



SUMMARY OF THE TWENTY-SEVENTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL: 1-5 NOVEMBER 2015

The twenty-seventh Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP 27) met from 1-5 November 2015, in Dubai, United Arab Emirates (UAE). Over 500 participants from governments, UN agencies, intergovernmental and non-governmental organizations, academia, and industry attended the joint meeting.

MOP 27 adopted a number of substantive and procedural decisions. Substantive decisions included: essential-use exemptions (EUEs) and critical-use exemptions (CUEs); avoiding the unwanted import of products and equipment containing or relying on hydrochlorofluorocarbons (HCFCs); and a Technology and Economic Assessment Panel (TEAP) report on alternatives to ozone depleting substances (ODS). Procedural decisions adopted include: budget; organizational issues related to the TEAP; and membership of Montreal Protocol bodies for 2015.

MOP 27 immediately followed the two-day resumed session of the 36th Open-ended Working Group (OEWG 36), which had agreed on a mandate for a contact group on the feasibility and ways of managing hydrofluorocarbons (HFCs). The contact group was established and HFCs were the “major topic” under debate throughout the week. Following protracted negotiations that finally concluded in the early hours of Friday morning, parties agreed to a “roadmap” for negotiating an HFC amendment; this agreement included provision for an additional OEWG meeting and an extraordinary MOP in 2016.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth’s stratospheric ozone layer could be at risk from chlorofluorocarbons (CFCs) and other anthropogenic substances first arose in the early 1970s. At that time, scientists warned that releasing these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet (UV) rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune

systems. In response to this, a UN Environment Programme (UNEP) conference held in March 1977 adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action.

VIENNA CONVENTION: Negotiations on an international agreement to protect the ozone layer were launched in 1981 under the auspices of UNEP. In March 1985 the Vienna Convention for the Protection of the Ozone Layer was adopted. It called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce ODS usage. The Convention now has 197 parties, which represents universal ratification.

MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce ODS usage led to the adoption of the Montreal Protocol. The Montreal Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 countries). Developing countries (Article 5 countries) were granted a grace period allowing them to increase their ODS use before taking on commitments. The Protocol and all its amendments have been ratified by 197 parties, which represent universal ratification.

Since 1987, several amendments and adjustments have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a particular number of parties before they enter into force; adjustments enter into force automatically.

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LONDON AMENDMENT AND ADJUSTMENTS:

Delegates to MOP 2, held in London, UK, in 1990, tightened control schedules and added ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. MOP 2 also established the Multilateral Fund (MLF), which meets the incremental costs incurred by Article 5 countries in implementing the Protocol's control measures and finances clearinghouse functions. The Fund is replenished every three years.

COPENHAGEN AMENDMENT AND ADJUSTMENTS:

At MOP 4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and HCFCs. MOP 4 also agreed to enact non-compliance procedures. It established an Implementation Committee (ImpCom) to examine possible non-compliance and make recommendations to the MOP aimed at securing full compliance.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP 9, held in Montreal, Canada, in 1997, delegates agreed to: a new licensing system for importing and exporting ODS, in addition to tightening existing control schedules; and banning trade in methyl bromide with non-parties to the Copenhagen Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP 11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane, additional controls on HCFCs, and reporting on methyl bromide for quarantine and pre-shipment applications.

MOP 21: MOP 21 took place in Port Ghalib, Egypt, in 2009 and adopted decisions on: alternatives to HCFCs; institutional strengthening; environmentally sound management of ODS banks; methyl bromide; and data and compliance issues. This was the first meeting at which delegates considered, but did not agree on, a proposal to amend the Protocol to include HFCs submitted by the Federated States of Micronesia (FSM) and Mauritius.

MOP 22: MOP 22 took place in Bangkok, Thailand, in 2010 and adopted decisions on, *inter alia*: the terms of reference for the TEAP study on the MLF replenishment and the evaluation of the financial mechanism; and assessment of technologies for ODS destruction. Delegates considered, but did not agree on, two amendments proposed to address HFCs under the Protocol, one submitted by the US, Mexico and Canada and another submitted by FSM.

COP 9/MOP 23: The ninth Conference of the Parties (COP 9) to the Vienna Convention and MOP 23 took place in Bali, Indonesia, in 2011 and adopted decisions on, *inter alia*: a US\$450 million replenishment of the MLF for the 2012-2014 period; updating the nomination process and recusal guidelines for the TEAP; the treatment of ODS used to service ships; and additional information on alternatives. Delegates also discussed the two proposed amendments to the Protocol to address HFCs, but no agreement was reached.

MOP 24: MOP 24 took place in Geneva, Switzerland, in 2012 and adopted decisions on, *inter alia*, the review by the Scientific Assessment Panel (SAP) of RC-316c; procedural issues related to the TEAP and its subsidiary bodies; and data and compliance

issues. MOP 24 did not reach agreement on two draft decisions on: clean production of HCFC-22 through by-product emission control; and amendment of the Montreal Protocol to include HFCs.

MOP 25: MOP 25 was held in Bangkok, Thailand, in 2013. The MOP adopted 21 decisions, including on: terms of reference for the study of the 2015-2017 MLF replenishment; implementation of the Montreal Protocol with regard to small island developing states; and a TEAP report on ODS alternatives. MOP 25 did not reach agreement on: amendment proposals; additional funding for the MLF for implementing the Montreal Protocol to maximize the climate benefit of the accelerated phase-out of HCFCs; and the harmonization and validation of the climate impact fund.

COP 10/MOP 26: COP 10/MOP 26 was held in Paris, France, in 2014 and adopted decisions on, *inter alia*: a US\$507.5 million replenishment of the MLF for the 2015-2017 period; availability of recovered, recycled or reclaimed halons; and a TEAP report on ODS alternatives. Delegates also discussed possible ways to move the HFC issue forward, deciding to convene a two-day workshop in 2015, back-to-back with an additional OEWG session, to continue discussions on HFC management, including a focus on high-ambient temperatures.

MOP 27 REPORT

MOP 27 opened on Sunday morning, 1 November. The Preparatory Segment met from Sunday through to Tuesday. On Wednesday and Thursday, the High-Level Segment (HLS) convened. As the Preparatory Segment was unable to complete its work by Tuesday, it reconvened a number of times during the HLS.

PREPARATORY SEGMENT

On Sunday, Co-Chair Emma Rachmawaty (Indonesia) opened the Preparatory Segment. Rashid Ahmed Mohammed Bin Fahad, Minister of Environment and Water, UAE, underscored his country's longstanding commitment to the Montreal Protocol and welcomed OEWG 36's success in establishing a mandate for a contact group on HFC management.

Tina Birmbili, Executive Secretary, Ozone Secretariat, observed that the evolution of ODS controls under the Montreal Protocol follow a pattern, with early action by non-Article 5 parties, later action by Article 5 parties, and inclusion and tightening of control measures and schedules at appropriate times. She highlighted that additional obligations have been accompanied by supplementary funding for Article 5 parties. She said delegates are beginning to write the Protocol's next phase by agreeing on a mandate for a contact group on HFC management. She stressed that HFC discussions must be inclusive, build trust and consider the interlinkages of the eight challenges identified in the mandate.

ORGANIZATIONAL MATTERS: Adoption of the

Agenda: Co-Chair Rachmawaty introduced the provisional agenda (UNEP/OzL.Pro.27/1 and 1/Add.1). Delegates agreed to discuss under agenda item nine (Potential areas of focus for the 2018 quadrennial assessments) nominations to replace the

resigning SAP Co-Chairs, A. R. Ravishankara (US) and Ayite-Lo Nohende Ajavon (Togo), as well as TEAP organizational matters raised in the addendum to its 2015 progress report.

Delegates agreed to include under item 11 (Other matters), *inter alia*: ODS releases from production processes; financial matters related to TEAP's organizational issues; ODS disposal; and possible problems created by delayed transfer of funds from implementation bodies.

Organization of Work: Co-Chair Paul Krajnik (Austria) introduced the organization of work. Saudi Arabia questioned whether the outcome of the OEWG and the proposed amendments should be discussed in plenary or in a contact group. Co-Chair Krajnik clarified that proponents need to present their amendments before discussing them in a contact group.

OTHER MATTERS: These items were addressed on Sunday.

ODS Disposal: Samoa, supported by Grenada and Cameroon, requested that this issue be included on OEWG 37's agenda. Delegates agreed.

Delayed Transfer of Funds: Co-Chair Krajnik addressed possible problems created by delayed transfer of funds from implementation bodies. Paraguay, supported by Cuba, Haiti, Mozambique and Niger, cautioned that delays in disbursing funds from implementing agencies could lead to parties' non-compliance.

Canada explained that the MLF Executive Committee (ExCom) addresses possible delays and the reasons for the delays. Jordan noted the ExCom finances two types of projects: infrastructure and investment.

Cuba suggested the MOP "take note" of the issue as a preventative approach, to which parties agreed.

HIGH-LEVEL SEGMENT

The HLS was opened by Mikkel Sorensen (Denmark), Acting MOP 26 President, on Wednesday.

Minister Fahad called for moving past discussing HFC management challenges and focusing on generating solutions. He said further delay in achieving an HFC agreement would undermine efforts to mitigate climate change and recommended sending a strong message to the 21st COP of the UN Framework Convention on Climate Change (UNFCCC).

India urged careful consideration of any HFC phase-down under the Protocol, noting that the UNFCCC controls greenhouse gas (GHG) emissions. He recommended the contact group on HFCs address the concerns of all parties through a holistic, visionary approach.

