

SUMMARY OF THE TWENTY-FOURTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER: 12-16 NOVEMBER 2012

The twenty-fourth Meeting of the Parties (MOP 24) to the Montreal Protocol on Substances that Deplete the Ozone Layer took place in Geneva, Switzerland, from 12-16 November 2012. The meeting was attended by over 550 participants representing governments, UN agencies, intergovernmental and non-governmental organizations, academia, industry and the agricultural sector.

MOP 24 opened with a preparatory segment from Monday to Wednesday, 12-14 November, which addressed the MOP’s substantive agenda items and related draft decisions. This segment was followed by a high-level segment on Thursday and Friday, 15-16 November, which adopted the decisions forwarded by the preparatory segment. As the preparatory segment did not conclude its work by Wednesday, it reconvened several times during the high-level segment to address a number of outstanding issues.

MOP 24 adopted 14 substantive and 11 procedural decisions, including on: the review by the Scientific Assessment Panel (SAP) of RC-316c; procedural issues related to the Technology and Economic Assessment Panel (TEAP) and its subsidiary bodies; budget; and data and compliance issues. MOP 24 did not reach agreement on the draft decision on clean production of HCFC-22 through by-product emission control or on the draft decision to amend the Montreal Protocol to include hydrofluorocarbons (HFCs).

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 the release of 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 growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ozone depleting substances (ODS). The Convention now has 197 parties.

MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries

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(non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their ODS use before taking on commitments. The Protocol currently has 197 parties, which represents universal membership.

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

LONDON AMENDMENT AND ADJUSTMENTS:

Delegates to the second Meeting of the Parties (MOP 2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 197 parties have ratified the London Amendment. MOP 2 also established the Multilateral Fund (MLF), which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training and the costs of the MLF Secretariat. The Fund is replenished every three years and has received pledges of over US\$2.8 billion since its inception.

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 hydrochlorofluorocarbons (HCFCs). MOP 4 also agreed to enact non-compliance procedures and to establish an Implementation Committee (ImpCom). The ImpCom examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 197 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP 9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to ban trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 192 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP 11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 182 parties have ratified the Beijing Amendment.

MOP 15 AND FIRST EXTRAORDINARY MOP: MOP 15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for critical uses where no technically or economically feasible alternatives were available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP. The first Extraordinary Meeting of the Parties to the Montreal

Protocol (ExMOP 1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005, with the introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide central to this compromise. Parties agreed to a cap on new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP 16 AND EX-MOP 2: MOP 16 took place in Prague, the Czech Republic, in 2004. Work on methyl bromide exemptions for 2006 was not completed and parties decided to hold a second ExMOP. ExMOP 2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP 7/MOP 17: MOP 17 was held jointly with the seventh Conference of the Parties to the Vienna Convention (COP 7) in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions included a US\$470.4 million replenishment of the MLF for 2006-2008, and agreement on terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP 18: MOP 18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on, *inter alia*: future work following the Ozone Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change (IPCC) and the Technical and Economic Assessment Panel (TEAP); difficulties faced by some Article 5 parties manufacturing CFC-based metered dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; and a feasibility study on developing a system for monitoring the transboundary movement of ODS.

MOP 19: MOP 19 took place in Montreal, Canada, in September 2007. Delegates adopted decisions on: an accelerated phase-out of HCFCs; critical-use nominations for methyl bromide; and monitoring transboundary movements of, and illegal trade in, ODS. Parties also adopted an adjustment accelerating the phase out of HCFCs.

COP 8/MOP 20: MOP 20 was held jointly with COP-8 of the Vienna Convention in Doha, Qatar in November 2008. Parties agreed to replenish the MLF with US\$490 million for 2009-2011 and adopted other decisions concerning, *inter alia*: the environmentally sound disposal of ODS; approval of 2009 and 2010 CUEs for methyl bromide; and compliance and reporting issues.

MOP 21: MOP 21 took place in Port Ghalib, Egypt, in November 2009 and adopted decisions on: alternatives

to HCFCs; institutional strengthening; essential uses; environmentally sound management of ODS banks; methyl bromide; and data and compliance issues. Delegates considered, but did not agree to, a proposal to amend the Montreal Protocol to include hydrofluorocarbons (HFCs) submitted by the Federated States of Micronesia (FSM) and Mauritius.

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

COP 9/MOP 23: COP 9/MOP 23 took place in Bali, Indonesia in November 2011 and adopted decisions on, *inter alia*, a US\$ 450 million replenishment of the MLF for the 2012-2014 period; issues related to exemptions; updating the nomination process and recusal guidelines for TEAP; the treatment of ODS to service ships; and additional information on alternatives. Delegates considered, but did not agree to, two proposed amendments to the Montreal Protocol to address HFCs, one submitted by the US, Mexico and Canada, and the other submitted by FSM.

CURRENT ODS CONTROL SCHEDULES: Under the amendments and adjustments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. Article 5 parties were required to phase out production and consumption of hydrobromochlorofluorocarbons by 1996, bromochloromethane by 2002, and CFCs, halons and CTC by 2010. Article 5 parties must still phase out production and consumption of methyl chloroform and methyl bromide by 2015. Under the accelerated phase-out of HCFCs adopted at MOP 19, HCFC production and consumption by non-Article 5 parties was frozen in 2004 and is to be phased out by 2020, while in Article 5 parties, HCFC production and consumption is to be frozen by 2013 and phased out by 2030 (with interim targets prior to those dates, starting in 2015 for Article 5 parties). There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives.

SUMMARY OF MOP 24

PREPARATORY SEGMENT

The preparatory segment of MOP 24 was opened by Ghazi Odat (Jordan), who co-chaired the meeting with Gudi Alkemade (the Netherlands).

Bruno Oberle, Secretary of State for the Environment, Switzerland, highlighted the Protocol's scientific foundation, governments' willingness to act quickly and the Multilateral Fund (MLF) as factors contributing to the Protocol's success. He expressed Swiss support for the HFC amendment proposal.

Marco González, Executive Secretary, Ozone Secretariat, highlighted the Protocol's success and noted outstanding challenges, including decisions on, *inter alia*, critical-use exemptions (CUEs) and quarantines and feedstock uses. González called on delegates to discuss the HFC amendment proposals in the spirit of the Protocol's original negotiations, which based decisions on science, recognized industry's ability to innovate and accepted the principle of common but differentiated responsibilities (CBDR).

Awards were presented to Stephen Andersen (US) and Lambert Kuijpers (Netherlands) for their work as the longest serving Co-Chairs of the TEAPs.

ORGANIZATIONAL MATTERS: Co-Chair Alkemade introduced the provisional agenda (UNEP/OzL.Pro.24/1). The US suggested additions to the agenda, including: TEAP membership; improved information on policy and control measures of ODS transition; and transition of the MLF chief officer. India, supported by China, Bahrain and Kuwait, objected to raising the following issues, stating their belief that they do not fall within the mandate of the Montreal Protocol: feedstock uses; clean production of HCFC-22 through by-product emission control; additional funding for the MLF to maximize the climate benefit of the accelerated phase-out of HCFCs; and new HFC amendments. The European Union (EU) noted feedstock use is controlled by the Montreal Protocol and this item, as well as proposals for amendments, should be retained on the agenda.

Haiti, Indonesia, Bolivia, Ecuador, Bahrain and Nicaragua said that they have not yet ratified the Beijing Amendment. Indonesia proposed discussing the status of the Bali Declaration, which was introduced at MOP 23.

Co-Chair Alkemade proposed that issues related to TEAP membership, raised by the US and China, be added as a sub-item to the existing agenda item on TEAP procedures. Regarding the proposed amendments to the Protocol, Alkemade acknowledged that while this topic was discussed at previous meetings, no agreement was reached and thus it remains on the agenda.

Alkemade proposed, and parties agreed, to include several items under "other matters," including: policies and controls influencing transition of ODS; transition of the chief MLF officer; ratification status of the Beijing Amendment; and the status of the Bali Declaration.

