

Summary of the 34th Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer: 31 October – 4 November 2022

As parties to the Montreal Protocol on Substances that Deplete the Ozone Layer celebrated the 35th anniversary of one of the world's most successful environmental treaties, their work at the 34th Meeting of the Parties (MOP 34) demonstrated their commitment to building on their achievements and evolving to meet new challenges. Delegates worked intensively throughout the week, making use of every available minute for work in plenary, contact groups, and bilateral consultations on weighty issues. While many of the issues required extensive negotiation and, in some cases, significant compromise, by the end of the meeting, parties were able to reach agreement on elements of every issue on the MOP 34 agenda.

Parties adopted 24 decisions, including on:

- illegal import of certain refrigeration, air-conditioning, and heat pump products and equipment;
- identification of gaps in the global coverage of atmospheric monitoring of controlled substances and options for enhancing such monitoring;
- collecting data to understand potential impacts of the COVID-19 pandemic on hydrofluorocarbon (HFC) consumption in developing countries;
- strengthening institutional processes with respect to information on HFC-23 by-product emissions;
- strengthening Montreal Protocol institutions, including for combatting illegal trade;
- ongoing emissions of carbon tetrachloride (CTC);
- critical-use exemptions (CUEs) for methyl bromide;
- stocks and quarantine and pre-shipment uses of methyl bromide;
- enabling enhanced access and facilitating the transition to energy-efficient and low or zero-global-warming-potential (GWP) technologies; and
- financial reports and budgets.

After extensive negotiations that ran into the early hours of Saturday morning, delegates also adopted the terms of reference for the study on the replenishment of the Multilateral Fund (MLF) for 2024-2026, which will allow the Technology and Economic Assessment Panel (TEAP) to establish a Replenishment Task Force and begin laying the groundwork for replenishment negotiations at MOP 35.

Delegates were buoyed throughout the week by the light jokes of the Open-ended Working Group (OEWG) Co-Chairs presiding over the preparatory segment. Their enthusiastic and good-humored approach to facilitating discussions offered moments of comic relief during complex negotiations on highly technical issues.

The work of the Protocol's expert panels, which are regarded as central to the instrument's success, provided the foundation for negotiations. Their previews of their 2022 quadrennial assessment reports also provided compelling insights into future work, including highlighting potential connections to a wide range of issue areas, such as food security, plastic pollution, and ecosystem health.

MOP 34 convened from 31 October – 4 November 2022 in Montreal, Canada. Over 500 people participated. While most delegates attended the meeting in person, a small number of parties and observers followed the proceedings online due to the ongoing COVID-19 pandemic.

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 UN

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

Vienna Convention: Negotiations on an international agreement to protect the ozone layer were launched in 1981 under the auspices of UNEP. In March 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted. It calls for cooperation on monitoring, research, and data exchange, but does not impose obligations to reduce the use of ozone-depleting substance (ODS). The Convention 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 the 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 CTC and methyl chloroform. MOP 2 also established the 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 (ImpCom) to examine possible non-compliance and make recommendations to the MOP aimed at securing full compliance.

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

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

Kigali Amendment: At MOP 28, held in Kigali, Rwanda, in 2016, delegates agreed to amend the Protocol to include HFCs as part of its ambit and to set phase-down 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 GWP. To date, 141 parties to the Montreal Protocol have ratified the Kigali Amendment, which entered into force on 1 January 2019.

Recent Meetings

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 trichlorofluoromethane (CFC-11) emissions, and the areas of focus for the 2022 quadrennial assessment reports. MOP 31 also addressed: ongoing reported emissions of CTC; CUEs for methyl bromide; 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.

COP 12/MOP 32: Due to the COVID-19 pandemic, the first part of the 12th meeting of the Conference of the Parties to the Vienna Convention (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 and budget for 2021-23. MOP 32 also addressed: 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, held on 21, 22 and 24 May 2021, convened online 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. OEWG 43 discussed the scope and content of guidance to the TEAP Replenishment Task Force on further work on its replenishment report. Parties agreed on an updated report, rather than a more comprehensive supplemental report.

COP 12/MOP 33: This combined meeting convened virtually from 23-29 October 2021, with a high-level segment on the last day. The meeting took key decisions related to monitoring of controlled substances and energy efficiency, as delegates requested 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-GWP and energy-efficient technologies. The meeting considered two draft decisions, which addressed: trading of soon-to-be obsolete technologies that could be a threat to the future implementation of the Kigali Amendment and broadening the list of sectors required to implement more energy-efficient technologies. The meeting also adopted 18 decisions on administrative and technical matters, including: replenishment of the MLF; financial reports and budgets of the trust funds for the Vienna Convention and Montreal Protocol; compliance and reporting; membership of Montreal Protocol bodies; and recommendations of the Ozone Research Managers of the Vienna Convention.

ExMOP 5 and OEWG 44: The Fifth Extraordinary MOP to the Montreal Protocol (ExMOP 5) and OEWG 44 convened in Bangkok, Thailand, from 11-16 July 2022. ExMOP 5 adopted decisions on the replenishment of the MLF for the triennium 2021-2023 and extension of the fixed-exchange-rate mechanism to the 2021-2023 replenishment. OEWG 44 addressed issues including

terms of reference for a study of MLF replenishment needs in the 2024-2026 triennium; energy efficiency; ongoing emissions of CTC; potential restructuring of the TEAP's technical options committees; and a proposal from African states to address dumping of inefficient refrigeration and air-conditioning appliances.

Preparatory Segment Report

OEWG Co-Chairs Martin Sirois (Canada) and Osvaldo Álvarez-Pérez (Chile) opened the preparatory segment on Monday, 31 October. Highlighting that 2022 marks the 35th anniversary of the Montreal Protocol and the 50th anniversary of the Stockholm Conference on the Human Environment, Megumi Seki, Executive Secretary, Ozone Secretariat, welcomed participants to Montreal. She stressed that the “ozone family” can contribute to environmental governance by distilling and analyzing lessons to provide targeted information on global issues. She noted that the Secretariat is supporting the ongoing process to establish a science-policy panel for the sound management of chemicals and waste and prevention of pollution.