Achim Steiner, Executive Director, UNEP, urged delegates to seize the opportunity to act on HFCs to honor and build on the Protocol's legacy as the most successful multilateral environmental agreement. He elaborated that acting on HFCs in Dubai would prove that the Protocol can take up new challenges.

Steiner then presented outgoing SAP Co-Chairs Ravishankara and Ayite-Lo Nohende Ajavon with awards honoring their contribution to the SAP, the Montreal Protocol, and ozone science as a whole. Fahad was also honored for his contribution, including in environmental decision-making in the region.

Acting MOP 26 President Sorensen said that, while much has been achieved under the Protocol, parties should continue their efforts to address current and future dangers. He highlighted unfinished business, such as exemptions and the use of methyl bromide for quarantine and pre-shipment procedures.

ORGANIZATIONAL MATTERS: Election of MOP 27 officers: The MOP 27 Bureau was elected as follows: as President, Virginia Potter (Canada); as Vice Presidents, Rose Mkankomeje (Rwanda); Tumau Herowna Neru (Samoa); and Sabir Atadjanov (Kyrgyzstan); and as rapporteur, Elias Gómez (Dominican Republic).

Adoption of the Agenda of the MOP 27 HLS: Delegates adopted the agenda (UNEP/OzL.Pro.27/1 and 1/Add.1) without amendment.

Organization of work: Plenary agreed to convene a ministerial roundtable, followed by a presentation on the 2014 Quadrennial Assessment Synthesis Report, among other items.

Credentials of representatives: On Wednesday morning, MOP 27 President Potter requested parties to submit credentials as soon as possible, saying that the Bureau will review them and report to plenary. On Friday morning, Gilbert Bankobeza, Senior Legal Officer, Ozone Secretariat, reported that the MOP 27 Bureau had inspected the credentials, and approved 90 of them.

PRESENTATIONS BY THE ASSESSMENT PANELS ON THEIR SYNTHESIS OF THE 2014 QUADRENNIAL ASSESSMENTS: On Wednesday, SAP Co-Chair Ravishankara presented the Synthesis of the 2014 Reports of the Assessment Panels of the Montreal Protocol. He noted overarching messages include that, due to the success of the Montreal Protocol: large increases in UV radiation have been prevented, except near the poles; ozone layer depletion has been reversed; and ODS consumption has decreased, in contrast to all other major GHGs. He cautioned that some ODS alternatives are powerful GHGs, with potentially harmful effects, but stated that scientific and technological advances may offer solutions.

On a question regarding the aspects contributing to the success of the Protocol, Ravishankara, with Ashley Woodcock, Medical Technical Options Committee (TOC) Co-Chair, underscored the importance of "bringing science to the parties." On studying the links between the replacement of HCFCs and HFCs and their effect on the ozone layer and climate change, Paul Newman, SAP Co-Chair, said that these are dealt with in greater depth in the report.

MOP 27 took note of the report.

PRESENTATION BY THE CHAIR OF THE MLF EXCOM ON THE WORK OF THE COMMITTEE: On Thursday in plenary, John Thompson (US), Chair of the ExCom, presented the Report of the ExCom of the MLF for the Implementation of MOP 27 (UNEP/OzL.Pro.27/10). He highlighted the MLF's decisions, activities and achievements, noting 140 countries have approved HCFC Phase-Out Management Plans (HPMPs) and 33 countries are preparing to implement stage 2 HPMPs. He highlighted, *inter alia*: the importance of addressing the refrigeration and air conditioning (RAC) sector, noting funding for a feasibility project on district cooling to demonstrate low-global warming potential (GWP) technologies in the air conditioning manufacturing sector and the

expected consideration of demonstration projects and feasibility studies on district cooling at the upcoming ExCom meeting. Thompson reminded delegates that the ExCom had scheduled a review of institutional strengthening projects, saying that such projects will be approved at a level that is 28% higher than the historically agreed level. He described projects being implemented by the UN Development Programme (UNDP), the UN Industrial Development Organization (UNIDO) and the World Bank. On achievement, he said a total of 453,772 tonnes of ODS has already been phased out.

STATEMENTS BY HEADS OF DELEGATION: This agenda item was taken up on Wednesday and Thursday.

Ministerial Roundtable: On Wednesday, a ministerial roundtable addressed “How the institutions and mechanisms of the Montreal Protocol could assist parties in managing HFCs,” moderated by Ambassador Fernando Lugris (Uruguay). The roundtable began with a video on the role of HFCs in contributing to global warming, followed by statements and a panel discussion.

An in-depth summary of the Ministerial Roundtable is available at: <http://www.iisd.ca/vol19/enb19114e.html>.

Statements from Heads of Delegation: On Wednesday and Thursday, the HLS heard statements from heads of delegation. Burkina Faso, with Bangladesh, the European Union (EU), Kenya, and others, supported an HFC amendment. Bahrain identified challenges, including funding, alternatives and capacity building.

FSM reiterated that adopting the HFC amendment would send a signal to the market that could spark innovation and unlock large-scale investments. He highlighted opportunities for energy efficiency in an HFC phase-down and urged, with Australia and others, agreement on a “Dubai roadmap” for a comprehensive, inclusive negotiation process in 2016. Somalia referenced current reconstruction efforts, including a focus on energy efficiency and green growth, calling on the private sector to comply with corporate social responsibility.

Indonesia presented efforts to phase-out HCFCs. FSM urged attention on low-GWP alternatives for the fisheries sector. Mauritius suggested that other multilateral environmental agreements could learn from the Protocol’s success, particularly its cooperative nature. Kyrgyzstan emphasized the vulnerability of mountain ecosystems to climate change. Oman reiterated its commitment to the Vienna Convention and the Montreal Protocol.

The International Institute of Refrigeration offered to help countries develop and adopt low-GWP technologies in the refrigeration sector. The International Pharmaceutical Aerosol Consortium expressed support for the phase-down of HFCs, but requested consideration of important patient health aspects, as was suggested by the Medical TOC (MTOC).

An in-depth summary of Wednesday’s statements is available at: <http://www.iisd.ca/vol19/enb19114e.html>.

REPORT OF THE CO-CHAIRS OF THE PREPARATORY SEGMENT AND CONSIDERATION OF THE DECISIONS RECOMMENDED FOR ADOPTION BY MOP 27: On Friday morning, Co-Chair Krajcnik provided

a report on the preparatory segment, stating that, while taking a long time, parties had concluded their work and agreed to forward a number of decisions to the HLS.

ADOPTION OF DECISIONS AND REPORT OF MOP 27: On Friday morning, the HLS considered the draft report of MOP 27 (UNEP/OzL.Pro.27/L.1 and UNEP/OzL.Pro.27/L.1/Add.1). They also considered the compilation of draft decisions (UNEP/OzL.Pro.27/L.2).

The decisions were considered and adopted with minor amendments. After going through the report paragraph-by-paragraph, delegates adopted it with minor amendments.

CLOSING PLENARY: The HLS closing plenary reconvened early Friday morning due to protracted contact group discussions. MOP 27 President Poter thanked participants for their cooperative spirit during discussions over the week and congratulated them on their achievements. She reminded delegates of Rwanda’s offer to host MOP 28 in 2016 in Rwanda, as well as MOP 26’s agreement that Rwanda would host MOP 28. She also read a message from the delegation of Rwanda, who she said had to leave, reconfirming that Rwanda is ready and honored to host this meeting in November 2016. She closed the meeting at 2:41 am on Friday, 6 November.

MOP 27 OUTCOMES

Unless otherwise stated, all draft decisions submitted for MOP 27’s consideration are contained in document UNEP/OzL.Pro.27/3. Unless otherwise indicated, draft decisions were adopted during the HLS on Friday morning, and can be found in document UNEP/OzL.Pro.27/L.2.

ADMINISTRATIVE ISSUES: Financial report of the Trust Fund and budgets for the Montreal Protocol: On Sunday, in plenary, Co-Chair Rachmawaty introduced this item (UNEP/OzL.Pro.27/3, UNEP/OzL.Pro.WG.1/36/INF/1 and UNEP/OzL.Pro.WG.1/36/INF/2) and asked interested parties to join an open-ended budget committee, which convened throughout the week. Delano Ferwey (the Netherlands) and Leslie Smith (Grenada) co-chaired the group.

On Friday morning in plenary, Co-Chair Ferwey presented the report of the budget committee. He reported that the committee agreed to, *inter alia*: leave parties’ contributions unchanged, noting that this decision carries risks with regard to the fund balance; and include a budget line for one extra five-day OEWG and one three-day ExMOP to be held back-to-back with the scheduled OEWG in the 2016 budget. Plenary agreed to forward the draft decision to the HLS.

