and Climate Change, and the Arctic Council, in support of avoiding the use of high-global-warming-potential alternatives to hydrochlorofluorocarbons (HCFCs). He congratulated the parties on the most recent agreement by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol with

the Government of China to shut down the country's HCFC production facilities, a step that would provide climate benefits equivalent to the elimination of 8 billion tonnes of carbon dioxide.

7. He also emphasized the extent to which the parties continued to rely on the work of the Technology and Economic Assessment Panel, as set out in its 2013 report, which covered a number of the usual topics and a review of the alternatives to HCFCs, their development and their market penetration. The report also provided information and recommendations regarding the future configuration of the technical options committees in the light of their expected workload.

8. The parties would also discuss terms of reference for the study on the 2015–2017 replenishment of the Multilateral Fund, looking at various scenarios to enable parties operating under paragraph 1 of Article 5 to meet their future compliance obligations.

9. Lastly, he paid tribute to Dr. Joseph Farman, Head of the Geophysics Section at the British Antarctic Survey, who had passed away on 11 May 2013, and applauded his many years of tireless work for the ozone community. His scientific contribution remained a cornerstone of the global efforts to protect the ozone layer. Participants stood in silence for one minute in honour of Dr. Farman.

II. Organizational matters

A. Attendance

10. The following parties to the Montreal Protocol were present: Albania, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Bahamas, Bahrain, Bangladesh, Belarus, Belgium, Belize, Benin, Bhutan, Bosnia and Herzegovina, Brazil, Brunei Darussalam, Burkina Faso, Cambodia, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Congo, Côte d'Ivoire, Croatia, Cuba, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Dominica, Dominican Republic, Egypt, El Salvador, Estonia, Ethiopia, European Union, Fiji, Finland, France, Gambia, Georgia, Germany, Ghana, Grenada, Guinea, Guinea-Bissau, Haiti, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Italy, Japan, Jordan, Kenya, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lebanon, Lesotho, Libya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Philippines, Poland, Portugal, Qatar, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Samoa, Senegal, Seychelles, Sierra Leone, Singapore, Slovakia, South Africa, South Sudan, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Tajikistan, Thailand, the former Yugoslav Republic of Macedonia, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Turkmenistan, Tuvalu, Uganda, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay, Uzbekistan, Vanuatu, Viet Nam, Yemen, Zambia, Zimbabwe.

11. Observers from the following United Nations entities, organizations and specialized agencies were also present: Global Environment Facility, Multilateral Fund for the Implementation of the Montreal Protocol, Secretariat of the Convention on Biological Diversity, Secretariat of the United Nations Framework Convention on Climate Change, United Nations Development Programme, United Nations Environment Programme, United Nations Industrial Development Organization, United Nations Office at Nairobi, World Bank and World Meteorological Organization. Also in attendance were representatives of the Economic Effects Assessment Panel, the Scientific Assessment Panel and the Technology and Economic Assessment Panel of the Montreal Protocol.

12. Representatives of the following intergovernmental, non-governmental and industry bodies attended the meeting as observers: Abacus Renewable Energy Corp.; AHT Cooling Systems Asia Ltd.; Air-Conditioning and Refrigeration Institute; Alliance for Responsible Atmospheric Policy; American Lung Association; Asada Corporation; Assumption University; Business Council for Sustainable Energy; California Citrus Quality Council; California Strawberry Commission; Centre for Science and Environment; Chemtura Corporation; Council on Energy, Environment and Water; Daikin Airconditioning (Singapore) Pvt. Ltd.; Daikin Europe N.V.; Daikin Industries, Ltd.; DLA Piper U.S. LLP; DuPont; Emergent Ventures International (EVI); Environmental Investigation Agency; European Partnership for Energy and the Environment; Foam Supplies Inc.; Fuso Co. Ltd.; GIZ Proklima; Godrej and Boyce Manufacturing Co. Ltd.; Green Cooling Council; ICF International; Industrial Foams Pvt. Ltd.; Industrial Technology Research Institute; Institute for Governance and Sustainable Development; Japan Fluorocarbon Manufacturers Association; Japan Industrial Conference for Ozone Layer and Climate Protection; Japan Refrigeration and Air Conditioning Industry Association; JX Nippon Oil and Energy Corporation; Korea Speciality Chemical Industry

Association; Mebrom NV; Mebrom Pty. Ltd.; Mitsubishi Electric; Natural Resources Defense Council; Navin Fluorine International Limited; Pollet Environmental Consulting; PREC Institute; Productos Halogenados de Venezuela; Quimobasicos S.A.; Refrigerant Reclaim Australia Ltd.; Refrigerants Australia; Shecco; Siam Compressor Industry Co. Ltd.; SRF Limited; Trident Agricultural Products, Inc.

B. Adoption of the agenda

13. The Working Group agreed to discuss a new proposal on a climate impact indicator by the secretariat of the Multilateral Fund and adopted the following agenda on the basis of the provisional agenda set out in document UNEP/OzL.Pro.WG.1/33/1:

1. Opening of the meeting.
2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work.
3. 2013 progress report of the Technology and Economic Assessment Panel.
4. Issues related to exemptions under Articles 2A–2I of the Montreal Protocol:
 - (a) Nominations for essential-use exemptions for 2014 and 2015;
 - (b) Nominations for critical-use exemptions for 2014 and 2015;
 - (c) Handbook on critical-use nominations for methyl bromide (decision XXIII/14, paragraph 2; report of the Sixteenth Meeting of the Parties (UNEP/OzL.Pro.16/17), annex I, paragraph 29);
 - (d) Quarantine and pre-shipment use of methyl bromide (decisions XXIV/15, paragraph 1; XXIII/5, paragraph 6);
 - (e) Uses of controlled substances as process agents (decisions XXII/8, paragraph 5; XVII/6, paragraph 6; XXIV/6, paragraph 4).
5. Report by the Technology and Economic Assessment Panel on additional information on alternatives to ozone-depleting substances (decision XXIV/7, paragraph 1).
6. Information on ozone-depleting substance transition policy measures (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 187).
7. Organizational issues related to the Technology and Economic Assessment Panel:
 - (a) Report of the Technology and Economic Assessment Panel on operational and organizational issues (decision XXIV/8, paragraphs 1 and 3);
 - (b) Status of the membership of the Panel and its technical options committees (decision XXIII/10, paragraphs 10 and 11).
8. Controlled substances used on ships, including prior informed consent (decision XXIV/9, paragraph 3; report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 74).
9. Review by the Scientific Assessment Panel of RC-316c (decision XXIV/10, paragraph 2).
10. Issues related to funding:
 - (a) Clean production of HCFC-22 through by-product emission control (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 98);
 - (b) Additional funding for the Multilateral Fund for the Implementation of the Montreal Protocol to maximize the climate benefit of the accelerated phase-out of hydrochlorofluorocarbons (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 105);
 - (c) Funding of production facilities for hydrochlorofluorocarbons (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 114);

- (d) Terms of reference for the study on the 2015–2017 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol.
11. Implications of the outcome document of the United Nations Conference on Sustainable Development for small island developing States with regard to the implementation of the Montreal Protocol (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 125).
 12. Proposed amendments to the Montreal Protocol.
 13. Other matters.
 14. Adoption of the report.
 15. Closure of the meeting.

C. Organization of work

14. The Working Group adopted a proposal on the organization of work presented by the Co-Chair, agreeing to establish such contact groups as it deemed necessary to accomplish its work.

III. 2013 progress report of the Technology and Economic Assessment Panel

15. Members of the Technology and Economic Assessment Panel made a presentation summarizing the main findings of the Panel's 2013 progress report, including information on nominations for essential-use and critical-use exemptions, process agents, quarantine and pre-shipment issues and a summary of progress in the various sectors of use of ozone-depleting substances. Co-chairs of the Panel's technical options committees summarized the findings of their committees as follows: Ms. Helen Tope – Medical Technical Options Committee; Mr. Ian Rae – Chemicals Technical Options Committee; Mr. Miguel Quintero – Foams Technical Options Committee; Mr. Daniel Verdonik – Halons Technical Options Committee; Mr. Mohamed Besri, Mr. Ian Porter, Ms. Michelle Marcotte and Ms. Marta Pizano – Methyl Bromide Technical Options Committee; and Mr. Roberto de Aguiar Peixoto – Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee. In conclusion, Mr. Lambert Kuijpers, co-chair of the Panel, summarized some organizational issues related to the Panel and the technical options committees. A summary of the presentation prepared by the presenters is set out in section A of annex II to the present report.

16. In the ensuing discussion, the representative of the Russian Federation explained that the essential-use nomination for pharmaceutical-grade chlorofluorocarbons (CFCs) for metered-dose inhalers had been submitted late because of last-minute difficulties that had arisen with regard to the introduction of equipment for the manufacture of CFC-free alternatives as part of the conversion project co-funded by United Nations Industrial Development Organization (UNIDO) and the Global Environment Facility (GEF). Installation had been expected by the end of 2013 but had been postponed until 2014, thus necessitating submission of the essential-use nomination for that year. Given that patients' lives were at stake, she stressed the importance of approving the full amount of 212 metric tonnes in the nomination being discussed. Several representatives expressed concern at the recurrent submission by the Russian Federation of essential-use nominations for CFCs when affordable CFC-free inhalers were readily available in many other countries.

17. Regarding the assertion in the Panel's report that insufficient data were available to update table B of decision X/14, Mr. Rae said that the reason was the incomplete reporting available in the United Nations Environment Programme (UNEP) database. There were too few entries, owing, among other things, to the phase-out of certain process agent uses and to the consolidation of data for reasons of confidentiality. One representative stated the need to ensure that the source of the data from individual plants could not be identified, without compromising the ability to obtain data that were useful to the Panel. Mr. Rae acknowledged the problem, especially in cases where there was only one relevant plant in a given country, and said that he was open to suggestions other than the current practice of aggregation.

18. In response to questions about definitions, he also recalled that criteria for defining a process agent had never been officially adopted by the parties, but had rather been implicitly accepted through usage over more than 20 years. When asked why the criterion "insignificant emissions" had not been included in the Panel's criteria, he said that it had not been deemed necessary, given that the element was already part of the definition itself and that two other criteria had been applied. Regarding the

definition of feedstock uses under the Montreal Protocol, which one representative had considered incomplete in the report, he said that the Panel had not been exhaustive in its definition as it was usually argued that feedstocks were not controlled by the Montreal Protocol.

19. In response to a question about the use of the figure of 0.5 per cent as guidance for the level of feedstock emissions for HFC plants as practised by the Intergovernmental Panel on Climate Change (IPCC), he said it had simply been a matter of professional judgement. It was true that a number of plants were now rather old, but many of them had very low emissions. The 0.5 per cent value was therefore suited not only to modern plants and, in his opinion, was a fair estimate and took into account plants' entire lifecycle.

20. Noting that the report of the Executive Committee of the Multilateral Fund, contained in document UNEP/OzL.Pro.WG.1/33/5, also dealt with process agent emissions, another representative asked whether the Technology and Economic Assessment Panel and the Multilateral Fund had consulted each other. Mr. Rae said that they had not, but the Panel's next report would include any relevant additional information from the Multilateral Fund's report.

21. On the understanding that there was no alternative to halon in certain civil-aviation air frames, one representative asked for more information on discussions with the International Civil Aviation Organization (ICAO) in that regard. Mr. Verdonik said that the Panel was continuing to work with ICAO, under the provisions of existing decisions, but was pushing the aviation industry to find suitable alternatives for halons given the concern that there might soon be shortages if solutions were not found.

IV. Issues related to exemptions under Articles 2A–2I of the Montreal Protocol

A. Nominations for essential-use exemptions for 2014 and 2015

22. Introducing the sub-item, the Co-Chair recalled the consideration of essential-use exemptions for 2014 and 2015 in the presentation by the Technology and Economic Assessment Panel of its 2013 progress report (see section A of annex II to the present report).

23. In the ensuing discussion, the representative of China confirmed that his country was making good progress towards the phasing out of CFC use in metered-dose inhalers by the end of 2016 and that he agreed with the quantity recommended for exemption by the Panel for 2014. Regarding the amount nominated for 2015, on which the Panel had been unable to formulate a recommendation, his delegation was ready to discuss the current situation in China with the Medical Technical Options Committee to arrive at an acceptable decision.

24. The representative of the Russian Federation thanked the Panel for having recommended an essential-use exemption for the full amount of 85 tonnes of CFC-113 for use in his country's aerospace industry in 2014 and confirmed that it was on track to phase out CFC-113 completely by 2016. Regarding the recommendation to authorize half of the amount nominated for use in metered-dose inhalers, he requested the Panel to reconsider its decision in view of new information that had not been taken into account in the assessment: an unexpected delay in implementing the conversion of two manufacturing companies taking place within the framework of a project co-organized by GEF and UNIDO. The project in question would be completed in 2014, putting in place the equipment and permits needed to produce metered-dose inhalers without ozone-depleting substances, meaning that no nomination would be required for 2015. His delegation was ready to provide any further information requested by the parties within the framework of a contact group. Responding to the doubts expressed by one representative, speaking on behalf of a group of parties, as to whether to accept another delay and authorize the full amount nominated, he said that the nomination would be accompanied by an official statement to the effect that it would be the very last one submitted by the Russian Federation.

25. Two representatives, one speaking on behalf of a group of parties, hoped to have an opportunity to discuss the matter with the Russian Federation so as to understand why it required the full amount nominated for essential use in metered-dose inhalers. One representative reiterated his delegation's view that the parties should only authorize essential-use exemptions for quantities recommended by the Panel and that production of CFCs should only be authorized in the absence of sufficient stocks to produce inhalers. One representative stressed the need to grant exemptions in view of the fact that asthma sufferers, among others, could not wait for alternatives to be found to pharmaceutical-grade CFCs in quantities recommended by the Panel.

26. The representative of the Russian Federation introduced a conference room paper proposing a draft decision on an essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation.
27. The Working Group agreed to forward the draft decision, as set out in section A of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.
28. The representative of China introduced a conference room paper containing a proposed draft decision, submitted in conjunction with the Russian Federation, on essential-use nominations for controlled substances for 2014. One representative suggested that, in addition to the amount of CFCs nominated by the Russian Federation for essential use in metered-dose inhalers, the table in the annex to the proposed draft decision should also include the amount recommended by the Panel.
29. The Working Group agreed to forward the proposed draft decision, as amended and as set out in section B of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

B. Nominations for critical-use exemptions for 2014 and 2015

30. Introducing the sub-item, the Co-Chair recalled the consideration of critical-use exemptions for 2014 and 2015 in the presentation by the Technology and Economic Assessment Panel of its 2013 progress report (see section A of annex II to the present report).
31. The representative of Canada requested a bilateral meeting with the Methyl Bromide Technical Options Committee to seek clarification on the interim recommendation for a reduction in the quantity of methyl bromide nominated for use in her country's strawberry runner sector for 2015. As clearly outlined in the nomination by Canada, the technology suggested by the Committee was currently unproven and could not be introduced in Canada for a variety of reasons.
32. The representative of the United States of America drew attention to the progress made in reducing the number of nominations for critical-use exemptions of methyl bromide. In addition to the point raised by Canada, remaining challenges included regulatory uncertainties and the loss of a key alternative substance. The United States would continue to invest in research and development of new alternatives for use in the three sectors forming the focus of current nominations, namely strawberry fruit, dates and cured pork. In particular, he noted that the United States believed the dates sector would continue to face challenges in transitioning to alternatives and that the United States would continue to invest in research on alternatives to facilitate that transition. The Panel's interim recommendation for the cured pork sector was acceptable and no further review was needed. However, his delegation requested that the Panel should reconsider the recommendation for strawberry fruit in the light of the unique circumstances preventing growers in the state of California from moving easily to the suggested alternatives. The United States delegation would meet bilaterally with the co-chairs and members of the Methyl Bromide Technical Options Committee during the current week to present its case and would submit additional information for the Committee's consideration.
33. The representative of Australia requested a meeting with the Methyl Bromide Technical Options Committee to provide additional information on her country's revised research and transition plans, which would, she hoped, persuade the Committee to reconsider its interim recommendation on her country's critical-use exemption nomination for its strawberry runner sector. Australia further requested clarification on the difference between the terms "unable to assess" and "not recommended", as used in the Panel's report in relation to various critical-use nominations. Such information would be conducive to a better understanding of the evaluation process and assist parties operating under paragraph 1 of Article 5, as those parties moved towards the 2015 phase-out deadline.
34. One representative, speaking on behalf of a group of parties, expressed concern at the number of nominations submitted for critical uses when there were alternatives to methyl bromide, such as soilless substrates, which were in use in various countries. Parties not operating under paragraph 1 of Article 5 should set a better example to other parties and further information on the reasons why the alternative technologies were not more widely used would be helpful in advance of the next session of the Meeting of the Parties.
35. One representative reiterated his delegation's view that critical-use nominations for methyl bromide represented a tool that should be used only in exceptional circumstances. Another representative said that his delegation was in favour of authorizing only the quantities recommended for critical uses by the Panel and that the substance should be sourced exclusively from existing stocks. Every effort should be made to eliminate its use as soon as possible, encouraging the

nominating parties to draw on the experience of his country and others that had already made the transition.

36. The representative of the Methyl Bromide Technical Options Committee said that the Committee was ready to discuss the various points raised by representatives in bilateral meetings with parties.

37. The Working Group agreed to request interested parties to meet during the week or intersessionally to prepare a draft decision to be submitted to the Meeting of the Parties at its next session.

C. Handbook on critical-use nominations for methyl bromide (decision XXIII/14, paragraph 2; report of the Sixteenth Meeting of the Parties (UNEP/OzL.Pro.16/17), annex I, paragraph 29)

38. Introducing the sub-item, the Co-Chair recalled the introduction of the updated version of the handbook on critical use nominations for methyl bromide in the presentation by the Technology and Economic Assessment Panel of its 2013 progress report (see section A of annex II to the present report).

