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**Third Extraordinary Meeting of the Parties to
the Montreal Protocol on Substances that
Deplete the Ozone Layer: high-level meeting**
Vienna, 22 and 23 July 2016

Report of the Third Extraordinary Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer: high-level meeting

I. Opening of the meeting

1. The Third Extraordinary Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer was held on 22 and 23 July 2016 at the Vienna International Centre, Vienna. The meeting was opened at 10.10 a.m. on Friday, 22 July 2016, by the President of the Twenty-Seventh Meeting of the Parties, Ms. Virginia Poter (Canada). The meeting was convened in accordance with decision XXVII/1 of the Twenty-Seventh Meeting of the Parties, on the Dubai pathway on hydrofluorocarbons (HFCs).

2. Ms. Poter welcomed the parties to the meeting, which had been organized in accordance with decision XXVII/1 as part of the effort to work towards an HFC amendment to the Montreal Protocol in 2016 by first resolving identified challenges through generating solutions. The agenda for the meeting, she said, would focus solely on that objective and included a ministerial round table discussion that would hopefully send a strong message to the parties, encouraging them to build on the considerable progress made in addressing those challenges by the Open-ended Working Group at its previous three meetings and to work together to deal with outstanding issues regarding baselines, baseline years, control measures and other matters.

3. Expressing appreciation to the Open-ended Working Group for the progress made to date, she called on the participants in the current meeting to fulfil their duty as ministers and high-level representatives of their Governments and, given the urgency of the situation, to seize the opportunity to review the range of actions needed to address the issues; to bridge the differing perspectives of Article 5 and non-Article 5 parties; and to provide clear guidance on the way forward to a positive outcome to the Twenty-Eighth Meeting of the Parties, which would take place just three months later. To that end, she urged the parties to go beyond their individual and regional positions and to prove, once again, that they were capable of setting aside their differences and forging consensus.

4. Opening statements were made by Mr. Andrä Rupprechter, Federal Minister of Agriculture, Forestry, Environment and Water Management of Austria, Mr. Li Yong, Director General of the United Nations Industrial Development Organization, and Mr. Ibrahim Thiaw, Deputy Executive Director of the United Nations Environment Programme.

A. Statements by representatives of the United Nations

5. In his statement, Mr. Li welcomed the parties to Vienna and commended them and their national ozone units on the commitment and leadership that they had shown in harnessing the political will to phase out ozone-depleting substances, which had resulted in substantial reductions in the damage caused to the ozone layer and the impact on climate change, adding that such successes would

have been impossible without the support of bodies such as the Multilateral Fund for the Implementation of the Montreal Protocol, the Global Environment Facility and the World Bank and the strong partnership of other entities within the United Nations system.

6. He then went on to outline the work of the United Nations Industrial Development Organization, which had become the fourth implementing agency of the Montreal Protocol in 1992 and which currently implemented some 35 per cent of the projects approved by the Multilateral Fund. The organization, he said, played a key role in ensuring that industries in many developing countries, least developed countries and countries with economies in transition had the capacity to continue doing business while complying with the requirements of the Montreal Protocol and other multilateral environmental agreements. Through its multidisciplinary programmes for country partnerships and the implementation of cleaner production business models, such as chemical leasing, the United Nations Industrial Development Organization provided enterprises and government institutions with support in promoting environmentally sound technologies, improved industrial energy efficiency, the certification of laboratories and the development of standardization bodies to improve market access, and its various projects had helped to prevent 338 million tonnes of CO₂-equivalent emissions per year.

7. In conclusion, he pledged the continued commitment of the United Nations Industrial Development Organization to the work of the Montreal Protocol and to the many countries that it served, and he encouraged the parties to continue working together with the same convivial spirit and decisiveness as they had shown in the past, wishing them every success in meeting the main objective of the current meeting: to chart a way forward to an HFC amendment to the Protocol, which would have a profound effect on the future of the international climate regime.

8. Mr. Thiaw, in his statement, said that the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change reflected a recognition on the part of the international community that individual countries, while they would always have their own priorities and challenges to protect themselves and mitigate natural disasters, could create a force for positive, meaningful change by focusing on what they had in common. The Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol, he said, had clearly demonstrated that fast, bold action could be delivered to scale up solutions through the use of science to identify key priorities and the most appropriate policies and forms of public-private cooperation. By way of example, he highlighted how the parties to the Protocol had worked together to overcome the seemingly insurmountable obstacles to phasing out ozone-depleting substances such as chlorofluorocarbons (CFCs), which had resulted in, among other things, an estimated 2 million fewer people per year being diagnosed with skin cancer, the prevention of some 135 billion tonnes of CO₂-equivalent greenhouse gas emissions and potential benefits for global health worth nearly \$2 trillion by 2030. Quoting the words of the writer and astronomer Carl Sagan about the hole in the ozone layer being “a kind of skywriting” that had inspired in the countries of the world a “newfound talent to work together to protect the global environment”, he stressed that parties must set aside their debates on differing approaches and focus on the common ground that would enable them to reach agreement on a phasedown of HFCs.

9. Having originally phased in HFCs as the only viable alternative to CFCs based on the best science available at the time, the parties to the Montreal Protocol, he said, were the only ones who could phase them down and provide for the continued protection of the ozone layer and the prevention of up to 0.5°C of global warming by 2050, thereby contributing significantly to the achievement of the Paris Agreement and the 2030 Agenda. A failure to do so, on the other hand, could see HFC use growing by 7 per cent per year and emissions of up to 8.8 or even 9 gigatonnes CO₂ equivalent per year by 2050.

10. In conclusion, he said that the responsibility for tackling the problem of HFCs lay equally with developed and developing countries; that the overwhelming commitment of parties to achieving that goal was encouraging, in that it provided a positive basis on which to find a way to resolve the remaining challenges at the current meeting; and that the parties had effective tools to assist them in the form of science, policy and cooperation, the power of which had been confirmed the previous month with the news that the hole in the ozone layer had been reduced by an area the size of India thanks to the phasing out of CFCs under the Montreal Protocol. The parties to the Protocol, he said, could choose to act in the interest of future generations by following the Dubai pathway and taking decisive steps to secure the Twenty-Eighth Meeting of the Parties in Kigali as a turning point.

