

Summary of the Combined Twelfth Meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer (part II) and the Thirty-Third Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer: 23-29 October 2021

“The effective implementation of the Montreal Protocol and the Kigali Amendment will go down in history as having put humanity back on track to a peaceful and sustainable future.” Those were the words of Inger Andersen, Executive Director of the United Nations Environment Programme (UNEP), at the close of the meeting, but which guided how delegates worked through a limited, but intense agenda.

Convening online to consider time-sensitive issues, the combined twelfth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer (part II) and the thirty-third Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP 12(II)/MOP 33) took key decisions related to monitoring controlled substances and energy efficiency.

Due to the unexpected emissions of trichlorofluoromethane (CFC-11) in 2018, the issue of gaps in monitoring of substances controlled by the Protocol has been growing in the scientific community as well as among parties to the Protocol. Although additional monitoring responsibilities may be seen as burdensome, developing countries have long been calling for the requisite capacity and infrastructure to effectively implement the Protocol. At this meeting, delegates took the first step, requesting the assessment panels to work out what would be needed to increase the monitoring capacities in regions where capacity is limited or altogether absent.

Delegates also continued work on what is becoming an increasing focus of the Montreal Protocol: low global-warming-potential (GWP) and energy efficient technologies. Five years after the adoption of the Kigali Amendment to the Protocol, the need for more sectors to adopt energy efficient technologies is an increasing concern and desire among all parties. The meeting considered two draft decisions, which took different approaches to address this issue. One, which was forwarded to the next in-person meeting of the MOP, addressed trade in soon-to-be obsolete technologies, which could be a threat to the future implementation of the Kigali

Amendment. The other sought to broaden the list of sectors required to implement more energy-efficient technology. Both drafts gave parties much food for thought throughout the seven-day meeting.

Over 300 delegates attended this meeting, and worked collaboratively to overcome the challenges of the online setting, adopting 18 decisions on administrative and technical matters on, among others:

- the replenishment of the Multilateral Fund;

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- financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol;
- compliance and reporting;
- membership of Montreal Protocol bodies; and
- recommendations of the Ozone Research Managers of the Vienna Convention.

Due to the COVID-19 pandemic, COP 12(II)/MOP 33 was held virtually from 23-29 October 2021, with the preparatory segment convening from 23-28 October, and the high-level segment convening on 29 October 2021.

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, a 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 calls for cooperation on monitoring, research, and data exchange, but does not impose obligations to reduce use of ozone depleting substances (ODS). The Convention now has 198 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, which entered into force in January 1989. The Montreal Protocol introduced control measures for some CFCs and halons for developed countries (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 has been ratified by 198 parties.

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 certain number of parties before they enter into force; adjustments enter into force automatically. All amendments except its newest, the Kigali Amendment, have been ratified by 197 parties.

Key Turning Points

London Amendment and Adjustments: At the second MOP, held in London, UK, in 1990, delegates 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 parties 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 hydrochlorofluorocarbons (HCFCs). MOP 4 also agreed to enact non-compliance procedures. It established an Implementation Committee 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.

Kigali Amendment: At MOP 28, held in Kigali, Rwanda, in 2016, delegates agreed to amend the Protocol to include hydrofluorocarbons (HFCs) as part of its ambit and to set phasedown schedules for HFCs. HFCs are produced as replacements for HCFCs and thus a result of ODS phase-out. HFCs are not a threat to the ozone layer but have a high global warming potential. To date, 127 parties to the Montreal Protocol have ratified the Kigali Amendment, which entered into force on 1 January 2019.

Recent Meetings

COP 11/MOP 29: The eleventh meeting of the Conference of the Parties to the Vienna Convention (COP) and MOP 29 met in November 2017, in Montreal, Canada. COP 11/MOP 29 adopted decisions including on future availability of halons and energy efficiency. They also agreed on a USD 540 million replenishment of the MLF for the triennium 2018-2020.

MOP 30: Convening in November 2018 in Quito, Ecuador, MOP 30 adopted decisions on, *inter alia*: issues important to the January 2019 entry into force of the Kigali Amendment; approved destruction technologies to be used for HFCs; the MLF Executive Committee's (ExCom) progress in developing guidelines for the financing of the HFC phase-down; Article 5 parties' access to energy-efficient technologies in the refrigeration, air conditioning, and heat pump sectors; a proposal to permit essential use exemptions for HCFCs for specific uses by certain parties; and unexpected increases in CFC-11 emissions.

MOP 31: MOP 31 met in November 2019 in Rome, Italy. The MOP adopted several decisions, the most significant of which were on the terms of reference for the study on the 2021-2023 MLF replenishment, unexpected CFC-11 emissions, and the areas of focus for the 2022 quadrennial assessment reports. MOP 31 also addressed: ongoing reported emissions of CTC; critical use exemptions (CUEs); and issues of non-compliance. Parties were invited to sign the Rome Declaration on the Contribution of the Montreal Protocol to Food Loss Reduction through Sustainable Cold Chain Management.

OEWG 42: The 42nd meeting of the Open-ended Working Group (OEWG 42) convened online on 14, 15 and 16 July 2020 for three identical three-hour sessions to address the Technology and Economic Assessment Panel (TEAP) Replenishment Task Force's report on the 2021-2023 MLF replenishment. Parties heard the MLF replenishment needed to consider not only the HCFC phase-out but also the HFC phase-down. Estimated funding requirements put forward by the TEAP's Replenishment Task Force ranged from

USD 376,697,000 to USD 808,706,000. Parties were able to submit queries during and after the online sessions. Work on the methyl bromide CUEs took place online.

COP 12/MOP 32: Due to the COVID-19 pandemic, the first part of COP 12 and MOP 32 convened online from 23-27 November 2020. Delegates addressed only those issues deemed essential, including the replenishment of the MLF for 2021-2023. Parties authorized the Secretariat to arrange an extraordinary MOP in 2021 to take a decision on the final programme budget for 2021-23. MOP 32 also addressed, *inter alia*: methyl bromide CUEs for 2021-2022; compliance and data reporting issues; and membership of the Montreal Protocol bodies and assessment panels.

ExMOP 4 and OEWG 43: The Fourth Extraordinary MOP to the Montreal Protocol (ExMOP 4) and OEWG 43 convened online from the 21, 22 and 24 May 2021 due to the COVID-19 pandemic. ExMOP 4 agreed to facilitate payments to the MLF to ensure its continued functioning during 2021. Parties agreed that any contributions made in advance of the 2021-2023 replenishment decision should count toward future contributions and should not affect the overall level of the replenishment or the agreed level of contributions by parties. At the first of three sessions of OEWG 43 held between May and July 2021, parties discussed the scope and content of guidance to the TEAP Replenishment Task Force on further work on its replenishment report. Parties were only able to agree on an updated report, rather than a more comprehensive supplemental report.

Online Briefing Meetings: In October 2021, the Ozone Secretariat convened three online briefing meetings for delegates to prepare for COP 12(II)/MOP 33. On 5 October 2021, delegates discussed issues relating to the Vienna Convention, including the outcome of the eleventh meeting of the Ozone Research Managers (ORM 11), and the status of the General Trust Fund for financing activities on research and systematic observations relevant to the Convention. On 7 October 2021, delegates met to discuss the 2021 TEAP progress report, including its membership changes. On 18 October 2021, delegates convened to address the updated replenishment report by the TEAP task force.

Preparatory Segment Report

Welcoming delegates, OEWG 43 Co-Chair Vizmindia Osorio (Philippines) opened COP 12(II)/MOP 33 on Saturday, 23 October 2021, noting the reduced agenda is still ambitious as it contains essential elements for the implementation of the Convention and its Protocol.

Megumi Seki, Executive Secretary, Ozone Secretariat, expressed her hope for the return of in-person meetings in 2022 to further negotiations on key issues that have been deferred over the past two years due to the COVID-19 pandemic. Of particular importance, she stressed the need for full discussions and negotiations of the 2021-2023 replenishment of the MLF, as well as on the terms of reference for the next TEAP study of the 2024-2026 replenishment period. Noting preparatory work is the most important ingredient for success, she drew attention to several online meetings and briefings that took place in advance of COP 12/MOP 33. Stressing the need to increase action to address climate change and achieve the Sustainable Development Goals, she drew attention to the Secretariat's partnership with the UN Food System Summit to address sustainable cold chains, with a virtual exhibition available on the Convention's [website](#).

Organizational Matters

On Saturday, delegates adopted the provisional agenda (UNEP/OzL.Conv.12(II)/1-UNEP/OzL.Pro.33/1 and UNEP/OzL.Conv.12(II)/1/Add.1-UNEP/OzL.Pro.33/1/Add.1). OEWG 43 Co-Chair Osorio noted that the organization of work had been circulated well before the meeting to ensure delegations could fully engage on the agenda items, time zones notwithstanding.

Financial Reports and Budgets of the Trust Funds for the Convention and the Protocol

On Saturday, OEWG 43 Co-Chair Osorio noted that in 2020, delegates had agreed on an annual budget for 2021 rather than a budget for 2021-2023 triennium. Delegates agreed to establish a Budget Committee to discuss this issue. The Committee was open only to parties and chaired by Nicole Folliet (Canada). The Committee met from Saturday to Monday. Reporting on the committee's progress on Tuesday, Chair Folliet requested more time to finalize the decision text. On Thursday, she reported that the Committee had finalized its work. Delegates agreed to forward the draft decisions related to the financial reports and budgets of both the Vienna Convention and the Montreal Protocol to the high-level segment.