39. In the ensuing discussion, several representatives welcomed the updated version of the handbook, which, in their view, should continue to be revised. Several representatives, one speaking on behalf of a group of countries, expressed concern about the lack of clarity regarding the decision-making process, responsibility for which should remain with the full Methyl Bromide Technical Options Committee rather than with a subcommittee. His delegation had drafted language on the subject. Other representatives suggested that future versions should be presented in a format demonstrating where changes had been made. He expressed his regret that his delegation's concerns about the economic guidelines had not been taken into account, stressing that the handbook should reflect decisions taken by the parties rather than interpretations by the Technical Options Committee.

40. The Co-Chair announced that the version of the handbook that tracked the changes made to it had been posted on the website as requested by some parties to facilitate its review. The Working Group invited interested parties to obtain clarifications as required and to discuss modifications to the handbook.

D. Quarantine and pre-shipment use of methyl bromide (decisions XXIV/15, paragraph 1; XXIII/5, paragraph 6)

41. Introducing the sub-item, the Co-Chair recalled the consideration of quarantine and pre-shipment uses of methyl bromide in the presentation by the Technology and Economic Assessment Panel on its 2013 progress report (see section A of annex II to the present report).

42. In the ensuing discussion, one representative congratulated the parties that had provided information on their methyl bromide requirements for phytosanitary purposes; and another, observing that importing and exporting countries continued to rely on the substance for quarantine and pre-shipment uses, expressed satisfaction with the Panel's scientific evaluation and urged the parties yet to submit their data to do so voluntarily, so that the next version of the Panel's report would be fuller and more reliable. Another representative, speaking on behalf of a group of parties no longer using methyl bromide, expressed concern about its continuing and, in some cases, increasing use for quarantine and pre-shipment purposes. He also said that parties not operating under paragraph 1 of Article 5 should lead by example in volunteering the relevant information. In that regard, some parties had yet to respond to decision XXIV/14 on reporting of zero in Article 7 data reporting forms, which should be considered so as to assist the Methyl Bromide Technical Options Committee in its work.

E. Uses of controlled substances as process agents (decisions XXII/8, paragraph 5; XVII/6, paragraph 6; XXIV/6, paragraph 4)

43. Introducing the sub-item, the Co-Chair recalled the consideration of uses of controlled substances as process agents in the presentation by the Technology and Economic Assessment Panel on its 2013 progress report (see section A of annex II to the present report).

44. In the ensuing discussion, one representative, speaking on behalf of a group of parties, expressed the view that the use of controlled substances as process agents would not be required indefinitely and that consideration should be given to the idea of a sunset clause in that respect.

45. The Chief Officer of the Secretariat of the Multilateral Fund introduced the report of the Executive Committee of the Multilateral Fund on the progress made in reducing emissions of controlled substances from process-agent uses over the biennium 2011–2012, contained in document UNEP/OzL.Pro.WG.1/33/5. A representative of the secretariat of the Multilateral Fund then presented the report, pointing out that the information provided on those uses referred only to those parties operating under paragraph 1 of Article 5 that had received Multilateral Fund assistance; that, according to the Executive Committee's monitoring and verification efforts, no new process-agent-using plants had been commissioned; that all the process-agent activities approved by the Committee had been operationally completed; and that the only remaining activities were those related to raising awareness, collecting data, reporting and oversight so as to ensure that carbon tetrachloride was used exclusively for non-controlled uses. Based on its understanding of decision XXII/8, the secretariat of the Multilateral Fund considered that it would no longer be required to report to the parties, as requested in decision XVII/6, and that the present report would be its last.

46. In the ensuing discussion, one representative, speaking on behalf of a group of countries, requested and received confirmation from the Chemicals Technical Options Committee that the information provided in the Executive Committee's report would be reflected in the next progress report by the Technology and Economic Assessment Panel, to be presented to the Working Group at its thirty-fourth meeting.

47. One representative, responding to a query regarding his country's compliance with decision XXIV/6 on feedstock uses, said that it did not use carbon tetrachloride in the process of producing vinyl chloride monomer. Another representative requested clarification from the Technology and Economic Assessment Panel on its criteria for determining whether carbon tetrachloride use in the production of vinyl chloride monomer constituted a feedstock use.

48. Following bilateral consultations, and wishing to elucidate the information provided in volume 1, section 3.6.1, of the Panel's 2013 progress report as read out by the representative of India, the representative of the United States clarified the issue regarding the presence of carbon tetrachloride in the manufacture of vinyl chloride monomer in his country. He said that carbon tetrachloride was not used as feedstock in the manufacture process, but was a co-product, seen by the manufacturers as a contaminant. Most companies therefore sent it to onsite thermal oxidation facilities for destruction. One company, however, took advantage of the chlorine produced to manufacture hydrochloric acid. The carbon tetrachloride was used as feedstock in that process and, as a result, was completely transformed.

49. The representative of India, however, expressed his wish for the Technology and Economic Assessment Panel to examine the matter in more detail to clarify any perceived contradictions in the various explanations given. He requested information on the cases in which carbon tetrachloride was used as a feedstock, destroyed, or used in the manufacture of other chemicals, although he questioned its use in the manufacture of hydrochloric acid when alternative feedstocks were readily available. He also wondered which other chemicals used carbon tetrachloride in their manufacture. He requested the Panel to provide that information to the Twenty-Fifth Meeting of the Parties.

V. Report by the Technology and Economic Assessment Panel on additional information on alternatives to ozone-depleting substances (decision XXIV/7, paragraph 1)

50. Introducing the sub-item, the Co-Chair recalled that, in decision XXIV/7, the parties had requested the Technology and Economic Assessment Panel, in consultation with experts from outside the Panel, to update information on alternatives and technologies in various sectors, to prepare a draft report for consideration at the current meeting and a final report to be submitted to the Twenty-Fifth Meeting of the Parties. The decision had also invited the Panel to take into account any information relevant to its report provided by parties to the Secretariat. The Panel had established a task force to respond to the decision and their draft report had been published as volume 2 of the Panel's 2013 progress report.

51. Members of the task force then gave a presentation outlining the report. A summary of the presentation is set out in section B of annex II to the present report.

52. Responding to questions from representatives, Mr. Kuijpers clarified that the task force had classified "low-global-warming-potential technologies", which were "natural refrigerants" (such as ammonia, carbon dioxide and hydrocarbons), some HFCs, unsaturated HFCs and some HFC blends. The task force had not attempted to define a specific threshold, but had offered a rough classification.

In some sectors, notably domestic and commercial refrigeration, those technologies had been in use for a considerable amount of time, in particular by parties not operating under paragraph 1 of Article 5; the level of market penetration sometimes exceeded 50 per cent. In all other sectors the level of penetration was lower and varied substantially by sector and by country.

53. In response to a question about alternatives to HCFC-22, he said that the main alternatives for air conditioning were R-410A and R-407C, which were saturated HFCs with high global-warming potentials. Significant efforts were being made, however, to develop equipment for low-global-warming-potential alternatives for air conditioning, including hydrocarbons and carbon dioxide; refrigerant blends with similar characteristics to HCFC-22 were just beginning to be demonstrated. There were currently no commercially available technologies for replacement refrigerants for chillers, but some were under investigation.

54. As the Panel had reported at an earlier meeting, the energy efficiency of some saturated HFCs as replacements for HCFC-22 tended to fall significantly at high ambient temperatures, above approximately 45°C. The introduction of new low-global-warming-potential alternatives in those circumstances would probably require a redesign of the whole system. Propane could be used in some systems, but in some cases there were concerns over flammability and safety.

55. Responding to a question about the task force's consideration of the costs of alternatives, Mr. Paul Ashford, co-chair of the Foams Technical Options Committee, observed that the issue was complex. It was not only the per-kilogram cost of alternative substances that had to be taken into account, but also the costs at the system level. Redesign to allow the use of an alternative substance could sometimes increase overall cost-effectiveness. In addition, the sensitivity to per kilogram costs varied significantly by technology; for example, in refrigeration, the cost of the refrigerants was usually a small proportion of the total, whereas for foams the cost of the blowing agent was a much higher proportion. The task force had taken a consistent approach to cost-effectiveness across all sectors, but producing a single criterion for cost-effectiveness would not be appropriate.

56. Responding to a question on terminology, he said that the task force had tried to use the terms "saturated" and "unsaturated" consistently throughout the report, although there were some inconsistencies in language between chapters. Unsaturated substances, which could be both HFCs and HCFCs, had much shorter lifetimes, and therefore lower global-warming-potential values. The term "olefin" was often used, for example, in hydrofluoroolefins (HFOs), but the task force had avoided it as it was not a standard term under the nomenclature of the International Union of Pure and Applied Chemistry. The task force would make sure that the final report used consistent terminology, but it also wished to invite further discussion on a common nomenclature, to be used throughout the Montreal Protocol community in the future.

57. He recognized the concern expressed by one representative over both the direct and indirect impact of technologies on climate change, the need to take into account factors such as generating capacity and the carbon intensity of the electricity supply by country, and also the costs of alternative technologies. Such issues made it extremely difficult to reach definitive conclusions on desirable alternatives, given that they would vary by sector and by country. The task force had assumed that reducing the impact of technologies on the ozone layer was the primary objective of their work, but other environmental impacts, especially climate, were clearly also extremely important.

58. Mr. Ashford and Mr. Kuijpers added that in most cases they did not believe that there was ever one final transition that needed to be made from any given technology. New substances and technologies with improved characteristics, such as higher energy efficiency, were constantly being developed. It was clear, however, that the technology solutions currently under consideration were not intended to be transitional, unlike, for example, HCFCs. Another complication was that parties operating under paragraph 1 of Article 5 could not learn from the experience of parties not so operating, unlike in previous transitions, since all parties were looking for similar solutions simultaneously.

59. Several representatives announced that they were encouraged by the growing availability of environmentally sound alternatives in many sectors. One representative of a party operating under paragraph 1 of Article 5 highlighted the need for alternatives to be affordable. Other representatives stressed the crucial need for alternatives to be safe.

60. Some representatives expressed their concern that the task force had not defined precisely what it meant by "low global-warming potential" or "high global-warming potential"; it seemed strange to debate the issue without providing clear definitions. One representative suggested that the measure "global temperature change potential" (GTP), which would provide an estimate of the contribution of

a greenhouse gas in the atmosphere to an increase in the global temperature, including throughout the gas's life-cycle, would be a better measure of impact than global warming potential. Another representative observed that decision XXIV/7 had not referred to "low global-warming potential" but to "environmentally-sound" alternatives, which clearly suggested low or zero global-warming-potential technologies.

61. Several representatives commented on alternative technologies in use in some countries that had not been recognized in the report, including HFC-1234yf in mobile air conditioning and ammonia-carbon dioxide cascade systems in refrigeration.
62. One representative believed that the report should do more to highlight the potential of unsaturated HFCs with very short lifetimes. Another representative, however, observed that the breakdown products of some of those chemicals could be very stable, persisting for years or even centuries, and possessing the potential to accumulate in surface water or soil. Given the phytotoxic nature of some chemicals, the use of significant volumes of unsaturated HFCs was therefore a matter of potential concern. In contrast to natural refrigerants, whose associated risks were well understood, the unknown risks of new substances needed to be borne in mind. Another representative agreed, commenting that the full life-cycle impacts and risks of all substances must be studied, as well as the potential for not-in-kind alternatives, such as district cooling and heating systems.
63. One representative observed that the list of task force members included in the presentation seemed to be different from the list included in the report. She asked whether all task force members had had the opportunity to contribute to and comment on the report.
64. One representative suggested that the final version of the report should include more information on regulatory barriers to the adoption of alternatives, for example in key international standards, and the potential for their revision. He also commented that, in decision XXIV/7, the task force's interpretation of the phrase "the approximate amount of alternatives with negative environmental impacts that could be or could have been avoided or eliminated", was not what he had expected, but he accepted that there had been a lack of clarity in the wording used. Estimating retrospective impacts was an extremely difficult exercise, and it might be better, in the final version of the report, to produce estimates of the potential for alternatives with lower climate impacts from 2014 onwards. He accepted that that necessitated difficult assumptions about servicing rates in the refrigeration and air conditioning sectors, but even estimates of the impacts from manufacturing alone could be valuable.
65. Two representatives mentioned that the task force report should focus on such issues as safety, particularly the issue of flammability in areas with high population density.
66. The representative of an environmental non-governmental organization observed that HFC emissions were continuing to rise at a rate of 10–15 per cent per year, and that parties now had a unique window of opportunity to reach a global agreement on phasing down HFCs, which would be the most significant climate protection measure undertaken to date. She was concerned to note that the draft report failed to recognize many commercially available, technically feasible, safe and energy-efficient alternatives, especially in commercial refrigeration, where the retail sector had played a pioneering role in introducing HFC-free refrigeration in Europe and elsewhere, including in high-ambient-temperature regions. She also felt that the report overemphasized the potential of unsaturated HFCs, in particular in domestic refrigeration, where the use of hydrocarbons was widespread, especially in China, India and the European Union. She called on the Panel to ensure that the final version of its report fully reflected the realities of the market and the full range of low-global-warming-potential alternatives available.
67. One representative hoped that further discussion of the issue would follow, for instance in the context of agenda item 12 on proposed amendments to the Protocol. There was a need to discuss what further work the Panel could carry out on the issue. Several representatives, recognizing that the report was only an interim version, requested the opportunity to discuss its contents with the task force in detail.
68. Summarizing the debate, the Co-Chair concluded that there was a clear necessity for further work to be carried out on the report and that the parties needed to give guidance to the Panel on its finalization. It was agreed to establish an informal group to discuss the topic in more detail.
69. The representative of Canada introduced a proposal for a draft decision, prepared in collaboration with Mexico, Morocco, Switzerland and the United States of America. He explained that it was intended to build on the report that was being produced under the terms of decision XXIV/7, but also to integrate other issues that had been raised at the meeting, especially under agenda items 6

and 10 (a). It was also relevant to the proposed amendments that were to be debated under agenda item 12, but was separate from them. He expressed his hope that parties which did not support the amendments could nevertheless endorse the draft decision.

70. The draft decision requested the Panel to produce an assessment of the technical and economic considerations involved in implementing a global phase-down of HFCs and HFC-23 by-product control measures, including associated environmental impacts and costs. Pursuant to agenda item 6, it also invited parties to provide information on reporting systems, policies and initiatives promoting alternatives to ozone-depleting substances that minimized impacts on the environment. Lastly, it requested the Executive Committee of the Multilateral Fund to consider whether additional demonstration projects to validate emerging low-global-warming-potential alternatives and technologies to control by-product emissions, would be useful in assisting parties operating under paragraph one of Article 5 to minimize the climate impact of their HCFC phase-out activities, and to consider the cost implications of avoiding the transition to high-global-warming-potential alternatives in stage II of the HCFC phase-out management plans. He accepted that this was not an exhaustive list of potential actions, but expressed the hope that it would provide a good basis for discussions.

71. The representative of Mexico, a co-sponsor of the draft decision, stressed the importance of going beyond existing initiatives to replace ozone-depleting substances and to gather a full understanding of the costs of what were potentially complex new technologies.

72. One representative highlighted the need for the Panel to carry out further work to identify alternative technologies suitable to high-ambient-temperature countries.

73. Responding to a question about the title of the decision, the representative of Canada explained that since he had not provided one, the Secretariat had simply used the title of agenda item 5. He agreed that this was not an appropriate title for what was a much broader draft decision, and undertook to provide a revised one.

74. One representative said that he felt that the informal discussions to be had with the Panel should provide the basis of a mandate for further work by the Panel. He believed that the draft decision went much further than that agenda item and raised political, legal and technical questions that would need to be discussed under agenda item 12 on the proposed amendments to the Protocol. He considered it unfair to ask the Panel, a technical body, to provide advice before the meeting of the parties had taken the necessary political decisions. Similarly, he felt it was inappropriate to request the Executive Committee of the Multilateral Fund to take up issues that he was not sure fell under its mandate. Regarding the proposal to request information on policy measures, parties had agreed to promote the transition to alternatives. He reiterated his concern, which he had raised under agenda item 6, on the potential overlap with a similar process established under the Framework Convention on Climate Change. In conclusion, he stated that he would prefer to see the draft decision held in abeyance until the informal discussions with the Panel had been concluded.

75. Responding to a question about the kind of demonstration projects envisaged in the draft decision, the representative of the United States of America, a co-sponsor of the draft decision, explained that a first stage of demonstration projects had already been undertaken in the context of the initial control measures for parties operating under paragraph 1 of Article 5 for HCFCs. The draft decision requested the Executive Committee to consider whether there was a case for further demonstration projects to assist in the transition to low-global-warming-potential alternatives in the context of the further phase-out targets and of stage II of the HCFC phase-out management plans.

76. More broadly, he considered that the draft decision aimed to build on the good work that had been carried out to date by the Panel. He expressed his belief that it was logical to take the next step and consider the technical and environmental implications of the rapidly increasing consumption of HFCs. It would also make sense to tie together the issues discussed under agenda items 5, 6 and 10 (a), which were all related, and suggested the establishment of a contact group to discuss the text of the proposed draft decision in more detail.

77. Other representatives, however, opposed the establishment of a contact group at that stage, reiterating their concerns about the broad nature of the draft decision. It might be possible, however, to return to the issue of a contact group after the discussion on agenda item 12.

78. The Co-Chair concluded that the draft decision would be held in abeyance for the time being; the meeting could return to it following discussions on other issues.

79. Subsequently, Mr. Ashford reported back on the informal discussions held with parties regarding the finalization of the report. The group had met twice and, at its second meeting, the

Technology and Economic Assessment Panel had suggested structuring the discussions into three main areas, so as to consider: retrospective versus future assessments; hierarchy of environmental impacts; and scope of sectors, for inclusion in the final report. Parties agreed to provide additional information along those lines in the discussions. More specific comments would also be submitted in writing.