Organizational Matters

Adoption of the Agenda of the Preparatory Segment: On Monday, Co-Chair Álvarez-Pérez introduced the proposed agenda (UNEP/OzL.Pro.34/1). ARMENIA proposed, and delegates agreed, to add an item on the distribution of seats in the Executive Committee to the MLF (ExCom). Parties adopted the agenda as amended.

Organization of Work: Co-Chair Sirois outlined, and delegates adopted, the proposed organization of work for the preparatory segment.

Administrative Matters

Budget of the Trust Fund for the Montreal Protocol and Financial Reports: On [Monday](#), Co-Chair Sirois introduced this item ([UNEP/OzL.Pro.34/2](#); [34/4](#); [34/INF/1](#); [34/INF/2](#); [34/5](#)). A budget committee, chaired by Nicole Folliet (Canada), met throughout the week.

On Friday morning, Chair Folliet reported to plenary that the group had agreed to the Secretariat's recommended 2023 budget with three changes, including a USD 16,000 increase to cover higher travel costs, a placeholder for two potential workshops on energy efficiency and strengthening institutional processes to combat illegal trade at USD 130,000 each from the cash balance, and a shift of USD 9,500 from the core budget to the cash balance for two one-off communications projects.

On the decision text, she outlined the two changes to the preamble that: explain the higher cash balance due to lower utilization rate during the pandemic; and recognize that maintaining the level of contributions at the 2023 level will result in a significant reduction in the cash balance.

On operative paragraphs, she noted an addition to reflect the revised 2022 budget, placeholder text should the workshops be approved by parties at MOP 34, and a clarification to the Secretariat that in preparing a zero nominal growth budget, it should be against the 2023 budget rather than 2019.

Parties agreed to entrust the Secretariat with making necessary adjustments to the placeholder text depending on the outcome of negotiations on the workshops in relevant contact groups, and to forward the draft decision to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.14), MOP 34, *inter alia*:

- approves the revised budget, including the additional activities, of USD 5,855,129 for 2022 and the budget of USD 5,729,665 for 2023, and takes note of the indicative budget for 2024;
- authorizes the Executive Secretary, on an exceptional basis, to draw upon the available cash balance for 2022 in an amount of up to USD 406,235 for specific activities, including an indicative amount for workshops in 2023 as called for in the decisions on energy efficiency and strengthening institutional processes to combat illegal trade, provided that the cash balance is not reduced below the working capital reserve;
- approves the contributions to be paid by the parties in the amount of USD 3,170,390 for 2023 and takes note of the contributions for 2024;
- authorizes the Secretariat to draw down from the cash balance the funds required to cover the shortfall between the level of contributions agreed upon in the present decision and the approved budget for 2023;
- reaffirms that a working capital reserve shall be maintained at a level of 15% of the annual budget, to be used to meet the final expenditures under the Trust Fund, noting that the working capital reserve shall be set aside from the existing cash balance;
- requests the Secretariat to ensure the full utilization of the programme support resources available to it in 2023 and in later years and, where possible, to offset programme support resources against the administrative components of the approved budget; and
- requests the Executive Secretary to prepare budgets and work programmes for the years 2024 and 2025, based on the projected needs, for two budget scenarios: zero-nominal-growth based on the 2023 approved budget and a scenario based on recommended adjustments to the zero-nominal-growth scenario.

Consideration of the Membership of the Montreal Protocol

Bodies for 2023: Co-Chair Álvarez-Pérez introduced this agenda item ([UNEP/OzL.Pro.34/2](#); [34/3](#)) on [Monday](#), urging regional consultations and submission of nominations for the ImpCom, ExCom, and Co-Chairs of the OEWG as early as possible. On Friday morning, the Secretariat reported it had received nominations from regional consultations for the Montreal Protocol bodies and OEWG Co-Chairs, and parties agreed the nominations would be forwarded to the high-level segment. In the evening, the high-level segment adopted the related decisions.

Final Decisions: Members of the Implementation Committee:

In its decision ([UNEP/OzL.Pro.34/L.2](#)), MOP 34:

- confirms the positions of China, Costa Rica, Egypt, Poland, and the US as members of the ImpCom for one additional year and selects Chile, Lebanon, Netherlands, Senegal, and Suriname as members of the Committee for a two-year period beginning on 1 January 2023; and
- notes the selection of Gene Smilansky (US) to serve as President and Osvaldo Álvarez-Pérez (Chile) to serve as Vice President and Rapporteur of the Committee for one year beginning on 1 January 2023.

Members of the Executive Committee of the Multilateral Fund:

In its decision ([UNEP/OzL.Pro.34/L.2](#)), MOP 34:

- endorses the selection of Brazil, Burkina Faso, China, Cuba, Ghana, Kenya, and Kuwait as members of the ExCom representing Article 5 parties and the selection of Australia, Belgium, Estonia, Finland, Italy, Japan, and the US as members representing non-Article 5 parties for one year beginning 1 January 2023; and
- notes the selection of Annie Gabriel (Australia) to serve as Chair and Matheus Bastos (Brazil) to serve as Vice-Chair of the ExCom for one year beginning 1 January 2023.

Co-Chairs of the Open-Ended Working Group: In its decision ([UNEP/OzL.Pro.34/L.2](#)), MOP 34 endorses the selection of Ralph Brieskorn (Netherlands) and Ameh Djossou (Togo) as Co-Chairs of the OEWG in 2023.

Terms of Reference for the Study on the MLF Replenishment for the Triennium 2024-2026

Co-Chair Sirois introduced this item ([UNEP/OzL.Pro.34/2; WG.1/44/4](#)) on [Monday](#), proposing that the contact group established at OEWG 44, chaired by Samuel Paré (Burkina Faso) and Cindy Newberg (US), be reestablished and use the draft text forwarded from OEWG 44 as a starting point for discussions. Parties agreed.

The contact group met throughout the week, closing to non-parties on [Wednesday](#).

On Friday morning, Co-Facilitator Paré reported good progress in the contact group and said he and Co-Facilitator Newberg were working informally to ensure consensus would be reached. He requested additional time to consolidate ideas and finish work.