Final Outcome: In its decision (UNEP/OzL.Pro.27/CRP.10), the MOP decides to, *inter alia*:

- approve the revisions of the 2015 budget in the amount of US\$6,363,557 and the budget of US\$6,772,162 for 2016;
- authorize the Secretariat to draw down the amounts of US\$2,086,624 in 2015 and US\$2,495,229 in 2016;
- approve, as a consequence of the drawdowns referred to above, total contributions to be paid by the parties of US\$4,276,933 for 2015 and US\$4,276,933 in 2016, and to note the on-going unsustainable depletion of the fund balance and the implications for further drawdowns after 2016;
- request the Secretariat to prepare scenarios for the Trust Fund budget, its fund balance and reserves and parties’ future

contributions to ensure an adequate level of the fund balance to allow the continued work of the Montreal Protocol and present these scenarios in time for OEWG 36;

- reaffirm a working capital reserve at a level of 15% of the annual budget to be used to meet the final expenditures under the Trust Fund;
- note with concern that a number of parties have not paid their contribution for prior years, and urge those parties to pay both their outstanding contributions and their future contributions promptly and in full, particularly given that the fund balance has been significantly depleted;
- request the Executive Secretary and invite the MOP President to enter into discussions with any party whose contributions are outstanding for two or more years with a view to finding a way forward, and to request that the Executive Secretary report to MOP 28;
- decide to further consider how to address outstanding contributions to the Trust Fund at its next meeting and request the Executive Secretary to continue to publish and regularly update information on the status of contributions to the Protocol's Trust Funds;
- request the Secretariat to provide, within the budget approved for 2016, administrative and organizational support to the TEAP;
- encourage parties to provide additional voluntary contributions to the Trust Fund "Support of the Activities of the Ozone Secretariat" for any unbudgeted meetings;
- encourage parties to contribute to the Trust Fund "Support of the Activities of the Ozone Secretariat" with a view to ensuring the full and effective participation of Article 5 parties in the MOP and OEWG; and
- request the Secretariat to indicate in future financial reports of the Trust Fund the amounts of cash in hand in the section entitled "Total reserves and fund balances," in addition to contributions that have not yet been received.

ISSUES RELATED TO EXEMPTIONS FROM ARTICLE

2 OF THE MONTREAL PROTOCOL: Nominations for essential-use exemptions for 2016:

On Sunday, Co-Chair Rachmawaty presented the EUE nominations noting, *inter alia*, one nomination from China for CTC was approved by the Chemicals TOC.

On Tuesday, parties agreed to forward nominations for EUEs for 2016 (draft decision XXVII/[A]) to the HLS, where it was adopted Friday morning without amendment.

Final Outcome: In its decision (XXVII/[A]), the MOP, *inter alia*:

- encourages China to complete the revision of its relevant national standard and to ensure that a revised national standard is brought into force as soon as possible with a view to ensuring a smooth transition to a method that does not use ODS; and
- authorizes the level of consumption for China for 2016 necessary to satisfy essential uses of CTC for testing of oil, grease and total petroleum hydrocarbons in water, as specified in the annex to the decision.

Nominations for critical-use exemptions for 2016 and 2017: On Sunday, Methyl Bromide TOC (MBTOC) Co-Chair Ian Porter (Australia) presented the recommendations for methyl bromide critical-use nominations (CUNs). He requested parties to report on stocks if applying for CUEs and to follow data submission timelines. He said the MBTOC: does not recommend Canada's CUN for strawberry runners in 2017; reduced Argentina's CUN for tomatoes by an additional 5%; and approved Argentina's revised request on strawberries.

Noting disagreement with the MBTOC's recommendation, Canada withdrew its CUN and said it will consider submitting it in 2017. The US said it had collected additional information on available stocks and withdrew its CUN on cured pork.

Australia invited delegates to join a small discussion group to finalize a conference room paper (CRP) on CUEs. South Africa asked the MBTOC to re-consider its recommendation on South Africa's CUN, saying it cannot find a suitable alternative. Co-Chair Rachmawaty suggested interested parties discuss with Australia and proposed South Africa hold additional bilateral discussions with the MBTOC.

On Tuesday, parties agreed to forward the nominations for CUEs for 2016 and 2017 (UNEP/OzL.Pro.27/CRP.6) to the HLS for adoption.

Final Outcome: In its decision, XXVII/[B], the MOP permits, for the agreed critical-use categories for 2016 and 2017 set forth in Table A contained in the annex to the decision, for each party, subject to the relevant conditions, the levels of production and consumption for 2016 and 2017 set forth in Table B of the annex, which are necessary to satisfy critical uses. It further decides that:

- parties shall endeavor to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in Table A of the annex;
- each party that has an agreed CUE shall renew its commitment to ensuring that the relevant criteria are applied in licensing, permitting or authorizing critical uses of methyl bromide; and
- each party reports on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies.

The annex to the decision contains two tables. Table A lists agreed critical-use categories for: Australia (strawberry runners) for 2017; and Argentina (strawberry fruit and tomato), China (ginger), Mexico (strawberry and raspberry nurseries) and South Africa (mills and houses) for 2016. Table B sets out corresponding permitted levels of production and consumption.

ISSUES RELATED TO ALTERNATIVES TO ODS:

Report by the TEAP on the full range of alternatives to

ODS: On Sunday, Co-Chair Krajnik introduced this item. TEAP Co-Chair Bella Maranion (US) noted the report's highlights, including little change in the availability of equipment in the RAC sector and significant changes in mitigation scenarios, including on cost estimates.

Various TEAP members outlined, *inter alia*: that the different scenarios consider three conversion periods, noting the most aggressive mitigation scenario showed the greatest decrease in GWP impacts, while the least aggressive scenario showed the

lowest decrease; that delaying and extending conversion periods for the stationary air conditioning sector affects overall climate impacts and that the most aggressive mitigation scenario is the cheapest; and that without a universal definition for high-ambient temperature conditions, there is no clarity on what constitutes a high-ambient temperature country.

Responding to questions, the TEAP explained that: the model has many parameters, not just gross domestic product (GDP) and growth projections; the report's maps illustrate different climate zones in which equipment has to work efficiently; the definitions and classifications take into consideration the American Society of Heating, Refrigerating, and Air-Conditioning Engineers methods.

Pakistan requested more information on new substances. Saudi Arabia asked the TEAP to explore safety, energy efficiency, and economic and social costs. Argentina requested analysis of the availability and timelines for alternatives in different world regions. Switzerland asked for more precision on investment costs in HFC replacements. Canada announced that it would propose a CRP on a renewed mandate for TEAP work on mitigation scenarios.

On Tuesday, Canada introduced the document (UNEP/OzL.Pro.27/CRP.8), explaining that it requests the TEAP to prepare a report for consideration by OEWG 37 that would, *inter alia*, update information on alternatives to ODS and HFCs and update and extend the business-as-usual scenario.

Burkina Faso, Fiji and Samoa urged the TEAP to consider alternatives to ODS in the fisheries sector. Australia, the EU, Mexico and the US expressed broad support for the draft decision. Pakistan and Saudi Arabia noted caution, saying that elements of the draft decision presuppose the outcome of the contact group on HFCs management. India opposed the draft decision.

On Wednesday and Thursday, an informal group discussed the CRP. The group addressed, *inter alia*: the TEAP's role as an advisory body; that the TEAP has not previously conducted specific options for phase-down scenarios; and the TEAP's position to provide a definition of high ambient temperatures.

During Friday morning's Preparatory Segment plenary, Canada revealed that after the informal group had concluded on Thursday afternoon, discussions continued on the meeting's margins with concerned parties agreeing to text. Parties then agreed to forward the CRP to the HLS for adoption.

Final Outcome: In its final decision (UNEP/OzL.Pro.27/CRP.8/Rev.1), the MOP agreed to request the TEAP, if necessary in consultation with external experts, to prepare a report for consideration by OEWG 37, and thereafter an updated report to be submitted to MOP 28. The update would, where necessary, provide new information on ODS alternatives, including not-in-kind alternatives, based on the guidance and assessment criteria provided in sub-paragraph 1(a) of Decision XXVI/9 (Responses to the TEAP Report on Information on ODS Alternatives), taking into account the most recent findings on the suitability of alternatives under high-ambient temperatures.

Updated information submitted by parties on their implementation of paragraph 9 of decision XIX/6: On Sunday, Co-Chair Rachmawaty stated that parties were

encouraged to send information on their activities to minimize ODS' environmental impacts to the Secretariat. She welcomed information provided by Canada, Mexico, Montenegro, Paraguay, Switzerland and the US.

On Friday morning, Kuwait reported that his country and Qatar had submitted their data and asked to be removed from the list of six parties that had not reported 2014 data. The Secretariat noted that the decision will be amended to reflect this change.

Final Outcome: The final decision (XXVII/[G]) notes, *inter alia*, that: 193 of the 197 parties that should have reported data for 2014 have done so; failure to report 2014 data in accordance with Article 7 places parties in non-compliance with their data reporting obligations; a lack of timely data reporting impedes effective monitoring and assessment of parties' compliance; and reporting by 30 June each year facilitates the MLF ExCom for the implementation of the Protocol in assisting parties to comply with the Protocol's control measures.

The decision also:

- urges Democratic Republic of Congo, Dominica, Somalia and Yemen to work closely with the implementing agencies and to report the required data to the Secretariat;
- requests the ImpCom to review the situation of those parties; and
- encourages parties to continue to report consumption and production data as soon as figures are available, preferably by 30 June each year, as agreed in Decision XV/15 (on Earlier Reporting of Consumption and Production Data).

OUTCOME OF THE RESUMED OEWG 36 MEETING:

On Sunday, Co-Chair Rachmawaty introduced this item (UNEP/OzL.Pro.27/12), underlining that most discussions occurred informally, but a decision had been reached on a mandate to establish a contact group to discuss the feasibility and ways of managing HFCs. Co-Chair Rachmawaty proposed, and delegates agreed, to establish a contact group.