80. He confirmed that the final report of the Technology and Economic Assessment Panel would focus on forward assessments up to 2020; retrospective analyses would be collected in one chapter, but would not be further elaborated on. The individual sector chapters would include an expanded treatment of alternatives available and the factors influencing market acceptance and penetration, but would not model specific scenarios. Parties did not consider the treatment of negative environmental impacts consistent with the intent of the decision. Accordingly, the quantification of substances with negative environmental impact would be limited to those with direct climate impacts, although the report would provide a narrative discussion that would give indications of the significance of other potential environmental impacts. Parties indicated that the existing scope of sectors covered in the draft report was sufficient to address the aims of decision XXIV/7. Efforts would be made to expand the explanation of the process for selecting alternatives to address the treatment of both local and global environmental factors, alongside technical and economic prerequisites.

81. He said that parties still had the opportunity to submit further specific comments by 19 July 2013, but he believed that the task force now had sufficient guidance to prepare the final version of the report for submission to the Twenty-Fifth Meeting of the Parties.

82. Subsequently, following the discussion in plenary on agenda item 13, and in the light of the overlap between the proposed draft decision introduced by Canada and that discussion, the Co-Chair invited the Working Group to consider options for discussing the proposed draft decision.

83. The representative of Canada observed that elements of the draft decision overlapped both with the discussion on item 12 and with the informal discussions held with the Panel on the finalization of its report on low-global-warming-potential alternatives. There had not, however, been a systematic opportunity to discuss what follow-up to the report parties might wish to see. He wondered, therefore, whether it might be possible to establish a contact group to look at the issue, for which his proposed draft decision could provide one option. Alternatively, the proposed draft decision could be forwarded to the Meeting of the Parties for further discussion.

84. One representative observed that the proposed draft decision also overlapped with several other items on the agenda, including 5, 6 and 10 (a), and the meeting had already discussed the issue to a certain extent.

85. The Co-Chair suggested that it might be helpful to conduct the discussion after representatives had had the chance to see the Panel's final report, which would be available prior to the Twenty-Fifth Meeting of the Parties. Interested representatives could discuss the proposed draft decision before the meeting, in the light of the Panel's report.

86. The Working Group agreed to forward the draft decision, as set out in section C of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

VI. Information on ozone-depleting substance transition policy measures (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 187)

87. Introducing the item, the Co-Chair recalled that, at the Twenty-Fourth Meeting of the Parties, a conference room paper containing a draft decision on information on ozone-depleting substance transition policy measures had been proposed by some parties. The intention behind the draft decision had been to provide parties with information on policies, control measures and other initiatives aimed at avoiding a transition from ozone-depleting substances to alternatives with high global-warming potential. The parties had agreed to defer further consideration of the matter to the thirty-third meeting of the Open-ended Working Group, owing to lack of agreement on the draft decision. The draft decision was set out in section A of annex I to document UNEP/OzL.Pro.WG.1/33/2.

88. One representative said that, while agreement had not been reached on the draft decision at the Twenty-Fourth Meeting of the Parties, a promising dialogue had taken place and the issue merited further consideration at the current meeting, perhaps in conjunction with other relevant agenda items,

for example item 5 on the report by the Technology and Economic Assessment Panel on alternatives to ozone-depleting substances, or item 12 on proposed amendments to the Montreal Protocol.

89. Responding to a query regarding whether any response had been received to the invitation in the draft decision for parties to provide relevant information to the Ozone Secretariat by 31 March 2013, the representative of the Secretariat said that, as no agreement had been reached on the draft decision by the Meeting of the Parties, the Secretariat did not have a mandate to receive the information and report on the matter. One representative recalled that a concern of several parties during the previous discussion of the draft decision had been the kind of policy measures being referred to, including whether they related to alternatives that were already in place and covered under the Panel's report. He added that, before undertaking formal consideration of the substantive elements of the decision, it would be useful to engage in informal discussions on the intended scope of the measures and how they related to other processes taking place under the climate change regime, especially the Ad Hoc Working Group on the Durban Platform for Enhanced Action set up by the Conference of the Parties to the United Nations Framework Convention on Climate Change at its seventeenth session; and the current reporting obligations in the form of national communications under the United Nations Framework Convention on Climate Change.

90. As the issues under consideration were addressed in the draft decision submitted under agenda item 5 (see paragraph 69 above), no separate decision was submitted under this item.

VII. Organizational issues related to the Technology and Economic Assessment Panel

A. Report of the Technology and Economic Assessment Panel on operational and organizational issues (decision XXIV/8, paragraphs 1 and 3)

91. Introducing the sub-item, the Co-Chair recalled that, in decision XXIV/8, the parties had requested the Technology and Economic Assessment Panel to make recommendations on the future configuration of its technical options committees, bearing in mind their anticipated workload, to the Open-ended Working Group at its thirty-third meeting. The decision also requested the Panel and its technical options committees to make available to the parties their standard operating procedures. Accordingly, the Panel had set up a task force to carry out the work and produce volume 3 of the Panel's 2013 progress report. A summary of the key issues contained in the report was also set out in addendum 1 to the note by the Secretariat on the issues before the Open-ended Working Group at its current meeting (UNEP/OzL.Pro.WG.1/33/2/Add.1). Ms. Bella Maranion, co-chair of the Panel and co-chair of its task force on decision XXIV/8, and Ms. Pizano, also co-chair of the task force, made a presentation on the main findings. A summary of the presentation is set out in section C of annex II to the present report.

92. In the ensuing discussion, the representatives of the Panel were asked to clarify certain aspects of their presentation. With regard to the new standard operating procedures and their relation to existing procedures, Ms. Maranion said that the technical options committees all had formal or informal standard operating procedures, but decision XXIV/8 had led to their revision to ensure greater uniformity. Some of the technical options committees were already using the new procedures, while others were in the process of introducing them. She further explained that the proposed future configuration of the technical options committees was based on anticipated workload in the coming years, but did not take into account possible developments beyond 2018 as that was too far ahead to speculate.

93. One representative said that terms used in the standard operating procedures should have a clear definition and drew attention to the use of "chapter lead author" within the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee, a term that was not employed by the other technical options committees.

94. In response to a request for clarification on the process outlined in the Panel's report for the nomination of experts to technical options committees, which appeared different to that in the revised terms of reference, Ms. Pizano recalled that the procedure for nominating members of technical options committees was different from that used to appoint Panel members, the latter requiring a decision by the parties. A potential member of a technical options committee could be nominated by the technical options committee itself or by his or her country, but in both cases the focal point of the nominee's country was consulted, either directly by the technical options committee or via the Ozone Secretariat. Involvement of the Ozone Secretariat was especially useful as it would know if several technical options committees had nominees from the same party.

95. Several representatives stressed the need to ensure balance in the membership of each technical options committee, in terms of gender and geographical representation, and to be aware of whether members came from a party operating under paragraph 1 of Article 5 of the Montreal Protocol. Such balance, however, should in no case lead to any loss of expertise essential to the parties, especially in relation to future developments regarding alternatives to ozone-depleting substances. Other important proposals included: ensuring that all technical options committees availed themselves of expertise relating to alternatives with low global-warming potential; limiting the number of co-chairs serving on each technical options committee to two and the number of members to 20; and, as a result of those smaller numbers, conducting more consultations by correspondence.

96. Representatives expressed their wish to discuss in more detail the above issues, among others, such as the possibility of combining the Chemicals Technical Options Committee and the Medical Technical Options Committee and splitting in two the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee, to ensure that the technical options committees could meet the future needs of the parties. Given that the Panel and its technical options committees would be heavily engaged in the 2014 assessment process, one representative suggested that any such changes should be considered for 2015 and beyond. Furthermore, she said that having annual technology updates might no longer be necessary, proposing biennial updates instead, provided that specific interim requests would still be accommodated.

97. The representative of Australia informed the Open-ended Working Group that her party had prepared a proposed draft decision for possible submission to the Meeting of the Parties. The Co-Chair requested interested parties to consult on the matter and report back to the Working Group on their progress.

98. Subsequently, the representative of Australia, speaking also on behalf of the United States of America, presented a conference room paper setting out a proposed draft decision on the operation and organization of the Panel. She explained that the proposed draft decision contained operative paragraphs on the implementation of the revised terms of reference as approved by the parties in decision XXIV/8; a review of the processes for the nomination of members to the technical options committees; a possible revised configuration of the technical options committees; and the periodicity of the Panel's technology updates.

99. In the ensuing discussion, several representatives praised the Panel and its technical options committees for their useful work and the transparency of their modes of operation. One representative said that, to assist the Panel with its primary task of providing the meetings of the parties with technical information and updates, any reorganization or modification of its *modus operandi* should be limited to what was strictly necessary. Another representative, speaking on behalf of a group of countries, said that some of the proposals merited further consideration, but expressed reservations that further questions were being raised about the operation of the Panel so soon after the recent revisions to its terms of reference.

100. The Working Group agreed that interested parties should discuss the matter informally with the proponent of the draft decision and report to the Working Group on the results of their discussions.

101. Subsequently, the representative of Australia, speaking also on behalf of the United States of America, reported that the proposed draft decision had been revised, incorporating the useful comments of interested parties. The revised draft recognized that the Panel had begun implementing its revised terms of reference and encouraged it to continue to do so. The draft decision also requested the Panel to include in its 2014 progress report the relevant information on nominations to its technical options committees, together with examples of their possible configuration to illustrate what was meant by the term "configuration", and to provide options for any necessary streamlining of its annual technology updates.

102. The Working Group agreed to forward the draft decision, as amended and as set out in section D of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

B. Status of the membership of the Panel and its technical options committees (decision XXIII/10, paragraphs 10 and 11)

103. Introducing the sub-item, the Co-Chair recalled that, in decision XXIII/10, the parties had agreed that the terms of all the members of the Panel and its technical options committees would expire at the end of 2013 or 2014 in the absence of reappointment by the parties prior to that time, with the exception of experts who had already been nominated for four-year periods in past decisions.

104. The status of the membership of the Panel was summarized in documents UNEP/OzL.Pro.WG.1/33/2 and UNEP/OzL.Pro.WG.1/33/2/Add.1. The Co-Chair recalled that the Panel's 2013 Progress Report contained some limited information on the renomination and reappointment of some members of the technical options committees and asked for information on any new nominations or renominations.

105. The representative of Australia noted that the following Panel members would be leaving at the end of 2013: Ms. Michelle Marcotte and Mr. Ian Rae. She paid tribute to the significant contribution that their scientific and technical knowledge had made to the Montreal Protocol. She then said that Australia was renominating two members of technical options committees: Ms. Helen Tope for the Medical Technical Options Committee and Mr. Ian Porter for the Methyl Bromide Technical Options Committee. The representative of the Russian Federation said that his party was renominating Mr. Sergey Kopylov for the Halons Technical Option Committee. The representative of Brazil recalled that his party had already expressed the wish to renominate Mr. Roberto de Aguiar Peixoto for the Refrigeration, Air-Conditioning and Heat Pumps Technical Options Committee. The representative of the Secretariat said that Mr. Mohamed Besri had been renominated by Morocco for the Methyl Bromide Technical Options Committee.

106. Subsequently, several representatives suggested the introduction of conference room papers containing proposed draft decisions on nominations and renominations for membership of the Panel and its technical options committees. For reasons of efficiency, one member suggested that those representatives should work together to consolidate all nominations and renominations into a single proposed draft decision. While doing so, they could also engage in further discussion of certain aspects of the terms of reference for the Panel and its technical options committees, such as the number of co-chairs of each technical options committee, and the simultaneous tenure of the position of co-chair of the Panel and of co-chair of a technical options committee.

107. After further discussion, one representative reported that an informal group had met to discuss the nominations in the light of the new terms of reference with regard to the number of co-chairs of the technical options committees and the preference that a co-chair of the Panel should not simultaneously co-chair one of its committees. Participants in the discussions had also indicated that the Panel should be given time to implement its new terms of reference gradually, in such a way as to maintain its level of expertise, and that parties should be requested to coordinate their nominations with the Panel.

108. The Working Group agreed to request the Secretariat to merge the two draft decisions considered under sub-item 7 (b), along with other renominations received from the parties, into a single draft decision and to submit it together with an updated list of nominations to the Twenty-Fifth Meeting of the Parties for further consideration. Accordingly, the Working Group agreed to attach the two draft decisions as set out in section E of annex I to the present report, pending their merging into a single draft decision and forwarding to the Twenty-Fifth Meeting of the Parties for further consideration.

VIII. Controlled substances used on ships, including prior informed consent (decision XXIV/9, paragraph 3; report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 74)

109. Introducing the item, the Co-Chair recalled that, at the thirty-second meeting of the Open-ended Working Group, the Technology and Economic Assessment Panel had presented an assessment of ozone-depleting substances used to service ships and the Secretariat had provided information on how parties regulated and reported on the use of ozone-depleting substances to service ships. Subsequently, a draft decision by Croatia and the European Union had been put forward at the Twenty-Fourth Meeting of the Parties to request the Panel to provide a range of additional information that could help to address the underlying issues at the national and global levels and to identify possible alternatives to ozone-depleting substances used in the maritime sector. Agreement had not been reached on some elements of the draft decision, including the use of a prior informed consent procedure with regard to ozone-depleting substances on ships. The Meeting of the Parties had agreed, by decision XXIV/9, that the Open-ended Working Group would revisit the issue at its current meeting. That decision had also requested the Panel to provide, together with its 2013 progress report, an updated version of the information set out in its previous progress reports on transport refrigeration in the maritime sector. That updated version was contained in volume 1, chapter 7, of its 2013

progress report, and a summary of the findings was contained in document UNEP/OzL.Pro.WG.1/33/2/Add.1.

110. One representative, speaking on behalf of a group of parties, noted with appreciation the report of the Panel on transport refrigeration in the maritime sector. He also praised the efforts made by certain parties to take action in that area, despite the lack of a formal decision on the matter, and urged other parties to follow suit. Lastly, he said that he looked forward to the completion of the Panel's work, which would assist the parties in deciding whether any further action was necessary on the issue.

111. The Working Group took note of the report of the Panel on transport refrigeration in the maritime sector and agreed to defer further consideration of the issue pending the availability of additional information.

IX. Review by the Scientific Assessment Panel of RC-316c (decision XXIV/10, paragraph 2)

112. Introducing the item, the Co-Chair recalled that the Russian Federation had reported, in early 2012, that it was testing the chemical RC-316c (1,2-dichloro-1,2,3,3,4,4-hexafluorocyclobutane, CAS 356-18-3) as an alternative to CFC-113 in the aerospace industry. That chemical had been identified by the Chemicals Technical Options Committee during the presentation on its 2012 progress report at the thirty-second meeting of the Open-ended Working Group as a new CFC not currently controlled by the Montreal Protocol. Accordingly, decision XXIV/10 had invited parties in a position to do so to provide environmental assessments of RC-316c and any guidance on practices that could reduce intentional releases of the substance. The decision had also requested the Scientific Assessment Panel to conduct a preliminary assessment of RC-316c, including its ozone-depleting potential and global-warming potential, and to report its findings to the Working Group at the current meeting. The assessment of the chemical would be included in the next quadrennial assessment by the Panel, due in 2014.

113. The co-chair of the Scientific Assessment Panel, Mr. A. R. Ravishankara, presented a preliminary report on commercial R-316c, which was a mixture of two isomers, both long-lived and with a high ozone-depleting potential and global-warming potential similar to, and slightly smaller than, CFC-11 and CFC-12.

114. One representative expressed appreciation to the co-chair of the Panel for bringing the information before the Working Group in a timely manner and for the continued efforts to include information on the substance in the next assessment report.

115. The Working Group took note of the information presented.

X. Issues related to funding

A. Clean production of HCFC-22 through by-product emission control (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 98)

116. Introducing the sub-item, the Co-Chair drew attention to the draft decision on clean production of HCFC-22 through by-product emission control, contained in section B of annex I to document UNEP/OzL.Pro.WG.1/33/2. Among other things, it requested the Executive Committee of the Multilateral Fund to consider proposals for projects to eliminate by-product emissions of HFC-23 from HCFC-22 production facilities not earning emission reduction credits under the Clean Development Mechanism. The draft decision had been considered at the Twenty-Fourth Meeting of the Parties which, in the absence of a consensus, had agreed to defer further discussion to the current meeting of the Open-ended Working Group.

117. One representative informed the Working Group that his delegation had collaborated with other parties to incorporate into the draft decision a number of related issues being considered under items 5 and 6 of the agenda. The amended text would be presented to the Working Group in a conference room paper.

118. Following consideration of the amended text, the Working Group agreed that, as the issues under consideration were addressed in the draft decision submitted under agenda item 5 (see paragraph 67 above), no separate decision would be submitted under this item.

B. Additional funding for the Multilateral Fund for the Implementation of the Montreal Protocol to maximize the climate benefit of the accelerated phase-out of hydrochlorofluorocarbons (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 105)

119. Introducing the sub-item, the Co-Chair drew attention to the draft decision on additional funding for the Multilateral Fund to maximize the climate benefit of the accelerated phase-out of HCFCs, contained in section C of annex I to document UNEP/OzL.Pro.WG.1/33/2. Among other things, it requested the Executive Committee of the Multilateral Fund to assess options for a funding window to maximize climate co-benefits of the phase-out of HCFCs and to agree on a set of appropriate procedures and terms of reference. The text had been considered in a contact group at the Twenty-Fourth Meeting of the Parties which, in the absence of sufficient time to finalize the text, had agreed that further discussion should be deferred to the current meeting of the Working Group.

120. In the ensuing discussion, several representatives underscored the importance of the issues covered in the draft decision and requested that sufficient time be given to finalize the text in a contact group at the current meeting.