On Friday evening, Co-Facilitator Newberg expressed confidence that the Terms of Reference could be completed that night and encouraged parties to continue bilateral consultations.

Early Saturday morning, Co-Facilitator Newberg reported to the preparatory segment that the group had completed its work and thanked parties for their willingness to consult in the margins of the meeting and find creative solutions to work through very difficult issues. Delegates agreed to forward the draft decision to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.15), MOP 34 requests the TEAP to prepare a report for submission to MOP 35, and to submit it through OEWG 45 to enable MOP 35 to adopt a decision on the appropriate level of the 2024-2026 replenishment of the MLF.

MOP 34 also requests that, in preparing the report, the TEAP should take into account, among other things:

- all control measures and relevant decisions agreed upon by the parties to the Montreal Protocol and the ExCom, including paragraphs 9 through 25 of decision XXVIII/2, and the decisions of MOP 34 and the ExCom at its meetings, up to and including ExCom 92, insofar as those decisions will necessitate expenditure by the MLF during the period 2024-2026;
- the special needs of low volume-consuming and very low volume-consuming countries;
- the need to allocate resources to enable all Article 5 parties to comply with Articles 2A-2J of the Protocol, and the reductions and extended commitments made by Article 5 parties under approved HCFC phase-out management plans (HPMPs) and Kigali HFC implementation plans (KIPs);

- decisions, rules and guidelines agreed by the ExCom at all its meetings, up to and including ExCom 92, in determining eligibility for the funding of investment projects and non-investment projects;
- the need to allocate resources for activities to maintain and/or enhance energy efficiency while phasing down HFCs including those relating to pilot/demonstration projects in accordance with any energy efficiency cost guidance developed by the ExCom or, should the ExCom not adopt cost guidance in time to be considered in the report, for a scenario for a funding window to support such activities;
- the need to allocate resources for supporting activities related to gender mainstreaming as part of the gender policy of the MLF, taking into account the implementing agencies' existing policies to promote gender mainstreaming and the mandate as per ExCom decision 84/92;
- the need to allocate resources for a funding window for activities to support end-of-life management and disposal of controlled substances in an environmentally sound manner in accordance with any relevant decisions by the ExCom or, should the ExCom not adopt relevant decisions in time to be considered in the report, for a scenario for funding a limited number of demonstration projects; and
- a scenario to increase funding for institutional strengthening and the compliance assistance programme to assist Article 5 parties to strengthen their national capacities to address challenges associated with implementing the Kigali Amendment.

MOP 34 also decides that:

- in estimating the funding requirement associated with the HCFC and HFC targets, the TEAP will use a clearly explained compliance-based methodology that is informed by but independent of the business plan of the MLF, taking into account policy guidance provided by the MOP and/or the ExCom;
- the TEAP should provide indicative figures associated with enabling Article 5 parties to implement HPMPs and KIPs in a coordinated manner. Indicative figures should be provided for a range of typical scenarios, using all relevant data available to the TEAP;
- in preparing the report, the TEAP should consult widely, including all relevant persons and institutions and other relevant sources of information deemed useful;
- the TEAP should strive to complete the report in good time to enable it to be distributed to all parties two months before OEWG 45; and
- the TEAP should provide indicative figures for the periods 2027-2029 and 2030-2032 to support a stable and sufficient level of funding, on the understanding that those figures will be updated in subsequent replenishment studies.

Energy Efficiency

Response to the TEAP report on decision XXXIII/5 on the Continued Provision of Information on Energy-Efficient and Low-Global-Warming-Potential Technologies: Co-Chair Álvarez-Pérez introduced this item on [Monday](#) ([UNEP/OzL.Pro.34/2; WG.1/44/4](#); [Report of the TEAP, May 2022, Volume 3: Decision XXXIII/5](#)), noting the contact group at OEWG 44 developed a list of feedback and ideas in response to the report by the TEAP ([UNEP/OzL.Pro.34/2](#)).

The US, on behalf of Norway, Canada, and the UK, introduced a conference room paper (CRP) (UNEP/OzL.Pro.34/CRP.4) which, among other things: requests specific information and updates from the TEAP in its 2023 progress report and quadrennial assessment reports; requests a Secretariat report on existing policies; and encourages parties to take domestic action.

FEDERATED STATES OF MICRONESIA introduced a draft text (UNEP/OzL.Pro.34/CRP.6) that included a request to the TEAP for regular reporting and asks for further support for knowledge-building.

Parties agreed to reestablish OEWG 44's contact group on energy efficiency, co-facilitated by Annie Gabriel (Australia) and Bitul Zulhasni (Indonesia). The contact group met on [Monday](#), [Wednesday](#), and Friday.

On Friday morning, Co-Facilitator Gabriel reported agreement on some elements of the draft joint decision combining the two CRPs and requested additional time for the remaining work. On Friday evening, Co-Facilitator Gabriel reported the group had completed work on a number of additional paragraphs, but bracketed text remained. She requested additional time to meet.

On Friday night, Co-Facilitator Gabriel introduced a revised draft decision, which parties agreed to forward to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.6/Rev.1) MOP 34 requests the TEAP to include in its 2023 progress report:

- information on enhancements in energy efficiency associated with improvements in appliance foams;
- updates relating to the availability, accessibility, electrical compatibility, and cost of energy efficient products and equipment containing low or zero GWP refrigerants in the refrigeration, air-conditioning and heat pump sectors;
- information on testing equipment and procedures for validation of energy efficiency claims to enforce minimum energy efficiency standards and labels, and information on voluntary labeling programmes;
- information on barriers to consumer and business acceptance of the adoption of more energy-efficient products and equipment containing low or zero GWP refrigerants, including barriers related to electrical compatibility of such products and equipment, and possible solutions for sustainable transition to such products and equipment;
- analysis of the potential benefits of introducing more energy efficient refrigeration, air-conditioning and heat pump equipment, including costs and related climate benefits while phasing down HFCs; and
- information on the range of, and trends, in GWP and energy efficiency of refrigeration, air-conditioning and heat pump equipment, for which there is available data.

In the decision, MOP 34 also requests the TEAP to integrate updates on energy efficiency while phasing down HFCs in the refrigeration, air conditioning and heat pump sectors in its progress and quadrennial assessment reports from 2023 onwards.