The summary of the OEWG 36 discussions and the contact group mandate is available at: <http://www.iisd.ca/vol19/enb19110e.html>

PROPOSED AMENDMENTS TO THE MONTREAL PROTOCOL: On Sunday, Co-Chair Krajnik noted four amendment proposals submitted by: North America (UNEP/OzL.Pro.27/5); India (UNEP/OzL.Pro.27/6); the EU (UNEP/OzL.Pro.27/7); and Kiribati, Marshall Islands, Mauritius, FSM, Palau, Philippines, Samoa and Solomon Islands (UNEP/OzL.Pro.27/8). He reminded parties that, while the proposals will be introduced in plenary, a contact group will discuss them in greater depth.

The US presented North America's proposal for a two-step approach to an HFCs amendment. She suggested that step one consider adopting a scaled-back amendment in 2015, the "Dubai amendment," and step two negotiate the remaining provisions in 2016, with additional negotiating sessions and further analysis from TEAP.

India presented its proposal. He highlighted, *inter alia*: support for conversion costs; a 15-year grace period for Article 5 parties; and a division of the 19 HFCs into four categories based on their GWP and the availability of financially viable alternatives.

The EU highlighted its proposal's emphasis on offering solutions and its ambitious phase-down schedule for non-Article 5 countries, beginning in 2019.

Presenting the island states' proposal, FSM welcomed progress on the HFC discussions and said any agreement must address financing, flexibility and fairness. He called for agreement on an amendment at MOP 27.

CONTACT GROUP ON FEASIBILITY AND WAYS OF MANAGING HFCs: The contact group, with Patrick McInerney (Australia) and Xia Yingxian (China) as co-conveners, met throughout the week. In line with the mandate detailed by the resumed session of OEWG 36, the group began by discussing challenges and then moved to examine possible solutions to identified challenges.

The challenges identified in the initial discussions included: recognizing the principle of common but differentiated responsibilities; the lack of availability and cost of alternatives in some countries or regions; "flexibility of implementation" in matters such as choosing which technologies to employ and the prioritization and timing of sector conversions; cost coverage and cut-off dates for funding eligibility; funding coverage of second and third phase conversions; sufficient lead time for non-Article 5 control measures "to send the needed signal to the market" before Article 5 countries begin their control measures, in order to increase the availability of technology choices in the marketplace; HFC stocks disposal; capacity building for new technologies; a possible exemption mechanism; intellectual property rights (IPRs); the need for a "full" study of the economic impact of any proposed HFC phase-down on Article 5 countries; supporting small- and medium-sized enterprises in a transition away from HFCs; the need for a survey of HFC production and consumption by all parties prior to an agreement on phase-down commitments; whether to ask the TEAP to undertake a formal, technical review on the availability of alternatives; lack of "common procedures" for implementing agencies; and developing new standards and a shortage of engineers, particularly in the commercial refrigeration sector.

On Tuesday and Wednesday the contact group began discussing solutions and possible ways forward, with several non-Article 5 countries offering ideas, and several Article 5 countries welcoming the dialogue and suggestions.

On **flexibility in implementation**, several Article 5 and non-Article 5 countries expressed support for amendment language allowing flexibility in prioritizing sectors for phase-down and choosing substances, technologies and national compliance strategies. Article 5 countries supported, *inter alia*: including the concept of ratios in any phase-down; developing an HFC inventory; and exploring linkages between the concepts of flexibility and exemptions. They also urged ensuring flexibility in MLF funding and called for conducting a potential HFC phase-down in concert with the HCFC phase-out.

One non-Article 5 country suggested linking cost-effectiveness with funding made available for the phase-down. Two non-Article 5 countries suggested there was potential for substantial flexibility as long as it fell within the Montreal Protocol's framework.

An Article 5 country suggested linking commitments to actual country emissions of HFCs, using a volumetric approach. Others questioned the practicality of such an approach.

One non-Article 5 country suggested that if the baseline used for phase-down combines both HCFCs and HFCs, then countries could have many choices in how to meet targets. Regarding sectors and uses for which no viable technology is available as a phase-down deadline approaches, two non-Article 5 countries suggested that the proposed periodic technology review could allow for adjustments, when necessary.

On **financial support**, several non-Article 5 countries suggested "clear and transparent guidance" from the MOP to the ExCom on what the MLF would support, including a definition of what constitutes second and third stage conversions. One non-Article 5 country suggested that support for conversions might require a limit on GWP levels. Another suggested specifying support for training on alternative technologies and defining and adopting safety standards.

Participants also called for addressing, *inter alia*: "early funding" for enabling activities; training; methodologies for calculating conversion costs; new reporting obligations on by-products; patent costs and licensing fees; plant closings; lost profits; collection and disposal; and levels of support for low-level consumption countries. Several delegations suggested developing a list and classifying what should be dealt with by MOP guidance to the ExCom and what should be included in an amendment text. One urged caution concerning the level of detail to include in any guidance to ExCom.

Observing that the RAC sector is already moving to address HFCs, an Article 5 country requested support for **capacity building** during phase-down.

On **incentives**, one Article 5 country questioned whether the proposed cut-off date should be linked to the amendment's date of adoption, cautioning that this requirement may discourage some parties from committing. A non-Article 5 country proposed linking cut-off dates to the date of adoption of any agreement. An Article 5 country stressed that incentives should ensure that all parties benefit, identifying some countries that are without production sectors. One non-Article 5 country stated that if the Montreal Protocol agreed to address HFCs, dialogue on additional incentives could continue.

On Thursday a group of Article 5 countries proposed possible amendment text on the special situation of **high ambient temperature** countries. The proposal called for a special exemption, separate from CUEs and EUEs, for countries with high ambient temperature conditions where suitable alternatives do not exist in the specific sub-sector of use. The exemption initially would be for five years but renewable for another five years if the TEAP finds that suitable HFC alternatives still do not exist, based on criteria agreed by parties. The proposal also called for a deferral in consideration by the ImpCom of any noncompliance in HCFC production and consumption during the exemption period(s).

Non-Article 5 countries reacted to the proposal, indicating that more details would be needed on, *inter alia*: the criteria for deciding what constitutes a country with high ambient temperatures; which sectors would be eligible for the exemption;

and the role of the MOP in agreeing to or ending any extension request. They also suggested further discussion on the duration of exemptions and their extensions. One non-Article 5 country suggested that exemption renewals be tied to evidence that the party in question had committed to establishing framework conditions, such as developing safety standards for flammable or toxic alternatives.

Saying that the group needed to decide on a path forward, a non-Article 5 country proposed decision text in which parties would agree to: address HFCs under the Montreal Protocol and work towards an HFC amendment in 2016; recognize the progress made on the challenges identified in the group's mandate on certain issues; recognize that further progress needs to be made regarding the other challenges identified in the mandate; maintain the contact group to undertake those discussion during 2016; hold a series of OEWG and other meetings, including an ExMOP; forward the four 2015 amendment proposals to the 2016 Montreal Protocol meetings for consideration; and request the Ozone Secretariat to prepare a document for consideration at the 2016 meetings consolidating the legal text of the four amendment proposals.

Another delegation, saying they were reflecting the work of an informal consultation among Article 5 and non-Article 5 countries, suggested formally recognizing a list of points of convergence reached during contact group discussions, such as those on MLF funding, flexibility in implementation, second and third stage conversions, enabling activities, and the need for an exemption for high ambient temperature countries.

Delegations welcomed the two proposals as a good basis for discussion. The contact group then suspended its discussion for informal discussions on the proposals for a draft MOP decision and points of convergence until after 1:00 am. When the contact group reconvened, the Co-Conveners presented a modified proposal for a decision, with an annex containing a retitled and amended list of points of convergence. The Preparatory Segment agreed to forward the text, unchanged, to the HLS.

Final Outcome: In the decision, the parties decide to work within the Montreal Protocol toward an HFC amendment in 2016 by first resolving challenges through generating solutions in the contact group. They agree to hold a series of OEWG and other meetings, including an ExMOP, in 2016. The meetings will continue consideration of agenda items 6 (outcome of the resumed OEWG 36 meeting) and 7 (proposed amendments to the Montreal Protocol), including the four proposals for an HFC amendment.

The decision recognizes the progress made at MOP 27 on the challenges identified in the mandate agreed at the resumed session of OEWG 36 for a contact group on feasibility and ways of managing HFCs, including developing a common understanding on issues related to flexibility of implementation, second and third stage conversions, guidance to the ExCom, enabling activities for capacity building, and the need for an exemption for high ambient temperature countries. The mandate for the contact group is attached to the decision as Annex I.

The decision recognizes that further progress still needs to be made, in particular regarding other challenges identified in the contact group mandate, on such issues as conversion costs, technology transfer and IPRs.

The decision also endorses the concepts in Annex 2, "Issues raised and discussed in detail as part of the challenges during the contact group will be further discussed, in a direction consistent with the record of the discussion." These concepts are:

- **Funding:** maintain the MLF as the financial mechanism and agree that additional financial resources will be provided by non-Article 5 parties to offset costs arising out of HFC management for Article 5 parties, if obligations are agreed to;
- **Flexibility:** Article 5 parties will have flexibility to prioritize HFCs, define sectors, select technologies/alternatives, and 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 aforementioned principle in relevant guidelines and its decision-making process;
- **Second and Third Conversions:** enterprises that have already converted to HFCs in phasing out CFCs and/or HCFCs will be eligible to receive funding from the MLF to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
- **Guidance to the ExCom:** guidelines and/or methodologies will be developed on the following issues, if agreed: determining incremental costs; calculating incremental costs; cost effectiveness thresholds; and the energy efficiency and climate impacts of projects;
- **Enabling activities:** enabling activities will be supported by the MLF in any HFC phase-down agreement: capacity building and training for handling HFC alternatives in the servicing, manufacturing and production sectors; institutional strengthening; Article 4b licensing; reporting; demonstration projects; and developing national strategies; and
- **High Ambient Temperature Exemption:** the need for an exemption for high ambient temperature countries.