121. Subsequently, the co-chair of the contact group said that the group had discussed the draft decision but had not yet reached agreement on certain issues, including the form and scope of the additional funding required and the arrangements for reporting.

122. Following the deliberations of the contact group, the Working Group agreed to forward the draft decision, with certain elements enclosed in square brackets, as set out in section F of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

C. Funding of production facilities for hydrochlorofluorocarbons (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10) paragraph 114)

123. Introducing the sub-item, the Co-Chair drew attention to the proposed draft decision on funding of production facilities for hydrochlorofluorocarbons, contained in section D of annex I to document UNEP/OzL.Pro.WG.1/33/2. Referring to the funding provision in decision XIX/6, the draft decision urged the Executive Committee of the Multilateral Fund to finalize discussions on relevant guidelines and requested it to take into consideration the proactive regulatory actions that some parties had taken to limit production. The representative of India, the proponent of the proposed draft decision, said that the text was in the process of being revised and an updated version would be submitted to the Working Group for its consideration.

124. Subsequently, the representative of India, also speaking on behalf of Argentina, introduced a conference room paper containing a revision of the proposed draft decision. He recalled that, by decision XIX/6, the Meeting of the Parties had stated that funding through the Multilateral Fund should be stable and sufficient to meet all agreed incremental costs so as to enable parties operating under paragraph 1 of Article 5 to comply with the accelerated phase-out schedule for HCFCs for both the production and consumption sectors. Despite the efforts made by those parties to comply with the accelerated phase-out schedule, often with considerable adverse implications for their economies and industrial sectors, the promised funding for the phase-out had still not been realized, and certain parties operating under paragraph 1 of Article 5 that had HCFC production facilities might be at risk of being in non-compliance with the accelerated phase-out obligations if adequate assistance was not provided through the Multilateral Fund. The operative paragraphs of the proposed draft decision suggested measures to resolve that long-standing issue.

125. In the ensuing discussion, several representatives questioned the validity of some of the assertions in the proposed draft decision. One representative noted that the language in the draft decision appeared to reinterpret decision XIX/6. They said that their understanding of decision XIX/6 differed from the proposal under consideration in that, in their view, swing plants were not eligible for funding by the Multilateral Fund. They also considered that parties were not eligible to be compensated retroactively for actions that went beyond the terms of the agreement between their Governments and the Executive Committee, although voluntary adoption of such measures was laudable. They further indicated that every CFC production phase-out agreement providing compensation for swing plants stated that the funding provided represented the total funding available to the country for the phase-out of CFCs and HCFCs produced in such plants. One representative recalled that that stipulation had been included because, while funding was meant to compensate for

lost profits from the elimination of CFC production, those plants could continue to make or even increase their profits thanks to their capacity to produce HCFCs.

126. The representative of India bemoaned the absence of policy guidelines for funding production facilities for HCFCs, although six years had passed since the adoption of decision XIX/6 and parties operating under paragraph 1 of Article 5 would soon have to meet their 2015 compliance obligations. In response, representatives who were also members of the Executive Committee said that the policy discussions in that body had yet to conclude because the topic, already a challenging one, had been further complicated by the introduction by parties of additional elements for consideration. The Executive Committee was doing its very best to reach agreement, with substantial progress made at its most recent meeting in the form of a decision on the phase-out of HCFCs in the production sector of China. One representative pointed out that any developments at the next Executive Committee meeting, to be held during the week following the current Working Group meeting, might affect the content of the current proposed draft decision. Several representatives nevertheless expressed their willingness to begin discussing the proposed draft decision in a contact group.

127. Subsequently, the co-chair of the contact group said that the group had discussed the general issues behind the draft decision, but had made limited progress on the text during the time available.

128. The Working Group agreed to forward the draft decision, enclosed in its entirety in square brackets, as set out in section G of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

D. Terms of reference for the study on the 2015–2017 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

129. Introducing the sub-item, the Co-Chair invited the Working Group to consider the terms of reference for the upcoming study on the 2015–2017 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol. Drawing attention to the terms of reference of the previous replenishment study, set out in annex II to document UNEP/OzL.Pro.WG.1/33/2, he suggested that the matter should be taken up rapidly in a contact group.

130. In the ensuing discussion, the representative of Australia, also speaking on behalf of Canada and Norway, drew attention to a conference room paper proposing a draft decision based on the terms of reference established for the previous replenishment period, with two new elements presented in subparagraphs 2 (c) and (d). Several representatives expressed their willingness to begin discussing the matter in a contact group on the basis of the proposed draft decision.

131. Some representatives said that the forthcoming negotiations for stage II of the HCFC phase-out management plans would be challenging and stressed the need to build on the momentum achieved by stage I plans. One representative suggested that stage II activities should begin as early as possible to ensure a seamless transition, adding that particular emphasis should be placed on small and medium-sized enterprises as they were hindered by inadequate technical capacity and high phase-out costs.

132. Subsequently, the co-chair of the contact group said that the contact group had reached agreement on most of the text, although one operative paragraph remained in brackets.

133. Following the deliberations of the contact group the Working Group agreed to forward the draft decision, with certain text enclosed in square brackets, as set out in section H of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

XI. Implications of the outcome document of the United Nations Conference on Sustainable Development for small island developing States with regard to the implementation of the Montreal Protocol (report of the Twenty-Fourth Meeting of the Parties (UNEP/OzL.Pro.24/10), paragraph 125)

134. Introducing the item, the Co-Chair recalled that the proposal set out in section E of annex I to document UNEP/OzL.Pro.WG.1/33/2 had been submitted by Saint Lucia to the Working Group at its thirty-second meeting. It had been discussed and forwarded to the Twenty-Fourth Meeting of the Parties for further consideration. At that meeting, however, the parties had not discussed the proposal as its proponents, Saint Lucia and Trinidad and Tobago, had not been in attendance. They had instead agreed to defer the matter to the current meeting.

135. The representative of Saint Lucia recalled that, at Rio+20, countries had adopted its outcome document recognizing that the phase-out of ozone-depleting substances was leading to an increase in the use of substances with global-warming potential. They had also reaffirmed that small island developing States were particularly vulnerable for reasons such as their remoteness, economic fragility and limited resources. She therefore proposed that the Ozone Secretariat should work with the organizers of the Third International Conference on Small Island Developing States, to be held in Apia in 2014, to ensure that an item related to the unique and particular vulnerabilities of small island developing States in the implementation of the Montreal Protocol was included on the agenda of that conference.

136. The representative of Trinidad and Tobago confirmed the hurdles faced by small island developing States, but stressed that his country had managed to remain in compliance. The phase-out of HCFCs, however, was a new challenge that required a specific mechanism, along with the support of the parties, to ensure that countries could maintain their compliance status.

137. Subsequently, the representative of Saint Lucia introduced a conference room paper setting out a proposed draft decision on the implications of the Rio+20 outcome document for the implementation of the Montreal Protocol by small island developing States.

138. A number of representatives expressed their support for the draft decision, given the particular challenges faced by small island developing States in implementing the Montreal Protocol. Several representatives said they had reservations about certain elements of the proposed draft decision, but were willing to discuss those issues further with its proponents. One representative said that it was inappropriate for the Ozone Secretariat to inaugurate discussions with the organizers of another conference on matters related to the agenda of that conference and that the parties had no mandate to request the Secretariat to do so. Another representative said that, while it was recognized that small island developing States did face extra challenges because of their characteristics, those matters could be adequately dealt with under existing mechanisms applicable to developing countries under the provisions of the Montreal Protocol. One representative said that it was not clear what the intended scope and aim of the proposed draft decision was, nor was it apparent that it fell under the purview of the Montreal Protocol.

139. The Co-Chair said that, given the conflicting views on the matter, the best way forward was to establish a contact group to discuss the issue further. One representative, supported by others, said that an unfortunate precedent would be set by establishing a contact group without the full consensus of the Working Group. The Working Group had traditionally worked on a basis whereby contact groups were only set up with the full agreement of all parties attending the meeting, which was not the case with the present matter. The Co-Chair said that, given the range of opinions on the matter, a contact group was the most appropriate forum for discussing the issues raised and clarifying the purpose of the proposed draft decision. Such a way forward was within the mandate of the Working Group to serve as an arena where issues of concern could be discussed and decisions made on whether to forward those issues to the Meeting of the Parties for its consideration. The Executive Secretary of the Ozone Secretariat said that one of the benefits of discussing the matter in a formal contact group was that the group could report back to plenary on its outcomes, thus enabling the Working Group to decide whether there were grounds to further discuss the issue in plenary. The Co-Chair and the Executive Secretary expressed their willingness to discuss further the procedural implications with interested parties on a bilateral basis.

140. The Co-Chair reiterated his ruling that a contact group would be set up to discuss the proposed draft decision further.

141. Subsequently, the co-chair of the contact group reported that the group had amended the operative paragraphs and title of the proposed draft decision and had agreed that it should be forwarded to Twenty-Fifth Meeting of the Parties for further consideration. One representative, expressing appreciation for the amended version of the draft decision, noted a slight change in its scope and said that he looked forward to examining it in more detail before the Meeting of the Parties.

142. The Working Group agreed to forward the draft decision, as amended and as set out in section I of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

XII. Proposed amendments to the Montreal Protocol

143. Introducing the proposal for an amendment to the Montreal Protocol that had been submitted by his party, in collaboration with Canada and Mexico, the representative of the United States of America explained that it was designed to tackle the rapid rise in consumption of HFCs, which was a

direct result of the good work carried out under the Montreal Protocol over many years. The amendment's proposed phase-down of the production and consumption of HFCs would lead to an estimated reduction in global greenhouse gas emissions of more than 90 billion tonnes of carbon dioxide equivalent (GtCO₂-eq), corresponding to about two years of total current greenhouse gas emissions – a highly significant benefit. It would help to preserve the legacy of the Montreal Protocol by drawing on the expertise of its institutions and technical bodies.

144. He briefly explained the main features of the proposed amendment. It was designed to phase down, rather than phase out, HFC production and consumption, with phase-down schedules weighted by the global-warming potential of the substances controlled. It established baselines and phase-down schedules separately for parties operating under paragraph 1 of Article 5 and parties not so operating: the latter would start the phase-down process first. It included production provisions for basic domestic needs, controls on HFC-23 produced as a by-product, import and export controls, licensing systems and reporting requirements. It also included a clear linkage to Article 10 of the Protocol, thereby establishing that parties operating under paragraph 1 of Article 5 would be eligible for financial support from the Multilateral Fund in the fulfilment of their obligations. He concluded by requesting that a contact group should be established to facilitate a full exchange of views on the legal, technical and financial implications. Those issues did not need to be finalized at the current meeting, but it would be highly beneficial to start the discussion.

145. The representative of Canada, a co-sponsor of the amendment, added that the Montreal Protocol was widely recognized as one of the best, if not the best, examples of multilateral cooperation for the protection of the environment. It now had an opportunity to build on its first 25 years of achievements and use its expertise and experience to deal with that new challenge. She observed that discussions on HFCs in the context of the Montreal Protocol over the last few years, together with the efforts taken to phase out HCFCs in an environmentally responsible manner, and the establishment of the Climate and Clean Air Coalition, had all helped to accelerate the development of low-global-warming-potential alternatives, but alone those steps were not enough. A commitment by parties at the current meeting to phase down HFCs would send the strong signal that the market was waiting for to drive further innovation and limit the growth in the use of HFCs.

146. The representative of Mexico, the other co-sponsor of the amendment, believed that the parties had a moral and ethical responsibility to reduce HFC consumption, which was growing as a direct result of the phase-out of HCFCs. The phase-down of HFCs should be seen as a continuation of the parties' existing efforts, and could be carried out by the same bodies with the same expertise and knowledge, in particular the Multilateral Fund and its implementing agencies, with their long experience of financing and implementing phase-down projects. He invited the parties, especially parties operating under paragraph 1 of Article 5, to discuss the issues and points of view of all parties present.

147. The representative of the Federated States of Micronesia introduced the amendment proposed by his country, set out in document UNEP/OzL.Pro.WG.1/33/4, which had subsequently been co-sponsored by the Maldives and Morocco. The amendment proposed that the Montreal Protocol should phase down the production and consumption of HFCs, as had been called for at Rio+20, while not affecting the responsibility of the Framework Convention on Climate Change and its Kyoto Protocol on HFC emissions. The rapid growth in the use of HFCs was undermining the achievements of the Montreal Protocol in reducing climate impacts. By phasing down the production and consumption of HFCs, the proposed amendment could reduce the rate of global temperature rise by 0.1° C by 2050 and as much as 0.5° C by 2100. The proposed amendment set out a phase-down schedule for parties not operating under paragraph 1 of Article 5 and left open for negotiation the phase-down schedule for parties operating under paragraph 1 of Article 5, which would be compensated for the full incremental costs of phase-down through the Multilateral Fund. It also provided that any party operating under paragraph 1 of Article 5 taking early action to phase down HFCs in advance of its commitments would be entitled to receive support from the Multilateral Fund.

148. The representative of Morocco stressed the serious challenge that the growth in HFC use posed to the global climate system. The proposed amendment was equitable and fully in accord with the principle of common but differentiated responsibility; parties not operating under paragraph 1 of Article 5 would take the first steps, to be followed by parties operating under paragraph 1 of Article 5. The former would provide finance to the Multilateral Fund to allow the latter to meet all their commitments. The proposed amendment rested on a solid legal basis, namely Article 2 of the Vienna Convention for the Protection of the Ozone Layer, under which parties were obliged to take action to prevent any adverse impacts of the activities taken to protect the ozone layer. In accordance with

Article 3 of the Convention, the amendment had no impact on the obligations of parties to the Kyoto Protocol to control their emissions of HFCs.

149. The representative of the Maldives explained that his country had joined in sponsoring the amendment because climate change threatened its very existence. He had been trying to persuade the parties to the Montreal Protocol to take action on HFCs for many years, and time was now running out. Currently, HCFCs were used in his country's two main economic sectors, fisheries and tourism, and it would not be sustainable to adopt alternatives that would contribute to the greatest environmental challenge that the world currently faced. Countries such as his could not wait for alternatives for all uses to become available, but had to start taking action now. The proposed amendment promised huge potential benefits in steering manufacturers towards making appropriate investments and would also demonstrate how separate multilateral environmental agreements could work together constructively.

150. In response to a question about the application of the control schedules in the proposed amendment to mixtures of HFCs, the representative of the United States explained that it was intended to apply in the same way that the Montreal Protocol currently applied to mixtures of HCFCs. The mixtures themselves were not listed, but the individual HFCs that were the components of the mixtures were.

151. Several representatives stressed the need for urgency in addressing the issue, highlighting the impacts of climate change that were already apparent, especially on coastal areas and small islands. Similarly, severe floods in several regions in recent months had led to many deaths and the displacement of hundreds of thousands of people, including the evacuation of entire cities. Parties could not afford to delay action any longer. The Montreal Protocol needed to accept responsibility for the consequences of its own actions, including the negative impacts on the environment as a result of the replacement of CFCs and HCFCs by HFCs.

152. Several representatives highlighted the significance of the commitment to phase down the production and consumption of HFCs adopted at Rio+20 and also the more recent call by the Arctic Council to phase down HFCs as soon as possible. Others pointed to steps already taken in many countries, including Australia, Japan, New Zealand, the United States and member countries of the European Union, and to regulate aspects of HFC consumption, together with the recent agreement between China and the United States to work together to phase down HFCs, indicating a gathering of international momentum for action.

153. Some representatives queried the advisability of adopting commitments to phase out HFCs before the phase-out of HCFCs had been completed. One representative observed that, when HCFC phase-out had been discussed in 2007, it had been stated that HFCs would never be targeted under the Montreal Protocol, as they were not ozone-depleting substances; yet the issue had been raised just six months later. He expressed his belief that some parties had a hidden agenda.

154. Other representatives, however, felt that the experience of HCFC phase-out would be of significant help in phasing out HFCs. In addition, there would be a major advantage in moving early to phase down HFCs, to avoid the need for a double transition, first from HCFCs to HFCs and then away from HFCs.

155. Several representatives raised concerns over the level of financial support that would need to be available, especially given developing countries' limited resources and competing priorities for public funding. Several representatives raised their concern over the availability of funding for both HCFC phase-out and potential HFC phase-down and one representative highlighted the inadequate amounts that his country had thus far received for assisting with HCFC phase-out.

156. Several representatives said that, if the phase-down schedules were to be accepted, parties would need to be absolutely clear about the amount of financial assistance that would be available, especially as it related directly to stage II of the HCFC phase-out management plans. Since there was currently no clarity about the total sums that were likely to be needed, discussion of the issue remained difficult. More information on likely costs and environmental benefits would be necessary.

157. Many representatives highlighted the excellent record of the Multilateral Fund in assisting the phase-out efforts of parties operating under paragraph 1 of Article 5, but stressed the need for new and additional resources if HFCs were to be phased down too; they felt that a clear commitment to new and additional resources would be a prerequisite for any further discussion on new commitments.

158. Several representatives raised the issue of the availability of alternative technologies and substances. The draft report from the Technology and Economic Assessment Panel had made it clear

how many alternatives were still in very early stages of development; both the technical feasibility and the cost were still open questions. One representative stressed that, just because an alternative had been developed, it did not mean that it was necessarily available in sufficient quantities in the market at an affordable cost. Both technology transfer and financial support would have to be available.

159. The representative of a party operating under paragraph 1 of Article 5 explained that high-global-warming-potential substances had been used to replace CFCs, not because countries had wanted to increase the impact on climate change, but because there had been no other alternatives available at the time. Similarly, low-global-warming-potential alternatives to HCFCs were taking longer to emerge than had been originally estimated. Discussions regarding the provision of financial support for the phase-out of HFCs were irrelevant in the absence of adequate replacements. He called on the proponents of the proposed amendments to clarify exactly what low-global-warming-potential alternatives were available, in which sectors and at what cost.