OTHER MATTERS: Co-Chair Odat expressed gratitude to Paul Horwitz, the outgoing Deputy Executive Secretary of the Montreal Protocol, and Maria Nolan, outgoing chief officer of the MLF. The US also paid tribute to the outgoing officers.

HIGH-LEVEL SEGMENT

Doris Leuthard, Head of the Department of Environment, Transport, Energy and Communications, Switzerland, opened the high-level segment of MOP 24 on Thursday. She lauded the Montreal Protocol's twenty-fifth anniversary, noting that 98% of ODS have been phased out. She said Switzerland supports the proposed HFC amendments.

Marco Gonzalez, Executive Secretary, Ozone Secretariat, highlighted principles of the Montreal Protocol, *inter alia*: a

firm scientific foundation; the precautionary principle; common but differentiated responsibilities (CDR); cooperation; and an effective data system to monitor compliance. He expressed hope that these principles will contribute to overcoming current challenges.

Amina Mohamed, Deputy Executive Director, UNEP, asked for a moment of silence for Angela Cropper, former UNEP Deputy Executive Director and Special Advisor to the UNEP Executive Director. Mohamed highlighted the spirit of cooperation between governments, civil society, academia, NGOs and the private sector in implementing the Protocol and stressed inter-generational responsibility. She underscored UNEP's commitment to the Vienna Convention and the Montreal Protocol.

Syanga Abilio, MOP 23 President, said Article 5 parties are taking initial steps toward the accelerated phase-out of HCFCs, and lauded South Sudan for becoming a party to the Protocol.

ORGANIZATIONAL MATTERS: MOP 24 elected by acclamation Mahmood Alam (Pakistan) as President, Dmytro Mormul (Ukraine), Leslie Smith (Grenada) and Alain Wilmart (Belgium) as Vice Presidents, and Wilbur Simuusa (Zambia) as Rapporteur. Delegates also adopted the agenda (UNEP/OzL.Pro.24/1) with parties agreeing to follow customary procedures.

PRESENTATIONS BY THE ASSESSMENT PANELS ON THE STATUS OF THEIR WORK, INCLUDING THE LATEST DEVELOPMENTS: **SAP:** Paul Newman (US) presented the report on behalf of the SAP, including the status of the 2014 assessment report. He said the amount of time CTC remains in the atmosphere has been revised upward from 35 to 50 years, which has narrowed, but not closed, the discrepancy between top-down and bottom-up emission estimates. He noted that R-316C is a powerful ODS and greenhouse gas.

EEAP: Nigel Paul (UK) described the Environmental Effects Assessment Panel's (EEAP) work on examining the effects of ozone depletion and climate change on, *inter alia*, ultraviolet (UV) radiation in relation to human health, terrestrial and aquatic ecosystems, materials, and ODS and replacements. He highlighted a significant advance in understanding the relationship between UV radiation and key receptors, noting that UV can result in negative health effects but may have beneficial impacts on Vitamin D status.

TEAP: Lambert Kuijpers (Netherlands) presented the key conclusions of the TEAP. He said 80% of the methyl bromide use by Article 5 parties has been phased out from the aggregate baseline, in advance of the 2015 deadline. Daniel Verdonik reported on the Halons Technical Options Committee (TOC). He described an International Civil Aviation Organization study on the use of halons in the aviation industry, noting there is little evidence that states, civil aviation and ozone offices work together, and that it is not yet possible to determine long-term halon needs.

PRESENTATION BY THE CHAIR OF THE MLF EXECUTIVE COMMITTEE ON THE WORK OF THE MLF AND ITS RELATED BODIES: Delegates considered the report (UNEP/OzL.Pro.24/9). Xiao Xuezhi (China) highlighted

efforts to ensure funding for HCFC phase-out management plans, noted that 101 additional projects have been approved, and outlined a number of institutional efforts from the UN Development Programme (UNDP), UNEP, UN Industrial Development Organization (UNIDO) and the World Bank.

Additional information can be found at: <http://www.iisd.ca/vol19/enb1991e.html>.

STATEMENTS BY HEADS OF DELEGATION: A number of heads of delegation made statements during the high-level segment, highlighting, *inter alia*, national efforts to implement the Protocol, possible obstacles to implementation, and recent successes.

Several parties commended the MLF for its critical support in helping Article 5 parties to meet their obligations under the Protocol, including Nepal, Kiribati, Madagascar, Timor Leste and Côte d'Ivoire. New Zealand urged continued support for Article 5 countries. Tanzania, with India, commended the Protocol for being a model of cooperation between developed and developing countries, based on CBDR.

Mozambique and others provided overviews of national actions to raise awareness on and implement the Protocol. Bangladesh noted its active role in different committees of the Montreal Protocol and the Secretariat's recognition of its efforts. The Democratic Republic of Congo highlighted efforts to improve ODS monitoring and technical capacity. Guinea and Malawi noted efforts to eliminate HCFCs. Panama highlighted mechanisms to reduce HCFCs, *inter alia*, implementing annual import quotas and import monitoring. The Philippines described its efforts to phase-out ODS but noted compliance concerns related to illegal ODS trade and non-documented use of ODS in shipping and other sectors.

Sudan, Timor Leste and Croatia described national efforts to eliminate ODS use. Serbia described its efforts to phase-out HFCs, including its work to minimize illegal trade by cross-checking data as part of its licensing procedure. Mongolia described its progress on phasing out ODS and HCFCs. Palau stressed its commitment to phasing out ODS and reducing the illegal importation of ODS equipment and substances. Nicaragua said it has phased out CFCs and will now focus on phasing out HFCs. The Dominican Republic urged a smooth transition to substances that have a low Global Warming Potential (GWP).

On the proposed amendments, Kenya and others expressed their full support and favored cooperation between the Protocol and the United Nations Framework Convention on Climate Change (UNFCCC). Nepal said any process that creates new obligations for parties should be judged against their capacities to meet obligations. Canada recognized the many achievements of the Protocol while stressing the need to address new challenges, including the negative influence of HFCs on climate. Uganda and the Maldives stressed the need for affordable ozone-friendly and climate-friendly alternatives. Iraq, noting its high summer temperatures, asked that this concern be taken into account with regards to appropriate substitution technologies.

On obstacles to be addressed in the future, Nigeria and Bangladesh highlighted developing indigenous technologies

to address ODS. Pakistan expressed concern about the illegal cross-boundary movement of ODS. Benin, for the African region, identified technology concerns, especially for parties with hot climates, legal problems and fragile economic environments as challenges in implementing and achieving Protocol obligations. He expressed Côte d'Ivoire's interest in hosting the next meeting of the Protocol.

The International Plant Protection Convention (IPPC) said it had signed a Memorandum of Understanding with the Protocol to formalize mutual cooperation. Greenpeace, the Natural Resources Defense Council and the Environmental Investigation Agency (EIA) urged addressing HFC emissions.

A summary of the statements can be found at: <http://www.iisd.ca/vol19/enb1991e.html>.

DATES AND VENUE FOR THE TWENTY FIFTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL: In the closing plenary, González announced that MOP 25 will be held in Ukraine, commencing in the last week of October 2013.

CLOSURE OF THE MEETING: On Friday, delegates adopted the reports of the meeting (UNEP/OzL.Pro.24/L.1, L.1/Add.1/, L.1/Add.2. and L.1/Add.3) with minor amendments. Delegates also adopted the decisions forwarded from the preparatory segment (UNEP/OzL.Pro.24/L.2, L.2/Add.1. and L.2/Add.3).

President Alam, in closing, noted the need to reflect not only on the achievements of the Montreal Protocol but also on the challenges ahead. He said that as improved technologies are widely-available and scientific evidence exists in the face of an increasingly dramatic environmental crisis, the Protocol needs to act and embrace its responsibility to deal with HFCs. He urged parties to join discussions on the availability of alternatives to HCFCs and HFCs.