On Friday, during the HLS, delegates adopted the decisions.

Final Decisions: In the final decision on the financial reports and budgets for the Vienna Convention (UNEP/UNEP/OzL.Conv.12(II)/CRP.3), the COP, *inter alia*:

- approves the revised budget for 2021 for the Trust Fund in the amount of USD 1,083,488, the budget for 2022 in the amount of USD 888,180, the budget for 2023 in the amount of USD 902,192 and the budget for 2024 in the amount of USD 1,477,235, as set out in table A of the annex to the decision;
- reaffirms a working capital reserve equivalent to 15% of the annual operational budgets for the triennium 2022–2024, to be used to meet the final expenditures under the Trust Fund;
- approves the contributions to be paid by the parties, of USD 781,175 in 2022, USD 781,175 in 2023, and USD 781,175 in 2024;
- agrees to consider at COP 13 how to address outstanding contributions to the Trust Fund, and requests the Executive Secretary to continue to publish and regularly update information on the status of contributions;
- requests the Secretariat to ensure the full utilization of the programme support resources available to it in the triennium 2022–2024 and in later years and, where possible, to offset those programme support resources against the administrative components of the approved budget; and
- requests the Secretariat to indicate in future financial reports of the Trust Fund the amounts of cash on hand, in addition to contributions that have not yet been received.

The annex to the decision contains the approved revised budget for 2021 and approved budgets for 2022, 2023, and 2024 for the Vienna Convention Trust Fund.

In the final decision on the financial reports and budgets for the Montreal Protocol (UNEP/OzL.Pro.33/CRP.7), recognizing that the exceptional circumstances arising from the COVID-19 pandemic have resulted in a lower utilization of the budget in 2021, and taking this into account with respect to the level of contributions for 2022, the MOP, *inter alia*:

- approves the revised budget, including the additional activities, of USD 3,619,899 for 2021 and the budget of USD 5,608,190 for 2022, and to take note of the indicative budget for 2023;
- authorizes the Executive Secretary, on an exceptional basis, to draw upon the available cash balance for 2022, provided that the cash balance is not reduced below the working capital reserve, in an amount of up to USD 246,939 for specific activities, including an indicative amount for an ExMOP in 2022;
- requests the Executive Secretary to enter into discussions with any party whose contributions have been outstanding for two or more years with a view to finding a way forward, and to report to MOP 34 on the outcome of those discussions to enable further consideration by the parties of how to address the matter;
- requests the Executive Secretary to continue to provide regular information on earmarked contributions and to include that information, where relevant, in the budget proposals of the Trust Fund to enhance transparency with regard to the actual income and expenses of the Trust Fund; and
- requests the Secretariat to ensure the full utilization of the programme support resources available to it in 2022 and in later years and, where possible, to offset programme support resources against the administrative components of the approved budget.

The annex to the decision contains the approved revised 2021, approved 2022, and proposed 2023 budgets for the Trust Fund for the Protocol.

Montreal Protocol Issues

Replenishment of the MLF for the period 2021–2023: On Saturday, OEWG 43 Co-Chair Martin Sirois (Canada) noted that the report by the TEAP Replenishment Task Force would not be discussed at this meeting, as it had been adequately addressed during the pre-meeting online briefing.

MLF replenishment: OEWG 43 Co-Chair Sirois pointed to three draft decisions on: the 2022 contributions to the MLF for the 2021–2023 triennium (UNEP/OzL.Conv.12(II)/3/Add.6-UNEP/OzL.Pro.33/3/Add.6), submitted by Australia and the European Union (EU); the Fund's updated interim budget (UNEP/OzL.Conv.12(II)/3/Add.7- UNEP/OzL.Pro.33/3/Add.7), submitted by Canada; and an ExMOP in 2022 (UNEP/OzL.Conv.12(II)/3/Add.8- UNEP/OzL.Pro.33/3/Add.8), submitted by Norway.

Introducing the draft decision on the 2022 contributions to the MLF, AUSTRALIA noted the draft provides a legal basis for donor countries wishing to make an early contribution to the MLF for 2022. She underlined that the decision would guide national budgeting decisions, and underscored that the indicative level of contributions for 2022 does not preclude the replenishment level of the MLF, which is yet to be agreed.

OEWG 43 Co-Chair Sirois noted that a similar decision was taken by the ExMOP in 2021. BARBADOS, KUWAIT, and INDIA expressed their support for the proposal. NEW ZEALAND requested to be added as a co-sponsor. OEWG 43 Co-Chair Sirois proposed, and delegates agreed, to forward the draft decision as amended to the high-level segment (HLS) for adoption.

On Friday, during the HLS, delegates adopted the decision on contributions to the MLF for the triennium 2021–2023.

Final Decision: In its decision (UNEP/OzL.Pro.33/CRP.4), the MOP, taking into account the current exceptional circumstances related to the COVID-19 pandemic, and without setting a precedent:

- notes the next MOP is expected to take a final decision on the replenishment of the MLF, including a revised budget for the triennium 2021–2023, including regular contributions by parties and potential extension of the fixed-exchange-rate mechanism;
- recognizes some parties have advised that under their national budgeting processes, contributing to the MLF requires a decision by the MOP, which states the level of this contribution;
- notes any contributions made by parties, in advance of a final decision including a revised budget for the MLF for the 2021–2023 triennium and of a decision on the potential extension of the fixed-exchange-rate mechanism, would count towards the level of contributions to be decided for the 2021–2023 triennium;
- decides to adopt the level of indicative contributions for the parties listed in Table A for 2022 on an interim basis in advance of a final decision from the MOP on a revised budget for the MLF for the triennium 2021–2023; and
- decides any contributions by parties made in advance of a final decision on the revised budget for the MLF for the triennium 2021–2023 shall be without prejudice to the overall level of the replenishment or to the agreed level of contributions by parties.

Updated MLF interim budget: On Saturday, CANADA

introduced the draft decision on an updated MLF interim budget for the 2021–2023 triennium. He stated that although an interim budget had been adopted in 2020, based on the resources available at the time, there has been considerable change in available resources due to the receipt of additional contributions. He outlined the draft decision, stating it appreciates the contributions made, and reflects the updated budget. He noted placeholder text for the final budget amount, which he said would be inserted when the MLF Chief Officer provides an update on the final resources. Eduardo Ganem, Chief Officer, MLF, confirmed USD 399.3 million was available. OEWG 43 Co-Chair Sirois proposed, and delegates agreed, that the draft decision be forwarded to the HLS for adoption, entrusting the Secretariat to insert the confirmed amount available to the MLF. Parties agreed.

On Friday, during the HLS, delegates adopted the decision on the updated interim budget.

Final Decision: In its decision (UNEP/OzL.Pro.33/CRP.5), the MOP, taking into account the current exceptional circumstances related to the COVID-19 pandemic, and without setting a precedent:

- recognizes the resources remaining from the 2018–2020 replenishment in decision XXIX/1;
- recalls decision XXXII/1, under which parties adopted an interim budget of USD 268 million for the MLF for the triennium 2021–2023;
- notes parties will take a decision on the replenishment of the MLF to adopt a final budget for the triennium, 2021–2023, including regular contributions; and
- decides to adopt an updated interim budget for the MLF for the triennium 2021–2023 of USD 400 million until such time as parties adopt a final decision on replenishment, including a revised budget for the triennium 2021–2023, on the understanding that the updated interim budget will be provided from contributions due to the MLF and other sources for the triennium 2018–2020, and contributions from parties already made in 2021.

ExMOP: On Saturday, NORWAY introduced its draft decision to hold an ExMOP in 2022. He said that due to the persistence of the global pandemic and ongoing uncertainty, the draft recommends

authorizing the Secretariat to arrange an ExMOP in 2022, optimally back-to-back with the OEWG in July 2022, dependent on how the COVID-19 pandemic develops. This is with a view to finalizing the negotiations on the MLF contributions for the triennium 2021–2023. He underscored the critical need to finalize the negotiations.

Many parties, including EGYPT, supported the Norwegian proposal. SWITZERLAND, supported by COLOMBIA, requested explicit reference to an ExMOP held back-to-back with the OEWG, noting a plethora of environmental negotiations scheduled to take place during 2022. JAPAN, supported by the US, CANADA, KUWAIT, and BURKINA FASO, suggested the meeting take place in any format and not be limited, given the current global uncertainty.

KUWAIT, with INDIA, preferred delinking the 2021–2023 replenishment discussions from the 2024–2026 replenishment study discussions. The US proposed, and delegates agreed to delete language referencing the 2024–2026 replenishment study from the draft, to avoid confusion.