ISSUES RELATED TO THE PHASE-OUT OF HCFCs:

On Sunday, Co-Chair Rachmawaty introduced the agenda item. Australia presented its proposal with the US and Canada, requesting the TEAP to provide additional information on, *inter alia*: sectors where essential uses for non-Article 5 countries will be required after 2020; and future needs for non-Article 5 countries in the RAC sector. Plenary forwarded the draft decision to the HLS.

Final Outcome: In its decision (XXVII/[D]), the MOP requests the TEAP in relation to Annex C, group I, substances, to identify sectors, including subsectors, if any, where essential uses for non-Article 5 parties may be needed after 2020, including estimations of the HFC volumes to be used; to assess the future servicing requirements between 2020 and 2030 for non-Article 5 parties of RAC equipment, and to assess whether there is a need for servicing in other sectors; to report on recent volumes of production to satisfy basic domestic needs, projected estimates of such future production and estimated needs of non-Article 5 parties to satisfy basic domestic needs beyond 2020.

The decision also:

- invites parties to provide relevant information to the Ozone Secretariat by 15 March 2016 for inclusion in the Panel's assessment; and
- requests the Panel to submit its report to OEWG 37.

POTENTIAL AREAS OF FOCUS FOR THE ASSESSMENT PANELS' 2018 QUADRENNIAL ASSESSMENT:

Plenary addressed this item on Sunday.

Co-Chair Krajnik invited nominations for the SAP. The US for North America nominated David Fahey (US). Zimbabwe for the African Group nominated Bonfils Safari (Rwanda). On Tuesday, Co-Chair Krajnik informed plenary that the draft decision on the two nominations for SAP Co-Chairs was available (UNEP/OzL.Pro.27/CRP.5), along with their *curriculum vitae*. Plenary forwarded the draft decision to the HLS.

On TEAP organizational issues, Australia supported a MTOC, Japan said it is finalizing a CRP, and Switzerland proposed parties guarantee secure funding for their candidates.

On Monday through Thursday, delegates met informally to discuss potential areas of focus for the assessment panels' 2018 quadrennial reports (UNEP/OzL.Pro.27/CRP.1). Switzerland and the EU co-chaired the group.

Participants debated issues related to: references to climate change; whether to encourage the assessment panels to keep parties informed of any important new developments; "definition" of units and terminology; timing of the reports; and spacing between panel reports and the synthesis report. Members of the Assessment Panels shared their process for producing the report, among other topics.

Participants also discussed whether to reference environmental impacts in the work of the Environmental Effects Assessment Panel (EEAP), with one participant opposing such a reference. Others suggested alternative language, including reference to physical and chemical processes; "atmospheric" processes; and reference to Vienna Convention language. One participant pointed out the difficulty of removing the word "environment," noting that the Panel itself is called the Environmental Effects Assessment Panel and the Protocol is hosted under UNEP. Panel representatives expressed concern about "broad" references, saying the Panels rely on the MOP for guidance. Following protracted discussion, participants compromised by agreeing to refer to "those factors stipulated in Article 3 of the Vienna Convention."

During Friday morning's plenary, and following bilateral discussions, the EU reported that participants agreed to UNEP/OzL.Pro.27/CRP.1/Rev.1.

The relevant decisions were forwarded to the HLS.

Final Outcomes: In decision XXVII/H, on **membership changes in the SAP**, the MOP:

- thanks the scientific experts who have served as SAP Co-Chairs for their long and outstanding efforts on behalf of the Montreal Protocol: Ayite-Lo Ajavon (Togo); and A.R. Ravishankara (US); and
- endorses the appointment of new SAP Co-Chairs: Bonfils Safari (Rwanda); and David Fahey (US).

In its decision (UNEP/OzL.Pro.27/CRP.1/Rev.1), on **potential areas of focus for the assessment panels' 2018 quadrennial reports**, the MOP, *inter alia*:

- notes the excellent and highly useful work conducted by the SAP, the EEAP and the TEAP in preparing their 2014 assessment reports, including the 2015 synthesis report;
- requests the three assessment panels to prepare reports in 2018 and submit them to the Secretariat by 31 December 2018 for consideration by the OEWG and by MOP 31 in 2019 and present a synthesis report by 30 April 2019, noting that the panels should continue to exchange information, including on all sectors as well as on alternatives and the issue of high ambient temperatures, during the process of developing their respective reports to provide comprehensive information to the parties;
- encourages the assessment panels to more closely involve relevant scientists from non-Article 5 parties with a view to promoting gender and regional balance in producing reports;
- encourages the assessment panels to use defined, consistent units and consistent terminology throughout for better comparability;
- requests the assessment panels to bring to the notice of the parties any significant developments which, in their opinion, deserve notice, in accordance with Decision IV/13 (Assessment Panels);
- requests the EEAP, in drafting its 2018 report, to consider the most recent scientific information regarding the effects on human health and the environment of changes in the ozone layer and in ultraviolet radiation, together with future projections and scenarios for those variables, taking into account those factors stipulated in Article 3 of the Vienna Convention;
- requests the SAP to undertake, in its 2018 report, a review of the scientific knowledge as dictated by the needs of the parties to the Montreal Protocol, taking into account those factors stipulated in Article 3 of the Vienna Convention, including estimates of the levels of ozone layer depletion attributed to the remaining potential ODS emissions and an assessment of the level of global ODS emissions below which the depletion of the ozone layer could be comparable to various factors, such as the natural variability of global ozone, its secular trend over a decadal timescale and the 1980 benchmark level; and
- requests the TEAP, in its 2018 report, to consider the following topics, among others: the impact of ODS phase-out on sustainable development; technical progress in the production and consumption sectors in the transition to alternatives and practices that eliminate or minimize ODS emissions to the atmosphere, taking into account those factors stipulated in Article 3 of the Vienna Convention; technically and economically feasible choices for the reduction and elimination of ODS in all relevant sectors, including through the use of alternatives, taking into account their performance, and technically and economically feasible alternatives to ODS in consumption sectors; their overall performance; the status of banks containing ODS and their alternatives, including those maintained for essential and critical uses, and

the options available for handling them; and accounting for the production and consumption in various applications and relevant sources of ODS and their alternatives.

In its decision (UNEP/OzL.Pro.27/CRP.7/Rev.1) on the **TEAP organizational and membership changes**, the MOP thanks:

- the TEAP for its outstanding reports and the individual members for their service and dedication;
- Masaaki Yamabe (Japan) for his long and outstanding efforts as Senior Expert of the TEAP;
- Lambert Kuijpers (the Netherlands) for his long and outstanding efforts as Co-Chair of the RAC and Heat Pumps TOC;
- Paul Ashford (UK) and Miguel Quintero (Colombia) for their long and outstanding efforts as Co-Chairs of the Flexible and Rigid Foams TOC; and
- Ashley Woodcock (UK) and Jose Pons Pons (Venezuela) for their long and outstanding efforts as Co-Chairs of the MTOC.

The MOP also:

- endorses the appointment of Marco Gonzalez (Costa Rica) and Suely Carvalho (Brazil) as Senior Experts for a two-year and a four-year term, respectively;
- encourages the outgoing Co-Chairs to provide support to the new Co-Chairs of the relevant TOCs to ensure a smooth transition;
- disbands the Chemicals TOC and the MTOC and establishes a new TOC, to be called the Medical and Chemicals TOC;
- endorses the appointment of Helen Tope (Australia) as Co-Chair of the Medical and Chemicals TOC for a term of two years; and
- endorses the appointment of Keiichi Ohnishi (Japan) and Jianjun Zhang (China) as Co-Chairs of the Medical and Chemicals TOC for a term of four years.

COMPLIANCE AND DATA REPORTING ISSUES: On Sunday, ImpCom President Nancy Seymour (Canada) reported on the 54th and 55th ImpCom meetings (UNEP/OzL.Pro.27/9-UNEP/OzL.Pro/ImpCom/55/2 and Add.1). She noted that the Democratic Republic of Congo, Dominica, Somalia and Yemen have yet to report for 2014. She reported cases of non-compliance involving Libya and Bosnia and Herzegovina, noting both have submitted plans of action to return to compliance. She said that the draft decision (UNEP/OzL.Pro.27/CRP.3) calls for no further action for Bosnia and Herzegovina and close monitoring of Libya. Delegates agreed to forward the draft decision to the HLS.

Final Outcomes: In its decision on **non-compliance of Bosnia and Herzegovina** (XXVII/[E]), the MOP recognizes that Bosnia and Herzegovina reported annual consumption for the controlled substances in Annex C, group I (HCFCs), for 2013 of 5.13 ozone depleting potential (ODP) tonnes, which exceeded the party's maximum allowable consumption of 4.7 ODP-tonnes for those controlled substances for that year, and was therefore in non-compliance.