MOP 34 also:

- requests the ExCom to take into consideration information prepared by the TEAP in the preparation and finalization of the energy efficiency cost guidance in the context of the Kigali Amendment and to report on its progress in the context of the ExCom Chair's annual report to the MOP;

- requests the ExCom to continue to support activities to maintain and enhance energy efficiency while phasing down HFCs in countries wishing to do so;
- requests the Secretariat to organize a one-day workshop in 2023 back-to-back with the MOP to share information, experiences and lessons learned, and assess challenges related to ways of improving availability and accessibility of energy efficient equipment and equipment using low or zero GWP alternatives during the implementation of the Kigali Amendment;
- requests the Secretariat to prepare a report of existing policies addressing the interlinkages between phasing down HFCs and enhancing energy efficiency;
- encourages parties to enhance coordination between domestic energy and ozone officials to enhance energy efficiency while phasing down HFCs;
- encourages parties to support upgrading domestic servicing including related certification programmes, including technician training to maintain and/or to enhance energy efficiency, reduce refrigerant leaks, and ensure proper installation and maintenance, including related certification programmes of refrigeration, air-conditioning and heat-pump equipment; and
- encourage parties, when phasing down HFCs, to take into account, as appropriate, the information contained in Volume 3 of the TEAP 2022 report responding to decision XXXIII/5.

Dumping of New and Old Inefficient Refrigeration and Air-Conditioning Appliances: Co-Chair Álvarez-Pérez introduced this item on [Monday](#) (UNEP/OzL.Pro.34/2; [WG.1/44/4](#)), explaining that the draft decision had been updated following discussions at OEWG 44. GHANA, on behalf of the African States, introduced a revised draft decision (UNEP/OzL.Pro.34/CRP.2). He said that policies to curb dumping are not interchangeable with institutional strengthening to respond to dumping, emphasizing that neither is adequate alone.

Parties agreed to establish a contact group, co-facilitated by Cornelius Rhein (EU) and Tumau Herownna Neru (Samoa). It met on [Tuesday](#), [Wednesday](#), and Friday.

On Friday morning, Co-Facilitator Rhein reported progress on compromise text but, given remaining brackets, requested additional time to reach agreement on the final text. On Friday evening, he reported that the group had reached agreement on a "very short" draft decision, as it had run out of time to consider the full decision text. He said the group had agreed on the core element of the proposal, which aims to generate information for consideration at OEWG 45.

On Friday night, Co-Facilitator Rhein proposed to change the title of the CRP from the name of the agenda item to "Illegal import of certain refrigeration, air conditioning and heat pump products and equipment." He explained that while the title had not been addressed in the contact group, this revised title would better reflect the content of the draft decision.

Parties agreed to forward the draft decision with the revised title to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.2/Rev.1), MOP 34 invites parties that have restricted the manufacture and/or import of certain refrigeration, air-conditioning and heat pump products and equipment containing or relying on controlled substances, including with respect to energy efficiency, and that do

not want to receive such products and equipment from other parties against payment or free of charge, to submit to the Secretariat by 1 May 2023 information on:

- the types of products and equipment concerned, including their Harmonized Item Description and Coding System codes, where applicable;
- the specific domestic restrictions on the controlled substances (i.e., the maximum GWP of HFCs permitted to be used) for each category of products and equipment;
- the minimum energy efficiency performance standard permitted under domestic legislation for each category of products and equipment; and
- any attempted illegal imports of such restricted products and equipment to their countries.

MOP 34 also decides to consider this issue at MOP 35 and include the item on the agenda of OEWG 45, taking into account the information requested under this decision.

Identification of Gaps in the Global Coverage of Atmospheric Monitoring of Controlled Substances and Options for Enhancing Such Monitoring

Co-Chair Sirois introduced this item on [Monday](#) ([UNEP/OzL.Pro.34/2; 34/2/Add.1; WG.1/44/4](#)), noting that at OEWG 44, the EU had presented a draft decision on identifying sources of emissions originating from industrial processes, but the contact group at that meeting had not had time to discuss it. He suggested, and parties agreed, to reestablish the contact group co-facilitated by Michel Gauvin (Canada) and Liana Ghahramanyan (Armenia) to pursue discussions on the proposal.

The contact group met on [Tuesday](#), [Wednesday](#), and Friday.

On Friday, Co-Facilitator Gauvin requested additional time for the contact group to address the EU's proposal. On Friday evening, the EU reported that it was consulting with interested parties on its CRP and was confident a result could be achieved in "a reasonably short time." The contact group was given additional time to conclude its work.

Later that evening, Co-Chair Álvarez-Pérez introduced the revised draft decision and parties agreed to forward the proposal to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.16), MOP 34 decides to request the TEAP to prepare a report for OEWG 45 on:

- chemical pathways in which substantial emissions of controlled substances are likely to occur;
- best practices available to control these emissions; and
- gaps in understanding the sources of emissions referred to in the first point of the decision.

Institutional Processes to Strengthen the Effective Implementation and Enforcement of the Montreal Protocol

On [Monday](#), Co-Chair Sirois opened this item ([UNEP/OzL.Pro.34/2; 34/8; WG.1/44/4](#)), saying an informal group at OEWG 44 had produced an unprioritized list of ideas for further discussion at MOP 34.

AUSTRALIA, on behalf of Norway, the UK, and the US, introduced a draft decision (UNEP/OzL.Pro.34/CRP.7), outlining its two approaches: urging or encouraging parties to take certain actions that are consistent with previous decisions on CFCs and HCFCs,

but apply those to HFCs; and also re-visiting the issue next year, including through a workshop.

The US, on behalf of Australia and the UK, introduced a draft decision (UNEP/OzL.Pro.34/CRP.5) requesting the TEAP to provide additional information on HFC-23 by-product emissions and prepare a report ahead of MOP 35.

Parties agreed to take up these two CRPs in the same contact group co-facilitated by Andrew Clark (US) and Miruza Mohamed (Maldives). The contact group met on [Tuesday](#), [Wednesday](#), and Friday.