B. Statement by the Federal Minister of Agriculture, Forestry, Environment and Water Management of Austria

11. In his statement, Mr. Rupprechter welcomed the parties to Vienna, where more than 30 years earlier the first steps had been taken on a long journey towards a sustainable future that had seen the near complete phase-out of ozone-depleting substances. That phase-out had started the ozone layer on a path of healing, closing the Antarctic hole in the ozone layer between 2005 and September 2015 by an area the size of India, and it had also contributed to a significant decrease in greenhouse gas emissions. The establishment of the Dubai pathway on HFCs, he said, represented a clear commitment to maintaining that progress by means of a global strategy to phase down the production and consumption of those substances, and an HFC amendment to the Montreal Protocol could prevent an estimated 105 gigatonnes of CO₂-equivalent emissions by 2050 and reduce the rise in global temperatures by up to 0.5°C. In so doing, the pathway would mark a major step towards achieving the objective of the Paris Agreement on climate change to limit increases in average global temperatures to 2°C or, ideally, to 1.5°C.

12. Announcing that Austria had, the previous week, become one of the first member States of the European Union to finalize the Paris Agreement ratification process, he expressed his Government's strong commitment to supporting the phasedown of HFCs under the Montreal Protocol, as it offered the international community an unprecedented opportunity to adopt new climate-friendly technologies, improve energy efficiency, enhance employment and, hence, contribute to the development of a sustainable economy. The successes and lessons of the Protocol, he said, remained central to the global climate change discussions as they showed how important it was to have a multilateral agreement with strong, science-based, legally binding limits and funding to help developing countries achieve compliance, thus fostering a sense of common commitment and equity.

13. In conclusion, he said that the current meeting provided a unique opportunity to open a new era in the history of the Montreal Protocol and an historic chance to contribute to climate change mitigation, and he wished the parties every success in their efforts over the coming week to work towards the finalization of an HFC amendment.

II. Organizational matters

A. Attendance

14. The Third Extraordinary Meeting of the Parties to the Montreal Protocol was attended by representatives of the following parties: Afghanistan, Albania, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Belgium, Belize, Benin, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Canada, Chad, Chile, China, Colombia, Comoros, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Cyprus, Czechia, Democratic People's Republic of Korea, Democratic Republic of the Congo, Denmark, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Estonia, Ethiopia, European Union, Fiji, Finland, France, Georgia, Germany, Ghana, Greece, Grenada, Guatemala, Guinea, Guyana, Haiti, Holy See, Honduras, Hungary, India, Indonesia, Iran (Islamic Republic of), Ireland, Italy, Japan, Jordan, Kazakhstan, Kenya, Kiribati, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lebanon, Lesotho, Libya, Lithuania, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Palau, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Russian Federation, Rwanda, Saint Vincent and the Grenadines, Samoa, Saudi Arabia, Senegal, Serbia, Singapore, Slovakia, Somalia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Thailand, the former Yugoslav Republic of Macedonia, Timor-Leste, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay, Venezuela (Bolivarian Republic of), Viet Nam and Zimbabwe.

15. Representatives of the following United Nations bodies and specialized agencies also attended: International Maritime Organization, secretariat of the Multilateral Fund for the Implementation of the Montreal Protocol, secretariat of the United Nations Framework Convention on Climate Change, Secretariat of the United Nations, United Nations Development Programme, United Nations Environment Programme, United Nations Industrial Development Organization and World Bank.

16. The following intergovernmental, non-governmental, industry, academic and other bodies and individuals were also represented or present: ADC3R, Air-conditioning, Heating and Refrigeration Institute, Alliance for Responsible Atmospheric Policy, Arkema, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Bitzer SE, California Citrus Quality Council, Center for Climate and Energy Solutions, Centre for Science and Environment, the Chemours Company, China Association of Fluorine and Silicone Material Industry, China Household Electrical Appliances Association, China National Petroleum and Chemical Planning Institute, Christian Aid, Climate Action Network International, Climalife, Climate Advisers, Climate and Clean Air Coalition, Council on Energy, Environment and Water, CYDSA Corporativo, S.A. de C.V., Daikin Europe N.V., Daikin Industries, Ltd., Daikin U.S. Corporation, Danfoss A/S (Denmark), Dongyang Chemical Co. Ltd., Embraco Europe S.r.l., Emergent Ventures India, Environmental Investigation Agency, European Air-conditioning and Refrigeration Association, European Chemical Industry Council, European Partnership for Energy and the Environment, GIZ GmbH, GIZ Proklima, Gluckman Consulting, Gujarat Fluorochemicals Limited, HEAT International, Honeywell, Hudson Technologies, ICF International, IN Consult (Pvt.) Ltd., India Habitat Centre, Ingersoll Rand Inc., Institute for Governance and Sustainable Development, International Institute of Refrigeration, International Pharmaceutical Aerosol Consortium, Institute of Energy and Environment, Japan Fluorocarbon Manufacturers Association, Japan Refrigeration and Air-Conditioning Industry Association, Jiangsu Blue Star Co., Ltd., Johnson Controls, Kulthorn Group, Lawrence Berkeley National Laboratory, League of Arab States, Lennox International Inc., Mahle Behr Troy Inc., Mebrom, Matthias Meier Technical Consulting, Mexichem (UK) Limited, Mitsubishi Electric Europe B.V., Natural Resources Defense Council, Nolan Sherry and Associates Ltd., Northwest Horticultural Council, Oak Ridge National Laboratory, Oeko-Recherche GmbH, Pyc Edition, Quimobásicos S.A. de C.V., Refrigeration and Air-Conditioning Manufacturers Association of India, Refrigerants Australia, Shecco, Sinochem Lantian Co., Ltd., SRF Limited, Sun Yat Sen University School of Engineering, Tata Motors Limited, TERRE Policy Centre, TICA Air-conditioning, Transfrig, Trans-Mond Environment Ltd., United Technologies Corporation, Victorian Strawberry Industry Certification Authority, Westfalen France S.a.r.l, Xi'an Jiaotong University, Zhejiang Sanmei Chemical Industry Co., Ltd., Zhejiang Yonghe Refrigerant Co. Ltd. and independent consultants.