President Alam closed the meeting at 10:05 pm.

MOP 24 OUTCOMES AND DECISIONS:

ADMINISTRATIVE MATTERS: Consideration of membership of Montreal Protocol bodies for 2013: The Secretariat introduced the item, noting that the preparatory segment will recommend the membership to the high-level segment.

Financial reports of the trust funds and budgets for the Montreal Protocol: The Secretariat introduced this item (UNEP/OzL.Pro.24/7 and 7/Add.1). A budget group was established to further discuss the documents and prepare a draft decision for consideration by the parties.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html> and <http://www.iisd.ca/vol19/enb1991e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.13), the MOP approves:

- a budget of US\$4,927,420 for 2013;
- total contributions to be paid by the parties of US\$4,276,933 for 2012 and 2013; and
- an operating cash reserve at 15% of the annual budget for meeting the final expenditures under the Trust Fund.

It further requests the Secretariat to indicate, in future financial reports, the amounts under “total reserves and fund balances” of contributions that have not yet been received and authorizes the Executive Secretary to enter into discussions with any party whose contributions are outstanding for two or more years.

ISSUES RELATED TO EXEMPTIONS FROM ARTICLE 2 OF THE MONTREAL PROTOCOL: Nominations for essential-use exemptions for 2013: Delegates considered draft decisions XXIV/[A] and XXIV/[B] on essential-use exemptions for 2013 (UNEP/OzL.Pro.24/8).

Discussions focused on, *inter alia*, the use of CFCs for manufacturing traditional Chinese medicine (TCM) MDIs. The TEAP said the Medical Technical Options Committee (MTOC) noted that the improved efficacy for the treatment of asthma using TCM MDIs was not proven and thus not considered an essential use. China said that refusing the nomination would have negative implications for Chinese companies and communities and requested reconsideration.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.15), the MOP:

- authorizes the levels of production and consumption for 2013 needed for using CFCs for MDIs as set out in the annex to the decision;
- requests nominating parties to supply the MTOC with information to assess essential-use nominations;
- encourages parties with essential-use exemptions in 2013 to consider sourcing required CFCs, initially from stockpiles;
- further encourages parties with potentially available stockpiles to notify the Ozone Secretariat of quantities and a contact point by 31 December 2012 and requests the Secretariat to post details on its website;
- further requests parties to consider domestic regulations to ban the launch or sale of new CFC-based MDIs; and
- requests China to provide more information about the absence of alternatives in the region, the phase-out efforts undertaken for this use, and other relevant information necessary to the MTOC for full evaluation of the case.

Nominations for critical-use exemptions for 2014: Delegates considered a draft decision put forward by the US, Canada and Australia on critical-use exemptions for 2014.

Discussions focused on, *inter alia*, methyl bromide exemption nominations put forward by the US, Canada and Australia.

The Methyl Bromide Technical Options Committee (MTOC) Co-Chairs presented their recommendations on methyl bromide critical-use nominations (CUNs). Co-Chair Ian Porter noted decreasing CUN trends and outlined nominations from Australia, Canada and the US for strawberry production. Co-Chair Marta Pizano described revisions to the CUN handbook including, *inter alia*, removal of the code of conduct and clarification of economic indicators.

The EU, highlighting soilless cultures available for strawberry runners, asked if bigger reductions are not possible for Australia and Canada. Mexico recommended using existing methyl bromide stocks and fully eliminating methyl bromide use in the future.

Australia requested flexibility to use its 2014 CUE for fumigation of packaged rice in 2013, noting this would allow Australia to complete its transition one year earlier and result in no additional methyl bromide use. Canada said it will not request an exemption for flour mills in 2015. The EU said parties should respect the MBTOC recommendations.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>.

Final Outcome: In the decision (UNEP/OzL.Pro.24/CRP.4/Rev.1), the MOP:

- allows the agreed critical-use categories for 2014 set out in the annex for each party, subject to the conditions set forth in the decision and in decision Ex.I/4;
- approves Australia's request to bring forward up to 1.187 tonnes of methyl bromide from its 2014 CUE to 2013 for fumigating packaged rice, with any quantity brought forward to 2013 deducted from its allocation in 2014;
- recognizes the continued contribution of the expertise of the MBTOC; and
- requests Canada, Australia and the US to take steps to explore the possibility of transitioning to technically and economically feasible alternatives and ensure the MBTOC is aware of these efforts.

Quarantine and pre-shipment issues: Delegates considered draft decision XXIV/[C] on the QPS uses of methyl bromide (UNEP/OzL.Pro.24/8).

Discussions focused on, *inter alia*: QPS uses in trade; TEAP reporting; and methyl bromide exemptions.

On reporting of methyl bromide for QPS, TEAP and others noted that data provided under Article 7 (data reporting) is voluntary and insufficient to analyze or provide a conclusion on QPS and methyl bromide. Switzerland and the US suggested providing more regular TEAP reports, including trend data.

The IPPC explained their "system approach application" to tackle pests, where parties are encouraged to reduce or reuse methyl bromide. Japan noted methyl bromide use in trade to minimize pests and disease.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.11), the MOP invites the 33rd meeting of the Open-ended Working Group (OEWG 33) to request the TEAP to analyze trends in data provided under Article 7 (reporting of data) on methyl bromide use for QPS. It invites parties to establish data collection procedures for methyl bromide use in QPS. It also requests the Secretariat to remind parties that they are invited to submit information by 31 March 2013, on a voluntary basis, and make the forms available on its website.

Feedstock uses: Delegates considered draft decision XXIV/[D] on feedstock uses (UNEP/OzL.Pro.24/8).

Discussions focused on whether the TEAP should conduct a study on ODS use in feedstocks. The EU presented the proposal, noting anticipated increases and a need for monitoring. India, supported by China, stated that feedstocks are not controlled under the Montreal Protocol. The US, with the EU, and opposed by India, said this approach would be voluntary and provide opportunities for learning. Delegates also addressed inviting experts with additional expertise; and qualifying the characteristics of new alternatives to ODS, in particular, emerging, under development, or commonly available and environmental.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html>, <http://www.iisd.ca/vol19/enb1990e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.3), the MOP decides to, *inter alia*:

- remind parties that reporting on ODS quantities used as feedstock is obligatory under Article 7;
- urge parties to take steps to minimize ODS emissions in feedstock uses;
- encourage parties to replace ODS in feedstock uses with alternatives to the extent possible;
- request parties to report, by 31 January 2014, whether feedstock uses are taking place in their territory and to provide information on the processes identified; and
- invite parties to provide information to the Secretariat on new alternatives replacing any feedstock uses reported, where such information is not considered confidential.

ADDITIONAL INFORMATION ON ALTERNATIVES

TO ODS: Delegates considered draft decision XXIV/[E] on additional information on alternatives to ODS (UNEP/OzL.Pro.24/8).

The Co-Chairs introduced a shortened compromise text of the decision, which was taken as a basis for further negotiations. Discussions focused on whether the TEAP should conduct a study on ODS use in feedstocks. The EU presented the proposal, noting anticipated increases and a need for monitoring. India, supported by China, stated that feedstocks are not controlled under the Montreal Protocol. The US, with the EU, and opposed by India, said this approach would be voluntary and provide opportunities for learning. Discussion centered on: how to specify the terms of reference for TEAP to prepare a report, namely whether to establish a task force, which was supported by the US and the EU, but opposed by India; inviting experts with additional expertise; and how to define the characteristics of new alternatives to ODS.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.17), the MOP requests TEAP, in consultation with outside experts with relevant expertise, if necessary, to update information on

alternatives and technologies in various sectors and to prepare a draft report for consideration by OEWG 33 and a final report to be submitted to MOP 25. The report, taking into account any relevant information provided by parties, would:

- describe all available alternatives to ODS that are commercially available, technically proven, and environmentally-sound, taking into account their efficacy, health, safety and environmental characteristics, cost-effectiveness, and their use including in high ambient temperatures and high urban density cities;
- update information provided by previous TEAP reports on alternatives under development;
- identify barriers and restrictions to the adoption and commercial use of certain environmentally-sound alternatives to ODS;
- estimate the approximate amount of alternatives with negative environmental impacts that could be or could have been avoided or eliminated by both non-Article 5 and Article 5 parties in the process of phasing-out ODS; and
- identify the opportunities for the selection of environmentally-sound alternatives to HCFCs in the future.