160. Several representatives from high-ambient-temperature regions explained that the matter of the availability of alternatives was a particular concern to them. In their countries, summer temperatures could reach as high as 55° C; in such circumstances, air conditioning was not a luxury but a necessity. Concerns over flammability and safety further limited the availability of alternatives to HFCs.

161. Other representatives, however, pointed to the long periods which the amendments proposed for phase-down, arguing that that would allow plenty of time for new products to enter the market. Some representatives believed that the report of the Technology and Economic Assessment Panel demonstrated the already widespread availability of alternatives. Furthermore, since the amendments proposed a phase-down, not a phase-out, some uses of HFCs would continue.

162. Several representatives, from parties operating under paragraph 1 of Article 5 and from parties not so operating, underlined the need for the latter to take the lead in demonstrating the technical and economic feasibility of new alternatives.

163. Several representatives raised the question of the legal status of the Montreal Protocol with regard to undertaking obligations related to substances that were already the subject of other multilateral agreements, namely the Framework Convention on Climate Change and its Kyoto Protocol. One representative argued that the demonstrated success of the Montreal Protocol was not an argument for extending its coverage. Since almost all parties to the Montreal Protocol were also parties to the Framework Convention on Climate Change, there was no reason why the issue of HFCs could not be taken up there.

164. Another representative pointed to the agreement reached in 2012 on the second commitment period to the Kyoto Protocol, which would set targets for Annex I parties to reduce greenhouse gas emissions in the period leading up to 2020. That offered an opportunity for Annex I parties to demonstrate their commitment to reducing HFCs, and non-parties to the Kyoto Protocol (including two of the amendments' proponents) could undertake equivalent actions. He also drew the Working Group's attention to the references in the Kyoto Protocol to "greenhouse gases not controlled by the Montreal Protocol". If the implication of those references was that a decision to add HFCs to the Montreal Protocol would result in their removal from the Kyoto Protocol, he would oppose that decision.

165. One representative, however, pointed out that the parties to the Framework Convention on Climate Change had a very full agenda and that it was not clear that they would be able to discuss the HFC issue as fully as the parties to the Montreal Protocol. Nevertheless, he understood the concerns raised by some parties and believed that an agreement needed to be reached between the Montreal Protocol and the Framework Convention on Climate Change. He suggested that a special group should be established to discuss the relationship and means of resolving the issue.

166. Another representative believed that the Montreal Protocol had to be invited and guided by the Framework Convention on Climate Change to discuss high-global-warming-potential substances, in accordance with the Convention's principles of equity and common but differentiated responsibility. That could include discussions on whether a production and consumption phase-down approach was more effective than an approach based on controlling emissions; the necessary preconditions for implementing phase-downs, in terms of scientific evidence and the availability of alternatives; the need to take into account specific national circumstances, especially those of developing countries and countries with economies in transition; and the appropriate financial mechanism.

167. Another representative suggested that the Montreal Protocol could be the operative mechanism for a legal obligation to deal with HFCs located under the Kyoto Protocol. He observed that the issue had generated considerable interest at the recent meetings of the subsidiary bodies to the Framework

Convention on Climate Change and that the two agreements would establish some form of cooperation.

168. Several representatives argued that the phase-down of HFCs under the Montreal Protocol would complement parties' obligations under the Kyoto Protocol, not reduce them. In any case, since the Kyoto Protocol controlled emissions, rather than production and consumption, there was no contradiction between the two. Several representatives argued further that, under Article 2 of the Vienna Convention, parties were obliged to take action to counter the adverse consequences of the phase-out of ozone-depleting substances, so the Convention and its Montreal Protocol were clearly the appropriate legal instruments.

169. The representative of the European Union reported that his party had submitted a draft decision to the Framework Convention on Climate Change that would urge parties to the Montreal Protocol to take appropriate measures to phase down HFCs under the Protocol. He also drew attention to the statement by the European Union and its member States regarding the amendment proposals set out on the website of the current meeting.

170. One representative highlighted the need for the World Trade Organization and the World Customs Organization to be involved in any discussions about regulating trade in HFCs.

171. Many representatives supported the proposals for a contact group. The questions raised by parties over the need for finance and technology transfer, the availability of alternatives and the inter-relationship between the Montreal Protocol and the Framework Convention on Climate Change were serious issues and merited a systematic discussion. The contact group would also be an appropriate forum in which to discuss what further information might be required from the Technology and Economic Assessment Panel.

172. One representative felt that the establishment of a contact group to discuss the amendments would be premature, but that it would be useful to establish a contact group to consider how HFCs could be dealt with under the Montreal Protocol, including consideration of further work by the Panel, the implications for existing efforts to phase out HCFCs, the likely needs for additional financial and capacity-building support through the Multilateral Fund and other relevant issues, some of which had been raised under other agenda items. Other representatives agreed that a formal contact group would be premature, but said that they would be happy to continue discussions in an informal setting.

173. Responding to the discussion, the representative of the Federated States of Micronesia thanked all representatives for their constructive input, which had helped to provide a framework for further discussion, in particular on the key issues of finance, the availability of alternatives and the legal inter-relationship of the two international regimes. He observed that section III of the amendment proposed by his country dealt explicitly with the legal question. He noted further that those issues would require consideration regardless of the venue but that the advantage of addressing them in the Montreal Protocol was that there were experts and institutions under the Protocol well qualified to contributing to the necessary answers.

174. The representative of the United States of America similarly observed that the questions raised in the discussion provided the basis for necessary real and robust further discussion, and expressed his hope that a contact group would be established to tackle the issue. Responding briefly to some of the points raised, he stressed that the amendment proposed a phase-down, not a phase-out, over a thirty-year period. He recognized that solutions were not yet available for all current uses of HFCs, but were available for many, and further alternatives were constantly being developed. There were many options for achieving a phase-down, including not only the use of alternatives to HFCs but also the use of lower-global-warming-potential HFCs (since the amendment's control schedules were weighted by global-warming potential), not-in-kind alternatives, and redesigned systems requiring significantly lower charges of refrigerants, among others. The proposed amendment was also clear about the use of the Multilateral Fund to provide assistance with meeting the new phase-down obligations.

175. He recognized the importance of the availability of alternatives, especially in high-ambient-temperature countries, where some existing alternatives were not suitable. The Panel's report had provided useful information in that regard and the discussion had highlighted the questions that further reports could answer. The issue was not new, however, but one already faced in the context of the HCFC phase-out. Furthermore, the proposed phase-down framework would permit some uses of HFCs indefinitely.

176. One representative said that the Montreal Protocol should take on the phase-down of HFCs because the growth in their consumption was a direct consequence of the actions taken under the Montreal Protocol and also because HFCs were being used in exactly the same sectors in which the

Montreal Protocol bodies already had experience. Article 3 of the proposed amendment explicitly tackled the relationship between the Montreal Protocol and the Framework Convention on Climate Change, which he saw as complementary.

177. After informal discussions with a number of parties on the appropriate forum for further discussion, the Co-Chair suggested the establishment of a discussion group, rather than a contact group, which would report back to the meeting on issues relating to the management of HFCs through the mechanisms of the Montreal Protocol, including financial, technical and legal aspects, and on the appropriate processes to deal with them, including options for establishing a mechanism to deal with the linkages between the Montreal Protocol and the Framework Convention on Climate Change. The co-convenors of the discussion would be Ms. Gudi Alkemade (Netherlands) and Mr. Leslie Smith (Grenada).

178. Responding to questions, the Co-Chair clarified that the discussion group was a formal group, as its co-convenors were appointed by the Working Group, and it was tasked with reporting back to the Working Group. Its report would be reflected in the report of the current meeting. Its discussions would not prejudice any decisions on the proposed amendment, or any discussions held in other forums, including those dealing with climate change.

179. The representatives of India and Kuwait stated their preference for the discussion group to be established as an informal group, given that the issue had been discussed in earlier years in informal groups, and there seemed no reason to establish a formal group now. The Co-Chair agreed that their statements would be reflected in the report of the meeting. Another representative stated her preference for the meeting to establish a contact group rather than a discussion group.

180. Subsequently, Mr. Leslie Smith (Grenada), one of the co-convenors of the discussion group, reported back to the meeting on its deliberations. He thanked his co-convenor, Ms. Gudi Alkemade, and all those who had participated in the meeting for the excellent spirit in which they had approached the discussions. He presented the issues discussed by the group, stressing that the group had not reached any agreement on any issue. The report of the discussion group is set out in annex III to the present report.

181. Representatives commended the co-convenors on their hard work and applauded the spirit in which the discussions had been conducted. Some representatives asked whether there would be a chance to take up the discussions again in the future. One representative underlined the urgent nature of the issue, stressing that the next meeting of the Conference of the Parties to the United Nations Framework on Climate Change was due to take place shortly after the Twenty-Fifth Meeting of the Parties; if the Meeting of the Parties failed to reach a decision, another year would be lost.

182. Another representative stated that he wanted to make it clear that the discussion group had discussed issues relating only to the management of HFCs, and not to the proposed amendments to the Protocol. The Co-Chair confirmed that clarification. He also confirmed that the agenda item remained open and would be taken up again at the Twenty-Fifth Meeting of the Parties, and that the draft decision introduced by Canada would be forwarded, in square brackets, to the Meeting of the Parties.

183. The Working Group agreed to forward the draft decision, enclosed in its entirety in square brackets, as set out in section J of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

XIII. Other matters

184. The representative of Uruguay introduced a conference room paper setting out a proposed draft decision on the modalities for moving forward with the discussions on the Multilateral Fund climate impact indicator.

185. In the ensuing discussion, a number of representatives expressed interest in the provisions of the proposed draft decision, though they said that further clarity was needed regarding the scope and intention of the proposal, the processes involved and how it would relate to the work of other bodies, including those of the Framework Convention on Climate Change. One representative recalled that the climate impact indicator had been the subject of several discussions in meetings of the Executive Committee and that information on the matter would be included in the report of the Chair of the Executive Committee to the Meeting of the Parties.

186. The Working Group agreed that interested parties should discuss the matter informally and report to the Working Group on the results of their discussions.

187. Subsequently, the representative of Uruguay said that the informal discussions had resulted in agreement on the text of the draft decision. Accordingly, the Working Group agreed to forward the draft decision, as set out in section K of annex I to the present report, to the Twenty-Fifth Meeting of the Parties for further consideration.

XIV. Adoption of the report

188. The present report was adopted on the afternoon of Friday, 28 June 2013, on the basis of the draft report contained in documents UNEP/OzL.Pro/WG.1/33/L.1, L.1/Add.1 and L.1/Add.2. The Ozone Secretariat was entrusted with the finalization of the report following the closure of the meeting.

XV. Closure of the meeting

189. The Co-Chair paid tribute to Ms. Maria Nolan, Chief Officer of the Multilateral Fund Secretariat, and Ms. Ruth Batten, Senior Administrative and Fund Management Officer of the Ozone Secretariat, both of whom were retiring in 2013. He applauded their significant contribution over the years to the success of the Montreal Protocol and to the smooth running of related meetings.

190. Following the customary expression of courtesies, the thirty-third meeting of the Open-ended Working Group of the Parties to the Montreal Protocol was declared closed at 6.50 p.m. on Friday, 28 June 2013.

Annex I

Draft decisions

The Working Group agreed to forward to the Twenty-Fifth Meeting of the Parties the following draft decisions for further consideration, on the understanding that they did not constitute agreed text and were subject in their entirety to further negotiation.

[A. Essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation

Draft decision submitted by the Russian Federation

The Twenty-Fifth Meeting of the Parties decides:

Noting the evaluation and recommendation of the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee on the essential use nomination for chlorofluorocarbon-113 for aerospace applications,

Noting also that the Russian Federation continues to explore the possibility of importing chlorofluorocarbon-113 for its aerospace industry needs from available global stocks,

Noting further that the Russian Federation has been successful in reducing use and emissions in line with the technical adaptation timetable developed in collaboration with the Chemicals Technical Options Committee,

1. To authorize the levels of production and consumption of chlorofluorocarbon-113 in the Russian Federation for essential-use exemptions for chlorofluorocarbons in its aerospace industry in the amount of 85 metric tonnes in 2014;
2. To request the Russian Federation to explore further the possibility of importing chlorofluorocarbon-113 for its aerospace industry needs from available global stocks;
3. To encourage the Russian Federation to continue its efforts to introduce alternative solvents and adopt newly designed equipment, with a view to completing the phase-out of chlorofluorocarbon-113 by 2016.

B. Essential-use nominations for controlled substances for 2014

Draft decision submitted by China and the Russian Federation

The Twenty-Fifth Meeting of the Parties decides:

Noting with appreciation the work done by the Technology and Economic Assessment Panel and its Medical Technical Options Committee,

Mindful that, according to decision IV/25, the use of chlorofluorocarbons for metered-dose inhalers does not qualify as an essential use if technically and economically feasible alternatives or substitutes are available that are acceptable from the standpoint of environment and health,

Noting the Panel's conclusion that technically satisfactory alternatives to chlorofluorocarbon-based metered-dose inhalers are available for some therapeutic formulations for treating asthma and chronic obstructive pulmonary disease,

Taking into account the Panel's analysis and recommendations for essential-use exemptions for controlled substances for the manufacture of metered-dose inhalers used for asthma and chronic obstructive pulmonary disease,

Welcoming the continued progress of several parties operating under paragraph 1 of Article 5 in reducing their reliance on chlorofluorocarbon-based metered-dose inhalers as alternatives are developed, receive regulatory approval and are marketed for sale,

1. To authorize the levels of production and consumption for 2014 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease, as specified in the annex to the present decision;
2. To request nominating parties to provide the Medical Technical Options Committee with information to enable the assessment of essential-use nominations, in accordance with the criteria

contained in decision IV/25 and subsequent relevant decisions, as set out in the handbook on essential-use nominations;

3. To encourage parties with essential-use exemptions in 2014 to consider initially sourcing required pharmaceutical-grade chlorofluorocarbons from stockpiles where they are available and accessible, provided that such stockpiles are used subject to the conditions established by the Meeting of the Parties in paragraph 2 of its decision VII/28;

4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2014 to notify the Ozone Secretariat of those quantities and to provide it with the details of a contact point by 31 December 2013;

5. To request the Secretariat to post on its website details of the potentially available stocks referred to in paragraph 4 of the present decision;

6. That parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered-dose inhalers, as authorized in paragraph 1 of the present decision, from imports, from domestic producers or from existing stockpiles;

7. To request that parties consider domestic regulations to ban the launch or sale of new chlorofluorocarbon-based metered-dose inhaler products, even if such products have been approved;

8. To encourage parties to fast-track their administration processes for the registration of metered-dose inhaler products in order to speed up the transition to chlorofluorocarbon-free alternatives.

Annex to decision XXV/[...]

Essential-use authorizations for 2014 of chlorofluorocarbons for metered-dose inhalers

(Metric tonnes)

<i>Parties</i>	<i>2014</i>
China	[235.05]
Russian Federation	[212]

C. Report by the Technology and Economic Assessment Panel on information on alternatives to ozone-depleting substances (decision XXIV/7, paragraph 1)

Draft decision submitted by Canada, Mexico, Morocco, Switzerland and the United States of America

The Twenty-Fifth Meeting of the Parties decides:

Noting with appreciation volume 2 of the 2013 progress report of the Technology and Economic Assessment Panel, which responded to decision XXIV/7,

1. To request the Technology and Economic Assessment Panel to undertake, for the thirty-fourth meeting of the Open-ended Working Group, an assessment of the technical and economic considerations involved in:

(a) Implementing a global phase-down of hydrofluorocarbons, taking into account options for baselines and reduction steps, and their relative environmental impacts and costs;

(b) Implementing hydrofluorocarbon-23 by-product control measures related to the production of hydrochlorofluorocarbon-22 in production lines that are not covered under a Clean Development Mechanism project, including associated environmental impacts and costs;

2. To invite parties to provide to the Ozone Secretariat information on reporting systems, policies and initiatives that are related to promoting the transition of ozone-depleting substances towards alternatives that minimize other impacts on the environment and, in particular, the climate, by 1 March 2014, and to request the Ozone Secretariat to compile submissions received for consideration at the thirty-fourth meeting of the Open-ended Working Group;

3. To request the Executive Committee of the Multilateral Fund to consider the information provided in the report on additional information on alternatives to ozone-depleting substances prepared by the Technology and Economic Assessment Panel pursuant to decision XXIV/7 and other related reports, with a view to considering:

(a) Whether additional demonstration projects to validate emerging low-global-warming-potential alternatives and technologies, and technologies to control by-product emissions, would be useful in assisting parties operating under paragraph 1 of Article 5 in further minimizing the climate impact of the hydrochlorofluorocarbon phase-out;

(b) The cost implications of avoiding, to the extent possible, transition to high-global-warming-potential alternatives and technologies in stage II hydrochlorofluorocarbon phase-out management plans.

D. Operation and organization of the Technology and Economic Assessment Panel

Draft decision submitted by Australia and the United States of America

The Twenty-Fifth Meeting of the Parties decides:

Taking note of decision XXIV/8, which updated the terms of reference for the Technology and Economic Assessment Panel,

Taking note also of the information provided by the Technology and Economic Assessment Panel in volume 3 of its 2013 progress report,

Recognizing that the Technology and Economic Assessment Panel has commenced implementation of its revised terms of reference as approved by the parties in decision XXIV/8,

Recognizing also the need to consider adjustments to the technical options committees so as to reflect evolving workloads, the need for relevant expertise, and the requirements of the parties,

1. To encourage the Technology and Economic Assessment Panel to continue its implementation of the revised terms of reference as approved by the parties in decision XXIV/8;

2. To request the Technology and Economic Assessment Panel to provide the following information in its 2014 progress report:

(a) An update on its processes for the nomination of members to its technical options committees, taking into account section 2.2.2 of its terms of reference;

(b) Its proposed configuration (for example, the combination or division of existing technical options committee, or maintaining the status quo) of the technical options committees from 1 January 2015;

(c) Options, if considered appropriate, to streamline the Panel's annual technology updates to the parties.