Co-Chair Sirois then proposed, and delegates agreed, to forward the draft decision as amended to the HLS for adoption. He noted that with this agreement, there would be no need for a contact group to address MLF replenishment-related issues.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In its decision (UNEP/OzL.Pro.33/CRP.6), the MOP, taking into account the current exceptional circumstances related to the COVID-19 pandemic, and without setting a precedent:

- recalls decision XXXII/2 on organizing an ExMOP in 2021 to enable parties to take a decision on the replenishment of the MLF for the triennium 2021–2023, if and when the circumstances related to the global pandemic permit it;
- is aware that the Secretariat might need to prepare a contingency plan for meetings of the ozone treaties in 2022; and
- decides to authorize the Secretariat to organize an ExMOP in 2022 to enable parties to take a decision on the 2021–2023 MLF replenishment, if and when the circumstances related to the global pandemic permit.

Unexpected emissions of CFC-11: On Sunday, OEWG 43 Co-Chair Osorio introduced this issue, noting 2019 and 2020 reports from the Scientific Assessment Panel (SAP) and the TEAP in response to parties' requests for information. Highlighting that these reports were addressed at OEWG 43 (as contained in UNEP/OzL.Pro.WG.1/43/4/Add.1) and during the online forums in the lead up to COP 12(II)/MOP 33.

In a video message, the SAP presented the trends of CFC-11 emissions, noting these emissions have declined rapidly since 2019, with global emissions substantially below 2018 levels, the year when the unexpected emissions were first detected. Parties welcomed this information, with many thanking the SAP and the TEAP for their work on this issue.

INDIA, with SWITZERLAND, underlined the need to strengthen monitoring to ensure any future unexpected emissions are identified swiftly, without extending additional burdens to parties.

The EU:

- called for vigilance, given not all emission sources have been identified, supported by SWITZERLAND, the US, and SENEGAL;
- noted the ongoing nature of this problem, particularly due to destruction banks; and

- with SENEGAL and others, pointed to CTC as a source of CFC-11, which also needs to be monitored.

Stating the SAP should have the capacity to monitor emissions in real time, BURKINA FASO, with the US, highlighted that more needs to be done to monitor CFC-11 stocks. The US also noted the need to further understand potential emissions sources. NORWAY called for continued vigilance, particularly on CTC and global banks of CFC-11 and, with AUSTRALIA, looked forward to the quadrennial reports of the SAP and TEAP on this matter.

Outlining potential next steps, CANADA called on the SAP and TEAP to inform parties of new, significant information at MOP 34, and update their reports for 2023, noting that, supported by AUSTRALIA, no decision is required at this meeting for these measures to be implemented.

CHINA called for capacity building to enhance compliance on such matters, specifically for developing countries. Supported by BAHRAIN and EGYPT, KUWAIT stressed any monitoring mechanism established should not be burdensome to Article 5 parties, and, with NORWAY, BURKINA FASO, SWITZERLAND and several others, called for any further discussions on this issue to be held at a face-to-face meeting.

SWITZERLAND reminded delegations of their 2019 draft decision on CTC, requesting it be included on the agenda of the next in-person meeting.

OEWG 43 Co-Chair Osorio closed this item, noting the discussion would be reflected in the meeting report.

Gaps in monitoring of controlled substances and options for enhancing monitoring: On Sunday, OEWG 43 Co-Chair Sirois introduced this item (UNEP/OzL.Conv.12(II)/2-UNEP/OzL.Pro.33/2, paras.40-43, UNEP/OzL.Conv.12(II)/7 Annex Section III), including recommendations from the ORM. He noted the EU had prepared a draft decision on the matter.

The EU introduced its draft decision (UNEP/OzL.Conv.12(II)/3/Add.3/Rev.1-UNEP/OzL.Pro.33/3/Add.3/Rev.1), noting it is closely linked to the unexpected emissions of CFC-11. He said monitoring is essential, lamenting the remaining gaps and uncertainties that could be mitigated. He underlined the importance of addressing this issue to maintain the successful reputation of the Montreal Protocol.

The EU provided an overview of the proposed decision that:

- requests parties to enhance sharing of data on the atmospheric monitoring of controlled substances among existing measurement networks and to inform the Secretariat;
- encourages parties to contribute to developing enhanced monitoring capacities and to maintain existing capacities; and
- requests the Secretariat, *inter alia*, to coordinate with the SAP and TEAP experts and the ORMs to provide a framework on how to enhance the monitoring of atmospheric emissions of controlled substances.

He noted an EU grant to facilitate such work. He concluded by stating this is expected to be a starting point for broader action on the issue and welcomed further discussions in a contact group.

KUWAIT queried if there will be an additional burden on Article 5 parties. SENEGAL asked how Article 5 parties could be assisted in measuring and monitoring controlled substances, and which mechanisms could be employed for scientific and technical capacity building.

The UK, with the US, CANADA, and AUSTRALIA, said the proposal addresses issues of importance for the Protocol and serves

as a good basis for discussions. CANADA further noted there is an uneven distribution of ODS monitoring stations across the globe.

INDIA, supported by KUWAIT, underscored that the unexpected CFC-11 emissions and this proposal are connected and, as such, should be discussed at the next in-person meeting.

The EU clarified that the proposal aims to be factfinding and does not intend to place any additional burden on Article 5 parties. He reiterated the broader discussion should be undertaken face-to-face, underscored the proposal as a first step in addressing these issues, and stated it does not prejudice any future measures.

OEWG 43 Co-Chair Sirois established a contact group to further discussions, co-facilitated by Samuel Paré (Burkina Faso) and Ulrika Raab (Sweden).

The contact group met on Sunday, Monday, Wednesday, and Thursday to consider the EU proposal. Delegates considered issues of data sharing and capacity building, with many expressing concern that Article 5 parties would be tasked with additional work, when they are already “stretched thin” in meeting their obligations under the Protocol. Many permutations were considered, with delegates eventually deciding to delete the text, with a view to considering the options at the next face-to-face meeting. Delegates also deleted a request to the SAP to provide advice on which controlled substances to monitor as a priority. This was a result of a SAP intervention stating all substances should be monitored, so that any unexpected emissions can be detected. As a result, delegates also ultimately agreed to only request the Secretariat to provide information on, among others, options for possible means to establish new monitoring capacities. On Thursday, Co-Facilitator Raab reported to the preparatory segment plenary that the group had completed its work. Delegates agreed to forward the draft decision to the HLS for adoption.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In the final decision on enhancing the global and regional atmospheric monitoring of substances controlled by the Protocol (UNEP/OzL.Pro.33/CRP.8), the MOP requests the Ozone Secretariat, in consultation with relevant experts from the SAP, TEAP, and ORM, to provide the following information to the parties at OEWG 45 in 2023, and to report on the progress of work at OEWG 44 in 2022:

- options for regional monitoring of atmospheric concentrations of substances controlled by the Protocol, based on the existing information provided by the SAP and ORM, and the challenges for operationalizing relevant recommendations;
- identification of suitable locations for possible high-frequency measurements and flask sampling for regions not, or not sufficiently, covered by existing atmospheric monitoring, with a view to strengthening monitoring capacity and networks; and
- options for possible means of establishing new monitoring capacities and related costs, taking into account existing monitoring infrastructure.

Nominations for methyl bromide critical-use exemptions for 2022 and 2023: On Monday, OEWG 43 Co-Chair Osorio noted that the Methyl Bromide Technical Options Committee (MBTOC) had evaluated CUE nominations submitted by Argentina, Australia and Canada. She explained their recommendations were included in volume five of the 2021 TEAP report, noting the nominations were for strawberry runners and tomatoes.

MBTOC Co-Chair Marta Pizano highlighted the assessment had been conducted virtually, with the participation of all 16 MBTOC

members. She said Australia’s CUE pertains to methyl bromide use for strawberry runners in 2023, noting the amount is 50% less than their previous CUE. She called attention to Australia’s intention to transition to methyl iodide when this substance is registered, which could completely phase out the country’s use of methyl bromide.

MBTOC Co-Chair Ian Porter noted that Canada’s CUE was 5% less than previous years and also pertains to strawberry runners. He noted Argentina’s CUE for strawberries and tomatoes, adding that the amounts were “very small.” He highlighted that, unlike in previous years, South Africa had not submitted a CUE for the fumigation of structures such as houses and mills, which had significantly reduced the quantity of methyl bromide approved for use in 2022 and 2023. He shared that, overall, the reduction in the concentration of methyl bromide has been critical for the recovery of the ozone layer, stating that most uses are now related to quarantine and pre-shipment (QPS).

AUSTRALIA discussed its plan to transition from methyl bromide by 2024. Welcoming the downward trend in methyl bromide use, the EU called on the next meeting of the OEWG to address QPS uses, noting there is a distinction in requirements for quarantine uses, and for pre-shipment uses. He also called for discussions on stocks at the next meeting.

MBTOC Co-Chair Porter reminded nominating parties to also submit national management plans as part of the CUE nomination process. OEWG 43 Co-Chair Osorio said all comments would be recorded in the meeting report.