PROCEDURAL ISSUES RELATED TO TEAP AND ITS SUBSIDIARY BODIES: Delegates considered draft decision XXIV/[F] in section II of document UNEP/OzL.Pro.24/8.

Delegates discussed the procedural issues related to the TEAP and its subsidiary bodies in a closed contact group, which considered, *inter alia*: the code of conduct; procedures to address conflicts of interest; and disclosure guidelines, including on advisory bodies. The guidelines include procedures to deal with conflicts of interest.

Final Outcome: In its decisions (UNEP/OzL.Pro.24/CRP.5, CRP.8, CRP.12 and CRP.14), the MOP, *inter alia*:

- endorses the selection of Shao Min (China) as the new Co-Chair of the EEAP;
- endorses the selection of Co-Chairs of TEAP, and its associated TOCs;
- approves the membership of the MLF Executive Committee;
- endorses the Co-Chairs of the OEWG;
- requests the TEAP to make recommendations on the future configuration of its TOCs to OEWG 33, bearing in mind anticipated workloads;
- approves the terms of reference and the conflict of interest and disclosure policy for the TEAP, its TOCs and any Temporary Subsidiary Bodies (TSBs) set up by those bodies, as contained in the annex to the decision; and
- requests that the TEAP and its TOCs make available to the parties their standard operating procedures.

The annex to the decision outlines, *inter alia*: the scope of work; the size and balance of TEAP and its TOCs and TSBs; nominations and appointments of members to TEAP and its TOCs and TSBs; termination of appointment; replacement; TEAP functioning, including language, meetings, scheduling, operating procedures, rules of procedure and observers; report of TEAP, TOCs and TSBs, including procedures, access, review,

public comment and code of conduct; conflicts of interest; disclosure; recusal; and conflict resolution advisory body.

PROPOSAL ON TRADE OF CONTROLLED SUBSTANCES WITH SHIPS SAILING UNDER A FOREIGN FLAG: Delegates considered draft decision XXIV/[G] in section II of document UNEP/OzL.Pro.24/8.

Delegates discussed, *inter alia*: monitoring issues, particularly when flag ships do not enter the waters of the party they are registered under; data discrepancies between reported export and import data; issues of prior informed consent; and monitoring. They also considered what type of information is already available and accessible and whether requests would be within or beyond the mandate of TEAP. Delegates requested additional time to discuss this issue at the next meeting.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html> and <http://www.iisd.ca/vol19/enb1991e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.2/Rev.1), the MOP, *inter alia*:

- requests the TEAP to provide an updated version of the information provided in its previous progress reports on transport refrigeration in the maritime sector with its 2013 progress report; and
- invites parties to encourage relevant stakeholders to minimize the use of controlled substances in newly built ships and to consider environmentally benign and energy-efficient alternatives wherever they are available.

INVESTIGATION OF CTC DISCREPANCY: The SAP reported that discrepancies between “top-down” and “bottom-up” estimates of CTC have narrowed but not closed, as a result of new information. They also stated that the atmospheric concentration of CTC is decreasing. Canada and Australia suggested that TEAP and SAP participate in the feedstocks contact group. India expressed doubt about the necessity of such action.

EVALUATION OF THE FINANCIAL MECHANISM OF THE MONTREAL PROTOCOL: Delegates discussed the final report of the evaluation of the financial mechanism of the Montreal Protocol (UNEP/OzL.Pro.24/INF/4).

Mark Wagner, ICF International, described the evaluation findings, noting that the final report incorporates comments from OEWG 32 and written submissions. Many delegates welcomed the report, with several noting that it recognizes the MLF as an effective and efficient funding mechanism for implementing the Protocol. Delegates also discussed, *inter alia*, implementing a more regular schedule of evaluations and developing clear terms of reference for future evaluations.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html> and <http://www.iisd.ca/vol19/enb1991e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.6/Rev.1), the MOP, *inter alia*:

- notes that the MLF is an efficient and effective instrument for enabling compliance with the Protocol by Article 5 parties;

- recognizes that parties consider periodic evaluations of the MLF an important means of ensuring its continued efficiency and effectiveness;
- recognizes also the role of the MLF as a cornerstone of the Protocol and a key mechanism for the success of the ozone layer regime;
- notes with appreciation the report on the 2012 evaluation of the MLF; and
- requests the MLF Executive Committee, within its mandate, to consider the report on the 2012 evaluation of the MLF in the process of continuously improving the MLF management.

PROPOSAL ON CLEAN PRODUCTION OF HCFC-22 THROUGH BY-PRODUCT EMISSION CONTROL:

Delegates discussed the draft decision XXIV/[H] in section II of document UNEP/OzL.Pro.24/8.

Participants discussed, *inter alia*: the continuation of HCFC-22 production for another two decades, and possibly longer as a feedstock; and prioritizing the phase-out of HCFC-22.

The US, supported by Mexico and Canada, recommended conducting demonstration projects on the costs, benefits, environmental implications and climate impacts of HCFC-22 production. Nigeria supported a study on HCFC-22 conducted by TEAP in consultation with SAP, but preferred delaying a decision on a demonstration project until after completion of the study. EIA said the Protocol has an obligation to ensure HCFC-22 production does not harm the global climate. India said the Protocol is not the appropriate forum for controlling by-product emissions. China said the Protocol is not mandated to cover HFC-23. India and China opposed forwarding the draft decision to the high-level segment.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html>.

Final Outcome: This topic will be taken up by parties at OEWG 33.

PROPOSAL ON ADDITIONAL FUNDING FOR THE MLF TO MAXIMIZE THE CLIMATE BENEFIT OF THE ACCELERATED PHASE-OUT OF HCFCs: Delegates considered draft decision XXIV/[I] on additional funding for the MLF to maximize the climate benefit of the accelerated phase-out of HCFCs (UNEP/OzL.Pro.24/8).

Discussions addressed, *inter alia*: the voluntary nature of the funding; that it would be additional to the MLF financial assistance; and funding sources.

Colombia, Brazil, China and others asked if this would influence existing MLF replenishments. China, opposed by Japan, the EU and others, stressed that funding should come from non-Article 5 parties. Parties did not reach agreement.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html>, <http://www.iisd.ca/vol19/enb1991e.html> and <http://www.iisd.ca/vol19/enb1992e.html>

Final Outcome: This item will be taken up by parties at OEWG 33.

PROPOSAL ON FUNDING OF PRODUCTION FACILITIES FOR HYDROCHLOROFLUOROCARBONS: Delegates considered draft decision XXIV/[L] on funding of production facilities for HCFCs (UNEP/OzL.Pro.24/8).

Discussion focused on regulatory actions to limit HCFC production and 2013 deadlines for phase-outs. India proposed that the MLF expedite funding for HCFC phase-out in the production sector, noting ODS control schedules for Article 5 parties. Australia, the US and Japan questioned the decision. Parties differed concerning how many Annex 5 countries would be affected by this pending deadline. No consensus was reached on the draft document.

A summary of the discussion can be found at: <http://www.iisd.ca/download/pdf/enb1990e.pdf>.

Final Outcome: This issue will be forwarded to OEWG 33, for consideration by parties.

PROPOSAL ON THE REVIEW BY THE SCIENTIFIC ASSESSMENT PANEL OF RC-316C: Delegates considered draft decision XXIV/[J] in document UNEP/OzL.Pro.24/8, which called for the SAP to review the ozone depletion potential (ODP) and GWP of RC-316c, a newly identified ozone-depleting substance.