E. Membership changes on the Technology and Economic Assessment Panel

1. Draft decision submitted by Australia and the Russian Federation

[The Twenty-Fifth Meeting of the Parties decides:

1. To endorse the reappointment of Mr. Sergey Kopylov of the Russian Federation to the Technology and Economic Assessment Panel as co-chair of the Halons Technical Options Committee for a term of four years in accordance with section 2.3 of the terms of reference of the Panel;

2. To endorse the reappointment of Ms. Helen Tope of Australia to the Technology and Economic Assessment Panel as co-chair of the Medical Technical Options Committee for a term of four years in accordance with section 2.3 of the terms of reference of the Panel;

3. To endorse the reappointment of Mr. Ian Porter of Australia to the Technology and Economic Assessment Panel as co-chair of the Methyl Bromide Technical Options Committee for a term of four years in accordance with section 2.3 of the terms of reference of the Panel;]

2. Draft decision submitted by Colombia

[The Twenty-Fifth Meeting of the Parties decides:

1. To endorse the appointment of Mr. Miguel Wenceslao Quintero of Colombia to the Technology and Economic Assessment Panel as co-chair of the Flexible and Rigid Foams Technical Options Committee for a term of four years in accordance with section 2.3 of the terms of reference of the Panel;
2. To endorse the appointment of Ms. Marta Pizano of Colombia to the Technology and Economic Assessment Panel as co-chair of the Methyl Bromide Technical Options Committee for a term of four years in accordance with section 2.3 of the terms of reference of the Panel.]

F. Additional [voluntary] funding for the Multilateral Fund to maximize the climate benefit [of the accelerated phase-out of hydrochlorofluorocarbons]

Draft decision submitted by the contact group

The Twenty-Fifth Meeting of the Parties decides:

Recalling that decision XIX/6 encourages parties to promote the selection of alternatives to hydrochlorofluorocarbons that minimize environmental impacts, in particular impacts on climate, as well as meeting other health, safety and economic considerations,

Recalling that decision XIX/6 requests that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, when developing and applying funding criteria for projects and programmes for the accelerated phase-out of hydrochlorofluorocarbons, gives priority to cost-effective projects and programmes that focus on, inter alia, substitutes and alternatives that minimize other impacts on the environment, including on the climate, taking into account global-warming potential, energy use and other relevant factors,

Recalling that, in the guidelines for the preparation of hydrochlorofluorocarbon phase-out management plans adopted by the Executive Committee at its fifty-fourth meeting, the Committee encouraged countries and agencies to explore potential financial incentives and opportunities for additional resources to maximize the environmental benefits of hydrochlorofluorocarbon phase-out management plans in accordance with subparagraph 11 (b) of decision XIX/6,

Noting that paragraph 2 of article 10 of the Montreal Protocol stipulates that the mechanism established under paragraph 1 shall include a Multilateral Fund and that it may also include other means of multilateral, regional and bilateral cooperation,

[Recalling that Article 10 of the Montreal Protocol enables....]

[Noting that donors do not impose any conditions for their contributions.....]

[1. To request the Executive Committee to consider the means for [receiving and] managing voluntary contributions that are made independently of [or] [and] in addition to pledged contributions to the Multilateral Fund on a trial basis for a period of [three] [four] [one] year[s];]

2. To [invite] [urge] parties [not operating under paragraph 1 of Article 5] [which have paid their contributions to the Multilateral Fund in full and in time] [or other entities] [organizations and multilateral and/or financial institutions], to provide on a voluntary basis, [without specific conditions], [unconditional] new and additional financial resources to the Multilateral Fund:

(option 1) for the purposes of maximizing environment benefits [of the accelerated phase-out of hydrochlorofluorocarbons] other than ozone layer protection, in particular in respect of the climate, from Multilateral Fund activities beyond and outside current funding eligibility under the terms of reference and policies of the Multilateral Fund;

(option 2) for the purposes of maximizing climate benefits [of the accelerated phase-out of hydrochlorofluorocarbons] [from Multilateral Fund activities] beyond and outside current funding eligibility under the terms of reference and policies of the Multilateral Fund;

(option 3) for activities that maximize climate benefits [including but not limited to activities in hydrochlorofluorocarbon phase-out management plans that exceed funding eligible under [the hydrochlorofluorocarbon guidelines] [the cost-effectiveness thresholds for the phase-out of hydrochlorofluorocarbons], and for activities that are [currently] not eligible under Multilateral Fund terms of reference and policies;

3. [To further request the Executive Committee:

(a) To consider the respective reports of the implementation agencies that had to be submitted at its sixty-ninth meeting, including the elements and conditions relating to resource mobilization in respect of which the Executive Committee required clarification,

(b) To evaluate these reports on resource mobilization and consolidate its recommendations on the way forward for a cost-effective resource mobilization that benefits climate mitigation;

(c) To develop guidelines for the management of such additional voluntary funding, including an evaluation of its operation during the trial period;]

[3. bis To request the Executive Committee to undertake the 2013 review of the principles related to eligible incremental costs of hydrochlorofluorocarbon phase-out projects with a view to increasing the availability of funding to projects for the introduction of low-global-warming-potential alternatives above the cost effectiveness threshold whenever needed;]

4. To request the Executive Committee to report to the Twenty-Sixth Meeting of the Parties on the progress made with regard to the present decision;

5. [To confirm that any voluntary contributions received from parties not operating under paragraph 1 of Article 5 shall [be new [and additional]] and shall not affect any current [or future] [obligations] [pledges] of those parties to provide stable and sufficient funding for parties operating under paragraph 1 of Article 5 to comply with their [accelerated] hydrochlorofluorocarbon phase-out obligations under the Montreal Protocol according to decision XIX/6;]

[5 (alt) To confirm that any such voluntary contributions by parties [not operating under paragraph 1 of Article 5] shall be new and additional to and shall not affect [any current or future obligations of those parties] [the regular contributions made by these parties] to the Multilateral Fund to provide stable and sufficient funding for parties operating under paragraph 1 of Article 5 to comply with their [accelerated] hydrochlorofluorocarbon phase-out obligations under the Montreal Protocol according to decision XIX/6;]

[5. bis To confirm that any such voluntary contributions [from parties not operating under paragraph 1 of Article 5] will be [new, additional] and independent of the regular contributions made to the Multilateral Fund as part of the regular replenishment process.]

G. Funding of production facilities for hydrochlorofluorocarbons

Draft decision submitted by Argentina and India

[The Twenty-Fifth Meeting of the Parties decides:

Recalling decision XIX/6, which states that funding through the Multilateral Fund for the Implementation of the Montreal Protocol shall be stable and sufficient to meet all agreed incremental costs so as to enable parties operating under paragraph 1 of Article 5 of the Montreal Protocol to comply with the accelerated phase-out schedule for hydrochlorofluorocarbons for both the production and consumption sectors,

Noting that decision XIX/6 was agreed to by parties operating under paragraph 1 of Article 5 of the Montreal Protocol only after consensus had been reached that they would receive sufficient funding for both production and consumption sector phase-out without any specified exclusions,

Recognizing that the first control measures on hydrochlorofluorocarbons for parties operating under paragraph 1 of Article 5 of the Montreal Protocol have already come into force with a freeze at the baseline level in 2013 and a 10 per cent reduction from the baseline in 2015,

Recognizing and appreciating that certain parties operating under paragraph 1 of Article 5, through their proactive regulatory measures in respect of hydrochlorofluorocarbon production, long before the control measures under decision XIX/6 became effective, have prevented an enormous amount of potential ozone-depleting substance production by regulating hydrochlorofluorocarbon capacity build-up,

Concerned that, although more than five years have passed since the adoption of decision XIX/6, the funding for the phase-out of hydrochlorofluorocarbon production for these parties has still not been finalized,

Noting that certain parties operating under paragraph 1 of Article 5 of the Montreal Protocol that have hydrochlorofluorocarbon production facilities might be at risk of being in non-compliance with the accelerated phase-out obligations if adequate assistance is not provided through the Multilateral Fund,

1. To confirm the intent of decision XIX/6 to provide stable and sufficient funding through the Multilateral Fund to meet all agreed incremental costs for accelerated hydrochlorofluorocarbon production phase-out for all parties operating under paragraph 1 of Article 5 of the Montreal Protocol, including parties that have swing plants;
2. To urge the Executive Committee of the Multilateral Fund to finalize and approve, as a priority, the funding of hydrochlorofluorocarbon production facilities and initiate the technical audit for production facilities for parties that have swing plants;
3. To request the Executive Committee of the Multilateral Fund, while finalizing the production sector funding for these parties, to also take into consideration any proactive regulatory actions taken by parties operating under paragraph 1 of Article 5 of the Montreal Protocol to restrict production of hydrochlorofluorocarbons in their countries ahead of the relevant phase-out schedule, leading to a significant reduction in ozone-depleting substances and to other environmental benefits.]

H. Terms of reference for the study on the 2015–2017 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

Draft decision submitted by the contact group

The Twenty-Fifth Meeting of the Parties decides:

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 present 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 the preceding paragraph, 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 related to the special needs of low-volume and very-low-volume-consuming countries, and decisions agreed upon by 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 of the Montreal Protocol 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) [The assessment of the necessity of progressively increasing [or decreasing] the funding needed to achieve the 2020 target applicable to hydrochlorofluorocarbon consumption and production and] The possibility of dividing the funding related to the 2020 target applicable to hydrochlorofluorocarbon consumption [and production] [equally] [in an appropriate manner] between the 2015–2017 and 2018–2020 replenishments[, and to address funding related to the 2020 target applicable to hydrochlorofluorocarbon production after 2017];]
 - (e) Rules and guidelines agreed upon by the Executive Committee at all meetings, up to and including its seventy-first meeting, for determining eligibility for the funding of investment projects and non-investment projects, [[including institutional strengthening] [, measures to combat illegal trade and sectoral phase-out plans], measures to manage banks of ozone-depleting substances and ozone-depleting-substance destruction projects];

(f) The impact that the international market, ozone-depleting substance control measures and country phase-out activities are likely to have on the supply of and demand for ozone-depleting substances, the corresponding effects on the price of ozone-depleting substances and the resulting incremental costs of investment projects during the period under review;]

(g) The [lessons learned by] [[difficulties] [challenges] to be faced by] [large], medium-sized and small enterprises in the parties operating under paragraph 1 of Article 5 beyond 2015, and the resulting incremental costs of conversion activities for those enterprises [, while at the same time taking into account economies of scale and lessons learned];]

[[h) [To develop a dynamic model for the adjustment] [The necessary [increase] [decrease] [stability]] of the cost-effectiveness thresholds for the phase-out of hydrochlorofluorocarbons with a view to maximizing [climate benefits in the context of sustainable development] [social, economic and environmental benefits, including in respect of climate] [, taking into consideration necessary safety measures] in order to [prevent the phase-in of high-global-warming-potential hydrofluorocarbons] [promote the use of climate-friendly alternatives] while meeting compliance obligations in relation to hydrochlorofluorocarbons]. [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 address potential compliance obligations regarding hydrofluorocarbon phase-down, in particular as stipulated in the amendment proposal submitted in 2013 by Canada and the United States of America for consideration by the Twenty-Fifth Meeting of the Parties];]

[[2 bis) 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 [promote the use of climate-friendly alternatives while meeting compliance obligations in relation to hydrochlorofluorocarbons] [maximize environmental benefits including in respect of climate, taking into consideration necessary safety measures for the phase-out of hydrochlorofluorocarbons] [address potential compliance obligations regarding hydrofluorocarbon phase-down, in particular as stipulated in the amendment proposal submitted in 2013 by Canada and the United States of America for consideration by the Twenty-Fifth Meeting of the Parties];]

[[2 bis alt) [To develop a dynamic model for the adjustment] [The necessary [increase] [decrease] [stability]] of the cost-effectiveness thresholds for the phase-out of hydrochlorofluorocarbons with a view to maximizing [climate benefits in the context of sustainable development] [social, economic and environmental benefits, including with in respect of climate] [, taking into consideration necessary safety measures] [in order to prevent the phase-in of high-global-warming-potential hydrofluorocarbons while meeting compliance obligations in relation to hydrochlorofluorocarbons]. [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 address potential compliance obligations regarding hydrofluorocarbon phase-down, in particular as stipulated in the amendment proposal submitted in 2013 by Canada and the United States of America for consideration by the Twenty-Fifth Meeting of the Parties];]

3. That, in preparing the report referred to above, the Panel should consult widely all relevant persons and institutions and other relevant sources of information deemed useful;

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

5. 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.

I. Third International Conference on Small Island Developing States and implementation of the Montreal Protocol

Draft decision submitted by Grenada, Mauritius, Saint Lucia and Trinidad and Tobago

The Twenty-Fifth Meeting of the Parties decides:

Recalling that, of the 197 parties to the Montreal Protocol, 39 are recognized by the United Nations as small-island developing States,

Noting that the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, from 20 to 22 June 2012, recognized in its outcome document, “The future we want”, that the phase-out of ozone-depleting substances was resulting in a rapid increase in the use and release of high-global-warming-potential hydrofluorocarbons to the environment,¹

Recognizing decision XIX/6, in which the parties agreed to accelerate the phase-out of hydrochlorofluorocarbons and encouraged parties to promote the selection of alternatives to them that minimized environmental impacts, in particular impacts on climate, as well as meeting other health, safety and economic considerations,

Noting that the outcome document of the United Nations Conference on Sustainable Development reaffirmed that small island developing States remained a special case for sustainable development in view of their unique and particular vulnerabilities, including their small size, remoteness, narrow resource and export base, and exposure to global environmental challenges and external economic shocks,²

To request the Ozone Secretariat to liaise with the organizers of the Third International Conference on Small Island Developing States, to be held in Apia from 1 to 4 September 2014, with a view to suggesting the inclusion on its agenda of an item related to challenges associated with the implementation of the Montreal Protocol by small island developing States, and to report to the parties on the outcome of that liaison at the thirty-fourth meeting of the Open-ended Working Group.

J. Proposed amendments to the Montreal Protocol

Draft decision submitted by Canada, Mexico and the United States of America

[The Twenty-Fifth Meeting of the Parties decides:

Recalling the outcome of the United Nations Conference on Sustainable Development, in which countries expressed their support for a gradual phase-down in the consumption and production of hydrofluorocarbons,

Recognizing the high global-warming potential of hydrofluorocarbons that have come into use as substitutes for substances being phased out under the Montreal Protocol,

Bearing in mind the commitments in Articles 4 and 12 of the United Nations Framework Convention on Climate Change and in Articles 2, 5, 7 and 10 of its Kyoto Protocol that apply to greenhouse gases not controlled by the Montreal Protocol, and not intending to exclude hydrofluorocarbons from the scope of those commitments,

To adopt, in accordance with the procedure laid down in paragraph 4 of Article 9 of the Vienna Convention, the amendment to the Montreal Protocol related to hydrofluorocarbons as set out in annex [...] to the report of the Twenty-Fifth Meeting of the Parties, on the basis of the following considerations:

(a) For parties not operating under paragraph 1 of Article 5 of the Montreal Protocol, to select as the baselines for hydrofluorocarbon consumption and hydrofluorocarbon production, respectively, the average of 2008–2010 hydrofluorocarbon consumption plus 85 per cent of hydrochlorofluorocarbon consumption, and the average of 2008–2010 hydrofluorocarbon production plus 85 per cent of hydrochlorofluorocarbon production, calculated using the global-warming potentials of hydrofluorocarbons and hydrochlorofluorocarbons contained in the annex to the present decision;

(b) For parties operating under paragraph 1 of Article 5 of the Montreal Protocol, to select as the baselines for hydrofluorocarbon consumption and hydrofluorocarbon production, respectively, 90 per cent of the average of the 2008–2010 hydrochlorofluorocarbon consumption, and 90 per cent of the average of 2008–2010 hydrochlorofluorocarbon production, calculated using the global-warming potentials of hydrofluorocarbons and hydrochlorofluorocarbons contained in the annex to the present decision;

¹ “The future we want”, para. 222.

² *Ibid.*, para. 178.

(c) For parties not operating under paragraph 1 of Article 5 of the Montreal Protocol, the consumption and production of hydrofluorocarbons listed in the annex to the present decision shall be reduced to a level that does not exceed:

- (i) [90] per cent of their baseline levels by [2016];
- (ii) [65] per cent of their baseline levels by [2022];
- (iii) [30] per cent of their baseline levels by [2029];
- (iv) [15] per cent of their baseline levels by [2033] and thereafter;

(d) For parties operating under paragraph 1 of Article 5 of the Montreal Protocol, the consumption and production of hydrofluorocarbons listed in the annex to the present decision shall be reduced to a level that does not exceed:

- (i) [100] per cent of their baseline levels by [2018];
- (ii) [75] per cent of their baseline levels by [2025];
- (iii) [40] per cent of their baseline levels by [2030];
- (iv) [15] per cent of their baseline levels by [2043] and thereafter;

(e) In order to satisfy the basic domestic needs of parties operating under paragraph 1 of Article 5 of the Montreal Protocol, parties are allowed to exceed their production limit under each of the reduction steps specified in paragraphs (c) and (d) of the present decision by up to 10 per cent of their baseline levels;

(f) Hydrofluorocarbon-23 by-product emissions from each production line that manufactures hydrochlorofluorocarbons or hydrofluorocarbons shall not exceed [0.1] per cent of the mass of the hydrochlorofluorocarbons or hydrofluorocarbons manufactured in that production line except for those production lines generating Clean Development Mechanism emissions reduction credits;

(g) The import and export of hydrofluorocarbons listed in the annex to the present decision shall be licensed, and the import and export of these substances to non-Parties shall be banned;

(h) The consumption and production of hydrofluorocarbons and emissions of hydrofluorocarbon-23 by-product shall be reported to the Secretariat annually;

(i) The phase-down of the consumption and production of the hydrofluorocarbons listed in the annex to the present decision and hydrofluorocarbon-23 by-product emissions control requirements shall be eligible for funding under the Multilateral Fund, unless they are being funded from other sources;

Annex to decision XXV/[...]