B. Adoption of the agenda

17. The Meeting of the Parties adopted the following agenda on the basis of the provisional agenda (UNEP/OzL.Pro.ExMOP.3/1):

1. Opening of the meeting:
 - (a) Statement by the Federal Minister of Agriculture, Forestry, Environment and Water Management of Austria;
 - (b) Statements by representatives of the United Nations.
2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work;
 - (c) Credentials of representatives.
3. "Dubai pathway on hydrofluorocarbons" (HFCs) (decision XXVII/1).
4. Adoption of the report of the Extraordinary Meeting of the Parties.
5. Closure of the meeting.

C. Organization of work

18. The Meeting of the Parties decided to organize its work at the current meeting in accordance with the agenda for the meeting, whose only substantive item was the "Dubai pathway on hydrofluorocarbons (HFCs)". The parties would participate in a round table discussion on that subject, following which they would hear statements by heads of delegation on the same issue and related matters. They would also hear a report from the Co-Chairs of the contact group on HFCs as mandated by the thirty-eighth meeting of the Open-ended Working Group on the Group's discussions at its resumed thirty-seventh and thirty-eighth meetings on the Dubai pathway, and they would then consider next steps to be taken in the implementation of the Dubai pathway.

D. Credentials of representatives

19. The Senior Legal Officer of the Ozone Secretariat reported that the Bureau of the Meeting of the Parties to the Montreal Protocol had met to examine the credentials of the representatives attending the current meeting. The Bureau had approved the credentials of the representatives of 95 parties out of the 149 parties represented. The Bureau had also provisionally approved the participation of 52 parties on the understanding that they would forward their credentials to the Secretariat as soon as possible. The Bureau urged all parties attending future meetings of the parties to make their best efforts to submit credentials to the Secretariat as required under rule 18 of the rules of procedure. The Bureau also recalled that under the rules of procedure credentials had to be issued either by a head of State or Government or by a minister for foreign affairs. The Bureau further recalled that representatives of parties not presenting credentials in the correct form could be precluded from full participation in the meetings of the parties, including the right to vote in the future. It had been noted by the Bureau that two parties had not presented credentials in the proper form; those credentials had therefore not been approved by the Bureau. Those countries that had not presented proper credentials could resubmit them in proper form.

III. “Dubai pathway on hydrofluorocarbons” (HFCs) (decision XXVII/1)

A. Ministerial round table discussion

20. On the morning of 22 July 2016, the meeting took the form of a round table discussion in which participants considered how the parties to the Montreal Protocol could move forward in 2016 to deliver on the mandate of the “Dubai pathway on hydrofluorocarbons (HFCs)” set out in decision XXVII/1 of the Twenty-Seventh Meeting of the Parties to the Montreal Protocol. The discussion was moderated by Mr. Johnston Barkat, United Nations Ombudsman.

21. The panel comprised ten discussants, listed in the order in which they spoke: Mr. R. R. Rashmi, Additional Secretary, Ministry of Environment, Forest and Climate Change, India; Ms. Catherine McKenna, Minister of the Environment and Climate Change, Canada; Mr. Mohamed Mubarak Bin Daina, Chief Executive, Supreme Council for Environment, Bahrain; Ms. Gina McCarthy, Administrator, Environmental Protection Agency, United States of America; Mr. Ibrahim Jibril, Minister of State, Environment, Nigeria; Ms. Nur Masripatin, Director-General, Climate Change, and National Focal Point for Ozone-Depleting Substances, Ministry of Environment and Forestry, Indonesia; Mr. Alberto D’Alotto, National Director of Global Affairs, Ministry of Foreign Affairs, Argentina; Mr. Miguel Arias Cañete, European Commissioner for Climate Action and Energy, European Union; Mr. Mariano Castro, Vice-Minister, Ministry of the Environment, Peru; and Mr. Ibrahim Thiaw, Deputy Executive Director, United Nations Environment Programme.

22. The moderator began the discussion by posing one question to each of the panellists, following which he opened the floor for questions from the parties.

1. Questions from the moderator

23. In response to a question from the moderator about the challenges and opportunities that Parties faced in addressing HFCs, Mr. Rashmi argued that the Montreal Protocol provided an excellent opportunity to address the issue given its fine record of international cooperation and delivery of financial assistance, two essential elements that had not always been well handled under other international instruments such as the Kyoto Protocol. It was important to grasp the opportunity to introduce low-global-warming-potential (GWP) technologies in all countries for the benefit of the climate, environment and development. He added that the amendment proposed by India dealt with the key challenges, including the need to implement a cost-effective transition away from HFCs, to avoid multiple conversions and to meet any necessary costs of patents and licensing, including both product and application patents. He concluded by stressing that it was necessary to ensure flexibility for all parties in addressing the challenges.

24. Responding to a question from the moderator about why 2016 was a critical year with regard to the adoption of an HFC amendment to the Montreal Protocol, Ms. McKenna observed that Canada had supported an amendment to deal with HFCs since 2009 and continued to see it as a top priority. Parties could demonstrate that they were serious about tackling climate change by agreeing to phase down HFCs, and they needed to do it in 2016 in order to build on the momentum generated by the Dubai Pathway, the Paris Agreement and the Group of Seven commitment to providing financial support for an HFC phasedown. To that end they should finalize a text at the current meeting setting out options for the key elements of the amendment. Given the availability of climate-friendly alternatives already

on the market, and accepting a key role for the Multilateral Fund, she believed that it would be possible to reach agreement on an ambitious amendment without jeopardizing the progress made to date on the phase-out of HCFCs, while also improving energy efficiency and allowing economies to grow.

25. Asked by the moderator to comment on the needs of countries with high ambient temperatures, Mr. Bin Daina expressed appreciation for the progress that Parties had made over the previous two years; the Dubai pathway had given parties the confidence they needed to agree to establish a contact group to consider the issues in detail. It would be useful, he said, for the parties to discuss a single proposal, and he expressed support for the amendment proposed by India. He said that it would be possible to make use of the leaders present at the current meeting to reach agreement on an amendment in 2016.

26. Responding to a request that she outline the main issues still needing to be addressed, Ms. McCarthy said that the eight key challenges identified in the Dubai pathway had all been addressed during the resumed thirty-seventh and thirty-eighth meetings of the Open-ended Working Group and that it should therefore be possible to start to develop draft amendment text. Recognizing the concerns of Article 5 Parties about the provision of financial assistance, she argued that the Multilateral Fund had served the Parties well in the past and should continue to be relied upon, and the United States and others were ready to increase their contributions to the Multilateral Fund to make possible the implementation of an ambitious amendment. Agreement on a phasedown of HFCs represented an excellent opportunity to begin to realize the aims of the Paris Agreement and implement a cost-effective mechanism for reducing greenhouse gas emissions, avoiding an estimated 0.5 degrees of global warming by the end of the century. Steps taken by parties such as her own, which was expanding the range of permitted low-GWP alternatives and restricting the use of high-GWP substances and cooperating with industry to develop solutions, would help to drive industrial innovation and enable an aggressive rate of HFC reduction, to the benefit of every country and the planet.