On Friday morning, Co-Facilitator Clark introduced a revised draft decision on strengthening institutional processes with respect to HFC-23 by-product emissions and delegates agreed to forward it to the high-level segment for adoption. Co-Facilitator Clark explained the group needed additional time to discuss the draft decision on strengthening Montreal Protocol institutions. The group was given more time to meet.

On Friday evening, Co-Facilitator Clark reported the group had completed its work on their second draft decision, stating it had been titled "Strengthening Montreal Protocol institutions including for combating illegal trade." Parties agreed to forward the text to the high-level segment for adoption.

Final Decisions: In its decision (UNEP/OzL.Pro.34/CRP.5/Rev.1) on strengthening institutional processes with respect to information on HFC-23 by-product emissions, MOP 34 requests the TEAP to prepare a report for MOP 35 to include:

- information on the possible chemical pathways that could be used in the production of Annex C, Group I, or Annex F substances that may generate HFC-23 as a by-product;
- compilation of information on the amount of HFC-23 generation and emissions from facilities that manufacture Annex C, Group I, or Annex F substances, the reporting of which is required under Article 7 of the Montreal Protocol; and
- best practices available to control these emissions.

In its decision on strengthening Montreal Protocol institutions including for combating illegal trade (UNEP/OzL.Pro.34/CRP.7/Rev.1), MOP 34:

- urges parties that have not already done so to introduce into their national customs classification systems the separate subdivisions for HFCs and blends contained in the amendments to the Harmonized Commodity Description and Coding System adopted by the World Customs Organization in 2019 that entered into force on 1 January 2022, and use more specific classifications for controlled substances and blends containing controlled substances, where possible, to better identify and track imports and exports of controlled substances;
- encourages all parties to exchange information and strengthen joint efforts to improve means of identification, prevention and combating of illegal trade in controlled substances, including addressing the mislabeling of containers of controlled substances as other chemicals; and
- encourages parties to facilitate the exchange of information to prevent illegal trade of controlled substances by reporting to the Secretariat fully proved cases of illegal trade and, to the extent that parties are able to do so, to provide additional information about illegal trade situations.

MOP 34 also requests the Secretariat to:

- compile and regularly summarize the practices of illegal trade reported, as well as the approaches taken by national authorities to identify and address such cases;
- identify common features of licensing systems to assist parties wishing to improve their national licensing systems for controlled substances;
- organize a one-day workshop on further strengthening effective implementation and enforcement of the Montreal Protocol back-to-back with OEWG 45; and
- prepare a background information paper outlining issues to be discussed at the workshop and reflecting discussions at OEWG 44 and MOP 34 for consideration at OEWG 45.

Ongoing Emissions of Carbon Tetrachloride

On [Tuesday](#), Co-Chair Sirois invited Switzerland to present its CRP (UNEP/OzL.Pro.34/CRP.10). SWITZERLAND explained that the draft decision invites parties to provide general information on procedures related to CTC emissions. This issue was taken up in the contact group on gaps in atmospheric monitoring, co-facilitated by Michel Gauvin (Canada) and Liana Ghahramanyan (Armenia).

On Friday, Co-Facilitator Gauvin reported that the group had achieved agreement on a draft decision on ongoing emissions of CTC. Parties agreed to forward it to the high-level segment for adoption.

Final Decision: In the decision (UNEP/OzL.Pro.34/CRP.10/Rev.1), MOP 34:

- invites parties that have production of CTC, as well as by-production, or use of CTC as a feedstock for other substances or as a process agent, to provide to the Ozone Secretariat on a voluntary basis, by 1 February 2023, information on the national procedures and frameworks in place for management of such activities in their respective countries;
- requests the Secretariat to share with the TEAP the information received; and
- requests the TEAP to review the information received and to present this information in its 2023 progress report for consideration by OEWG 45.

Future Availability of Halons and their Alternatives

Co-Chair Sirois introduced this item (UNEP/OzL.Pro.34/2) on [Monday](#), noting the May 2022 TEAP report on halon availability. The US said the report would be helpful in guiding domestic action to manage halon stocks. Consideration of the item was closed.

Issues Related to Exemptions under Articles 2A–2I of the Montreal Protocol

Nominations for Critical-Use Exemptions for Methyl Bromide for 2023 and 2024: On [Monday](#), Marta Pizano and Ian Porter, Co-Chairs of the Methyl Bromide Technical Options Committee (MBTOC), presented the Committee's recommendations ([UNEP/OzL.Pro.34/2/Add.1](#)). Co-Chairs Pizano and Porter reported critical-use nominations (CUNs) had been submitted by South Africa, Canada, and Australia, noting that the MBTOC recommendation was, in each case, for a smaller amount than requested in the nomination.

AUSTRALIA and CANADA expressed disappointment with MBTOC's final recommendations regarding their respective nominations. The US said it is crucial for MBTOC to follow agreed procedures and fully take into account information submitted to it.

On [Tuesday](#), AUSTRALIA presented a CRP, submitted jointly with Canada and South Africa (UNEP/OzL.Pro.34/CRP.9). Co-Chair Álvarez-Pérez requested that interested parties discuss the CRP with its three sponsors and return to plenary with consensus on the decision text.

On Friday evening, AUSTRALIA reported that interested parties had reached agreement on a revised version of the joint CRP (CRP.9/Rev.1). He noted: the addition of a preambular paragraph recognizing the TEAP and MBTOC for their work; modifications to the country-specific paragraphs explaining the circumstances surrounding their request for CUEs; and changes to the amounts requested for Australia and Canada.

Parties agreed to forward this to the high-level segment for a decision.

Final Decision: In the preamble to the decision ([UNEP/OzL.Pro.34/CRP.9/Rev.1](#)), MOP 34, *inter alia*:

- notes with appreciation the work of the TEAP and its MBTOC;
- acknowledges that the TEAP, and specifically its MBTOC, produce reports that are science-based, independent and robust and that all parties should strive to respect the results of this work;
- notes that the TEAP has identified successful chemical and non-chemical alternatives to methyl bromide and the use of such alternatives in combination provides excellent results;
- notes Australia's transition away from methyl bromide in 2023 has been delayed as a result of the registration of an alternative not having been finalized as originally planned in January 2022, thus requiring its use of the full amount of methyl bromide in 2023;
- notes Canada is committed to continuing its research programme aiming at a full phase-out of methyl bromide for CUNs, and that Canada, for reasons linked to the economic impact of shifting towards soilless substrates use in strawberry runners for a single producer and in the absence of authorized fumigant alternatives, has asked to diverge from the MBTOC recommendations;
- notes with appreciation that South Africa is committed not to apply in the future years for CUNs of methyl bromide; and
- recognizes that some parties have recently stopped requesting CUEs and that the efforts to develop alternatives and substitutes by parties that continue to apply for exemptions are designed to achieve the same outcome.