CANADA introduced a draft decision on CUEs for methyl bromide for 2022 and 2023 (UNEP/OzL.Pro.33/CRP.1), noting ongoing consultations with the EU, who noted their changes were minor. ARGENTINA welcomed the draft decision. OEWG 43 Co-Chair Osorio requested Canada and the EU work on integrating any changes. On Wednesday, CANADA reported that minor changes had been integrated into the draft, after consultations with the EU, Australia, Argentina, and South Africa. Delegates agreed to submit the draft to the HLS for adoption on Friday.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In the final decision on CUEs for 2022 and 2023 (UNEP/OzL.Pro.33/CRP.1/Rev.1), the MOP, *inter alia*:

- permits, for the agreed critical-use categories for 2022 and 2023 set forth in Table A of the annex for each party, the levels of production and consumption for 2022 and 2023 set forth in Table B of the annex, which are necessary to satisfy critical uses, with the understanding that additional production and consumption and categories of use may be approved by the MOP in accordance with decision IX/6;
- agrees 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; and
- reiterates the reminder in decision XXXII/3 that Article 5 parties requesting CUEs are required to submit their national management strategies in accordance with paragraph 3 of decision Ex.I/4.

Annex A contains agreed critical-use categories for methyl bromide use for strawberry runners in Australia in 2023, for strawberry runners for both Canada and Argentina in 2022, and for tomatoes in Argentina in 2022. Annex B contains the permitted levels of production and consumption for the three countries over the two years.

TEAP membership changes: On Monday, OEWG 43 Co-Chair Sirois introduced this item (UNEP/OzL.Conv.12(II)/2-UNEP/OzL.Pro.33/2, paras. 48-50, UNEP/OzL.Conv.12(II)/2/Add.1-UNEP/OzL.Pro.33/2/Add.1, paras.23-29, and Annexes II and III, TEAP 2021: Progress report (Volume 1), Annex I, and CRP.3), stating the terms for nine members expire at the end of 2021 and nine nominations to fill these positions have been received. He said parties had been requested to use the nomination form, taking into account the matrix of required expertise and geographical and gender balance, when making their nominations. He highlighted the relevant draft decision, CRP.3/Rev.1, which reflects all the nominations received.

CANADA, noting inconsistency in the re-election terms of senior experts, and with the EU, KUWAIT, UK, and US, requested senior experts be re-elected for one year, as per decision XXXII/7. He noted term limits will be revisited at the next in-person meeting.

OEWG 43 Co-Chair Sirois proposed, and delegates agreed, to forward the CRP to the HLS, entrusting the Secretariat to limit the terms of senior experts to one year.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In its decision on the changes in membership of the TEAP (UNEP/OzL.Pro.33/CRP.3/Rev.2), the MOP:

- thanks the TEAP for its outstanding reports, and thanks the Co-Chairs and members of the Panel for their outstanding service and dedication;
- endorses the appointment of Sergey Kopylov (Russian Federation) as Co-Chair of the Halons Technical Options Committee (TOC) for an additional term of four years;
- endorses the appointment of Roberto Peixoto (Brazil) as Co-Chair of the Refrigeration, Air Conditioning and Heat Pumps TOC for an additional term of two years;
- endorses the appointment of Marta Pizano (Colombia) as Co-Chair of the MBTOC for an additional term of four years;
- endorses the appointment of Ian Porter (Australia) as Co-Chair of the MBTOC for an additional term of four years;
- endorses the appointment of Helen Tope (Australia) as Co-Chair of the Medical and Chemicals TOC for an additional term of four years;
- endorses the appointment of Helen Walter-Terrinoni (US) as Co-Chair of the Flexible and Rigid Foams TOC for an additional term of four years;
- endorses the appointment of Ray Gluckman (UK) as a senior expert for an additional term of one year;
- endorses the appointment of Marco González (Costa Rica) as a senior expert for an additional term of one year; and
- endorses the appointment of Rajendra Shende (India) as a senior expert for an additional term of one year.

Compliance and reporting: On Monday, OEWG 43 Co-Chair Osorio introduced this agenda item (UNEP/OzL.Conv.12(II)/2-UNEP/OzL.Pro.33/2, paras. 51-52, UNEP/OzL.Pro.33/6-UNEP/OzL.Pro/ImpCom/67/2, and CRP.2).

Cornelius Rhein, President of the Implementation Committee (ImpCom), presented the Committee's report saying the ImpCom met twice virtually in 2021. He said the ImpCom considered the new reporting requirements under the Kigali Amendment, heard about activities carried out by the implementing agencies to assist in compliance with the Protocol, and reviewed the non-compliance decisions relating to Kazakhstan, Libya, Ukraine, and the Democratic People's Republic of Korea. He drew attention to

CRP.2, which he said contained two draft decisions. The first relates to data reporting under Article 7 of the Protocol, stating that 197 of 198 parties reported data for 2020. The first decision also addresses reporting and notes with concern that Cuba has not yet reported on 2020 data, which places it in non-compliance. The decision also notes with concern that two Article 2 parties, San Marino and the Russian Federation, should have submitted baseline data for HFCs for 2011 and 2013 and have not yet done so, placing them in non-compliance. Two Article 5 parties, Cuba and Lebanon, have not reported their baseline data, also placing them in non-compliance. Rhein said the decision urges parties to provide their reports as soon as possible, thereby returning to compliance.

The second decision pertains to establishing licensing systems for the import and export of controlled substances under Annex F of the Protocol, as per the Kigali Amendment. He said the decision notes with appreciation that 92 of the 127 parties to the Kigali Amendment have established such licensing systems and 10 non-parties have also established such licensing systems. Seventeen parties have not reported on the establishment of licensing systems, and are urged to do so. It also urges parties, not having done so, to establish such licensing systems and report to Secretariat within three months of doing so. He concluded that the Secretariat is requested to periodically review the status of the establishment of such licensing systems and report back to parties.

In the ensuing discussion, LEBANON reported that her country's non-compliance in data reporting was due to recent political instability and a variable caretaker government, stressing the country would submit the required data as soon as possible.

BENIN, supported by SENEGAL, was concerned about illegal trade in obsolete materials, which circumvents the licensing system; with SENEGAL calling for guidance for Article 5 parties on how to dispose of obsolete materials, given the lack of destruction banks in most of these countries. The EU suggested these concerns be addressed at subsequent face-to-face meetings of the MOP. OEWG 43 Co-Chair Osorio proposed, and delegates agreed, to forward the draft decision to the HLS for adoption.

On Friday during the HLS, the RUSSIAN FEDERATION, via the chat function of the online platform, noted they had submitted the required reports and queried their inclusion on the list of parties in non-compliance. They further stated that this issue was not addressed by the ImpCom, and that only the ImpCom is mandated to decide on issues of non-compliance. The Secretariat noted the ImpCom had engaged in standard procedure while addressing this issue, having gone through the regular process of examining all the reports submitted. He also noted that it is the MOP and not the ImpCom that makes the final decision on non-compliance and reminded delegates that this decision had been approved by the MOP and forwarded to the HLS with no amendments. COP 12 President Cheikh Ndiaye Sylla stated that the Russian Federation's concerns would be noted in the meeting report.

Delegates then adopted two decisions on data and information and on licensing.

Final Decisions: In its decision on data information provided by parties in accordance with Article 7 of the Protocol (UNEP/OzL.Pro.33/CRP.2 Part A), the MOP:

- notes 197 of the 198 parties have reported data for 2020;
- notes with appreciation that 115 of those parties reported their data by 30 June 2021, in accordance with the encouragement

in decision XV/15, and reporting by 30 June each year greatly facilitates the work of the MLF ExCom;

- notes with concern that Cuba has not reported its 2020 data, and this places it in non-compliance with its data reporting obligations until such time as the Secretariat receives its outstanding data;
 - also notes with concern that two non-Article 5 parties, namely the Russian Federation and San Marino, that are parties to the Kigali Amendment and should have submitted baseline data for HFCs for the years 2011 to 2013 have not done so, placing them in non-compliance with their data reporting obligations until the Secretariat receives their outstanding baseline data;
 - further notes with concern that two Article 5 parties, namely Cuba and Lebanon, that are parties to the Kigali Amendment and should have submitted baseline data on HFCs for 2020 have not done so, placing them in non-compliance until such time as the Secretariat receives their outstanding data;
 - notes a lack of timely data reporting by parties impedes the effective monitoring and assessment of parties' compliance with their Montreal Protocol obligations;
 - urges those parties listed in paragraphs three, four and five of the present decision to report the required data to the Secretariat as soon as possible;
 - requests the ImpCom to review the situation of those parties at its 68th meeting; and
 - encourages parties to continue reporting consumption and production data as soon as the figures are available, and preferably by 30 June each year, as agreed in decision XV/15.
- In its decision on the status of the establishment of licensing systems under paragraph 2 *bis* of Article 4B of the Montreal Protocol (UNEP/OzL.Pro.33/CRP.2 Part B), the MOP:
- notes paragraph 2 *bis* of Article 4B of the Montreal Protocol requires each party, by 1 January 2019 or within three months of the date of entry into force of that paragraph for the party, whichever is later, to establish and implement a system for licensing the import and export of new, used, recycled and reclaimed controlled substances listed in Annex F to the Protocol;
 - notes with appreciation that 97 of the 122 parties to the Kigali Amendment to the Montreal Protocol have done so, and 10 parties that have not yet ratified the Kigali Amendment have also reported the establishment and implementation of such licensing systems;
 - takes note with appreciation the efforts made by the parties in establishing and implementing licensing systems under paragraph 2 *bis* of Article 4B of the Montreal Protocol for the import and export of new, used, recycled and reclaimed controlled substances listed in Annex F to the Montreal Protocol;
 - urges the 17 parties listed in the annex to the present decision to provide information to the Secretariat on the establishment and implementation of the licensing systems no later than 15 March 2022, for consideration by the ImpCom at its 68th meeting;
 - urges all parties to the Kigali Amendment that have not yet established and implemented the licensing systems referred to in paragraph 1 to do so, and to report that information to the Secretariat within three months of doing so; and
 - requests the Secretariat to review periodically the status of the establishment and implementation of the licensing systems

referred to in paragraph 1 by all parties to the Montreal Protocol, as is called for in Article 4B of the Protocol.