27. Mr. Jibril, asked about the opportunities that a possible amendment on HFCs presented and the compromises that might be required to adopt such an amendment, identified as key opportunities the possibility of avoiding global warming of 0.5 degrees Celsius above pre-industrial levels by the end of the century, which would help to achieve the goals of the Paris Agreement on climate change; of developing climate-friendly alternatives to HFCs in different countries and regions; and of strengthening institutional structures to ensure the proper use of climate-friendly alternatives to HFCs, including through the updating of safety codes and standards, capacity-building and the training and certification of technicians in developing countries. As for compromises required to reach an amendment acceptable to all, they included ensuring that existing alternatives to HFCs were available to all parties who wished to use them; providing additional funding for the implementation of the amendment in Article 5 parties, including for regional and national demonstration projects on climate-friendly alternatives to HFCs and the environmentally sound destruction and disposal of HFC stocks; adopting a time-limited exemption that would enable parties to continue to use HFCs in certain sectors where there were no suitable alternatives; the transfer of technology to Article 5 parties; and the provision of support to Article 5 parties for the conduct of HFC surveys, research on the development of alternatives to HFCs and the development of national regulatory frameworks.

28. Ms. Masripatin, asked to identify the main elements that an amendment on HFCs would need to include to address the concerns of her country and other countries of the Asia-Pacific region, said that such elements included achieving a balance between the environmental benefits and economic costs of the amendment by enabling those countries and their industries to implement the amendment in ways that did not jeopardize socioeconomic development; ensuring that mature climate-friendly technologies and substances were available in both global and local markets; providing support to parties to ensure the safety and safe use of climate-friendly alternatives to HFCs, including through the training of technicians in the manufacturing and servicing sectors and the provision of funding to cover the investment costs associated with ensuring the safety of those technologies and substances; and recognizing the linkages that existed between the amendment on HFCs and climate change and supporting the use of climate-friendly and energy-efficient technologies and substances.

29. Mr. D'Alotto, asked about his impression of the discussions on HFCs held during the resumed thirty-seventh and thirty-eighth meetings of the Open-ended Working Group and how the Twenty-Eighth Meeting of the Parties in Kigali might unfold, said that the adoption of a two-step approach to tackling HFCs, reflected in the Dubai pathway, had made it possible to build trust between Article 5 and non-Article 5 parties in devising solutions to various challenges associated with a potential amendment on HFCs. In the previous days the parties had achieved considerable progress in finding solutions to key challenges and addressing various concerns expressed by Article 5 parties,

including with regard to the conversion of industries that had already converted to HFCs from HCFCs, the need for flexibility to enable parties to decide which sectors should be converted and which technologies should be used, financing and capacity-building. Given the nature of the discussions and the agreements made thus far, including on financing, he was confident that the concerns of Article 5 parties would be addressed and that the Twenty-Eighth Meeting of the Parties would reach consensus and adopt a balanced amendment that all parties would be able to implement and that would benefit the environment.

30. Mr. Arias Cañete was asked about differences remaining between Article 5 and non-Article 5 positions and how to bridge them. He began by saying that supporting developing countries in the implementation of the new commitments was key, and he stressed that, while funding was a matter regarding which the European Union member States were competent, as donors to the Multilateral Fund of the Montreal Protocol European Union member States remained committed to providing additional financial and technical support through the Multilateral Fund to help developing countries comply with any HFC obligations agreed under the Montreal Protocol. In terms of differences, a significant gap in opinion remained on how HFC commitments should be designed and should differ for developed and developing countries. Such differences could be solved by adopting measures that accounted for the differing situations of developed and developing countries. Developed countries currently used large quantities of HFCs, and it was appropriate for them to start phasing down quickly, starting before 2020 and ending within fifteen years. Developing countries, which were still in the process of phasing out HCFCs, should receive not only financial and technical support for direct transition to climate-friendly and ozone-friendly alternatives, but also an early policy signal on HFCs. Commitments under the amendment should also provide for the economic growth needed in developing countries by allowing a sufficiently high starting level, flexibility and additional time prior to the start of reduction measures and the length of time over which they would be achieved. All four amendment proposals sought to address all those issues, and the time had come to combine the best elements from each proposal so that a final agreement could be reached in Kigali with ambitious targets for both developed and developing countries.

31. Asked what key points should be included in a possible HFC amendment to address the concerns of his region and country, Mr. Castro noted that Latin America currently had more middle income than poor people, which had an impact on the region's economies, the environment and resource use, among other things. There were therefore many reasons to promote a highly ambitious amendment. That would only be possible with trust and confidence, taking into consideration the wide range of conditions and capacity throughout the region and allowing for economic sustainability. In terms of the economy, micro and small enterprises were particularly important in the region and must be taken into consideration in any strategy. In his country, Peru, air-conditioning, transportation and even cooking arrangements in rural areas all had a notable impact on emissions.

32. At the moderator's request, Mr. Thiaw spoke about the significance for UNEP of a possible HFC amendment. UNEP responsibilities, he said, included acting as the secretariat for the Vienna Convention and the Montreal Protocol, acting as the financial manager of the trust fund of the Multilateral Fund, serving as the secretariat for the Fund and as one of the Fund's implementing agencies as well as providing secretariat services on clean air and climate matters and playing a key role in the United Nations Framework Convention on Climate Change. The current negotiations were therefore of great significance to UNEP. As the entity responsible for the environment within the United Nations, UNEP understood the importance of an HFC amendment to the planet and its inhabitants, and more specifically to the implementation of the Paris Agreement and achievement of the Sustainable Development Goals. The key issue of funding should be viewed taking into account the cost of failing to take action. The business case for an HFC phasedown also needed to be made, and the amendment, in addition to protecting the planet and its inhabitants, should aim to foster business.

2. Questions from the floor

33. After answering the questions posed by the moderator, the panellists responded to a number of comments and questions from the floor.