In the decision, MOP 34 agrees:

- to permit, for each party, for the agreed critical-use categories set out in Table A of the annex, the levels of production and consumption for 2023 set out 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;
- parties shall endeavor to license, permit, authorize, or allocate quantities of methyl bromide for critical uses as listed in table A;
- each party that has an agreed CUE shall renew its commitment to ensuring that specified criteria are applied in licensing, permitting, or authorizing critical uses of methyl bromide, with each party requested to report on the implementation to the Secretariat by 1 February for the years to which the decision applies;
- parties submitting future requests for methyl bromide CUNs shall also comply with paragraph 1(b)(iii) of decision IX/6

and that non-Article 5 parties shall demonstrate that research programmes are in place to develop and deploy alternatives to and substitutes for methyl bromide; and

- to reiterate 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.

The annex to the decision contains two tables. Table A lists the following agreed critical-use categories for 2023: strawberry runners for Australia and Canada, and structures for South Africa. Table B sets out the permitted levels of production and consumption for 2023 for those three parties: 29.98 tonnes for Australia (which includes the amount of 14.49 tonnes previously agreed for 2023 in decision XXXIII/6); 4.65 tonnes for Canada; and 19.00 tonnes for South Africa.

Stocks and Quarantine and Pre-Shipment Uses of Methyl Bromide: On [Monday](#), Co-Chair Álvarez-Pérez introduced a revised draft decision ([UNEP/OzL.Pro.34/2](#)) forwarded by OEWG 44 and arising from informal consultations led by the EU. After a brief discussion, delegates agreed to establish a contact group on the issue, co-facilitated by Alain Wilmart (Belgium) and Diego Montes Ferro (Colombia).

The contact group met on [Tuesday](#), [Wednesday](#), and Friday.

On Friday morning, Co-Facilitator Montes reported that the group was “seeing the shadow of the finish line” and requested more time to work. Co-Chair Álvarez-Pérez confirmed that the group could have an additional 30 minutes. On Friday evening, Co-Facilitator Montes reported that the group had reached consensus on the draft decision in less than ten minutes thanks to parties’ flexibility and parties agreed to forward this draft decision to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.17), MOP 34 invites parties to submit to the Ozone Secretariat, on a voluntary basis, by 1 June 2023:

- a list of the pest and commodity combinations in which methyl bromide is needed or used in their respective countries; and
- accessible data on the volumes of pre-phase-out methyl bromide stocks at the country level to the Ozone Secretariat by 1 June 2023.

MOP 34 also:

- includes the issue of methyl bromide stocks on the agenda of OEWG 45;
- requests the TEAP and its MBTOC, in consultation with the Secretariat of the International Plant Protection Convention, to provide updated information, as part of its progress report to OEWG 45, on current quarantine and pre-shipment uses for which alternatives are available; and
- invites parties to take into account the standards and guidelines under the International Plant Protection Convention in their national processes and to consider the potential for uptake of practices to minimize the use of methyl bromide.

Strengthening the Technology and Economic Assessment Panel and its Technical Options Committees for the Phase-Down of HFCs and Other Future Challenges Related to the Montreal Protocol and the Climate

On [Monday](#), Co-Chair Sirois introduced this item ([UNEP/OzL.Pro.34/2; 34/2/Add.1](#); [Report of the TEAP, May 2022, Volume 1:](#)

[Progress Report](#)), noting that OEWG 44 had considered a draft decision by Morocco that included proposals to merge the Halons Technical Options Committee and the MBTOC into the Medical and Chemicals Technical Options Committee, to restructure the Flexible and Rigid Foams Technical Options Committee, and to create an energy efficiency technical options committee. Parties reestablished the OEWG 44 contact group so that the TEAP Co-Chairs could answer parties’ questions on the Panel’s restructuring recommendations contained in their 2022 progress report. The contact group was co-facilitated by Paul Krajnik (Austria) and María del Mar Solano (Costa Rica).

On [Wednesday](#), AUSTRALIA presented a proposal (UNEP/OzL.Pro.34/CRP.12) on behalf of the UK, Canada, and the US, which helped guide the contact group’s work in meetings on Wednesday and Friday.

On Friday evening, Co-Facilitator del Mar Solano reported the group had completed its work. Parties agreed to forward the draft decision submitted by the contact group to the high-level segment for adoption.

Final Decision: In the decision (UNEP/OzL.Pro.34/CRP.12/Rev.1), MOP 34 requests the TEAP, including through consultations by the Co-Chairs of the technical options committees with their members, to provide more information on existing challenges and potential options for the future configuration and function of its technical options committees for consideration by OEWG 45, taking into account:

- discussions and questions raised by parties at OEWG 44 and MOP 34 concerning the TEAP’s recommendations in its 2022 progress report;
- the fact that the vast majority of HFC uses are in the refrigeration, air conditioning and heat-pump sector;
- expertise required to provide technical and cost-related information to the parties, including in the context of implementation of the Kigali Amendment;
- guidance provided in its terms of reference; and
- the need to ensure continued collaboration and coordination across the technical options committees.

MOP 34 also decides to rename the Halons Technical Options Committee to the Fire Suppression Technical Options Committee.

Consideration of Nominations by Parties of Experts to the Technology and Economic Assessment Panel

On [Monday](#), Co-Chair Álvarez-Pérez noted that seven experts had been nominated for membership on the TEAP ([UNEP/OzL.Pro.34/2; 34/2/Add.1](#)). He said the nominations would be discussed in an informal group, which met on Friday.