The decision, *inter alia*:

- notes the party's submission of a plan of action to ensure its return to compliance with the Protocol's HCFCs consumption control measures in 2014 and subsequent years;

- notes that the party submitted an explanation for its non-compliance, which confirmed that it had introduced a comprehensive set of measures necessary to ensure future compliance;
- notes the party's submission of ODS data for 2014 showing that it was in compliance with its HCFC consumption obligations;
- notes that no further action is necessary in view of the party's return to compliance and its implementation of regulatory and administrative measures to ensure compliance for subsequent years; and
- agrees to monitor the party's progress on the implementation of its obligations under the Protocol.

In its decision on **non-compliance of Libya** (XXVII/[F]), the COP recognizes that the annual consumption reported by Libya of the controlled substances in Annex C, group I (HCFCs), of 144.0 ODP-tonnes for 2013 and 122.4 ODP-tonnes for 2014, exceeded the party's maximum allowable consumption of 118.38 ODP-tonnes for those controlled substances for those years, and that the party was therefore in non-compliance.

The decision, *inter alia*:

- notes Libya's submission of an action plan to ensure its return to compliance with the Protocol's HCFC control measures under which Libya commits itself to reducing its HCFC consumption from 122.4 ODP-tonnes in 2014 to no greater than: 122.3 ODP-tonnes in 2015; 118.4 ODP-tonnes in 2016 and 2017; 106.5 ODP-tonnes in 2018 and 2019; 79.95 ODP-tonnes in 2020 and 2021; and levels allowed under the Protocol in 2022 and subsequent years;
- monitors the enforcement of Libya's system for licensing imports and exports of ODS;
- imposes a procurement ban of air-conditioning equipment containing HCFCs in the near future and consideration of a ban on the import of such equipment;
- urges Libya to work with relevant agencies to implement its action plan to phase out HCFC consumption;
- monitors Libya's progress on implementing its action plan and HCFC phase-out, and stated that Libya should be treated as a party in good standing, further noting that Libya should continue to receive international assistance to enable it to meet those commitments; and
- cautions Libya that, if it fails to return to compliance, parties will consider measures that may include actions, such as ensuring that the supply of HCFCs, that are the subject of noncompliance, is ceased so that exporting parties are not contributing to a continuing situation of non-compliance.

CTC DISCREPANCIES: This item was addressed under the agenda item on other matters during Sunday's plenary session. The EU introduced a draft decision on ODS releases from production processes and opportunities to reduce releases (UNEP/OzL.Pro.27/CRP.2) and asked for time to discuss the proposal with other parties.

An informal group met Monday and Tuesday to consider the draft decision. In the group, parties discussed, *inter alia*: possible discrepancies between observed and reported CTC data, as they relate to bottom-up inventories and global top-down assessments; findings from a scientific workshop held in Zurich, Switzerland,

in October 2015, themed “Solving the Mystery of CTC,” organized by the Stratosphere-Troposphere Processes and their Role in Climate (SPARC); the estimated lifetime of CTC; and removal of halon 2402 as this discrepancy was clarified by new data. The group agreed that the SPARC report findings would be presented at MOP 28, underscoring that the SAP will only provide an update to learn and benefit from the SPARC findings.

On Friday morning, plenary agreed to forward the CRP to the HLS.

Final Outcome: In its decision (UNEP/OzL.Pro.27/CRP.2/Rev.1), *inter alia*, the MOP:

- reiterates concern about the discrepancy between observed atmospheric concentrations and data on CTC reported in the 2014 TEAP and SAP assessment reports, indicating that the mismatch between bottom-up inventories and global top-down estimates of CTC remains unresolved;
- notes that derived CTC emissions, based on estimated lifetime and accurately measured atmospheric abundances, have become much larger over the last decade than those from reported production and usage, notwithstanding that some of the discrepancy could be explained by additional sources unrelated to reported production, such as contaminated soils and industrial waste, and that additional explanations could include underreported releases to the atmosphere and incorrect partial lifetimes (stratosphere, ocean or soil);
- recalls Decisions IV/12 (Classification of the Definition of Controlled Substances), X/12 (Emissions of ODS from Feedstock Applications), XVI/14 (Sources of CTC Emissions and Opportunities for Reductions), XVIII/10 (Sources of CTC Emissions and Opportunities for Reductions), XXI/8 (Sources of CTC Emissions and Opportunities for Reductions) and XXIII/8 (Investigation of CTC Discrepancy); and
- requests the TEAP and the SAP to continue their analysis of the discrepancies between observed atmospheric concentrations and reported data on CTC and to report and provide an update on their findings to MOP 28.

FINANCIAL ISSUES RELATED TO TEAP’S

ORGANIZATION: This item was taken up under the agenda item on other matters, during Sunday’s plenary session.

Switzerland explained concerns raised by the TEAP report addendum, suggested creating a voluntary trust fund to support participation in TEAP, and volunteered to work informally with other parties and draft a CRP.

On Friday morning, during the Preparatory Segment plenary, Switzerland introduced UNEP/OzL.Pro.27/CRP.9, providing an outline of key points, including modalities of funding for TEAP members’ participation. The plenary forwarded the draft decision to the HLS.

Final Outcome: In its decision (UNEP/OzL.Pro.27/CRP.9), the MOP, noting the existence of the means to receive voluntary contributions, separate from the trust funds for the Montreal Protocol and the Vienna Convention but managed by the Ozone Secretariat, to provide financial support for activities additional to the ones covered by the Vienna Convention and the Montreal Protocol, decides to, *inter alia*:

- maintain the current financial support for members of the assessment panels and their subsidiary bodies from Article 5 parties;
- request non-Article 5 parties that nominate experts to the assessment panels and their subsidiary bodies through their national focal points to obtain assurances or ensure they are otherwise satisfied that the nominated experts will be able to carry out their duties, including attendance at relevant meetings;
- invite parties to make voluntary financial contributions to members of the assessment panels and their subsidiary bodies from non-Article 5 parties to support their attendance at relevant meetings;
- note that the provision of such support does not detract from the responsibility of the non-Article 5 nominating party to obtain assurances or ensure it is otherwise satisfied that the nominated experts have sufficient support to carry out their duties, including attendance at relevant meetings; and
- request the Ozone Secretariat to reinstitute administrative and organizational support for the TEAP’s work to reduce the administrative burden on assessment panel members where possible.

UNWANTED IMPORT OF PRODUCTS AND

EQUIPMENT: This item was taken up on Sunday under the agenda item on other matters. Kyrgyzstan presented its CRP (UNEP/OzL.Pro.27/CRP.4), submitted with Armenia, Belarus, the EU, Kyrgyzstan, and the Russian Federation, on avoiding the unwanted import of products and equipment containing or relying on HCFCs. Co-Chair Rachmawaty suggested the MOP return to this CRP once it was translated into all languages.

On Monday, Co-Chair Rachmawaty reported that the finalized version of the draft decision, introduced by Kyrgyzstan and others, to amend MOP Decision X/9 on establishing a list of countries not wishing to import products and equipment whose continuing functioning relies on substances specified in Annex A and Annex B of the Protocol (UNEP/OzL.Pro.27/CRP.4) was available. Plenary forwarded the draft decision to the HLS.

Final Outcome: In its decision (UNEP/OzL.Pro.27/CRP.4), the MOP, *inter alia*:

- invites those parties that do not permit the importation of products and equipment containing or relying on substances specified in Annex C from any source, to inform the Secretariat, on a voluntary basis, that they do not consent to the importation of such products and equipment; and
- requests the Secretariat to maintain a list of parties that do not want to receive products and equipment containing or relying on substances specified in Annex C to be distributed to all parties by the Secretariat and updated on an annual basis.

CONSIDERATION OF THE MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2016:

On Sunday, Co-Chair Rachmawaty introduced this item, saying that nominations should be forwarded to the Secretariat for consideration at the HLS. The HLS adopted the nominations on Friday morning.

Members of the Implementation Committee: In its decision (XXVII/[I]), the MOP confirms the positions of Bosnia and Herzegovina, Cuba, Mali, Pakistan and the UK as members

of the ImpCom for one further year and selects, *inter alia*, Bangladesh, Canada, Haiti and Kenya as members of the ImpCom for a two-year period beginning on 1 January 2016;

It also notes the selection of Iftikhar ul Hassan Shah (Pakistan) to serve as President and Nancy Seymour (Canada) to serve as Vice-President and Rapporteur of the ImpCom for one year beginning on 1 January 2016.

Members of the MLF ExCom: In its decision (XXVII/[J]), the MOP decides to endorse the selection of Austria, Belgium, Canada, Germany, Japan, the Russian Federation and the US as members of the ExCom representing non-Article 5 parties and the selection of Argentina, Cameroon, China, Egypt, India, Jordan, and Mexico as members representing Article 5 parties for one year beginning 1 January 2016.

It also decides to note the selection of Agustin Sanchez (Mexico) and Krajnik to serve as Chair and Vice-Chair, for one year beginning 1 January 2016.

Co-Chairs of the OEWG: In its decision (XXVII/[K]), the MOP endorses the selection of Krajnik and Leslie Smith (Grenada) as Co-Chairs of the Montreal Protocol OEWG in 2016.

DATES AND VENUES FOR COP 11 OF THE VIENNA CONVENTION AND MOP 28 OF THE MONTREAL PROTOCOL: During Friday morning's plenary, MOP 27 President Poter reminded delegates of Rwanda's offer to host MOP 28 in 2016 in Rwanda and MOP 26's agreement that Rwanda would host MOP 28. She read a message from the delegation of Rwanda, reconfirming that Rwanda is ready and honored to host this meeting in November 2016.