34. Ms. McKenna reacted to comments by the representative of France, who had conveyed a message from Ms. Ségolène Royal, President of the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, urging parties to step up their deliberations and to agree on effective control measures for HFCs. Ms. McKenna said that parties already had answers to many of the associated challenges, including financial, technical and flexibility challenges, and that agreement could be reached at the current meeting. She called on parties to demonstrate the ambition and leadership required to achieve that goal.

35. Addressing suggestions that the flexibility provisions of the Paris Agreement could provide a model for flexibility in an amendment to phase down HFCs, Mr. Arias Cañete said that there were indeed lessons to be learned from the Paris Agreement, the most important of which was that parties could reach consensus on an ambitious target. There were significant differences, however, between limiting global warming, where the wide array of tools that could be employed allowed substantial flexibility, and limiting a single substance such as HFCs. Rather than looking only to the Paris Agreement, parties should look to the lessons of the Montreal Protocol, which had been successfully used to eradicate ozone-depleting substances and already had the appropriate mechanisms in place for such action.

36. In response to a question about meeting the needs of countries with economies in transition and post-conflict countries, Ms. McCarthy recalled that one of the strengths of the Montreal Protocol had always been its ability to respond to the individual needs of parties, giving them the flexibility to achieve their goals according to their own situations, including through the essential-use exemption procedure, which allowed them to deal with unforeseen circumstances.

37. Responding to a statement from the floor that it was necessary to include improvements in energy efficiency as an integral part of any HFC amendment, Mr. Arias Cañete said that improving energy efficiency was a critically important part of the response to climate change, noting that many of the intended nationally determined contributions submitted under the Framework Convention on Climate Change during 2015 included energy efficiency goals, the cost of achieving which was estimated by the International Energy Agency to be approximately \$8 billion by 2030.

38. Responding to the same question, Ms. McCarthy expressed agreement with Mr. Arias Cañete, observing that moving away from high-GWP HFCs and improving the efficiency with which refrigeration and air-conditioning were delivered were complementary objectives, both helping to reduce global warming. The parties needed to send a signal to industry to prompt it to innovate and find solutions that would protect both the environment and human health and comfort. Improving energy efficiency needed to be a key element of every action. She also said that installing new equipment often involved significant upfront costs. Ms. McKenna also expressed agreement about the importance of the topic, suggesting that sensitivity was needed in implementing solutions to phase down HFCs.

39. Responding to a concern that the parties to the Montreal Protocol might want to address additional challenges through the Protocol that were not directly related to the ozone layer because the Protocol had been so successful, Ms. McCarthy said that she did not expect that to be the case. The parties to the Montreal Protocol had decided to tackle HFCs under the Protocol not because the treaty had been successful but because it was the phase-out of HCFCs under the Protocol – and the promotion of HFCs as an alternative to them – that had been responsible for the growing use of the latter and the threat to the climate that they posed.

40. Asked to reflect on how the parties might strike a balance between environmental protection and economic growth in the context of an amendment on HFCs, all the panellists who spoke concurred that economic growth and environmental protection could go hand in hand and suggested ways through which the parties might achieve both objectives, while also agreeing that Article 5 parties would require financial and technical support to achieve a transition away from HFCs. Mr. Arias Cañete said that ways to achieve a decoupling of environmental impacts from economic growth included innovation, improved agricultural, land and forest management and investments in energy efficiency and renewable energy sources, noting that between 1990 and 2014 the European Union had reduced its greenhouse gas emissions by 24 per cent while growing its economy by 50 per cent, which showed that economic growth and environmental protection could go hand in hand. He also said that developed countries must honour their financial pledges to help developing countries to implement their commitments under the climate and ozone regimes. Ms. McKenna said that the Sustainable Development Goals required that countries alleviate poverty and deal with climate change and that countries could achieve a decoupling of economic growth and greenhouse gas emissions by improving energy efficiency, which triggered innovation and could result in the development of low-cost environment-friendly solutions.

41. Mr. Rashmi said that there were costs to the economy and industry associated with more environmentally sustainable technologies, suggesting that a transition away from HFCs would cost his country \$10 billion in the period between 2030 and 2050; it was therefore essential that the Montreal Protocol financial mechanism support the implementation of any amendment on HFCs in Article 5 parties, including with regard to intellectual property costs. Along the same lines, Mr. Bin Daina suggested that non-Article 5 parties must provide adequate financial resources to Article 5 parties to enable them to balance economic growth with environmental protection in the context of an HFC

amendment. Mr. Castro said that there were many win-win opportunities to protect the environment and human health while contributing to economic growth and poverty elimination, such as those being undertaken under the Climate and Clean Air Coalition to mitigate climate pollutants through the use of clean cook stoves and more efficient brick production. Mr. Thiaw said that countries could adopt national policies on energy efficiency that were not only good for the environment but also made economic sense and that, when dealing with an amendment to the Montreal Protocol, all the parties should make an effort to replace HFCs with energy-efficient alternatives.

3. Conclusion of the round table discussion

42. Suggesting that the round table discussions had revealed tremendous good will on the part of all participants, the moderator asked the panellists to provide a “Tweet” that might sum them up for the benefit of young people. Ms. McKenna suggested “Let’s do this!” The moderator then concluded the discussion with that very exhortation.

B. Statements by heads of delegation

43. Statements were made by the heads of delegation of the following parties, listed in the order in which they spoke: Mexico, Rwanda, Slovakia (on behalf of the European Union and its member States), Guatemala, Côte d’Ivoire, Dominican Republic, Myanmar, Ethiopia, Sudan, Nigeria, Haiti, Canada, India, Norway, Cameroon, Bangladesh, Kenya, Japan, Senegal, Afghanistan, Venezuela (Bolivarian Republic of), Argentina, Philippines, China, Burkina Faso, El Salvador, Zimbabwe, Indonesia, Mozambique, Nicaragua, Holy See, Fiji, Tunisia, Singapore, Benin and Russian Federation.

44. Many representatives who spoke expressed thanks to the Government and people of Austria for their hospitality in hosting the current series of meetings. Many also thanked the Ozone Secretariat for its support and for the efficient organization of the meetings and UNEP, the Multilateral Fund secretariat, the implementing agencies of the Multilateral Fund, the assessment panels and other stakeholders for their roles in ensuring the success of the meetings in particular and of the Montreal Protocol in general.