The annex to the decision lists the parties that have not yet reported on establishing and implementing licensing systems for HFCs.

Energy-efficient and low-global-warming-potential technologies: On Tuesday, OEWG 43 Co-Chair Sirois introduced this item, noting the focus of discussions at this meeting would be the draft decisions submitted by Ghana (UNEP/OzL.Conv.12(II)/3/Add.1–UNEP/OzL.Pro.33/3/Add.1) and the UK (UNEP/OzL.Conv.12(II)/3/Add.2–UNEP/OzL.Pro.33/3/Add.2).

Introducing their draft decision, Ghana, speaking for the AFRICAN GROUP, lamented the dumping of technologies with obsolete materials in Africa, which complicates countries' ability to comply with their obligations under the Protocol. Noting Africa is one of the regions worst affected by climate change, he stressed "every tool is required" to assist the continent to address climate change, including by preventing market penetration of obsolete equipment in Africa while facilitating access to secure and energy-efficient technologies on the continent.

Discussing the proposal, JAPAN, with ARGENTINA, AUSTRALIA, BRAZIL, MEXICO, EU, US, and CANADA, said there is insufficient time to consider the decision at this meeting, with many highlighting that the issues considered are complex and potentially go beyond the Montreal Protocol's ambit.

NIGERIA, with EGYPT and SENEGAL, underscored the proposal is an important decision for Article 5 countries, and suggested establishing a contact group to further discuss the issue. SENEGAL underscored the cross-cutting elements of the proposal, which has direct effects on economic growth and efforts to combat climate change. BARBADOS called for further consultations with other Article 5 parties to strengthen the decision.

KUWAIT called for clarity on the aim of the proposal, and whether it addressed the dumping of ODS, dumping of equipment containing ODS, or energy efficiency, and how these issues are managed.

CANADA requested clarification on which refrigerants the draft decision was labelling as obsolete, given that HFCs are still used in most countries as they begin to implement the Kigali Amendment. He conceded that some refrigerants may be obsolete in certain national jurisdictions, but this does not make them obsolete globally.

Delegates agreed to postpone further discussions on this issue to the next in-person meeting, with Co-Chair Sirois suggesting the draft could be revised in the interim to consider some of the concerns shared during this discussion.

Introducing their draft, the UK welcomed the work of the TEAP's Energy Efficiency Task Force, noting there is a continued role for the Task Force to provide information on sub-sectors not previously covered, such as those related to heat pumps, large commercial refrigeration, larger air-conditioning systems, and foams.

Expressing his preference to defer discussion of this draft to the next meeting, together with the proposal from Ghana, KUWAIT stressed parties have not yet decided to fund energy efficiency as an incremental cost and drew attention to ongoing discussions under the ExCom. He suggested energy efficiency be treated as a "good-to-have" measure, based on countries' capacities and priorities.

BARBADOS, CANADA, the EU, and INDIA expressed support for calling on the Task Force to continue its work, including new sub-sectors. BARBADOS and INDIA expressed reservations on text

encouraging parties to review their national regulatory framework, to take steps to prevent the import of unwanted technologies relying on HFCs and high-GWP HFCs, and to submit relevant national regulations and policies to the Ozone Secretariat. SENEGAL queried whether the Task Force could investigate norms and standards and share this information with Article 5 parties.

OEWG 43 Co-Chair Sirois established a contact group to discuss the UK proposal, co-facilitated by Leslie Smith (Grenada) and Patrick McInerney (Australia). The group met on Tuesday, Thursday, and Friday. The contact group held lengthy discussions on text related to trade in obsolete technologies, which many delegates felt held similar sentiment to the Ghanaian draft decision. Specifically, they debated over text referencing the unwanted import of products and equipment containing or relying on HCFCs, eventually agreeing to delete it. They also discussed and agreed to delete text recognizing that trade in older technologies that are less efficient and rely on high-GWP HFCs is a problem for some countries that do not manufacture them, with the text further encouraging trading partners to reduce or eliminate trade in these technologies. Delegates also considered the new sub-sectors recommended for inclusion under the TEAP's purview, with debate over the proposed inclusion of the foam sub-sector, with some arguing that information on energy efficiency in foams may constitute a policy recommendation, as foams are used in insulation. The TEAP clarified that they could provide technical information regarding differences in foam blowing agents and their performance.

On Friday, Co-Facilitator McInerney reported that the group had finalized its work, outlining that the draft decision calls on the TEAP to provide an update on additional sectors, assess potential cost savings for low-GWP alternatives, provide information on energy efficiency actions in the short term, provide options for best practices in the maintenance and servicing of equipment, and assess the integration of energy efficient technologies. Delegates forwarded the draft decision to the HLS for adoption.

On Friday, the HLS adopted the decision.

Final Decision: In the final decision (UNEP/OzL.Pro.33/CRP.9), the MOP requested the TEAP to prepare a report for consideration by OEWG 44, on energy efficient and lower-GWP technologies and on measures to enhance and maintain energy efficiency during HFC transition in equipment and within the report to, *inter alia*:

- update information in the decision XXXI/7 report, and address additional sub-sectors not previously covered such as the heat pump sub-sector, large commercial refrigeration, and larger air-conditioning systems;
- assess potential cost savings associated with adopting lower-GWP, energy efficient technologies, including for manufacturers and consumers;
- identify sectors where actions could be taken in the short term to adopt energy efficient technologies while phasing down HFCs;
- identify options to enhance and maintain energy efficiency in equipment through deploying best practices during installation, servicing, maintenance, refurbishment or repair; and
- provide detailed information on how the benefits of integrating energy efficiency enhancements with the HFC phase-down measures can be assessed.

Membership of Montreal Protocol bodies for 2022: On Tuesday, OEWG 43 Co-Chair Osorio introduced the item related to the membership of the ImpCom and ExCom, and OEWG Co-Chairs for 2022 (UNEP/OzL.Conv.12(II)/2–UNEP/OzL.Pro.33/2,

paras. 58–68; UNEP/OzL.Conv.12(II)/3–UNEP/OzL.Pro.33/3, draft decision XXXIII/[B] for the ImpCom, [C] for the ExCom, [D] for OEWG Co-Chairs).

The Secretariat then listed the nominations for the ImpCom: China, Costa Rica, Egypt, Poland, and the US, who would act as Vice-Chair and Rapporteur. He noted that the choice of Committee Chair was still pending.

For the ExCom, the Secretariat listed the nominations from Article 5 parties, including Bahrain, Brazil, Chad, Cuba, Guyana, India, and Zimbabwe. For non-Article 5 parties, he listed Belgium, Canada, Finland, Italy, Japan, Romania, and the US. He announced the Committee will be chaired by Hasan Ali Mubarak (Bahrain), with John Thompson (US) as Vice-Chair.

The Secretariat then announced Martin Sirois (Canada) and Osvaldo Álvarez (Chile) as OEWG 44 Co-Chairs.

Delegates agreed to forward the relevant draft decisions to the HLS for adoption.

On Friday, during the HLS, delegates adopted three decisions on the membership of the ImpCom, the ExCom, and the OEWG 44 Co-Chairs.

Final Decisions: In the final decision on the membership of the ImpCom (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2 Part N), the MOP:

- confirms the positions of Bhutan, Chile, the EU, North Macedonia, and Senegal as members of the Committee for one further year and to select China, Costa Rica, Egypt, Poland, and the US as members of the Committee for a two-year period beginning on 1 January 2022; and
- notes the selection of Xiaolin Guo (China) to serve as President and Gene Smilansky (US) to serve as Vice President and Rapporteur of the Committee for one year beginning on 1 January 2022.

In the final decision on the membership of the ExCom (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2 Part O), the MOP:

- endorses the selection of Bahrain, Brazil, Chad, Cuba, Guyana, India, and Zimbabwe as members of the ExCom representing Article 5 parties and the selection of Belgium, Canada, Finland, Italy, Japan, Romania, and the US as members representing non-Article 5 parties, for one year beginning 1 January 2022; and
- notes the selection of Hasan Ali Mubarak (Bahrain) to serve as Chair and John Thompson (US) to serve as Vice-Chair of the ExCom for one year beginning 1 January 2022.

In its final decision on the OEWG Co-Chairs (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2 Part P), the MOP endorses the selection of Martin Sirois (Canada) and Osvaldo Álvarez Perez (Chile) as OEWG 44 Co-Chairs in 2022.