The Dominican Republic then offered to host in 2017. MOP 27 President Poter said this offer would be noted in the report.

A BRIEF ANALYSIS OF MOP 27

I have walked that long road to freedom. I have tried not to falter; I have made missteps along the way. But I have discovered the secret that after climbing a great hill, one only finds that there are many more hills to climb. I have taken a moment here to rest, to steal a view of the glorious vista that surrounds me, to look back on the distance I have come. But I can only rest for a moment...and I dare not linger, for my long walk is not ended. – Nelson Mandela

As MOP 27 closed in the early morning hours of Friday, 6 November, delegates applauded, happily hugged and patted each other on the back. After six years of debate, with many parties refusing to even discuss a possible HFC amendment in any depth, MOP 27 was finally able to convene a contact group on the issue. Delegates held fruitful exchanges and shared their concerns as they embarked on what could be a long journey. In the end, the MOP decided to convene extraordinary meetings to be held during 2016, with a view to possible adoption of an HFC amendment.

Arriving at this outcome was not easy. During the final day of MOP 27, delegates' hope of capturing the broad agreement on certain ideas discussed in the contact group, including endorsing a 2016 goal to adopt an HFC amendment and authorizing the

necessary steps to make such a goal feasible, nearly faltered when an Article 5 country continued to apply steady resistance.

These cliff-hanging final hours of negotiation were a sharp reminder of the lingering mistrust among some Article 5 countries that was bred during the HCFC phase-out. Some felt misled by being pushed into HFCs in order to accelerate the HCFC phase-out, only to be told to shift away from HFCs just after they had invested heavily into converting to HFCs. Others felt they never received the financial support from the MLF they thought they had been promised, or the financial support offered was too little, with too many strings attached, and not enough flexibility.

The negotiations also highlighted the potential hazards of the Montreal Protocol's tradition of consensus decision-making as well as on the insistence by many parties of honoring the old diplomatic maxim, now explicitly enshrined in the contact group's mandate, that "nothing is agreed until everything is agreed." Ultimately, delegates struck a compromise on going forward, but not before raising, in the minds of many, the potential for one country to use the Protocol's preference for consensus-building to squeeze out additional concessions.

This brief analysis examines how the MOP's decision has put the Protocol firmly on the road toward developing an amendment that may inject new life and relevance into the Protocol. The analysis also considers how this agreement has given the "ozone family" an opportunity to reflect on lessons learned from implementing other amendments, start healing the wounds caused during the HCFC phase-out negotiations, and rebuild the trust among ozone family members.

THE LONG ROAD TO THE CONTACT GROUP, BUT MILES STILL TO GO

During MOP 27's opening plenary, many countries appeared eager to manage expectations, emphasizing that approval by the resumed session of OEWG 36 on a mandate for a contact group to discuss the feasibility and ways of managing HFCs was a notable achievement in and of itself. "It's a baby step, but an important one," stressed one seasoned participant, "For six years we have argued about whether or not we could discuss the issue at all...at least now it's no longer taboo." Another participant countered "We may yet have many years of talking left to endure, but at least now we are talking."

The contact group started with the shadow of mistrust built up from disagreements over the HCFC phase-out and six years of acrimonious debate about whether the management of HFCs belonged under the Montreal Protocol. On the former, Article 5 countries repeatedly employed examples from their HCFC experience, such as issues involving second and third conversions and the reputed lack of MLF help on technology transfer and IPR cost, to illustrate they did not want to repeat the experience by "walking down the long road" to a possible HFC amendment.

A large number of these complaints involved the MLF, expected to be one of the pillars of any HFC regime. Article 5 countries alleged that the MLF ExCom limited their choice of strategies and technologies to employ, would not permit flexibility in the prioritizing of sectors, underpriced projects in

some instances, and mishandled or ignored issues, such as those around second and third conversions, small- and medium-sized enterprises, and IPRs.

In Dubai, some Article 5 countries continued to debate which road to take. They questioned whether HFCs can and/or should be handled under the Montreal Protocol, stressing that HFCs are GHGs, not ODS, and therefore should be addressed under the UNFCCC. A few countries even wondered if HFCs were allowed under the Montreal Protocol, questioning if addressing HFCs under the Protocol would set a precedent for addressing other non-ozone-depleting substances.

For their part, some HFC amendment proponents expected the skeptics to “run out the clock” “by talking us to death and constantly adding to the list of challenges” before allowing discussion to turn to solutions. They expected this to be followed by discussion of the amendment proposals at some indeterminate time in the future. Resistance by a few Article 5 countries to a simple inventory of the ideas being offered to the group, even as a non-paper or virtual projection to aid discussion and identify commonalities, reinforced suspicions that some participants came to room solely to “apply the brakes.”

MORE HILLS TO CLIMB

Article 5 countries insisted on adequately airing concerns during initial contact group discussions, opposing early suggestions to focus on the text of the amendment proposals. Several countries adamantly emphasized the need to first address challenges, stressing the need to share lessons learned from the HCFC phase-out and their apprehensions about an HFC phase-down. One explained, “This is about trust building. This is about knowing you are not only listening, but that you hear us.”

The airing of the “challenges exercise” proved cathartic. But by the end of Monday’s contact group session, many Article 5 and non-Article 5 countries had tired of hearing about challenges and were eager to start “traveling further down the road” and discuss solutions. “We can repeatedly revisit the list of challenges, but really we all know them well by now,” declared one Article 5 country. “It does us little good if non-Article 5 countries are not going to offer us solutions.”

Non-Article 5 countries claimed that by providing more specific examples of Article 5 country HCFC implementation issues, their understanding of the latter’s concerns had improved. This was evidenced on Tuesday when they came ready to offer concessions, flexibility and compromise on key issues.

Encouraged by what they heard, Article 5 countries began taking some tentative steps. These steps, combined with a few behind-the-scenes informal-informals on Wednesday evening, helped the contact group reach what they deemed a “meeting of the minds” on possible solutions to several challenges posed by a possible HFC amendment. These challenges included implementation flexibility, second and third conversions, funding coverage, and guidance to the ExCom.

However, bumps in the road still exist and there are still many hills left to climb. This was evidenced by the final day of deliberations at MOP 27. Countries, eager to avoid the complete break-down of negotiations, focused on drafting a decision that would at least set out a pathway for negotiations on an amendment to continue. To this end, some countries,

long skeptical of an amendment, expressed sudden support for negotiations. Some were even tabling possible amendment text on the possible exemption for high ambient temperature countries.

Still, one country’s opposition to the draft decision led to approximately fifteen hours of often-frustrating informal talks and a series of concessions to bring on board the lone holdout. Several delegations and the Co-Conveners tried to put a positive spin on the situation, saying that during the long, frank discussions, “Everyone got to understand each other’s thinking better, and that will help us during negotiations next year.”

Others suggested that the protracted MOP 27 discussions were only the beginning. Informally, they said that the 2016 negotiations may be arduous and, once again, test the ozone family’s reliance on consensus, even though the Protocol allows for adoption by a two-thirds vote of parties present and voting.

Discussions on the HFC amendment, as well as in other informal discussions on decisions ranging from the terms of reference for the assessment panels to requests for the TEAP to provide information on alternatives to ODS, have also suggested the absence of “mutual trust” among a few members of the ozone family. This, they posited, led to the need for more intimate consultations on the meeting’s margins to hash out some of the underlying issues.

Several Article 5 countries, for example, expressed concerns about the terms of reference of the scientific assessment panels, questioning even the science of the assessment panels, and wanting both greater flexibility from and a tighter leash on the ExCom. The panels and the MLF are key pillars of the Montreal Protocol architecture, often pointed to as reasons for the Protocol’s success. However, the current mistrust in a few of these institutions, which are likely to have starring roles in implementing any HFC amendment, suggests the importance of building and re-building trust among the ozone family for any tangible progress to be made. This may be a process that could prove difficult, given the tone of some of the final hours of the informal-informals. For instance, normally positive, optimistic delegates were seen retreating with their heads in their hands, rubbing their eyes and looking exasperated, perhaps at having tried everything they could think of to reach consensus.

ONLY ONE DIRECTION TO GO?

After MOP 27’s dialogue, most participants seem to accept that, now that the contact group has been established, the eventual adoption of an HFC amendment is inevitable. Some were even arguing that the inevitable is necessary for the Montreal Protocol to continue its success. One observer was overheard saying that if an HFC amendment is not adopted, the Protocol will start meeting biennially until it meets “the end of its road” when the HCFC phase-out is complete, meaning the Protocol’s work would be done. As a result, many noted that this is ultimately a one-way street.

One seasoned participant familiar with the amendment negotiations of the past was heard insisting, “There is only one direction to go, even if we have to carry some parties while they drag their feet. Now it’s just a question of—when we finally get there—how ambitious it will be, and whether its name will be Kigali or Punta Cana.”