45. A number of representatives praised the significant achievements of the Montreal Protocol in controlling and phasing out ozone-depleting substances, which had been instrumental to the recovery of the ozone layer and had also contributed to climate change mitigation. Several representatives said that the Protocol’s effective mechanisms served as a universally recognized model for global action to protect the environment. One representative said that the Protocol was based on a dynamic model of evolving policy instruments based on scientific and technical advancements and had fostered an outstanding degree of international cooperation. One of the key factors in that accomplishment, he said, had been the acknowledgement by the industrialized countries of their historical responsibility for the production, consumption and emission of ozone-depleting substances; the principle of common but differentiated responsibilities, he said, could now serve as a model for further international cooperation in addressing emergent challenges. Another representative said that it was necessary to continue to work with the flexible and innovative approach that had made the Protocol one of the most successful global environmental agreements.

46. Several representatives affirmed their countries’ commitment to the work of the Protocol and described the actions taken by them to phase out ozone-depleting substances and to implement the Protocol and comply with its provisions, including through policy, legislative, institutional and programmatic measures. Several representatives highlighted the essential role that the Multilateral Fund had played in helping their countries, through financial and technical assistance, to successfully meet their obligations under the Protocol. Several representatives said that, following their success in phasing out CFCs, many countries were now focusing on the phase-out of HCFCs, outlining the various components of their HCFC phase-out management plans, including import controls, quota and licensing systems, training of customs and other officials, awareness-raising, partnership building, technical support in the foams sector and the development of guidelines for best practices in the refrigeration and air-conditioning sector. Particular issues highlighted included the need to provide incentives to importers and the importance of establishing and maintaining a database on HCFCs and their movements. Several representatives spoke of the priority placed in their countries on zero-ozone-depletion-potential, low-GWP, environment-friendly and energy-efficient alternatives.

47. Several representatives said that their countries’ efforts to control ozone-depleting substances under the Protocol were part of a wider commitment to sustainable development and the protection of the environment and human health. One representative urged that a holistic approach be taken to the solution of the many problems facing humanity, with the whole human family standing united to address climate change and other issues, taking into account the concerns of poorer and more vulnerable countries. The Montreal Protocol must continue to focus, he said, on information, education

and the development of a sense of responsibility to ensure environmentally sound consumption and development.

48. A number of representatives described multisectoral programmes in their countries, including a range of components in addition to protection of the ozone layer. Some representatives spoke of mainstreaming ozone protection and climate change mitigation as elements of national policies and development plans, with several stating that their HCFC phase-out management plans already included significant measures aimed at the adoption of natural alternatives and the avoidance of HFC-based, high-GWP substances.

49. A number of representatives outlined the challenges that were still being faced by developing countries in phasing out ozone-depleting substances, including illegal trade, the dumping of obsolete and out-of-date equipment, the high cost of alternative technologies, delays in the transfer of funds, a lack of technical and human capacity and internal conflict and insecurity. Several representatives said that there was a need for additional, adequate and sustainable financial and technical assistance to help combat the challenges faced by developing countries, including the new challenge of phasing down HFCs. Some representatives highlighted the specific challenges faced by small island developing States, in particular their vulnerability to the threat of climate change, which inclined them to support the adoption of an amendment to the Montreal Protocol to enable it to control HFCs. One representative underscored the particular problems encountered by a number of small island developing States in phasing out ozone-depleting substances in the fisheries sector and in the safe destruction of banks of ozone-depleting substances, which she said should be addressed under the Montreal Protocol.

50. Many representatives spoke at length about the issue they viewed as the current greatest challenge facing the Montreal Protocol, namely, the amendment of the Protocol to control the production and consumption of HFCs and thereby reduce HFC emissions. One representative expressed concern that an increase in HFC emissions would undo much of the climate benefit achieved by phasing out ozone-depleting substances, saying that an integrated approach was essential when tackling ozone depletion and climate change. Several representatives expressed support for such an integrated approach, saying that its benefits included the adoption of climate-friendly technologies, energy efficiency, job creation and the promotion of sustainable development.

51. Many who spoke referred to the historical importance of the current negotiations to amend the Protocol and add its weight to the fight against climate change, saying that it could make a substantial contribution to the implementation of the Paris Agreement on climate change. Several alluded to the testing and challenging nature of the negotiations on the matter and the faith they had placed in the longstanding mechanisms of the Protocol to exchange views in an open and transparent manner, to work collaboratively to develop innovative solutions to complex issues and ultimately to achieve consensus.

52. A number of representatives said that the journey towards the amendment of the Protocol was only just beginning, as a range of issues still needed to be resolved, including with regard to the baseline years, freeze years and phasedown schedules for both Article 5 and non-Article 5 parties; identifying alternative technologies that were viable, cost-effective, technically feasible and environmentally sound, while taking into account safety and energy efficiency issues; identifying innovative technologies that performed well in high ambient temperatures; ensuring the availability of cost-effective and safe alternatives to HFCs in all countries; improving data collection and analysis to assist informed decision-making; and ensuring appropriate levels of funding, technical assistance and technology transfer, including under the Multilateral Fund, to enable developing countries to implement the amendment. One representative expressed the hope that, under the principle of common but differentiated responsibilities, developed countries would fully consider the concerns of developing countries, including on the issues of financing, a grace period, the availability and safety of alternatives to HFCs, safety standards, exemptions and other issues of importance and make firm commitments on funding and technology transfer. The representative of the European Union said that European Union member States remained committed to providing additional financial and technical support through the Multilateral Fund to help developing countries to comply with their HFC-related obligations under the Montreal Protocol following the adoption of any amendment to the Protocol to control HFCs. One representative said that prior to reaching agreement on such an amendment there was a need to define what was meant by “additional resources”, to assess the funds required to deal with HFCs under the Montreal Protocol and to limit funding for dealing with HFCs under the Protocol to voluntary contributions, given that HFCs were not ozone-depleting substances and thus did not fall under the mandate of the Multilateral Fund.

53. A number of representatives said that there was a need for a flexible, adaptive approach that allowed countries to make the technology, sectoral and timing choices that were most suited to their particular circumstances. One representative said that any amendment should not only address protection of the environment but also ensure economic development and societal welfare. Several representatives described proactive actions that were being introduced in their countries to phase down the production and import of HFCs and to promote low-GWP alternatives, including through legislative and regulatory measures.