Delegates discussed the findings of two studies, one by the SAP and an independent study on which the Russian Federation reported, both of which verified the high ODP and GWP of RC-316c. The Russian Federation informed delegates these properties make RC-316c an unfeasible alternative for aerospace uses. He emphasized the Russian Federation is seeking new alternatives, including imported ones. India said this substance is not controlled by the Protocol, and that requests are not made to SAP to assess the GWP.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1989e.html> and <http://www.iisd.ca/vol19/enb1991e.html>.

Final Outcome: Following discussions and informal consultations, delegates welcomed the findings.

PROPOSAL ON THE IMPLICATIONS OF THE OUTCOME DOCUMENT OF THE UNCSD FOR SIDS WITH REGARD TO THE IMPLEMENTATION OF THE MONTREAL PROTOCOL: Delegates considered draft decision XXIV/[K] on the implications of the outcome document on the UN Conference of Sustainable Development (UNCSD or Rio+20) for small island developing states' (SIDS) implementation of the Montreal Protocol (UNEP/OzL.Pro.24/8).

Grenada, on behalf of St. Lucia and Trinidad and Tobago, introduced the document and proposed delaying discussion until OEWG 33. Following clarification questions on procedure and responses by the Secretariat, delegates agreed to defer the agenda item to OEWG 33.

Final Outcome: This issue will be forwarded to OEWG 33 for consideration by parties.

PROPOSED AMENDMENTS TO THE MONTREAL PROTOCOL: Delegates discussed proposals to amend the Montreal Protocol to control hydrofluorocarbons, among other

things, submitted by the Federated States of Micronesia (FSM) (UNEP/OzL.Pro.24/5) and Canada, Mexico and the US (UNEP/OzL.Pro.24/6).

The proponents of the amendments presented their proposals. The FSM proposed a gradual phase-down in the consumption and production of HFCs, noting that the Protocol has expertise in phasing down production and consumption of gases that are chemically similar to HFCs. The FSM emphasized that parties have a legal obligation to address adverse effects on the ozone layer and on the climate system, and further noted that UN experts have estimated that addressing HFCs would prevent 0.1 degree Celsius of warming by 2050. The US said the benefits of the North American proposal amount to nearly 100 gigatonnes of carbon dioxide equivalent in direct benefits. He stressed that decisions taken by the Protocol have implications for climate and urged action to avoid reducing the climate benefits achieved under the Protocol. Canada addressed frequently asked questions on the proposal (UNEP/OzL.Pro.24/INF/7). The US and Mexico said the Protocol is the appropriate institution to address this issue, and the US stressed the expertise of TEAP, SAP and the MLF. Mexico emphasized the Protocol's recognition of common responsibilities and called for urgent action.

Delegates discussed a number of questions about the proposed amendments, including, *inter alia*: availability of technologies; calculation of the costs and availability of alternatives; the effect of the proposals on modifying the ozone layer; and expertise within the Protocol and the UNFCCC and its subsidiary bodies.

The Russian Federation, Nigeria, Israel, Australia, Bangladesh, Japan, the Former Yugoslav Republic of Macedonia, the EU, Egypt, Morocco, Samoa, Norway, Switzerland, Maldives, Mozambique, Cameroon, Costa Rica, Colombia, Chile, Turkey and the Bahamas called for establishing a contact group to discuss the proposed amendment. Iran, Iraq and Tunisia expressed uncertainty in discussing the topic. Argentina, India, Cuba, Uruguay, Malaysia, Bahrain, China and others opposed establishing a contact group. India, China and Venezuela questioned whether the Montreal Protocol is the right legal framework to address HFCs. Bahrain noted ongoing use of HFCs in many processes, and Qatar stated that there are not yet clear alternatives. Following discussion on whether to form a contact group, Co-Chair Alkemade proposed establishing an informal discussion group, to which delegates agreed. Delegates then elected Grenada and Switzerland as co-conveners of this group.

The US said it proposed a phase-down due to alternatives not being available in every sector, such as for MDIs. He suggested that schedules could be adjusted later if alternatives are identified. The EU agreed that an HFC phase-down approach allows additional alternatives to emerge over time. He added that bans and taxes can push consumers and producers in the right direction. Canada highlighted commercialized alternatives available in the foam sector, noting there is still time for alternatives to emerge in other sectors.

Singapore said its primary concern is the availability of alternatives. India said there was uncertainty on emerging technologies. Japan said HFCs have varying levels of GWP and should not be grouped together, and expressed support for controlling GWP levels.

The FSM explained that because the Kyoto Protocol addresses "baskets of gases," the UNFCCC may not address HFCs if addressing carbon dioxide or other gases is cheaper. He stressed that the most mitigation would occur by using the Protocol as an additional approach. Canada requested that parties who advocate addressing HFCs under the climate regime provide details on how they propose to do so. South Africa outlined a number of policy issues, including: concerns that a phase-down would result in developing countries taking on quantified targets for the first time, albeit at a sector level; and issues of CBDR and capabilities and their interaction with the climate regime.

The SAP commented on observed increases of HFCs in the atmosphere, which are 10 to 15% per year. The SAP also said, *inter alia*, that observations are based on measurements at ground stations that are averaged to give global concentrations, and differences among different HFCs are calculated and reported.

New Zealand said current growth in HFC use indicates that action needs to be taken. India suggested that SAP projections are not valid as the penetration of HFCs has not occurred in the manner used by the SAP.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e> and <http://www.iisd.ca/vol19/enb1991e.html>.

COMPLIANCE AND DATA REPORTING ISSUES:
Proposal on the differences between data reported on imports and data reported on exports: Delegates discussed the draft decision XXIV/[M] in section II of document UNEP/OzL.Pro.24/8.

Delegates felt that the existing reporting system generally works well but noted there is room for improvement. Delegates also recognized multiple reasons for differences between data reported on imports and data reported on exports and discussed, *inter alia*, how to modify the current reporting system.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html>.

Final Outcome: In its decision (UNEP/OzL.Pro.24/CRP.18), the MOP, *inter alia*:

- notes differences in data on imports and exports of controlled substances submitted by parties under Article 7 (data reporting), and recognizes that while such shipments may have plausible explanations, such as shipments over the end of a calendar year or the submission of incomplete data, they may also result from illegal trade activities or from not complying with domestic legislation without criminal intent;
- notes also that in the Article 7 data reporting format, parties exporting controlled substances are requested to submit to the Ozone Secretariat information on countries of destination, while there is no request for parties importing controlled substances with regard to the country of origin;

- notes further that the absence of a request for importing countries to submit information on source countries makes the process of clarification of differences complex and burdensome for both importing and exporting countries;
- requests the Ozone Secretariat to revise, before 1 January 2013, the reporting format resulting from decision XVII/16 to include in the Data Forms an annex indicating the exporting party for the quantities reported as import, and noting that this annex is excluded from the reporting requirements under Article 7, and provision of the information in the annex would be done on a voluntary basis;
- requests the Ozone Secretariat to compile every January aggregated information on controlled substances by annex and group received from the importing/re-importing party and to provide this uniquely and solely to the exporting party concerned, when requested, in a manner that maintains confidentiality;
- invites parties to clarify any differences in import and export data as provided by the Ozone Secretariat; and
- invites parties to consider participating in the informal prior informed consent scheme as a means to improve information about their potential imports of controlled substances.

Presentation on and consideration of the work and recommended decisions forwarded by the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol: Delegates considered the draft decision on the status of ratification included as draft decision XXIV/[AA] in section III of document UNEP/OzL.Pro.24/8.

Sri Lanka, on behalf of the ImpCom, presented the progress on data reporting, noting, *inter alia*, that 192 out of 196 parties have reported their consumption and production data for 2011. He also described efforts made by parties to ratify all amendments to the Protocol.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html>.