UPCOMING MEETINGS

UNFCCC COP 21: The 21st session of the Conference of the Parties to the UNFCCC will take place in December 2015, in Paris, France. **dates:** 30 November - 11 December 2015 **location:** Paris, France **contact:** UNFCCC Secretariat **phone:** +49-228 815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

CCAC High Level Assembly: The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) High-Level Assembly will gather CCAC ministers and heads of partner organizations to evaluate the CCAC's progress, provide input on the direction of the CCAC's future work and learn about the latest policy and scientific developments related to short-lived climate pollutants (SLCPs). **date:** 8 December 2015 **location:** Paris, France **contact:** CCAC **www:** <http://www.ccacoalition.org/>

ATMOsphere Asia 2016: ATMOsphere Asia 2016 brings together decision-makers from industry and government to discuss the latest natural refrigerant technologies, market trends and regulatory issues in Asia. **dates:** 9-10 February 2016 **location:** Tokyo, Japan **contact:** ATMOsphere Secretariat **phone:** +81-3-3287-7330 or +32-22-30-37-00 **email:** info@atmo.org **www:** <http://www.atmo.org/events.details.php?eventid=36>

Second Meeting of the UNEP Open-ended Committee of Permanent Representatives: The Open-ended Committee of Permanent Representatives will prepare for the next meeting of the UN Environment Assembly (UNEA) of UNEP. **dates:** 15-19 February 2016 **location:** Nairobi, Kenya **contact:** Jorge Laguna-Celis, Secretary of Governing Bodies **phone:** +254-20-7623431 **email:** unep.sgb@unep.org **www:** <http://www.unep.org/about/sgb>

Global Climate Observation: The Road to the Future: This conference will allow producers and users of climate observations and other stakeholders the opportunity to discuss the current monitoring of the Essential Climate Variables (ECVs) and to highlight possible new areas for ECVs. **dates:** 2-4 March 2016 **location:** Amsterdam, the Netherlands **contact:** GCOS Science Conference Organizing Committee **phone:** +49-6151-807-6740 **fax:** +49-6151-807-6150 **email:** GCOS-SC@eumetsat.int **www:** <http://www.gcos-science.org/>

Committee on Mercury (INC-7): The seventh meeting of the Intergovernmental Negotiation Committee (INC-7) for the Minamata Convention on Mercury is scheduled to convene in Jordan. **dates:** 10-15 March 2016 **location:** Jordan **contact:** Sheila Logan, Interim Secretariat **phone:** +41-22-917-8511 **fax:** +41-22-797-3460 **email:** Sheila.logan@unep.org **www:** <http://www.mercuryconvention.org/Negotiations/INC7/tabid/4506/Default.aspx>

UNGA High-level Thematic Debate: Implementing Commitments on Sustainable Development, Climate Change and Financing: The President of the UN General Assembly, Mogens Lykketoft, will convene a high-level thematic debate to support coherent implementation of commitments relating to sustainable development, climate change and financing. The event aims to mobilize and catalyze multilateral, collective, multi-stakeholder and individual

actions and commitments in these areas, and to support early progress on the SDGs. **dates:** 11-12 April 2016 **location:** UN Headquarters, New York **contact:** Office of the President of the UNGA **email:** dowlatshahi@un.org **www:** <http://www.un.org/pga/70/2015/09/14/opening-speech/>

ATMOsphere Europe 2016: ATMOsphere Europe 2016 brings together decision-makers from industry and government to discuss the latest natural refrigerant technologies, market trends and regulatory issues in Europe. **dates:** 19-20 April 2016 **location:** Barcelona, Spain **contact:** ATMOsphere Secretariat **phone:** +32-22-30-37-00 **email:** info@atmo.org **www:** <http://www.atmo.org/europe2016>

76th Session of the MLF ExCom: The 76th session of the Montreal Protocol Multilateral Fund (MLF) Executive Committee (ExCom) will meet in Montreal, Canada. **dates:** 9-13 May 2016 **location:** Montreal, Canada **contact:** MLF Secretariat **phone:** +1-514-282-1122 **fax:** +1-514-282-0068 **email:** secretariat@unmfs.org **www:** <http://www.multilateralfund.org>

ATMOsphere Australia 2016: ATMOsphere Australia 2016 brings together decision-makers from industry and government to discuss the latest natural refrigerant technologies, market trends and regulatory issues in Australia. **dates:** 16 May 2016 **location:** Melbourne, Australia **contact:** ATMOsphere Secretariat **phone:** +32-22-30-37-00 **email:** info@atmo.org **www:** <http://www.atmo.org/events.details.php?eventid=43>

Tenth Meeting of the Open-ended Working Group of the Basel Convention (OEWG-10): The tenth meeting of the Open-ended Working Group of the Basel Convention (OEWG-10) will consider issues in advance of COP 13, including: strategic issues; scientific and technical matters; legal, governance and enforcement matters; international cooperation and coordination; and the programme of work and budget. OEWG 10 will consider revising the technical guidelines on e-waste adopted by COP-12 on an interim basis. **dates:** 30 May-2 June 2016 **location:** Nairobi, Kenya **contact:** BRS Secretariat **phone:** +41-22-917-8218 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** <http://www.basel.int>

42nd Sessions of the UNFCCC Subsidiary Bodies: The 42nd sessions of the subsidiary bodies to the UNFCCC are expected to take place in May 2016. **dates:** 16-26 May 2016 **location:** Bonn, Germany **contact:** UNFCCC Secretariat **phone:** +49-228 815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

Second Meeting of the UN Environment Assembly (UNEA): The UNEA of UNEP will convene for the second time, representing the highest level of governance of international environmental affairs in the UN system. **dates:** 23-27 May 2016 **location:** Nairobi, Kenya **contact:** Jorge Laguna-Celis, Secretary of Governing Bodies **phone:** +254-20-7623431 **email:** unep.sgb@unep.org **www:** <https://www.myunea.org>

50th Meeting of the GEF Council: The GEF Council meets twice a year to approve new projects with global environmental benefits in the GEF's focal areas, and in the GEF's integrated approach programmes. **dates:** 6-9 June 2016 **location:**

Washington D.C., US **contact:** GEF Secretariat **phone:** +1-202-473-0508 **fax:** +1-202-522-3240 **email:** secretariat@thegef.org **www:** <https://www.thegef.org/gef/calendar-date/2016-06>

ATMOsphere America 2016: ATMOsphere America 2016 brings together decision-makers from industry and government to discuss the latest natural refrigerant technologies, market trends and regulatory issues in North America. **dates:** 16-17 June 2016 **location:** Chicago, US **contact:** ATMOsphere Secretariat **phone:** +32-22-30-37-00 **email:** info@atmo.org **www:** <http://www.atmo.org/events.details.php?eventid=44>

37th Meeting of the Open-Ended Working Group of the Montreal Protocol: OEWG 37 will meet in July 2016. It will be held back-to-back with an Extraordinary session of the Meeting of the Parties to the Montreal Protocol. **dates:** July 2016 **location:** TBC **contact:** Ozone Secretariat **phone:** +254-20-762-3851 **fax:** +254-20-762-0335 **email:** ozoneinfo@unep.org **www:** <http://conf.montreal-protocol.org/>

Quadrennial Ozone Symposium 2016: The next Quadrennial Ozone Symposium will include scientific papers on all aspects of atmospheric ozone such as: tropospheric ozone; past and future budgets and trends and long-range transport; observations and budgets of trace constituents related to atmospheric ozone; and ozone chemistry, sources, sinks and budgets. **dates:** 4-9 September 2016 **location:** Edinburgh, UK **contact:** Sophie Godin-Beekmann **phone:** +33-1-80-28-54-99 **email:** beekmann@latmos.ipsl.fr **www:** <http://www.ozone-symposium-2016.org/>

Eleventh Meeting of the Rotterdam Convention Chemical Review Committee (CRC-12): The CRC will convene to consider, *inter alia*: notifications for atrazine, and DGDs for carbosulfate and carbofuran. It will also consider notifications found to meet Annex I criteria. **dates:** 12-16 September 2016 **location:** Rome, Italy **contact:** BRS Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** <http://www.pic.int>

Twelfth Meeting of the Persistent Organic Pollutants Review Committee (POPRC-12): POPRC-12 will convene to consider, *inter alia*: the draft risk profiles for dicofol and PFOA; further information related to Annex F for decaBDE; and the draft risk management evaluation for SCCPs. **dates:** 19-23 September 2016 **location:** Rome, Italy **contact:** BRS Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** <http://www.pops.int>

28th Meeting of the Parties to the Montreal Protocol: MOP 28 is scheduled to consider a number of issues, including HFCs management and nominations for critical- and essential-use exemptions. **dates:** November 2016 **location:** Kigali, Rwanda **contact:** Ozone Secretariat **phone:** +254-20-762-3851 **fax:** +254-20-762-0335 **email:** ozoneinfo@unep.org **www:** <http://conf.montreal-protocol.org/>

GLOSSARY

CFCs	Chlorofluorocarbons
COP	Conference of the Parties
CRP	Conference room paper
CTC	Carbon tetrachloride
CUEs	Critical-use exemptions
CUN	Critical-use nomination
EEAP	Environmental Effects Assessment Panel
EUEs	Essential use exemptions
ExCom	Executive Committee
ExMOP	Extraordinary MOP
FSM	Federated States of Micronesia
GHG	Greenhouse gases
GWP	Global warming potential
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
HLS	High-level Segment
ImpCom	Implementation Committee
IPRs	Intellectual property rights
MBTOC	Methyl bromide TOC
MLF	Multilateral Fund
MOP	Meeting of the Parties
MTOC	Medical TOC
ODS	Ozone depleting substances
OEWG	Open Ended Working Group
ODP	Ozone depleting potential
RAC	Refrigeration and air conditioning
SAP	Scientific Assessment Panel
TEAP	Technology and Economic Assessment Panel
TOC	Technical Options Committee
UAE	United Arab Emirates
UNEP	UN Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UV	Ultraviolet