On Friday evening, Co-Chair Álvarez-Pérez informed parties that a draft decision with the names of selected experts had been uploaded to the meeting website. Parties agreed to forward the document to the high-level segment for adoption.

Final Decision: In the decision (UNEP/OzL.Pro.34/CRP.18), MOP 34:

- endorses the appointments of Marta Pizano (Colombia) and Ashley Woodcock (UK) as Co-Chairs of the TEAP for an additional four-year term;
- endorses the appointment of Fabio Polonara (Italy) as Co-Chair of the Refrigeration Technical Options Committee for an additional term of four years; and

- endorses the appointments of Ray Gluckman (UK), Marco González (Costa Rica), and Shiqiu Zhang (China) as senior experts for additional terms of one year.

Compliance and Data Reporting Issues: The Work and Recommendations of the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol

On [Monday](#), Gene Smilansky, US, Vice-President of the Implementation Committee, reported ImpCom 68 and ImpCom 69 had adopted 13 formal recommendations, including three draft decisions for consideration by MOP 34 ([UNEP/OzL.Pro.34/CRP.3](#)). These address: data and information provided by parties; establishment of licensing systems of HFCs; and a request from Madagascar to revise its baseline data. Parties agreed to forward the draft decisions to the high-level segment for adoption.

Final Decisions: Data and information provided by the parties in accordance with Article 7 of the Montreal Protocol: In its decision ([UNEP/Oz.L.Pro.34/CRP.3](#)), MOP 34:

- urges the parties listed in paragraphs 3, 4 and 5 of the decision to report the required data to the Secretariat as soon as possible;
- requests ImpCom 70 to review the situation of those parties; and
- encourages parties to continue to report consumption and production data as soon as the figures are available, and preferably by 30 June each year, as agreed in decision XV/15.

Status of the establishment of licensing systems under Article 4B, paragraph 2 bis, of the Montreal Protocol: In its decision ([UNEP/Oz.L.Pro.34/CRP.3](#)), MOP 34:

- takes note with appreciation of the efforts made by the parties in the establishment and implementation of licensing systems under Article 4B, paragraph 2 bis, 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 15 parties listed in the annex to the decision to provide information to the Secretariat on the establishment and implementation of licensing systems as a matter of urgency, and no later than 15 March 2023, for consideration by ImpCom 70;
- urges all remaining parties to the Kigali Amendment that have not yet established and implemented the licensing systems referred to in the present decision 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 this decision by all parties to the Protocol.

Revision of the baseline data for Madagascar: In its decision ([UNEP/Oz.L.Pro.34/CRP.3](#)), MOP 34 decides to approve the request by Madagascar to revise its consumption data for HFCs for the baseline year 2009 as indicated in a table set out in the decision document.

Implementation of the Kigali Amendment

Periodic Review on Alternatives to HFCs (Decision XXVII/2, para. 4): On [Tuesday](#), Co-Chair Martin Sirois opened this item ([UNEP/OzL.Pro.34/2](#); [34/2/Add.1](#)), inviting TEAP members to present their report on information on alternatives to HFCs. After asking TEAP a number of technical and detailed questions, with a focus on accessibility of alternatives, parties discussed the timing of future reporting on this item. Co-Chair Sirois then closed the item.

Status of Ratification: On [Tuesday](#), noting that to date 140 parties had ratified the Kigali Amendment, OEWG Co-Chair Álvarez-Pérez presented a draft decision (UNEP/OzL.Pro.34/3) to be forwarded to the high-level segment for adoption. He explained the number of ratifications would be updated to reflect the number of ratifications on Friday. The draft decision was forwarded to the high-level segment. By Friday, the number of parties had grown to 141.

Final Decision: In the decision ([UNEP/OzL.Pro.34/L.2](#)), the MOP notes that, as of 4 November 2022, 141 parties had ratified, approved or accepted the Kigali Amendment to the Montreal Protocol and urges all parties that have not yet done so to consider ratifying, approving, or accepting the Kigali Amendment in order to ensure broad participation and achieve the goals of the Amendment.

Impact of the COVID-19 Pandemic on HFC Baselines for Article 5 Parties (Proposal by Cuba): Co-Chair Álvarez-Pérez opened discussion on the proposal by Cuba ([UNEP/OzL.Pro.34/CRP.1](#)) on [Tuesday](#). Parties agreed to convene an informal group on baselines, co-facilitated by Ralph Brieskorn (Netherlands) and Daniel López Vicuña (Mexico), to continue discussions on this matter. The informal group met on [Wednesday](#) and Friday.

On Friday morning, Co-Facilitator López Vicuña reported that, after the group's first meeting, parties had come up with a proposal to gather data on Article 5 parties' consumption of HFCs. Delegates agreed to forward the draft decision to the high-level segment for adoption.

Final Decision: In the decision ([UNEP/OzL.Pro.34/CRP.13](#)), MOP 34:

- recalls that the calculated HFC consumption baselines for Article 5 parties are determined on the basis of reported HFC consumption for 2020, 2021 and 2022 plus 65% of the country's HCFC baselines to account for HFC growth and fluctuations;
- notes the COVID-19 pandemic; and
- notes that the ExCom has taken no decision concerning the years for the starting point that will be used to determine maximum HFC consumption eligible for funding, and that this issue will continue to be considered at ExCom 91.

MOP 34 also encourages Article 5 parties that believe their reduced consumption of HFCs during the baseline years of 2020-2022, stemming from the effects of the COVID-19 pandemic, could hinder their ability to comply with the freeze in the consumption of HFCs in 2024 under the Kigali Amendment to submit to the Ozone Secretariat as soon as possible, and no later than 1 May 2023, their HFC consumption data for 2022 in time for consideration at OEWG 45.

MOP 34 also requests, for parties that provide the information above by 1 May 2023, the Ozone Secretariat to prepare for OEWG 45:

- information on the HFC consumption for the years 2020, 2021, and 2022 and the calculated baselines of Article 5 parties that have reported relevant data; and
- information on HFC consumption for the years 2018 and 2019 of Article 5 parties where information is available.

MOP 34 also requests ExCom 91 to consider requesting the Secretariat of the MLF to provide to the Ozone Secretariat any HFC consumption data it has available that could assist the Ozone Secretariat in preparing the information requested under this decision.