Vienna Convention Issues

Report of the eleventh meeting of the Ozone Research Managers (ORM 11): On Wednesday, OEWG 43 Co-Chair Sirois introduced this item (UNEP/OzL.Conv.12(II)/2–UNEP/OzL.Pro.33/2, paras. 69–72), noting ORM 11 had been originally scheduled for an in-person meeting in 2020, but had been postponed, and instead met online in two parts in 2021. He noted the ORM recommendations (UNEP/OzL.Conv.12(II)/7) had been adopted at the second half of ORM 11 in July 2021. He recalled that these recommendations as well as the status of the General Trust Fund for financing activities on research and systematic observations

relevant to the Vienna Convention had been discussed at an online meeting in early October 2021. He further noted that, based on these recommendations, Australia had submitted a draft decision, which had been posted on the online forum.

AUSTRALIA introduced the draft decision (UNEP/OzL.Conv.12(II)/3/Add.4–UNEP/OzL.Pro.33/3/Add.4), noting it responds in broad terms to the ORM recommendations, but lamenting that virtual meetings have precluded rigorous discussions on the draft. Stating the draft is modeled after similar previous decisions, she highlighted gaps in monitoring as an additional topic addressed. She then introduced minor textual amendments to the draft, including a request that the ORM continue to work on atmospheric monitoring.

The EU, US, CANADA, NORWAY, MAURITIUS, BRAZIL, CAMEROON, and the UK welcomed the draft decision, with BARBADOS highlighting that it does not place undue burdens on Article 5 parties.

INDIA and KUWAIT sought clarification on overlaps between this draft decision under the Vienna Convention and the EU's draft decision on gaps in monitoring under the Montreal Protocol. SENEGAL underlined the need for capacity building and infrastructure for Article 5 parties to enhance monitoring capabilities, lamenting that “there are scientists, but no equipment.”

In response, AUSTRALIA noted the draft addresses the capacity-building and infrastructure needs of Article 5 parties, and noted that the EU draft decision complements, rather than contradicts, this draft decision. The EU noted that the complementarity of the draft decisions illustrates there are no inconsistencies between the workstreams of the Convention and the Protocol.

Delegates agreed to forward the amended draft to the HLS for adoption.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In its final decision on recommendations of ORM 11 (UNEP/OzL.Conv.12(II)/CRP.1), the MOP encourages parties to adopt and implement the recommendations of the ORM under the topics of research needs, systematic observations, gaps in the global coverage of atmospheric monitoring of controlled substances and options for enhancing such monitoring, data archiving and stewardship, and capacity building. The MOP also encourages parties to accord priority, in particular to:

- research and systematic observation activities, including monitoring of the ozone layer using ground, satellite, aircraft, and balloon profiles, to analyze processes influencing the evolution of the ozone layer and its links to climate change;
- maintain, augment, restore and, where feasible, establish new long-term capacity and infrastructure for the atmospheric monitoring and observation of substances controlled by the Protocol in order to enhance the estimates of regional emissions, including in currently unmonitored and under-monitored regions;
- improved management and analysis of observation data, including for international open-access and collaborative research activities, long-term curation and storage, standardization, and inter-comparability, to support modelling and near real-time assessments; and
- support for capacity-building activities in developing countries and countries with economies in transition through the continuation and expansion of regular calibration and intercomparison campaigns and through the provision of training

and assistance to enable those parties to expand their scientific capacity and participate in ozone research activities, including assessment activities under the Protocol.

General Trust Fund for Financing Activities on Research and Systematic Observations: On Wednesday, OEWG 43 Co-Chair Sirois introduced this agenda item (UNEP/OzL.Conv.12(II)/8, and UNEP/OzL.Conv.12(II)/2–UNEP/OzL.Pro.33/2, paras. 73–77), recalling decision XI/2 that the Secretariat was requested to report to COP 12 on the activities of the Trust Fund as well as its operation, contributions and expenditures. He noted the Secretariat has accordingly prepared a note on the issue. He said it was presented by the Chair of the Advisory Committee at an online briefing held prior to the meeting. He further noted a draft decision submitted by Australia, which was highlighted at the meeting, and then posted online for comments.

AUSTRALIA introduced its proposal (UNEP/OzL.Conv.12(II)/3/Add.5–UNEP/OzL.Pro.33/3/Add.5). She said the decision, among others: invites parties to make contributions to the Trust Fund, requests relocation of unused Dobson and Brewer instruments to Article 5 parties when requested, requests the Advisory Committee to explore the options to leverage and catalyze its resources to safeguard necessary research and observation activities, and asks the Secretariat to invite parties and relevant international organizations to make financial and/or in-kind contributions towards well defined and well-budgeted project proposals developed under the Trust Fund. She noted no comments had been received through the online forum.

In the ensuing debate, parties expressed their support for the proposal, with many noting the important work the Trust Fund does to support monitoring of controlled substances under the Montreal Protocol. BARBADOS, BRAZIL, and CAMEROON underscored the importance of funding research and monitoring activities in Article 5 countries, where there is a paucity of such activities.

NORWAY, supported by BARBADOS, BRAZIL, BURKINA FASO, CAMEROON, MAURITIUS, SWITZERLAND, and TRINIDAD AND TOBAGO, suggested the draft decision “encourage” parties to contribute to the General Trust Fund to give the decision “more teeth.” Delegates agreed.

The decision was accepted with the proposed amendment and forwarded to the HLS for adoption.

On Friday, during the HLS, delegates adopted the decision.

Final Decision: In its final decision (UNEP/OzL.Conv.12(II)/CRP.2), the MOP:

- encourages parties to make contributions to the General Trust Fund for financing activities on research and systematic observations relevant to the Convention, for the purpose of improving the global ozone observing system in line with the long-term strategy and short-term plan of action prepared by the Advisory Committee of the Trust Fund;
- requests the Advisory Committee, with the assistance of the World Meteorological Organization (WMO) and the Secretariat, to continue to implement its long-term strategy and short-term plan of action for the Trust Fund, paying particular attention to, *inter alia*: identifying gaps and needs in research and monitoring of ozone and related climate variables and parameters, complementing the ongoing efforts of the ORM and other relevant programmes, such as the WMO Global Atmosphere Watch programme; facilitating the relocation of unused Dobson and Brewer instruments and the use of ozone

sondes to new observation programmes when requested and in line with global and regional observation priorities; fostering stronger relationships with scientific institutions and related global networks to build capacity and increase the infusion of knowledge for the activities under its consideration; and exploring opportunities to leverage and catalyze its resources to safeguard necessary research and observation activities in line with its strategic plan; and

- requests the Secretariat to continue to invite parties and relevant international organizations, including space agencies, scientific and research institutions, UN entities, international financial institutions, and the private sector, to make financial and/or in-kind contributions towards well defined and well-budgeted project proposals developed under the Trust Fund.

Other Matters

On Thursday, delegates paid tribute to Philip Owen (EU), who is leaving the ozone family to join the climate community. They also paid tribute to MLF Chief Officer Eduardo Ganem on his imminent retirement. Many remarked on his achievements in the relentless work of assisting parties to phase out ODS, with Ozone Executive Secretary Megumi Seki wishing him a “relaxing retirement.”

Closure of the Preparatory Segment

On Friday, OEWG 43 Co-Chair Sirois closed the preparatory segment, reporting that delegates had concluded their work and thanking them for their commitment to the process.

High-level Segment Report

On Friday, COP 12 President Cheikh Ndiaye Sylla opened the HLS. Inger Andersen, Executive Director, UNEP, thanked parties for their commitment to the Montreal Protocol, even through the two-year pandemic. She commended them on efficiently addressing the unexpected emissions of CFC-11, underlining that success lies in strengthening science, monitoring, and multilateralism. Andersen highlighted the links between the protection of the ozone layer, climate change and biodiversity loss, and called on all parties to ratify the Kigali Amendment. She said the Montreal Protocol has a key role to play in achieving the Sustainable Development Goals, underlining that effective implementation of the Montreal Protocol and the Kigali Amendment will go down in history as having put humanity on track to a peaceful and sustainable future.

COP 12 President Sylla thanked delegates for their steadfastness to the Convention and its Protocol in the face of the COVID-19 pandemic. Outlining key decisions to be taken at this meeting, he appealed for continued cooperation to address the new challenges arising, which were not contemplated at the adoption of the Convention or its Protocol.

Speaking for MOP 32 President Paul Krajnik (Austria), MOP 32 Vice President Ezzat Lewis (Egypt), noted that MOP 33 is scheduled to consider matters brought forward from MOP 32. He reminded delegates that the Kigali Amendment turned five years old in October, underscoring its importance in phasing down HFCs, protecting the climate, and reducing global energy costs.

Organizational Matters

On Friday, MOP 32 Vice President Lewis informed delegates that the nominations for the MOP 33 Bureau had been submitted, noting that Simeon Sawadogo (Burkina Faso) had been nominated as MOP 33 President. He reported the nomination of Saudi Arabia,

Bosnia and Herzegovina, and Trinidad and Tobago as MOP 33 Vice Presidents, and New Zealand as rapporteur. Delegates elected the Bureau by acclamation.

Delegates adopted the agenda (UNEP/OzL.Conv.12(II)/1–UNEP/OzL.Pro.33/1, section II) and agreed to the organization of work, on the understanding that no other matters had been brought to the attention of COP 12 President Sylla or the Secretariat.