54. Many representatives hailed the Dubai pathway on HFCs as a milestone in international cooperation and praised the efforts of the parties to make further progress and achieve productive outcomes at the resumed thirty-seventh and thirty-eighth meetings of the Open-ended Working Group. Several representatives acknowledged the achievements to date of the contact group on the feasibility and ways of managing HFCS, including the review of the challenges related to implementation of the Dubai pathway, the documentation of proposed solutions to the challenges identified in the pathway and the beginning, at the current meeting, of negotiations on the proposals to amend the Montreal Protocol in respect of HFCs. One representative said that in agreeing to the Dubai pathway the parties to the Protocol had again demonstrated a genuine unity of purpose and global partnership and exhibited a strong spirit of participation and a commitment to saving humankind. Several expressed hope that further concrete progress would be made towards adoption of an amendment of the Montreal Protocol at the forthcoming Twenty-Eighth Meeting of the Parties, to be held in Kigali in October 2016. One representative said that the solution would lie in an optimal combination of the key elements of the four amendment proposals rather than favouring one proposal over the others.

55. A number of representatives spoke of the importance of cooperation between the Montreal Protocol and other instruments, particularly in the context of the 2030 Agenda for Sustainable Development. In conclusion, many representatives expressed their commitment to the Montreal Protocol and its activities for the benefit of the environment and humankind.

Remarks by the Secretary of State of the United States of America

56. Under item 3 of the agenda the Meeting of the Parties heard remarks by Mr. John Kerry, Secretary of State of the United States of America. He emphasized the significance of what the parties to the Montreal Protocol were trying to achieve, calling it one of the most important single steps that could be taken to tackle climate change and comparable in importance to the fight against international terrorism. The scientific evidence behind climate change, seen in successively higher global temperatures, was overwhelming. Although the Paris Agreement was the strongest and most ambitious global climate agreement in history it was not a silver bullet, and it needed to be accompanied by additional steps by the private sector, Governments and citizens in every country.

57. The Montreal Protocol was a striking illustration of what global cooperation could accomplish, but its very success in phasing out ozone-depleting substances had accelerated the consumption of HFCs, currently responsible for a gigatonne of CO₂-equivalent emissions a year, roughly the amount emitted by 300 coal-fired power plants. Given the hard work already put in by parties, he said, an amendment on HFCs could be adopted and would represent a very big win for the climate.

58. Saying that not all countries possessed the same capacity to take action, he underlined his country's commitment to flexibility, to accommodating the special needs of countries with high ambient temperatures and to providing sufficient financial support through the Multilateral Fund. The members of the Group of 7 and the Nordic countries, he recalled, together accounted for 75 per cent of the Fund's donor base and had publicly stated their intention to provide additional funding to implement an HFC amendment. He concluded by calling on all parties to honour the legacy of their predecessors, who in 1987 had joined together to meet an unprecedented challenge, by adopting an amendment to phase down the use of HFCs and thus move closer to the goal set in Paris and help protect the future health and liveability of the only planet that humankind possessed.

C. Progress in the discussions on the Dubai Pathway

59. Mr. Patrick McNerney (Australia), co-chair of the contact group on the feasibility and ways of managing HFCs convened in accordance with decision XXVII/1, reported, also on behalf of the co-chairs of the Open-ended Working Group, that the contact group had met during the resumed thirty-seventh meeting of the Open-ended Working Group and produced a positive outcome with solutions to specific challenges identified in the Dubai pathway on HFCs. The group had reconvened during the thirty-eighth meeting of the Open-ended Working Group to continue its work and had discussed, under agenda item 4, the most challenging elements of the amendment proposals, namely, the baselines, freeze dates and reduction schedules for both Article 5 and non-Article 5 parties. The thirty-eighth meeting of the Open-ended Working Group had been suspended, and the Working Group

had decided that informal discussions on those issues, along with any outstanding issues related to the challenges outlined in the Dubai pathway, would continue under the auspices of the contact group during the current meeting. The contact group would hear a report on the result of the informal discussions and would also consider four proposals that had been submitted to the Working Group in conference room papers¹ and would report on its progress to the Third Extraordinary Meeting of the Parties.

60. At the final session of the current meeting the co-chair of the contact group, also on behalf of his co-chair, reported on the outcome of the group's discussions. A written version of the report is set out in annex I to the present report.

61. Following the report of the contact group co-chairs the Meeting of the Parties:

(a) Adopted the draft decision submitted by Canada and the United States referred to in the report of the contact group co-chairs, as revised by the contact group (decision Ex.III/1 in section IV below);

(b) Endorsed the solutions to the challenges identified in the Dubai pathway set out in annex II to the present report as a basis for discussion at the resumed thirty-eighth meeting of the Open-ended Working Group and the Twenty-Eighth Meeting of the Parties;

(c) Decided that the draft decision text set out in the two conference room papers submitted by Pakistan and the conference room paper submitted by India referred to in the report of the contact group co-chair, as set out in annexes III, IV and V to the present report, would be considered by the Open-ended Working Group at its resumed thirty-eighth meeting and by the Twenty-Eighth Meeting of the Parties;

(d) Decided that the document developed by the contact group showing the baseline ranges and freeze date preferences of various parties and groups, as referred to in the report of the contact group co-chairs, would be annexed to the present report as information for all parties (see annex VI to the present report);

(e) Decided that the Secretariat would update the consolidation of proposals to amend the Montreal Protocol (UNEP/OzL.Pro.WG.1/resumed.37/INF/1–UNEP/OzL.Pro.WG.1/38/INF/1–UNEP/OzL.Pro.ExMOP/3/INF/1) based on the latest developments;

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

IV. Adoption of decision by the Third Extraordinary Meeting of the Parties

62. The Third Extraordinary Meeting of the Parties adopted the following decision on the basis of the draft decision developed by the contact group:

The Third Extraordinary Meeting of the Parties decides:

Decision Ex.III/1: Report by the Technology and Economic Assessment Panel on the climate benefits and costs of reducing hydrofluorocarbons under the Dubai pathway

To request that the Technology and Economic Assessment Panel prepare a report for consideration by the Twenty-Eighth Meeting of the Parties containing an assessment of the climate benefits, and the financial implications for the Multilateral Fund for the Implementation of the Montreal Protocol, of the schedules for phasing down the use of hydrofluorocarbons (HFCs) contained in the amendment proposals discussed by the parties at the thirty-eighth meeting of the Open-ended Working Group and the Third Extraordinary Meeting of the Parties.