Part A

Substance	Global-warming potential
HCFC-21	151
HCFC-22	1,810
HCFC-123	77
HCFC-124	609
HCFC-141b	725
HCFC-142b	2,310
HCFC-225ca	122
HCFC-225cb	595

Part B**Group I**

Substance	Global-warming potential
HFC-32	675
HFC-41	92
HFC-125	3,500
HFC-134	1,100
HFC-134a	1,430
HFC-143	353
HFC-143a	4,470
HFC-152	53
HFC-152a	124
HFC-161	12
HFC-227ea	3,220
HFC-236cb	1,340
HFC-236ea	1,370
HFC-236fa	9,810
HFC-245ca	693
HFC-245fa	1,030
HFC-365mfc	794
HFC-43-10mee	1,640

Group II

Substance	Global-warming potential
HCFC-23	14,800]

K. Harmonization and validation of climate change indicator**Draft decision submitted by Uruguay**

The Twenty-Fifth Meeting of the Parties decides:

Recalling item 10 of the agenda of the sixty-ninth meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the report on the Multilateral Fund climate impact indicator (decisions 59/45, 62/62, 63/62, 64/51, 65/48, 66/53 and 67/32),

Considering that a number of delegations have expressed appreciation for the work performed by the Secretariat of the Multilateral Fund in developing this indicator, but pointing out that climate change data have not yet been validated by the key bodies of the United Nations Framework Convention on Climate Change, such as the Intergovernmental Panel on Climate Change,

Bearing in mind that, following discussions between a number of delegations, it was proposed that the decisions adopted at that meeting should draw attention to the need for the agencies of the United Nations Framework Convention on Climate Change to perform that scientific and technical validation and, while recognizing that the previous steps may also be necessary, considering the recommendation by the Executive Committee³ as the first step in that direction,

Taking note that the representative of the Secretariat clarified that neither the Executive Committee nor the Secretariat possessed the authority to approach other bodies of the United Nations and that such a request would need to come from the Meeting of the Parties,

Recognizing that, to ensure the harmonization and validation of the said indicator, there should be joint efforts by the agencies of both conventions,

To invite the Ozone Secretariat to make the necessary arrangements to effect these discussions.]

³ Decision 69/23 of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol.

Annex II

Summaries of presentations by the members of the assessment panels, technical options committees and task forces⁴

A. Presentation on the 2013 progress report of the Technology and Economic Assessment Panel (agenda item 3)

1. Ms. Helen Tope, co-chair of the Medical Technical Options Committee (MTOC), started the TEAP 2013 Progress Report presentation and mentioned that her presentation would cover Essential Use Nominations and the MTOC Progress Report. She said that China submitted nominations for 2014 and 2015, the last one expected to be China's last one, for final campaign production. The total China CFC stockpile was 855 tonnes in late 2012 and this was assumed to be adequate to supply China's requirements for 2013 and 2014. She then mentioned that China could possibly manage its CFC MDI phase-out completely from CFC stockpiles; furthermore, that China will supply its 2013 authorised exemption from CFC stockpile. MTOC recommends 235.05 tonnes for 2014 for China, expecting that China would supply requirements first from stockpile. MTOC is unable to recommend 1.55 tonnes for a certain company. Two salbutamol HFC MDIs were approved. The MTOC is unable to recommend the nomination for 2015 due to the uncertainty in the pace of transition and the CFCs that could potentially be available from stockpile. With the current salbutamol progress, China's CFC requirements could be less than the current, submitted nomination for 2015.

2. For the Russian Federation, Ms. Tope said that the Russian nomination was submitted well after the deadline of 31 January 2013. 212 tonnes were nominated for domestic salbutamol use, which is the same quantity as authorised for 2013. There has been no stockpile since 2011. For a GEF co-funded UNIDO conversion project, the tendering process has experienced delays, and UNIDO now predicts installation completion mid-2014. Ms. Tope mentioned that MTOC anticipates possible CFC requirements in Russia until the end of 2016, furthermore that CFCs in 2013 will be supplied from Chinese CFC production and that, in 2014, CFCs could be supplied from global stockpiles (e.g., from the US). MTOC is concerned about on-going delays and depletion of global CFC supplies before the Russian conversion will be completed. MTOC previously recommended that if conversion was not achieved within a reasonable timeframe, Russia should broaden the importation and distribution of available affordable, imported salbutamol CFC-free inhalers. MTOC believes it could take until mid-2014 to increase and distribute adequate amounts of imported HFC MDIs and recommends a sufficient quantity for the first six months of 2014 at 106 tonnes, preferably to be taken from existing global stockpiles.

3. Ms. Tope then continued with the MTOC Progress Report. The global use of MDI CFCs is estimated to be only about 700 tonnes as of 2012. Accounting frameworks are from Argentina, Bangladesh, China, EC, Pakistan, where the Russian Federation reported 875 tonnes pharmaceutical-grade CFC stocks end of 2012. Accounting frameworks were not submitted by Egypt, India, Syria and the USA. Different from what was reported earlier, the US clarified in June 2013 that 280 tonnes of CFC stockpile reported by the company BI and by Honeywell represents the remaining total combined US stockpile available for transfer.

4. Mr. Ian Rae, co-chair of the Chemicals Options Committee (CTOC) continued the presentation. For feedstocks, he mentioned that, in 2011, there was a global feedstock use of 414,291 ODP-t, where the emissions were estimated at 2071-t. The use of CTC in the production of VCM in the United States does not meet the criteria for feedstock use and no alternatives exist for most feedstock uses such as the conversion of HCFC-22 to fluoro-polymers, furthermore, new uses of CTC and other ODSs as feedstock could emerge.

5. In the case of the Russian Federation, he said that the CTOC had recommended an EUN of 85 tonnes of CFC-113 in 2014. The quantity continues to decrease, with a phase-out by 2016 expected. Because of the high ODP and GWP, Mr. Rae said that the Russian Federation no longer considers RC-316c as a substitute for CFC-113 and uses HCFC-141b as a transitional replacement for CFC-113. He also said that the Russian Federation is aware of possibilities to import CFC-113. He mentioned that process agent uses are declining, that the CTOC reviewed several more process agent uses but did not identify alternatives. The CTOC could not report new information on n-Propyl Bromide (nPB),

⁴ The texts in the annex are reproduced as submitted, without formal editing by the Secretariat.

however, it could give new information on solvents for N-bromosuccinimide laboratory reactions. Mr. Rae concluded by saying that there was no new information on the atmospheric CTC 'gap'.

6. Mr. Miguel Quintero, co-chair of the Foams Technical Options Committee (FTOC) started his presentation by saying that Article 5 Parties are focused on the implementation of the first stages of HPMPs. He said that hydrocarbons continue to be the dominant technology and form the main choice to replace HCFC-141b when applicable (for cost effectiveness and safety issues reasons), furthermore that new product development focused on unsaturated HFC/HCFCs, where extended commercial trials showed significant incremental energy efficiency improvement. He said that other options are (1) HC /unsaturated HFC /HCFC blends, (2) unsaturated HFC /HCFC systems co-blown with water, and (3) improved water formulations. There is limited market penetration of methyl formate and methylal, mainly for integral skin and flex-moulded foam in Article 5 Parties. Mr. Quintero also mentioned that continuing market and regulatory pressure on existing HFC use in developed countries, e. g. by the EC proposal to strengthen the F-gas regulation in Europe, are providing challenges for XPS and PU Spray. He said that some other regulatory pressures are emerging which may have future impact on foam strategies, including the tightening of legislation on certain flame retardants and the additional activity on VOC control. The latter may have impact on hydrocarbon use in some jurisdictions. He concluded by saying that waste classification of ODS-containing foams is intended to drive segregation and waste management in the absence of mandatory end-of-life regulation; also that some emerging carbon markets (e.g. California) are providing incentives for collection and destruction.

7. Mr. Dan Verdonik, co-chair of the Halons Technical Options Committee (HTOC), mentioned that toxicological testing of the unsaturated chemical HBFC-3,3,3-trifluoro-2-bromo-prop-1-ene (2-BTP) for use as a halon 1211 replacement in aviation is at an advanced stage; that the manufacturer plans to apply for listing under the US EPA Significant New Alternatives Policy (SNAP) during 2013. Furthermore, that another alternative for halon 1211, FK-6-1-14, a C7 fluoro-ketone blend, was recently approved under the US SNAP for use as a streaming agent in non-residential applications. Mr. Verdonik said that CF₃Br (halon 1301) continues to be produced in China and France for use as a feedstock for the pesticide Fipronil. He also said that halon recycling and banking in the Middle East continues to be problematic. It has been reported that decommissioned halons are stored rather than recycled. In South Africa, recycling equipment provided in 2003 is reaching a life-cycle stage where maintenance costs are high and replacement parts are not readily available. He continued by saying that, despite predictions that the demand for recycled halon 2402 would increase in the Russian military sector, information for 2011-2012 shows no increase in demand, suggesting that alternative agents are now being used. In the Indian civil sector, neither halon 2402 nor its blends have been used in fire protection systems or portable fire extinguishers for the past 5 years. Mr. Verdonik said that the HTOC is concerned that some clean agent portable extinguishers sold in South America and Asia may not extinguish some fires. Parties may wish to consider requiring fire extinguishers to be "listed" by internationally recognized testing laboratories. For example, HFC-125 and HCFC-123 products have been reported to be in use in Colombia, and in the Philippines. Of major concern is that at least one manufacturer in the Philippines is offering to convert extinguishers by removing the functional dry chemical from the extinguisher and replacing it with HCFC-123. This may give a false sense of security (e.g. may not extinguish some fires) as well as leading to contaminated agents. Mr. Verdonik said that the HTOC continues to work with the International Civil Aviation Organization (ICAO) on requiring the phase-out of the use of halons on new aircraft. At this time, no commercial airframe manufacturer has an acceptable alternative to halons for engine nacelles. The HTOC continues to work with ICAO to place before their General Assembly in September 2013, a requirement to report back in 2016 on a timeframe (likely to be around 2020) for the replacement of halon in cargo compartments on new aircraft designs.

8. Mr. Roberto Peixoto, co-chair of the Refrigeration Technical Options Committee (RTOC), started his presentation by saying that 14 new refrigerants were commercialised since 2010, where the focus is on non-halogenated and unsaturated HFC candidates, with an emphasis on low or very low GWP ones. More attention paid to (mildly) flammable refrigerants, one of them being HFC-32. In domestic refrigeration, HC-600a and HFC-134a continue to be preferred refrigerants; the transition from HFC-134a to HC-600a is slow. The new product development focuses on improved energy efficiency with e.g. variable speed compressors. In commercial refrigeration, refrigerants as diverse as hydrocarbons (HC-600a and HC-290), carbon dioxide (R-744), intermediate blends (for drop-in or nearly drop-in replacements for HCFC-22), HFC-134a and R-404A, HFC-1234yf and its blends are in competition. Mr. Peixoto said that strengthened regulations such as in the EU will end the use of high GWP refrigerants, such as R-404A. He mentioned that, except for HC-290, which sees limited use in large systems due to safety concerns, there is a lack of low GWP refrigerants with large enough refrigeration capacity to replace R-404A or HCFC-22 and that cascade R-744 systems or secondary

fluids are used, where regulations prohibit the use of ammonia (R-717) or limit its charge. He said that the air conditioners available in non-Article 5 Parties mainly use R-410A, with the use of R-407C decreasing; furthermore, R-410A equipment is also manufactured in some Article 5 Parties. Mr. Peixoto said that hydrocarbons are being used in smaller equipment and that voluntary and mandatory standards limit the quantity of the charge. HFC-32 considered for various types of AC units. He also said that the use of mixtures of three and four refrigerants with GWPs in the range 150-1000 is being investigated; technical data are not in the public domain, and development may take another 2-3 years. In heat pumps, HFCs, R-744 and HC-290 are currently used for new water and space heating heat pumps; here, the new refrigerant options include low GWP HFCs and their blends. Chillers that employ R-717, water (R-718), R-744 and HCs continue to be available in certain capacities; absorption can be a good alternative in case of availability of waste heat or cogeneration. Here, the testing for low GWP HFCs, HFC-32 and their blends (sometimes with HFC-134a) is underway (e.g., via AHRI in the USA). Mr. Peixoto said that in large size systems, R-717 is getting more widely accepted, while cascade systems with R-744 and secondary loops are options. In transport refrigeration, field testing by global manufacturers of R-744 in marine, rail and highway units continues. He said that the development of low GWP HFC equipment (e.g., HFC-1234yf) could be a solution here, which would require further redesign of R-404A units. Mr. Peixoto mentioned that in car air conditioners, HFC-1234yf was the universally preferred refrigerant to replace HFC-134a in 2012. Daimler then carried out in-house tests and claimed that HFC-1234yf is too flammable when leaking in engine compartments. Mr. Peixoto said that the significance of these test results is disputed within industry and other organisations involved, and that four German car manufacturers have pledged to use carbon dioxide.

9. Mr. Lambert Kuijpers, co-chair of the Technology and Economic Assessment Panel, concluded the TEAP presentation with some organisational issues. He said that, as of MOP-24, 13 of the 21 TEAP members were from non-Article 5 Parties, 7 from Article 5 Parties, and one from a former Country with Economy In Transition (CEIT). He also said that there are about 150 members of the TEAP and its six TOCs, with about a third coming from Article 5 Parties. In 2012 Parties approved re-nominations for TEAP members Mr. Stephen O. Andersen (Senior Expert, USA), Mr. Paul Ashford (FTOC co-chair, UK), Mr. Dave Catchpole (HTOC co-chair, UK), Mr. Lambert Kuijpers (TEAP, RTOC co-chair, NL), Mr. Dan Verdonik (HTOC co-chair, USA) and Mr. Ashley Woodcock (MTOC co-chair, UK). They also approved Ms. Bella Maranion (USA) as TEAP co-chair. He finished by showing a slide with all 2013 TEAP members.

B. Presentation on the draft report by the Technology and Economic Assessment Panel on additional information on alternatives to ozone-depleting substances (decision XXIV/7, paragraph 1) (agenda item 5)

10. The Task Force responding to Decision XXIV/7 had provided a draft report to the Parties in May 2013. Mr. Paul Ashford, co-chair of the Task Force, introduced the presentation of this draft report by highlighting the fact that the primary objective of the report was to ‘update information on alternatives and technologies’. In outlining the presentation, he noted that it would not be time-efficient to review all alternatives and technologies during the presentation but noted that these were set out systematically in the draft report. Instead, the presentation would address some of the challenges created by the Decision text and the interpretations adopted by the Task Force in its draft report.

11. Mr. Ashford continued by referring to the linkages between Decision XXIV/7 and the previous decisions dealing with these issues. He also made reference to the materials submitted by the EC and the USA which focused largely on refrigeration and air conditioning alternatives. Dealing sequentially with the operative paragraphs (a) to (e) in the Decision, several key phrases were identified and the interpretations and assumptions for each were given. In particular, there was some discussion about the term “negative environmental impacts” where it was noted that the outcome of the quantification of alternatives with such impacts would depend on the impacts selected for review.

12. Mr. Lambert Kuijpers, co-chair of the Task Force, then presented the refrigeration and air conditioning findings by firstly indicating the Task Force members with expertise in these sectors. A review of the types of alternatives and the sectors covered by the report was then given before considering a selection of barriers to, and opportunities for, their adoption. In the final slides on this sector, Mr. Kuijpers used the example of domestic refrigeration to highlight what climate impact might have been avoided followed by examples of commercial refrigeration and air conditioning to indicate the factors to be considered in projecting potential future avoidance.

13. Mr. Paul Ashford then presented a similar series of slides for the foam sector, indicating that hydrocarbons remain the major low-GWP blowing agent across the industry. Where saturated HFCs are used in non-Article 5 countries it is generally because of flammability concerns or the need for optimised energy efficiency. In the extruded polystyrene (XPS) sector, it was noted that CO₂ technologies offer some alternatives to saturated HFCs in non-Article 5 countries and preferable options to hydrocarbons in Article 5 countries as the replacement of HCFCs commences in this sector. The emergence of unsaturated HFCs (HFOs) was also offering some additional options, often with superior thermal performance.

14. Mr. Ashford presented an analysis of ‘what could have been done’ and noted that only 16% of the potential ODS impact had been unaddressed in the period from 1990 and 2013 in non-Article 5 Parties, although this figure increased to just under 30% for Article 5 countries, largely as a result of the ten year grace period provided for phase-out in these regions. A similar analysis on direct climate impacts yielded just over 29% for non-Article 5 and 43.5% for Article 5, albeit noting that the HCFC phase-out was still to follow in the latter regions. Selection of the most favourable option could address a further 13% of the overall climate footprint of the foam sector by 2020 if measures were implemented immediately.

15. Mr. Daniel Verdonik explained that a similar analysis had not been possible in the fire protection and solvent sectors because of difficulties with baseline definition and the tracking of alternative uptake. On behalf of Task Force member Mr David Catchpole, he proceeded to give an overview of the barriers to, and opportunities for, greater uptake of low-GWP alternatives. He noted that every fire hazard is unique making it difficult to generalise about solutions.