Final Decision: In its decision (UNEP/OzL.Pro.24/CRP.1), the MOP decides, *inter alia*:

- to urge Israel, Mali, Niger, Sao Tome and Principe, South Africa and Tajikistan to work closely with the implementing agencies to report the required data to the Secretariat as a matter of urgency;
- to request the ImpCom to review the situation of those parties at its fiftieth meeting;
- that Algeria, Ecuador, Equatorial Guinea, Eritrea, Haiti, Niger, the former Yugoslav Republic of Macedonia and Turkey have presented sufficient information to justify their requests for the revision of their consumption data for HCFCs for 2009, 2010 or both and approves the requests to revise their baseline;
- to request parties, when reporting production, imports, exports or destruction, to enter a number in each cell in the data reporting forms that they submit;
- to urge Bhutan, Democratic People's Republic of Korea, Marshall Islands, Qatar, South Africa and Yemen to submit information on process agent uses as a matter of urgency; and

- to record with appreciation the submission by Ukraine of a plan of action to ensure its prompt return to compliance with the Protocol's HCFC control measures.

OTHER MATTERS: Application of paragraph 8 of Article 4 of the Montreal Protocol with respect to the Beijing Amendment to the Montreal Protocol: Delegates considered the application of Article 4 (Control of Trade with non-parties) to parties that are in the process of ratifying the Beijing Amendment and are in full compliance with the Protocol's control measures. During discussion, participants noted the similarity between two draft decisions (UNEP/OzL.Pro.24/CRP.7) and (UNEP/OzL.Pro.24/CRP.10).

Canada, supported by the EU, proposed merging the documents by including Kenya and Chad in CRP.7. Participants discussed, *inter alia*: actions to ratify the Beijing Amendment; how to create a process that would allow countries that have not ratified it to submit something to avoid trade sanctions; and reviewing exceptions on an annual basis. Belarus expressed concern about allowing exceptions on an annual basis. Several delegations noted that time is needed to ratify amendments due to ratification procedures. Ecuador, Bolivia, Nicaragua, Kenya, Bahrain and others supported combining the two CRP documents, and delegates agreed to forward the document to the high-level segment.

A summary of the discussions can be found at: <http://www.iisd.ca/vol19/enb1990e.html> and <http://www.iisd.ca/vol19/enb1991e.html>.

Final Decision: In its decision (UNEP/OzL.Pro.24/CRP.7/Rev.1), the MOP, *inter alia*:

- acknowledges that Bahrain, Bolivia, Chad, Ecuador, Haiti, Kenya and Nicaragua have notified the Secretariat that their ratification of the Beijing Amendment is under way and that they will complete the procedures as expeditiously as possible;
- notes that Bahrain, Bolivia, Chad, Ecuador, Haiti, Kenya and Nicaragua are in full compliance with Articles 2A to 2I (Control Measures) and Article 4 (Control of Trade with non-Parties) of the Protocol, including its Beijing Amendment, on the basis of the data submitted under Article 7 (data reporting) of the Protocol;
- notes also that the exceptions provided for in paragraph 8 of Article 4 of the Protocol shall apply to Bahrain, Bolivia, Chad, Ecuador, Haiti, Kenya and Nicaragua from 1 January 2013 and will expire at the end of MOP 25; and
- notes further that any state that has not agreed to be bound by the Beijing Amendment and that seeks an exception beyond MOP 25 may do so by submitting a request to the Ozone Secretariat prior to the beginning of the ImpCom meeting that immediately precedes the MOP, that the Committee will review relevant data submitted in accordance with Article 7 and develop a recommendation for consideration by the parties and that such requests for exception will be considered on an annual basis.

Status of the Bali Declaration: Indonesia updated the meeting on the status of the Bali Declaration, which calls for the most effective means under the Protocol of achieving the transition to low GWP alternatives to ODS. She noted that 105 countries support the Declaration and several have given oral support. She encouraged others to join.

A summary of the discussions can be found at <http://www.iisd.ca/vol19/enb1991e.html>.

Information on ODS Transition Policy Measures:

Delegates considered draft decision (UNEP/OzL.Pro.24/CRP.9/Rev.1). The US said the informal group had agreed to delete “reporting systems” from the draft decision. Co-Chair Alkemada proposed to forward the document to the high-level segment, which India opposed. Canada, the EU, Australia, New Zealand, Norway and the US expressed concern and disappointment with India’s opposition, given that India did not participate in the discussions. They further stressed the voluntary nature of the information gathering exercise and emphasized ways in which the proposed activities would be useful. India responded that it is not required to participate in an informal group and said it did not understand the sense of collecting the information. The US said it was difficult to rationalize how working procedures can result in successful conclusions when countries that do not participate in discussion can block decisions, a sentiment supported in statements by several others. Brazil appreciated the positive spirit of discussion but noted the decision involves aspects of technical and political sensitivity, including possible overlap with reporting obligations in other fora. Brazil and China proposed considering the decision at the next meeting. Co-Chair Alkemada proposed intersessional discussions.

A summary of the discussions can be found at <http://www.iisd.ca/vol19/enb1992e.html>.

A BRIEF ANALYSIS OF MOP 24

On the Montreal Protocol’s twenty-fifth anniversary, participants had a chance to look back on the Protocol’s achievements; they also realized the serious difficulties it faces today. MOP 24 proved to be a watershed, both in terms of the Protocol’s future agenda of phasing down specific chemicals, and the generational change the ozone expert community is undergoing.

The Protocol is a uniquely successful international environmental agreement. Its membership of 197 countries is universal, which means that every nation in the world has agreed to implement its objectives. The Protocol’s record is no less impressive, as its original and regularly updated objectives illustrate. The Protocol set precise, time-bound targets and achieved practical results by eliminating entire classes of chemicals and vastly reducing emissions of ozone depleting substances (ODS). An impressive 98% of controlled substances have been destroyed or taken off the market. According to health experts, the Protocol has helped to avoid tens of millions of non-fatal skin cancers and cataracts, and will prevent millions of cancer deaths in this century, thus saving trillions of dollars for health-care services. Furthermore, the Protocol has achieved

these results by operating mostly on trust among parties, without an intrusive verification system to ensure parties’ compliance with their obligations. Finally, the Protocol’s Multilateral Fund (MLF) has provided necessary financial assistance in such an efficient and effective manner that some suggest it should serve as a financial model for future environmental conventions, including the mercury convention, which is currently being negotiated.

Despite these impressive achievements, the twenty-fourth Meeting of the Parties (MOP 24) shed light on some serious problems that will have to be addressed if the Protocol is to continue to represent a model agreement and contribute to environmental improvement. This brief analysis will focus on several controversial issues that came to the fore in the debates, and that pose new challenges for the Protocol and may serve as markers of its future successes. One of the most significant and controversial questions is whether the Protocol should take up a whole class of currently used chemicals—HFCs (hydrofluorocarbons)—a move that may lead the Montreal Protocol into uncharted territory.

AT A CROSSROADS

As in the previous three MOPs, the problem of controlling HFCs took center stage at MOP 24. Touted as an inexpensive and safe alternative to hydrochlorofluorocarbons (HCFCs) for use in refrigeration, foams, fire extinguishers and solvents, HFCs have turned out to pack a disturbingly high global warming potential (GWP), many times more than carbon dioxide. In fact, if no controls are introduced, HFC emissions into the atmosphere may negate the reductions of greenhouse gases pledged or anticipated under the UNFCCC. Thus, strictly speaking, HFCs are not ozone-depleting, but they have a direct bearing on the climate regime.

Many delegates point out that because the Montreal Protocol introduced HFCs as a substitute, parties have a responsibility to address the harmful climatic effects of these chemicals. One party cited Protocol text as justification, saying the Protocol obliges parties to “take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.” Others argue that tackling HFCs goes too far beyond the Protocol’s mandate.