¹ The text of those conference room papers is reproduced in annexes II–V to the report of the thirty-eighth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol (UNEP/OzL.Pro.WG.1/38/8).

V. Adoption of the report of the Extraordinary Meeting of the Parties

63. The parties adopted the present report on Sunday, 24 July 2016, on the basis of the draft report set out in document UNEP/OzL.Pro.ExMOP.3/L.1.

VI. Closure of the meeting

64. The Third Extraordinary Meeting of the Parties to the Montreal Protocol was declared closed at 1.15 am on Sunday, 24 July 2016.

Annex I

Report of the co-chairs of the contact group on the feasibility and ways of managing HFCs to the Third Extraordinary Meeting of the Parties

24 July 2016, 12.55 a.m.

Thank you Mr. Co-Chair. The contact group at the resumed thirty-seventh meeting of the Open-ended Working Group generated solutions to the challenges identified in the Dubai Pathway. The set of solutions was endorsed as an outcome of the resumed thirty-seventh meeting of the Open-ended Working Group and presented at the thirty-eighth meeting of the Open-ended Working Group as set out in document UNEP/OzL.Pro.WG.1/38/7 and Corr.1.

The contact group during the thirty-eighth meeting of the Open-ended Working Group continued discussing the baselines, freeze and reduction steps. There was a wide discussion on baselines and different preferences were expressed during the discussions in the contact group.

As a result of the discussions a table was developed showing the baseline ranges and freeze date preferences of various parties and groups, with the understanding that there would be an HCFC component to be added to the baseline. That document will be attached to the report of the meeting for further information and consideration.

It was noted and agreed that the Article 5 party schedule would hinge on the Article 2 party schedule and that both of them needed to be considered together. As mandated by the Open-ended Working Group at its thirty-eighth meeting, the contact group continued its discussions after the suspension of the thirty-eighth meeting. In addition to continuing the discussion on the baselines, freeze and phase-out schedule, the group also considered four conference room papers:

CRP.2: Text was considered by the parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol, submitted by India

CRP.3: Report by the Technology and Economic Assessment Panel on the climate benefits and costs of reducing hydrofluorocarbons under the Dubai pathway, submitted by Canada and the United States

CRP.4: Text for consideration by the parties for inclusion in decisions related to the phasedown of HFCs under the Montreal Protocol, submitted by Pakistan

CRP.6: Text for consideration by the parties for inclusion in decisions under the Dubai pathway on hydrofluorocarbons under the Montreal Protocol, submitted by Pakistan

The group did not complete its consideration of CRP.2, CRP.4 or CRP.6, and it forwards them to the Third Extraordinary Meeting of the Parties for consideration by the parties, noting that some reservations were expressed in regard to CRP.6. CRP.3 was revised and the contact group considered CRP.3/Rev.1, which is forwarded to the Extraordinary Meeting of the Parties for consideration and adoption. The contact group also sought to ask the Secretariat to update the consolidation of amendment proposals submitted by parties to reflect the developments that have occurred during the thirty-eighth meeting of the Open-ended Working Group and subsequent discussions.

I also note for the advice of the OEWG that there was a further request that was still under discussion at the time that the contact group concluded and that was a request for the Secretariat to convert the solutions document into decision text; there was no agreement to make that request at the stage that the contact group completed its work this evening.

And finally there was a request to authorize the Secretariat to organize an intersessional meeting to progress the negotiations on the Dubai pathway.

On behalf of my co-chair, I would like to thank all participants for the cooperation that prevailed throughout the discussion in the contact group.

Thank you madam President.

Annex II²

Solutions to challenges identified under the Dubai pathway

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

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

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

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

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

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

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

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

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

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

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

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

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

² See UNEP/OzL.Pro.WG.1/38/7 and Corr.1.

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

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

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

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

Challenge 6: *Relationship with the HCFC phase-out*

The Open-ended Working Group agrees as follows:

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

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

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

Challenge 7: *Non-party trade provisions*

The Open-ended Working Group agrees as follows:

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

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

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

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

Appendix I

Vienna solutions for challenges on funding issues and flexibility of implementation

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

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

Appendix II

Solutions on challenges regarding funding issues and flexibility in implementation

Overarching principles and timelines

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

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

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

Principles on 2nd and 3rd conversions

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

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

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

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

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

Sustained aggregate reductions

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

Enabling activities

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

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

Institutional Strengthening

Article 4b Licensing

Reporting

Demonstration projects

Developing national strategies

Appendix III

High-ambient temperature exemption

Amendment Text

To be added as paragraph 7 of Article 2J:

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

High Ambient Temperature

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

¹ Spatially weighted average temperatures deriving the daily highest temperatures (using the Centre for Environmental Data Archival:

http://browse.veda.ac.uk/browse/badc/cru/data/cru_cy/cru_cy_3.22/data/tmx

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

consumption and production of HCFCs for other sectors, and the Party has formally requested a deferral through the Secretariat.

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

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

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

List of countries operating under the high ambient temperature exemption

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

Annex III

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

Submission by India

The Meeting of the Parties,

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

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

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

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

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

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

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

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

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

Decides:

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

Appendix

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

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

Annex IV

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

Submission by Pakistan

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

The Meeting of the Parties,

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

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

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

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

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

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

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

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

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

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

Decides:

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

Annex V

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

Submission by Pakistan

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

The Meeting of the Parties,

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

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

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

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

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

Decides:

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

Annex VI

Party proposals regarding baselines, freeze dates and first reduction steps

A5 baselines and freeze dates		
Proponents	Proposed range (HFC component of baseline)	Freeze date
GCC	2024–2026	2028
China, Pakistan	2019–2025	2025–2026
India	2028–2030	2031
African Group, Pacific Island Countries, Latin America like-minded*, EU and JUSSCANNZ	2017–2019	2021
Malaysia, Indonesia, Brazil, Argentina,¹ English-speaking Caribbean, Cuba	2021–2023	2025
Iran	2024–2027	2029
Non-A5 baseline, freeze date/first reduction step		
EU and JUSSCANNZ	2011–2013	90% of baseline in 2019
Belarus and Russian Federation	2009–2013¹	100% of baseline in 2020

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

¹ Subject to confirmation by Government

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