The Secretariat then orally presented the credentials report, noting that the Credentials Committee had approved the credentials of 68 parties, and approved 63 parties based on the understanding that they would forward credentials to the Secretariat as soon as possible, in accordance with the rules of procedure.

Presentations by the Assessment Panels

SAP: SAP Co-Chair John Pyle (UK) reported on the status of the 2022 SAP report, noting it contains 22 chapters including on solar ozone radiation management, and is on track to present the completed report to the OEWG in July 2022. He noted the large size of the Antarctic ozone hole in 2021—the thirteenth largest on record—could be attributed to temperature changes, underlining it was not as large as it had been at its peak. Finally, he highlighted that CFC-11 emissions are in rapid decline, as noted in the report considered by OEWG 43 in July 2021.

Environmental Effects Assessment Panel (EEAP): EEAP Co-Chair Janet Bornman (Australia) presented the report of the EEAP. With respect to human health, she said the Protocol has reduced damaging health effects by avoiding large increases in DNA-damaging UV-B radiation. She also underscored an increase in extreme climate events during 2021, which changes exposure to UV radiation, thus contributing to ecosystem instability. She highlighted a recent study demonstrating the role the Montreal Protocol has played in protecting the carbon sinks provided by plant life. She also pointed to a study estimating that without the Montreal Protocol, UV-B radiation would have increased by 400% over the 21st century. She closed by stressing that the assessment of environmental effects, including health, continues to reinforce the multiple benefits of the Montreal Protocol in achieving the Sustainable Development Goals.

TEAP: The TEAP report was presented by Ashley Woodcock (UK). He noted the COVID-19 pandemic had posed several challenges, especially given the workload TEAP has had to deal with, citing the 14 reports produced since MOP 31 in November 2019. On flexible and rigid foams, he noted continued progress in adopting zero-ozone-depleting-potential and low-GWP foam blowing agents, but there are cost and safety challenges for small- and medium-sized enterprises. On halons, he urged implementing awareness programmes to reverse the loss of institutional knowledge on halon management requirements. On refrigeration, air conditioning and heat pumps, he stated that training in servicing and maintaining refrigeration, air conditioning and heat pump equipment to reduce leaks will reduce emissions of high-GWP HFCs. He also provided an overview of the work of the TEAP task forces and outlined the path forward for the 2022 assessment report.

ExCom Report

Alain Wilmart (Belgium), Chair of the MLF ExCom, provided a summary of activities in 2021. He said the ExCom met three times virtually. He provided an overview of activities related to policy matters and decisions of the ExCom. He stated that 144 HCFC phase-out management plans had been approved and one HCFC

production phase-out management plan had been approved. On HFCs, he noted continued work on the guidelines for the phase-down of HFC consumption and production. Regarding HFC-23 by-product-control technologies, he drew attention to the approval of two projects to assist countries in meeting their monitoring obligations. He also provided an overview of the activities of the implementing partners.

Preparatory Segment Report

OEWG 43 Co-Chair Osorio reported on the work of the Preparatory Segment, noting all agenda items were concluded and forwarded to the HLS. COP 12 President Sylla congratulated the Co-Chairs for effectively steering the group to its successful conclusion.

Dates and Venues for the Next Meetings

Executive Secretary Seki announced that MOP 34 is tentatively scheduled to be held from 31 October – 4 November 2022, and that COP 13/MOP 36 has been tentatively scheduled for 28 October – 1 November 2024. Delegates adopted the decisions related to both the COP and the MOP.

Final Decisions: In decision XII/[B] (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2), the COP agrees to convene COP 13 back-to-back with MOP 36.

In decision XXXIII/[B] (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2), the MOP decides to convene MOP 34 at the seat of the Secretariat, in Nairobi, from 31 October – 4 November 2022, unless other arrangements are made by the Secretariat in consultation with the Bureau.

Adoption of Decisions by COP 12 (part II) and MOP 33

COP 12 Rapporteur Ulrika Raab (Austria) led delegates in adopting the COP/MOP decisions forwarded to the HLS by the preparatory segment (contained in UNEP/OzL.Conv.12(II)/L.2- UNEP/OzL.Pro.33/L.2, and UNEP/OzL.Pro.33/CRP.9). Delegates adopted 18 decisions in total, which have been summarized under the relevant agenda items above.

Adoption of the Meeting Report and Closure of the Meeting

MOP 33 Rapporteur Mariska Wouters (New Zealand) led delegates in adopting the report of the meeting as well as the reports of the online briefing meetings held in October 2021 (UNEP/OzL.Conv.12(II)/L.1-UNEP/OzL.Pro.33/L.1 and Add. 1, L.3, L.4, and L.5). Delegates adopted the meeting reports, with minor editorial amendments.

MOP 33 President Sawadogo commended delegates for their work in adopting 18 decisions, thanked COP 12 President Sylla, the Co-Chairs of the preparatory segment, the contact group Co-Facilitators, and the Secretariat for their efficient management of the meeting. He closed the meeting at 5:52 pm EAT (UTC +3).

A Brief Analysis of COP 12(II)/MOP 33

Not ones to sit on their laurels, the parties to the Vienna Convention and the Montreal Protocol continued on the path to what could be yet more successes for both the ozone layer and the Earth's climate.

The twelfth meeting of the Conference of the Parties (Part II) to the Vienna Convention and the thirty-third Meeting of the Parties to the Montreal Protocol (COP 12(II)/MOP 33) convened virtually to tackle a pared down, yet robust agenda, and addressed issues including: the replenishment of the Multilateral Fund (MLF) for the

triennium 2021–2023; the unexpected emissions of CFC-11; issues related to the Vienna Convention; and energy efficiency. They also discussed budget issues and membership of the Montreal Protocol bodies.

While it was expected that issues around the MLF replenishment would take up the most time—the meeting had even been extended by two days to accommodate the expected negotiation time needed—delegates moved swiftly through those agenda items. In their discussions on the MLF, they agreed without much ado to postpone discussions to the next meeting of the MOP, in the hopes that this meeting will take place in-person to allow for more nuanced deliberations on a complex issue than can be undertaken online. Delegates spent a little time agreeing to interim contributions to the Fund to ensure its continued functioning, and planning an extraordinary MOP to further discuss the MLF replenishment. With everything agreed to in plenary on the first day of the meeting, delegates turned their focus to technical matters to ensure the Protocol maintains its reputation as the most successful environmental treaty. Key to this were two issues: energy efficiency and identification of gaps in the global coverage of atmospheric monitoring of controlled substances under the Montreal Protocol.

While delegates concluded their work on these issues, how did the decisions pave the way for future work to ensure the Convention and the Protocol continue setting the standard for successful multilateral environmental agreements (MEAs)? This analysis addresses these questions in the context of the discussions held over the week.

Gaps in Monitoring

*“Constant Vigilance!” – Alastor ‘Mad-Eye’ Moody
~ Harry Potter and the Goblet of Fire, J.K. Rowling*

As the week's proceedings drew to a close, delegates heard that the 2021 Antarctic ozone hole was the 13th largest on record. John Pyle, Co-Chair of the Protocol's Scientific Assessment Panel (SAP), noted that without the Montreal Protocol, the ozone hole would, in fact, have been much larger. This, along with the issue of the unexpected trichlorofluoromethane (CFC-11) emissions, underscored the importance of monitoring to ensure the Protocol's continued effectiveness.

During the investigations of the rogue CFC-11 emissions, it became apparent that large swathes of Africa and South America, among others, do not have monitoring stations. Accordingly, this has become an area of increasing concern as the lack of monitoring stations makes the detection and monitoring of emissions of controlled substances more difficult.

Parties have acknowledged that steps to improve monitoring in underserved regions and shore up current monitoring activities need to be taken to effectively implement the Protocol. Many developing countries have long pointed to the lack of monitoring infrastructure in their regions, but these calls have largely gone unanswered, and until the 2018 CFC-11 incident, there seemed no real cause for concern. Since 2018, however, the outlook on global and regional monitoring has changed. COP 12(II)/MOP 33 adopted two proposals under the Vienna Convention dealing with monitoring activities, including encouraging: transfer of unused technology to Article 5 countries; additional contributions to the General Trust Fund; and capacity building to fill in the gaps in monitoring. These focused on ensuring the Vienna Convention can continue making an important

impact by ensuring cooperation on research and systematic observations of the ozone layer, including through information exchange.

The EU also submitted a proposal at COP 12(II)/MOP 33 addressing the issue. They termed their proposal “an important first step” in dealing with gaps in monitoring. The proposal had three main elements. The first requested parties to enhance sharing of data and encouraged them to contribute to developing enhanced capacity to monitor atmospheric concentrations and emissions. The second, and arguably the least controversial, requested the Secretariat to: provide a summary of the information provided by SAP, the Technology and Economic Assessment Panel (TEAP), and the Ozone Research Managers on options for efficient monitoring; identify suitable locations for possible monitoring stations or for flask sampling; and provide options for possible means to establish new monitoring capacities and related costs. The third element requested the SAP to provide advice on which controlled substances to prioritize.