The problem of HFCs emerged as the single most important and controversial issue of the meeting, to the extent that it overshadowed other debates at times. HFCs are now at the center of a tangled web of economic, political and technical issues. The US, Canada, Mexico and the Federated States of Micronesia (FSM) once again tabled their Protocol amendments to make HFCs a controlled substance. Supported by a sizable number of parties—one participant put the total of supporters at 106 parties and counting—proponents of the amendment emphasized the climate benefits of phasing down HFCs. They emphasized that since this group of chemicals originated from the Protocol’s agenda, phasing them down would be in line with the Protocol’s objectives and would not affect the UNFCCC and Kyoto Protocol mandates, nor preempt any measures the latter

might take. The proponents note that the Montreal Protocol has already phased out more ozone depleting greenhouse gases than the Kyoto Protocol. The FSM and the US also cited the Rio+20 Outcome Document, which recommended “a gradual phase-down in the consumption and production of HFCs.” Other parties made a number of additional arguments in support of the amendments, highlighting economic, environmental and moral concerns. Niger and the Maldives, for instance, stressed that parties have a moral imperative to take action, with the Maldives pointing out that if parties are committed to environmental protection and global safety, it is not moral not to address the challenge within the Protocol.

However, the case for phasing out HFCs, judged by the tenor of the debate and informal exchanges in the corridors, is not so straightforward. The opponents of the proposal, including the members of the BRICS group (Brazil, Russia, India, China and South Africa), produced counterarguments that drew on economic, financial, legal, social, and technological issues. Their main proposition was that HFCs are not ODS and thus do not fall under the Montreal Protocol’s mandate, and instead relate to the UNFCCC and Kyoto Protocol. One delegate wryly wondered why a country that is not among the ardent supporters of the Kyoto Protocol is now arguing for ambitious climate measures “through the backdoor of the Montreal Protocol.”

Some delegates quietly suggested in informal discussions that they harbored suspicions that the HFC proponents might be motivated by industry interests. For instance, 3M, Honeywell, DuPont and other multinational companies are at the cutting edge of new technology and chemical substances, and are in a position to reap profits from the expected transition, at least after an initial phase of heavy investment. In fact, these companies are already turning to new alternatives and technologies in advance of regulation they expect (and possibly hope for). A BRICS delegate recalled that some countries are still reeling from the shock of the destruction of whole industries based on CFCs, and said some parties’ hesitation regarding HFCs stems from concern that dealing with HFCs might siphon funds from the work to phase out HCFCs.

India was particularly vociferous in its opposition to the HFC amendments, and delegates highlighted several concerns. India repeatedly questioned the legality of addressing HFCs under the Montreal Protocol, emphasizing while HFCs have a high GWP, they are not an ODS. They referred to the huge investments made in their national industry, employing substances that would otherwise be earmarked for oblivion by the “chemically advanced” parties. India also pointed to what they viewed as inconsistencies, such as the continued use of HFCs in the US and the EU when no alternatives are available. Safety concerns were emphasized: alternatives like propane are flammable and toxic, and can pose major problems in high ambient temperature developing countries (noted for slack government regulation and lax safety standards). India, supported by fellow BRICS members, succeeded in blocking action on the HFC amendments as well as HFC-associated items, such as a proposal on clean production of HCFC-22, and one to compile voluntarily-

reported information on ODS transition policy measures, which led several parties to express deep disappointment in the final plenary sessions.

These outcomes might have been predicted, given that the amendment proposals have been tabled at several previous MOPs. Still, many suggested that this outcome is not the final decision on the HFC amendments. As weary delegates added up the results of the debate over HFCs, a shrewd observer of the proceedings expressed hope, saying “We are five yards closer to the walls of the fort...” Admittedly, some worried inhabitants peer over the walls and see a Trojan horse poised to outwit the fort defenders. It is still an open question whether chipping off the fort walls will take another year or two, or five, but the drive towards an HFC phase-out might gather speed, particularly if strong incentives are available. One participant suggested that if India’s fears of their companies losing a sizable chunk of the home market if HFCs are put under control could be dispelled, then it will move quickly. In this connection, Switzerland’s initiative to maximize climate benefits in the MLF will be an important factor, as will be the possibility of voluntary contributions.

Furthermore, the agreement to discuss the amendment during plenary and in an informal group represented progress, considering that India and others successfully blocked any discussion at MOP 23. But this time they conceded to informally “discussing” ODS alternatives, albeit under the title “Co-Conveners,” rather than Co-Chairs, which they regarded as a notch lower in formality. While Russia did not support the proposed amendments, its suggestion that a special group be established to address the issue was seen as an important development. China and Brazil, while ready to voice their solidarity with India in principle, also showed a willingness to engage in further discussions. Some detected signs that China, with its export-oriented economy, might be in the process of taking a long-term strategic look at HFCs.

A BIFURCATED HIGHWAY

The meeting was an occasion for lauding several distinguished scientists, whose role in the Protocol’s history was seminal. Stephen Andersen received a special award from the Russian government, and the outgoing chief officers of the ozone secretariat and the MLF were feted. But as congratulatory speeches were delivered, some veteran participants felt nostalgia. The Montreal Protocol is in transition and a change of guard is taking place, with some negotiators stating that they may not be around for the final ODS phase-out. As one delegate observed, the anniversary meeting in Geneva marked the passing of the torch to a younger generation. Against this background, there was poignancy in calls for maintaining the networks and the bonds built over the years among scientists and national institutions and focal points. Several participants recalled the comradeship and cooperation from previous years: the hard bargaining and the late night sessions in which delegates were driven by a commitment to compromise in order to reach agreement. Some thought this commitment to compromise was

evaporating, and expressed concern about too much politicization and intolerance in recent MOPs. However, optimists argued that the overhaul of membership on TEAP and its associated organs will inject the “new blood” that will be necessary to pull the Protocol through the difficult times ahead. At the end of the day, the new areas of substantial work, especially on HFCs, are the ones that will give the Protocol a new lease on life, posing critical decisions for delegates in the meetings ahead.

Several participants emphasized that the debate about HFCs should not obscure the Protocol’s original focus. Both the Scientific Assessment Panel and one NGO noted that the ozone layer recovery is yet to be detected: indeed, it might not be restored to 1980 levels before 2050. Funding for background observation stations, which do critical ozone monitoring, is running dangerously low, and some national ozone units have ceased functioning after World Bank grants petered out.

However, the biggest challenge lies in strategic decisions. The HFC dilemma has again demonstrated the interconnectedness of the global ecosystem; it has also shown the real-life synergies between multilateral environmental agreements, where problems spill over and beg to be resolved in a practical way, overcoming man-made legalistic restrictions.

This challenge was evident when the normally simple procedure of adopting the agenda resulted in debate among parties regarding the re-tabling of proposed amendments to the Protocol, as well as the addition of TEAP membership and improved information on policy and control of ODS transition. Much emphasis was placed on process and procedure by parties opposing the adoption of amendments to the Protocol. For instance, some parties argued that since previous discussions on the proposed amendments had not concluded with agreement, they should not be reopened. However, the current procedures allow for agenda items to be forwarded to the OEWG or the next MOP for further discussion. This allows intersessional work to reach agreement on contentious issues, such as those described above. At the same time, such a strategy raises the question about the point at which parties may decide to “call time” on an issue that is proving difficult to resolve.

Several participants described the Montreal Protocol as arriving at a crossroads, a sentiment that has been expressed with increasing frequency in recent years. One participant invoked the words of Robert Frost, noting that perhaps the Protocol will take “the road less traveled.” the amendments may not be achieved at MOP 25, but the long road of discussions and sometimes acerbic debates may enable delegates to discover a way to reach consensus. In a sense the Protocol is approaching a bifurcated highway, partly obscured by fog, and hard decisions will need to be taken. The HFC phase-down represents a historical opportunity for the Protocol to revitalize and renew its life span. The Protocol is a powerful driver for beneficial environmental change and it can once again show itself as a model agreement by imposing a concrete phase-out schedule, without preempting what the UNFCCC and the Kyoto Protocol can accomplish. In

fact, several parties emphasized the Protocol is already doing more than the climate regime to address climate change, torn as the mechanisms are by political strife.