16. Mr. Keiichi Onishi reviewed the barriers to, and opportunities for, the uptake of low-GWP alternatives in the solvents sector and highlighted the fact that some alternatives were emerging from alternative processes (e.g. aqueous cleaning) rather than just alternative solvents. Apart from hydro-fluoro-ethers (HFEs) and saturated HFCs, HFOs and HCFOs were now seen as providing future options. Mr. Onishi closed the presentation by summarising the main findings of the draft report including the fact that it was counter-productive to delay action waiting for the ‘perfect alternative’. He highlighted the need for further clarification of the sectors to be covered in the Final Report and the next steps leading to the Meeting of the Parties.

C. Presentation on operational and organizational issues of the Technology and Economic Assessment Panel (agenda item 7 (a))

17. Ms. Bella Maranion and Ms. Marta Pizano, co-chairs of the Decision XXIV/8 task force, presented their report recommending the future configuration of the panel’s technical options committees (TOCs), bearing in mind anticipated workloads, and providing the standard operating procedures of the TEAP and its TOCs. Ms. Maranion referred to the composition of the task force, which comprised two co-chairs and seven members, three from Article 5 Parties and six from non-Article 5 Parties. She indicated that historical membership in the TOCs has increased in response to work load from the Parties but have remained essentially unchanged since 2006. Since 1989, over 900 experts from 65 countries have served on TEAP, its TOCs and TSBs with current membership at 150. She noted that TOC co-chairs continually work to maintain and strengthen the relevant expertise while striving for geographical, A5/non-A5 and gender balance. She further noted that the focus of TEAP’s work now focuses primarily on the A5 transition away from ozone-depleting substances, reflecting the progress of the phase out under the Montreal Protocol. In this time, while some TOCs have achieved regional and A5/non-A5 balance, the majority of TOCs have not, and gender balance has never been achieved, which remains a significant, continuing challenge. She emphasized that TEAP strives to structure its TOCs to the appropriate sizes and required expertise that ensure continuing support to the efforts of the Parties.

18. With regard to the future configuration of the TOCs, Ms. Maranion indicated that for 2014-2018, TOC membership numbers were generally anticipated to remain the same, although in some instances a decrease due to attrition during the 2014 reappointment process and sometimes reduced workload in this period could be expected. The exception to this was RTOC which would likely retain its previous membership numbers based on its anticipated workload in this period. The co-chair also indicated that beyond 2018, there was uncertainty in estimating likely TOC membership numbers, although significant workload reductions were anticipated for the Chemicals TOC and the Medical TOC. She then presented detailed recommendations on the future configurations for the CTOC, the Flexible and Rigid Foams TOC, the Halons TOC, and MTOC based on the periods for upcoming assessment reports by the TEAP.

19. Continuing with the presentation, Ms. Marta Pizano proceeded with detailed recommendations on the future configurations for the Methyl Bromide TOC and the Refrigeration, Heat Pumps and Air Conditioning TOC. She also presented the TEAP and TOC operating procedures related to consensus and guidance on the 2014 reappointment process for members of the TOCs.

D. Nominations by the Methyl Bromide Technical Options Committee for 2014 critical-use exemptions

20. The co chairs of the Methyl Bromide Technical Options Committee, Marta Pizano (QPS co chair), Michelle Marcotte (SC co chair), Ian Porter and Mohamed Besri (MBTOC-S co chairs), presented the MBTOC progress report.

21. Mohamed Besri introduced the presentation by summarizing methyl bromide consumption in A5 and non-A5 countries. He reported that the global consumption for MB controlled uses has fallen from 64,420 t in 1991 to 5,187 t in 2011. He explained that less than 1% of the non-A5 Parties aggregated baseline is now requested for critical uses. He said also that 80% of MB use in A5 Parties has been phased out from the aggregate baseline in advance of the 2015 deadline.

22. Regarding the available MB stocks (decision IX/6, para. 1), he said that Australia, Canada and US have reported respectively 0.0 t, 0.9 t and 627.0 t. He explained also that MBTOC critical use recommendations did not take stocks into account. He noted that stocks reported by USA are twice the annual CUN request.

23. He then said that only 3 non Article 5 Parties (USA, Canada and Australia) continue to submit nominations and that the number of CUNs from non Article 5 Parties has diminished greatly from 116 in 2005 to 5 in 2013. No Article 5 CUN requests in 2013 has been received.

24. MBTOC co-chair Ian Porter then presented an overview of nominations received for pre plant soil use of methyl bromide in 2015. Three Parties requested amounts of 408.68t and MBTOC has made an interim recommendation of 229.246 t. Consensus was achieved on all nominations.

25. Australia nominated 29.76 t for strawberry runners, however MBTOC did not recommend this nomination until further studies are provided by the Party. MBTOC considers soil-less production feasible for production of strawberry runners and it is widely used in Article 5 and non Article 5 countries.

26. MBTOC considers that, without a funded and active research program, the Party is not in compliance with decision IX/6

27. Canadian nominated 5.261 t for strawberry runners, however MBTOC made a reduction and made an interim recommendation of 5.050 t for uptake of soilless production for 50% of the foundation stock. MBTOC recommended no further reductions in view of the Party stating that 2016 will be the final year for use of MB for this sector.

28. USA nominated 373.660 t for strawberry fruit, however MBTOC made a reduction and made an interim recommendation of 224.196 t. MBTOC considers alternatives are available and complete phase-out of MB is feasible.

29. Alternatives (1,3-D/Pic and Pic alone under new permitted rates of up to 392 kg/ha) with or without barrier films can replace MB for specific CUN uses. These rates and formulations should also allow for greater areas of use of 1.3-D/Pic where township caps are binding

30. In conclusion he presented some key issues from the progress report showing that increasing regulations on all fumigants are stimulating consideration of many non-chemical alternatives for the remaining uses of MB (e.g. soil-less culture, grafting, steaming, ASDS, bio-fumigation).

31. In Article 5 Parties, the sectors where MB use is difficult to phase out are similar to those in non Article 5 Parties.

32. MB use in Article 5 Parties continues to decrease in regions where MLF and other projects have enabled good adoption of chemical and non-chemical alternatives.

33. Michelle Marcotte, MBTOC Co-Chair, presented the interim assessment of critical use nominations for commodities. There were two postharvest critical use nominations for postharvest uses submitted in 2013 for 2015. Both CUNs were from the United States and the total amount of MB requested was 3.510 tonnes.

34. The United States submitted a CUN for fresh dates, nominating 0.310 tonnes, a 4.6% decrease of the amount granted by the Parties last year for this application. MB was requested for dates for

quick shipment of the dates. MBTOC did not recommend this CUN on the basis that there are technically effective, commercially available alternatives available and the need for a three-day market window for the approximate 25% of the total harvest volume nominated was not substantiated by the Party.

35. Additionally, the United States nominated 3.240 tonnes for dry cure pork, a reduction of 13.1% from the amount granted by the Parties for this use in 2014; the reduction was achieved by improving fumigation efficacy. MBTOC recommended the nomination of 3.240 tonnes because extensive research has demonstrated a continued lack of success with possible alternatives particularly in killing mites. MBTOC made suggestions for new research and pest management approaches.

36. Marcotte noted that in its Progress Report MBTOC Structures and Commodities sub-committee focussed on regulatory news and alternatives for dates and dry cure pork. In regulatory news there has been no change to sulfuryl fluoride registration in US. This news likely helped flour millers to complete their adoption of alternative treatments. In Germany, the sulfuryl fluoride label no longer gives dosage to kill pest eggs; this might cause pest control problems in mills. Reviewing the alternatives for dates, MBTOC noted that alternatives have been adopted for high moisture dates in North Africa and also for the dates harvested in the Middle East. Reviewing the research on methods to control pests of dry cure pork, MBTOC noted that all methods have failed thus far to control mites. There are two ongoing research approaches and MBTOC has suggested new avenues for research which might assist the Party.

37. Marta Pizano MBTOC Co-chair, Addressing methyl bromide uses for quarantine and pre-shipment purposes (QPS), Ms. Marta Pizano, MBTOC co-chair showed an analysis of consumption trends at the global level. She noted that reported consumption in A5 Parties shows an upward trend since 2000, and has been higher than that of non A5 Parties since 2007. Overall, QPS consumption remains relatively stable but has decreased in some regions and increased in others. In 2011, 54% of MB consumption for QPS uses took place in Asia, 10% in Latin America and the Caribbean, and the remaining 32% in aggregate by USA, Australia and New Zealand.

38. In providing highlights of the QPS progress report, she said it contained an update on IPPC issues, and in particular mentioned a memorandum of understanding signed between that body and the ozone secretariat, plus dielectric heating as a new option approved for complying with ISPM-15. She further indicated that the report contained an update on recapture systems for MB and a description of new fumigants now available to conduct QPS treatments plus information on fumigants that have been de-registered or withdrawn from the market.

39. Proceeding to give a summary of the committee's response to decision XXIII/5 on amounts of MB used to comply with phytosanitary requirements of imported and exported commodities, she indicated that eight Parties (including the 27 member states of the EU) had responded to this decision, but that the depth and scope of the information received was variable. She further explained that some Parties had indicated difficulties in sourcing specific information such as distinguishing between pre-shipment and export treatments, clearly differentiating between controlled and exempted uses of MB, and also between 'imports' and 'use' of MB for QPS. Import and export quarantine uses were generally not identified.

40. In finishing her presentation the co-chair indicated that MBTOC has had access to wider, and often more complete information on QPS uses of methyl bromide in the past. And that Parties might wish to accept guidance on how to collect and record information, which has been provided by MBTOC for example in response to decision XXIV/15.

Annex III

Report of the discussion group on issues on the management of HFCs using the Montreal Protocol and its mechanisms⁵

1. Before starting the discussions the co-conveners clarified that the mandate provided by the OEWG was **to discuss without prejudging any decisions under the UNFCCC on the following:**

- **Issues on management of HFCs using the Montreal Protocol and its mechanisms, including legal, technical and financial aspects;**
- **Possible processes to address the legal, technical and financial aspects;**
- **Identifying options to establish a relationship between the UNFCCC and the Montreal Protocol;**

and report back to plenary.

2. Without coming to any agreement, the discussion group first addressed the legal aspects of management of HFCs using the Montreal Protocol and its mechanisms, possible processes to address the legal aspects and some options to establish a relationship between the UNFCCC and the Montreal Protocol were identified.

3. On the legal aspects, the group started discussing the following issues:

- Questions and issues related to the possible need of a mandate of the Montreal Protocol and its mechanisms provided in articles 1, 2 and 9 of the Vienna Convention to address the consumption and production of HFCs, and its linkages to the jurisdiction of the UNFCCC and the Kyoto Protocol, provided in articles 4,12 of the UNFCCC and articles 2,5,7,10 of the Kyoto Protocol;
- Issues related to the jurisdictions of the UNFCCC, Kyoto Protocol and the Montreal Protocol and its mechanisms to manage HFCs;
- Issues related to the possibilities of the UNFCCC and the Kyoto Protocol and the Montreal Protocol to mutually support each other;
- Possibilities to avoiding legal uncertainty on the mandate of the Montreal Protocol and its mechanisms to manage HFCs;
- The differences between legal interpretations and the necessity to consider all legal implications before managing HFCs;
- The importance of political willingness;
- The history of the Montreal Protocol and its mechanisms to address issues related to the management of HFCs.

4. On possible processes to address the legal aspects and options to establish a relationship between UNFCCC/KP and MP, the following processes and options were mentioned:

- To provide a signal to the UNFCCC and the KP on the instruments available to address production and consumption of HFCs under the Montreal Protocol;
- To explore under the Montreal Protocol and its mechanisms a series of approaches to address the management of HFCs that have no legal uncertainties;
- To explicitly address the relationship with the UNFCCC and the Kyoto Protocol in a possible amendment of the Montreal Protocol to control the production and consumption of HFCs;
- The policy options to address production and consumption of HFCs need to be considered:
 - To build a new production and consumption instrument under UNFCCC providing compliance based funding;
 - To follow the principle of mutual supportiveness of institutional treaties and use the existing instrument provided by the Montreal Protocol and its mechanisms;
 - Or a combination of both, using the institutional arrangements of the Montreal Protocol;

⁵ The text in the annex is reproduced as submitted, without formal editing by the Secretariat.

- To take a three-staged approach, without prejudging the outcome: 1) requesting TEAP to provide a report on alternatives, focusing on the need for financing to test and demonstrate suitable alternatives, 2) exploring the abovementioned policy options and 3) to negotiate their implementation;
 - To start taking measures to manage HFCs in domestic regulations.
 - Secondly, the discussion group started discussing the technical aspects of management of HFCs using the Montreal Protocol and its mechanisms and possible processes to address those aspects. On the technical aspects different questions and issues were discussed:
 - Questions and issues related to the availability of alternatives, especially for the RAC sectors and the need to have definitive solutions for sectors before the management of HFCs can be addressed;
 - Questions and issues related to the extent to which environmentally sound, economically viable and technically proven alternatives are available, the time necessary for alternative technologies to be introduced in the market, their costs and on technology transfer;
 - The suitability of a gradual consumption and production phase down schedule to address the technical challenges and the MLF to assist A5 parties with technology transition;
 - The suitability of a phase down schedule to provide signals to the market and the readiness to provide these signals;
 - Reports and conferences on information on the availability and development of alternative technologies for A5 parties
 - Issues related to safety, flammability, toxicity, energy-efficiency, costs, supply of climate friendly alternatives to A5 parties, training of technicians, high ambient temperature, high density urban cities and SMEs;
 - Questions on what is meant by low GWP and the appropriateness of that indicator to address the climate impact of alternative technologies
 - The importance of the compliance obligations under the Montreal Protocol, the climate conditions and the availability of alternative technologies in the relevant sectors to be able to manage HFCs;
 - Issues related to what extent the Montreal Protocol can address the management of HFCs and contribute to closing the ambition gap in 2020;
5. Furthermore several processes and options were discussed to address those technical aspects related to the management of HFCs:
- To establish a gradual production and consumption phase down schedule in the short or longer term;
 - To consider options to use the Montreal Protocol and the Multilateral Fund to assist A5 parties in the transition to lower GWP alternatives;
 - To request a follow-up study by TEAP that could address elements such as mentioned:
 - The extent to which alternatives are available, the time period necessary to become available for the relevant sectors and markets
 - A comprehensive analysis of environmental and safety considerations for all countries;
 - Feasibility of management of HFCs using the Montreal Protocol and its mechanisms;
 - To start addressing broader aspects such as social and economic development considerations;
 - To focus in the short term on:
 - Follow-up study by TEAP
 - Strengthening coordination between TEAP and IPCC;
 - To communicate domestic actions of non-A5 parties to the UNFCCC;
 - To continue international cooperation and initiatives on management of HFCs
 - A trial phase of implementation before deciding to manage HFCs using the Montreal Protocol and its mechanisms;
 - To take voluntary domestic actions to drive technological development, prevent leakages and provide technical assistance;
 - To continue discussions and using TEAP studies in order to understand the concerns and the options to address those better.

6. In the last session the discussion group started to discuss the financial aspects of management of HFCs using the Montreal Protocol and its mechanisms and possible processes to address those issues. The group also started to discuss in a more integrated manner issues related to the management of HFCs, processes to address them and options to establish a relationship between the UNFCCC and the Montreal Protocol in further detail.

7. On the financial aspects, the group discussed issues related to:

- Trade barriers between parties and non-parties to the Montreal Protocol and its amendments;
- The climate contribution of HFCs;
- The need to evaluate the financial mechanisms, including the MLF, on the appropriateness to manage HFCs;
- Concerns on technology transfer and patents and the assurance that the best technologies are transferred to A5 parties in line with article 10A of the Montreal Protocol and on the effectiveness of the MLF with regard to technology transfer in practice;
- The investment costs for industry and the need to cover those;
- The possibility to provide assurance on new and additional funding in the absence of information on costs;
- Difficulties for some A5 parties to access the MLF.

8. The group also discussed issues related to the various aspects on management of HFCs in an integrated manner, addressing the following issues:

- The importance of political will and understanding of mutual supportiveness of actions under the MP and UNFCCC and ways to provide political assurance for all parties involved;
- The key role of ensuring political assurance with respect to the provision of means of implementation for Article 5 parties by Article 2 parties;
- The importance and concerns on the certainty on the finance related to the compliance needs under the MP;
- The difficulties for parties to discuss the management of HFCs in the absence of clarity on technology pathways and on new and additional funding through the MLF;
- The potential need for a decision under UNFCCC to address the management of HFCs using the Montreal Protocol and its mechanisms and the need for assurance of new and additional funding from Article 2 parties;
- The need for actions that can be immediately operationalized;
- The risk of taking more time when the approach taken, prejudices an amendment to the MP.

9. On the possible processes to address those issues in an integrated manner and options to establish a relationship between the UNFCCC and the Montreal Protocol, the following processes and options were mentioned:

- To start addressing what the MP could be doing and if a phase down is an option for comprehensive approach to manage HFCs;
- To take the initiative to provide the MOP with a mandate to engage in a joint working process together with the COP/MOP under UNFCCC;
- To prioritize for discussing in the MOP in 2013:
 - Using the MLF to develop rules to promote, demonstrate and select climate friendly alternatives to ODS;
 - To build political will that would lead to more ambitious action;
 - To develop a trial period to demonstrate the feasibility to manage HFCs using the MP and its mechanisms and facilitate further discussions;
- To request TEAP to provide a report that could address element such as mentioned:
 - Options to control HFCs and the technical feasibility to ensure compliance of all parties, including a combined schedule to leapfrog HFCs;
 - Estimated costs of options to manage HFCs;
- To develop a staged approach to build political will, respecting the legal autonomy of international bodies, and to take mutual supportive actions to inform each other on the best option to manage HFCs in recognition of the broader context of the UNFCCC:

- To provide clarity on possible technologies and technology pathways and on financing;
 - To develop a trial phase to demonstrate the usefulness of a phase down approach;
 - To invite UNFCCC to consider the work the Montreal Protocol is undertaking to manage HFCs.⁶
-