Delegates quickly agreed on the requests to the Secretariat, but the requests to parties proved contentious. While Article 5 parties acknowledged the desperate need for more monitoring in their regions—one delegate was even heard calling for more equipment for their scientists—they are also wary of any decisions that could possibly add to their already heavy obligations under the Protocol.

There was also concern that the request to exchange information under the EU proposal should really be dealt with under the Vienna Convention, rather than the Montreal Protocol. As one delegate said, “the Montreal Protocol deals with policy, and the Vienna Convention deals with science,” implying that some of the issues under the EU proposal are better suited to being dealt with under the Vienna Convention. Another countered that exchanging information and building capacity are in fact policy issues and are what is needed for the Protocol to continue to be effective.

Ultimately, parties agreed to delete the requests to both parties and the SAP from the EU proposal. Delegates reasoned that face-to-face negotiations are better suited for such debates, so the issue of information sharing is expected to be taken up at the next in-person meeting. With some delegates expressing concern about the additional burdens these data-sharing requests place on developing countries and the potential precedents such a decision could set, it remains to be seen whether expanding and deepening monitoring capacities could potentially hinder progress in an area of crucial importance. More crucially, it could provide a greater impetus for improving monitoring capacities in regions that are underserved and insufficiently equipped.

The Fight for Energy Efficiency

“It is the quality of one’s convictions that determines success.” – Remus Lupin

~ Harry Potter and the Deathly Hallows, J.K. Rowling

Energy efficiency is an important topic for the African Group and has consistently been raised since the adoption of the Kigali Amendment in 2016. African and many other Article 5 parties are in a unique position to leapfrog over obsolete technology and use technology that is both energy efficient and ozone friendly. Energy efficiency is important because demand for cooling technology continues to increase throughout the world—some studies have estimated that demand for energy-efficient technologies is increasing

by 14% per annum. This in turn places increasing pressure on the energy supply. The risk is that as the hydrofluorocarbon (HFC) phase-down progresses, “old” technology will be exported to African or other Article 5 countries, in what could be seen as “dumping.” Additionally, using obsolete technology will prolong dependence on equipment containing ozone-depleting substances (ODS) that are being phased out or down, slowing the effectiveness of the Montreal Protocol. Studies have estimated that 35% of all sales of cooling equipment contain low efficiency technology

Ghana, on behalf of the African Group, submitted a proposal on this matter that seeks to avoid dumping of old technology containing ODS. The expectation is that this will concomitantly stimulate a market for energy-efficient equipment on the continent that uses ozone-friendly technology.

The UK similarly presented a proposal requesting the TEAP Energy Efficiency Task Force to expand the scope of their investigations into sectors that could most benefit from turning to more energy efficient technologies. There was also a request to parties to review national regulatory frameworks and take steps to prevent the import of unwanted technologies relying on hydrochlorofluorocarbons (HCFCs) and high-global-warming-potential HFCs.

While parties were willing to discuss the UK proposal to expand the TEAP Energy Efficiency Task Force’s scope, they were unwilling to discuss any issues related to preventing the export of equipment that could be deemed obsolete or “ozone-unfriendly.” The African Group proposal was considered too complex to address in a virtual setting. Delegates commented on a number of issues ranging from concerns that some of the issues raised in the proposal are outside of the Montreal Protocol’s purview, to queries on what counts as obsolete, with one party stating that “technologies that might be obsolete in one country, are not yet obsolete globally,” and thus any exports of these technologies should not be portrayed in a negative light. Others argued that not all technology using ODS have low-GWP alternatives.

While their draft decision did not gain traction at this meeting, the African Group recognizes momentum to address such issues is increasing. The African Ministerial Conference on the Environment (AMCEN) took a decision in 2019 urging parties to the Protocol to adopt an action plan “to prevent the market penetration of obsolete equipment in Africa while facilitating access to secure and energy-efficient technologies on the continent.” Acknowledging that there is overlap with other MEAs, the African Group’s proposal did reference the need to coordinate with other conventions, specifically the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

Citing time constraints and complexity, Ghana and the African Group were ultimately asked to take into consideration the comments made by other parties and resubmit their proposal for consideration at the next meeting of the Open-ended Working Group. As one delegate was heard saying, the proposal has some complex but important issues that need to be navigated, and thus time and a more conducive negotiating setting is needed. Some, however, believed that perhaps the “time to take this pressing issue elsewhere may be close at hand.”

The parties did ultimately agree on the UK proposal that focused on expanding the TEAP Energy Efficiency Task Force’s scope, which will have to be sufficient for now. This work will serve to

inform difficult but important discussions on energy efficiency that will likely be held at the next meeting, which is hopefully face-to-face.

What Lies Ahead

“Soon we must all face the choice between what is right and what is easy.” – Albus Dumbledore

~ Harry Potter and the Goblet of Fire, J.K. Rowling

The Vienna Convention and the Montreal Protocol have never shied away from addressing issues that could hinder its success. They have negotiated amendments to address substances such as HCFCs and HFCs. They have also acknowledged that developing country parties do need assistance to meet their obligations. None of these issues have been easy, but they have, nonetheless, been tackled head-on, ultimately expanding the success of the Convention and its Protocol.

Small but important steps were taken at COP 12(II)/MOP 33. Initial steps to address gaps in monitoring capacity can help the Protocol ensure that it remains fit-for-purpose. Expanding the scope of the investigations for the Energy Efficiency Task Force will allow for more informed discussions at the next face-to-face meeting.

Both issues are complex, but addressing them effectively may have positive residual effects even outside the boundaries of the Convention. Delegates did not hesitate to admit that addressing them will require both parties’ convictions, and in-person negotiations for meaningful headway to be made. The history of the Protocol shows, however, that parties are prepared to put in effort to shore up and even further the gains that have been made since 1987.

These issues won’t be easy to resolve, and work on monitoring and energy efficiency, as well as the MLF replenishment, will continue in 2022, hopefully, as many have wished for, in face-to-face negotiations. As one observer was heard saying, although small, the decisions taken will bolster the Protocol as it travels on its path, as foretold by UNEP Executive Director Inger Andersen: to go down in history as “having the set the world back on track to a ... sustainable future.”

Upcoming Meetings

UNFCCC COP 26: The 26th session of the COP, the 16th meeting of the COP serving as the MOP to the Kyoto Protocol, and the third meeting of the COP serving as the MOP to the Paris Agreement will convene to review implementation. **dates:** 31 October – 12 November 2021 **location:** Glasgow, Scotland, UK **www:** unfccc.int

ExCom 88: The eighty-eighth meeting of the Executive Committee of the MLF will convene online to discuss, among others: an evaluation of the performance of implementing agencies against their 2020 business plans; a desk study for the evaluation of energy efficiency in the servicing sector; and a draft monitoring and evaluation work programme for 2022. **dates:** 15-19 November 2021 **location:** online **www:** multilateralfund.org/88/pages/English.aspx

Resumed Fifth Session of the UN Environment Assembly (UNEA 5.2): UNEA 5.2 will take place under the theme “Strengthening Actions for Nature to Achieve the SDGs.” Its aim will be to connect and consolidate environmental actions within the context of sustainable development and motivate the sharing and implementation of successful approaches. UNEA will also discuss whether to establish an intergovernmental negotiating

committee (INC) towards a new agreement on marine litter and plastic pollution. UNEA-5.2 will be followed by a Special Session of the UNEA, on 3-4 March 2022, to commemorate UNEP’s 50th anniversary. **date:** 28 February – 2 March 2022 **location:** Nairobi, Kenya **www:** unep.org/environmentassembly/unea5

ExMOP: Delegates at MOP 33 requested the Secretariat to organize an extraordinary MOP to further consider issues related to the replenishment of the MLF. **dates:** TBC **location:** TBC **www:** ozone.unep.org

OEWG 44: This meeting is tentatively scheduled to be held in Bangkok, Thailand to consider the assessment reports requested by the MOP, among other issues. **dates:** 11-16 July 2022 **location:** Bangkok, Thailand (TBD) **www:** ozone.unep.org/meetings/44th-meeting-open-ended-working-group-parties

Montreal Protocol MOP 34: The thirty-fourth Meeting of the Parties to the Montreal Protocol will convene to continue work on monitoring, energy efficiency, and implementation of the Protocol. **dates:** 31 October – 4 November 2022 (TBC) **location:** Nairobi, Kenya **www:** ozone.unep.org

For additional meetings, see sdg.iisd.org

Glossary

CFCs	Chlorofluorocarbons
CFC-11	Trichlorofluoromethane
COP	Conference of the Parties
CTC	Carbon tetrachloride
CUEs	Critical-use exemptions
ExCom	Executive Committee of the MLF
ExMOP	Extraordinary MOP
GWP	Global warming potential
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
HLS	High-level segment
ImpCom	Implementation Committee
MBTOC	Methyl Bromide Technical Options Committee
MEAs	Multilateral environmental agreements
MLF	Multilateral Fund
MOP	Meeting of the Parties
ODS	Ozone depleting substances
OEWG	Open-ended Working Group
ORM	Ozone Research Managers
SAP	Scientific Assessment Panel
TEAP	Technology and Economic Assessment Panel
TOC	Technical Options Committee
UNEP	United Nations Environment Programme
UV	Ultraviolet