It was indicative that in the closing minutes of the meeting MOP 24 President Mehmood Alam of Pakistan issued a call for strong and immediate action on climate change, saying “it is time to act on HFCs.” MOP 24 focused the parties’ attention on issues crucial for the Protocol; the vigorous debate in Geneva has bared the political fissures and alliances, and, consequently, the framework for upcoming negotiations. While delegates may not yet be ready to commit to addressing HFCs at MOP 25, in the view of majority of the participants, this issue provides the opportunity to define the future of the Montreal Protocol.

UPCOMING MEETINGS

UNFCCC COP 18: The 18th session of the Conference of the Parties (COP 18) to the UNFCCC and the eighth session of the Conference of the Parties serving as the Meeting of Parties to the Kyoto Protocol (CMP 8), among other associated meetings, are scheduled to take place in Doha, Qatar. **dates:** 26 November - 7 December 2012 **location:** Doha, Qatar **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** http://unfccc.int/meetings/doha_nov_2012/meeting/6815.php

World Climate Summit 2012: The third annual World Climate Summit, which is organized alongside UNFCCC COP 18, will bring together government leaders and representatives from the business and finance community to discuss issues related to a low-carbon economy and industrial, financial, political and innovation drivers to accelerate progress in mitigating and adapting to climate change. The meeting will focus specifically on Qatar and the Middle East. Topics of discussion include: public-private partnerships; renewable energy; agriculture and water; emission reductions; transportation; carbon pricing; and energy efficiency. **dates:** 1-2 December 2012 **location:** Doha, Qatar **contact:** Michael Mathres **phone:** +44-7427-307730 **email:** michael@wclimate.com **www:** <http://www.worldclimatesummit.org/>

68th Meeting of the Executive Committee of the Multilateral Fund for the Montreal Protocol: The Executive Committee will meet to approve projects and review implementation of existing projects. **dates:** 3-7 December 2012 **location:** Montreal, Canada **contact:** Multilateral Fund Secretariat **phone:** +1-514-282-1122 **fax:** +1-514-282-0068 **email:** secretariat@unmfs.org **www:** <http://www.multilateralfund.org/>

Joint Meeting of the Bureaux of the Conferences of the Parties (COPs) to the Basel, Rotterdam and Stockholm Conventions: The Joint Meeting will review arrangements for the extraordinary meeting of the COPs to the three conventions, the proposal for the organization of their secretariats, joint activities for the 2014-2015 biennium, the budget and possible necessary amendments to the budgets of the three conventions for the 2014-2015 biennium, and information received from the UNEP’s Executive Director on the outcome of the consultative

process on financing options for chemicals and wastes. **dates:** 13-14 December 2012 **location:** Geneva, Switzerland **contact:** Secretariat of the Basel, Rotterdam and Stockholm Conventions **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** synergies@unep.org **www:** <http://synergies.pops.int/>

Fifth Session of the INC to Prepare a Legally Binding Instrument on Mercury: This meeting is the last of five Intergovernmental Negotiating Committee (INC) meetings to negotiate a legally binding instrument on mercury. **dates:** 13-18 January 2013 **location:** Geneva, Switzerland **phone:** +41-22-917-8192 **fax:** +41-22-797-3460 **email:** mercury.chemicals@unep.org **www:** <http://www.unep.org/hazardoussubstances/MercuryNot/MercuryNegotiations/tabid/3320/language/en-US/Default.aspx>

Expert Meeting on POPS in Articles in Use and “POPS-Free” Initiative: Experts will provide input for a publication on POPs in articles in use and the Stockholm Convention’s POPs-free initiative. **dates:** 4-6 February 2013 **location:** Geneva, Switzerland **contact:** Stockholm Convention Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** ssc@pops.int **www:** <http://www.pops.int>

Coordinated Ordinary and Extraordinary Meetings of the COPs to the Basel, Rotterdam and Stockholm Conventions: The ordinary and extraordinary meetings of the Conferences of the Parties (COPs) to the Basel, Rotterdam and Stockholm Conventions will convene in Geneva, Switzerland. **dates:** 28 April - 10 May 2013 **location:** Geneva, Switzerland **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** synergies@unep.org **www:** <http://synergies.pops.int/Implementation/ExCOPs/ExCOPs2013/tabid/2747/language/en-US/Default.aspx>

Eleventh International Conference on Mercury as a Global Pollutant: Convened under the theme “Science informing global policy,” the conference will celebrate the official launch of the UNEP Global Legally Binding Treaty on Mercury, and consider how to put the treaty into practice. The meeting aims to exchange information on the science of mercury behavior and release, and its effect on ecosystems. **dates:** 28 July - 2 August 2013 **location:** Edinburgh, United Kingdom **contact:** Marcus Pattison **phone:** +44-1727-858840 **fax:** +44-1727-840310 **email:** info@mercury2013.com **www:** <http://www.mercury2013.com/>

Ninth Meeting of the Persistent Organic Pollutants Review Committee (POPRC-9): POPRC-9 will review chlorinated naphthalenes, hexachlorobutadiene, hexabromocyclododecane, and pentachlorophenol and its salts and esters, as well as discuss other technical work such as the impact of climate change on the POPRC’s work and common issues in applying Annex E criteria. A joint meeting with the Rotterdam Convention’s Chemical Review Committee (CRC) may be held on 19 October 2013, if approved by the joint Basel/Rotterdam/Stockholm COPs. **dates:** 14-18 October 2013 **location:** Rome, Italy **contact:** Stockholm Convention Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** ssc@pops.int **www:** <http://www.pops.int>

Ninth Meeting of the Rotterdam Convention CRC: This subsidiary body of the Rotterdam Convention reviews chemicals and pesticide formulations according to the criteria set out by the Convention in Annexes II and IV, respectively, and makes recommendations to the COP for listing these chemicals in Annex III. A joint meeting with the POPRC may be held on 19 October 2012, if approved by the joint Basel/Rotterdam/Stockholm COPs. **dates:** 21-25 October 2013 **location:** Rome, Italy **contact:** Rotterdam Convention Secretariat **phone:** +41-22-917-8296 **fax:** +41-22-917-8082 **email:** pic@pic.int **www:** <http://www.pic.int/>

25th Meeting of the Parties to the Montreal Protocol: MOP 25 is scheduled to consider a number of issues, including nominations for critical- and essential-use exemptions. **dates:** 28 October - 1 November 2013 **location:** Ukraine **contact:** Ozone Secretariat **phone:** +254-20-762-3851 **fax:** +254-20-762-4691 **email:** ozoneinfo@unep.org **www:** http://ozone.unep.org/new_site/en/historical_meetings.php

GLOSSARY

CBDR	Common but differentiated responsibilities
CFCs	Chlorofluorocarbons
COP	Conference of the Parties
CRP	Conference room paper
CTC	Carbon tetrachloride
CUEs	Critical-use exemptions
CUNs	Critical-use nominations
EEAP	Environmental Effects Assessment Panel
EIA	Environmental Investigation Agency
ExMOP	Extraordinary Meeting of the Parties
FSM	Federated States of Micronesia
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
HCFCs	Hydrochlorofluorocarbons
ImpCom	Implementation Committee
IPPC	International Plant Protection Convention
ODP	Ozone depletion potential
ODS	Ozone depleting substances
OEWG	Open-ended Working Group
MDIs	Metered dose inhalers
MLF	Multilateral Fund
MOP	Meeting of the Parties
MTOC	Medical Technical Options Committee
MBTOC	Methyl Bromide Technical Options Committee
QPS	Quarantine and pre-shipment
SAP	Scientific Assessment Panel
TEAP	Technology and Economic Assessment Panel
TOC	Technical Options Committee
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change