Safety Standards (Decision XXIX/11)

On [Tuesday](#), Co-Chair Sirois introduced this item ([UNEP/OzL.Pro.34/2; 34/2/Add.1](#)) and recalled the work completed by the Secretariat to date, including creating an interactive online tool to facilitate access to information on safety standards. On [Wednesday](#), the EU presented a CRP on this item (UNEP/OzL.Pro.34/CRP.11) and Co-Chair Sirois requested that parties engage directly with the EU on questions or textual considerations.

On Friday, the EU reported that parties discussing this issue had added a deadline for the mandate being given to the Secretariat and introduced the resulting revised draft decision. Parties agreed to forward the draft decision to the high-level segment for adoption.

Final Decision: In its decision (UNEP/OzL.Pro.34/CRP.11/Rev.1), MOP 34 requests the Secretariat:

- to continue providing information on relevant safety standards as requested by decision XXIX/11 at least prior to each MOP up until MOP 41, when parties should consider whether to renew that request; and
- to include further relevant safety standards when notified by a party or a group of parties of the adoption of a standard.

Recognition of the Achievements of Paul Jozef Crutzen, Mario José Molina, and Frank Sherwood Rowland, Winners of the Nobel Prize in Chemistry in 1995

On [Tuesday](#), Co-Chair Sirois open this item ([UNEP/OzL.Pro.34/2; 34/3](#)) and parties forwarded the draft decision to the high-level segment for adoption.

Final Decision: In the decision (UNEP/OzL.Pro.34/L.2), MOP 34:

- expresses recognition of and gratitude for the invaluable scientific contributions of Paul Jozef Crutzen, Mario José Molina, and Frank Sherwood Rowland, which inspired countries around the world to join in solidarity and cooperation to protect the ozone layer from depletion, thus making the planet safer for present and future generations;
- upholds their legacy by maintaining mutual trust in and commitment to the work of the Vienna Convention and the Montreal Protocol; and
- strives to continue to strengthen the institutions that their achievements helped to establish in order to achieve the aims of those institutions and protect the atmosphere for the benefit of all.

Other Matters

Co-Chair Álvarez-Pérez opened discussion of this item on [Tuesday](#), reminding parties that the agenda was adopted with the addition of a sub-item under Other Matters from Armenia. ARMENIA introduced a draft decision on the item (UNEP/OzL.Pro.34/CRP.8). Co-Chair Álvarez-Pérez proposed, and parties agreed, that Armenia would lead bilateral discussions on the issue with interested parties and report progress to the OEWG Co-Chairs, who would then advise on next steps. On [Wednesday](#), ARMENIA shared a revised draft proposal that parties agreed to forward to the high-level segment for adoption.

Final Decision: In its decision ([UNEP/OzL.Pro.34/CRP.8/Rev.1](#)), MOP 34 requests the ExCom to consider increasing the funding allocated for travel by Article 5 parties in the budget of the Secretariat of the MLF, with a view to supporting the participation in ExCom meetings of an Article 5 party that is not eligible through

the existing rotation system for a seat on the ExCom for the year in question, on the understanding that the party concerned could be co-opted by another Article 5 party holding the rotating seat for the year in question.

High-Level Segment Report

MOP 33 President Samuel Paré (Burkina Faso) opened the high-level segment on [Thursday](#) morning.

Cécile Siewe, Environment and Climate Change Canada, highlighted that the Montreal Protocol demonstrates how to unite government, science, business, and civil society. Speaking via video message, Steven Guilbeault, Minister, Environment and Climate Change Canada, highlighted the Kigali Amendment's role in reducing HFCs and thus avoiding further global warming. He underscored the importance of enabling developing countries to comply with the upcoming freeze on HFC consumption.

Inger Andersen, Executive Director, UNEP, congratulated participants via video message for their work, and underlined the importance of supporting the Protocol through sound science and the replenishment of the MLF.

President Paré reflected on intersessional work since MOP 33, highlighting ongoing efforts to achieve universal ratification of the Kigali Amendment and the celebration of the pioneering work of the winners of the 1995 Nobel Prize in Chemistry.

Organizational Matters

Election of Officers for the 34th Meeting of the Parties to the Montreal Protocol: President Paré presented the names of nominated officers, who were subsequently elected by acclamation: President: Hassan Mubarak (Bahrain); Vice Presidents: Jana Mašíčková (Czechia); Adrian Forde (Barbados); Alain Wilmart (Belgium); and Rapporteur: Cyrus Mageria (Kenya).

Taking the floor, MOP 34 President Mubarak thanked the outgoing President and parties for the confidence they had shown by electing him.

Adoption of the Agenda for the High-Level Segment: President Mubarak introduced the agenda ([UNEP/OzL.Pro.34/1](#)), which was adopted as presented.

Organization of Work: President Mubarak introduced this item ([UNEP/OzL.Pro.34/2](#)), outlining a plan for the final two days of MOP 34. As the preparatory segment had not yet completed its work, he explained some contact groups would be working in parallel to the high-level segment, and suspension of the high-level segment could be required at times.

Credentials of Representatives: On Friday evening, the Secretariat reported on the Bureau's review of credentials, noting it approved the credentials of 79 out of 127 parties represented at MOP 34. He said one party's participation was approved provisionally on the condition that it forward credentials as soon as possible.

Presentations by the Assessment Panels on Progress in their Work and Key Issues Emanating from their 2022 Quadrennial Assessments

On [Thursday](#), experts from the Montreal Protocol's three assessment panels presented key findings from their forthcoming reports.

Scientific Assessment Panel (SAP): Co-Chair Bonfils Safari (Rwanda) introduced the SAP's forthcoming quadrennial assessment. Co-Chair Paul Newman (US) highlighted declines in

ODS since the Protocol's adoption. Underscoring that ozone in the upper stratosphere continues to recover, he noted ozone in the lower stratosphere does not show signs of recovery, but the uncertainty is large.

Co-Chair John Pyle (UK) presented a chapter on climate intervention or "geoengineering," specifically Stratospheric Aerosol Injection (SAI). He noted that while SAI could lead to 0.5°C surface cooling, it could result in ozone depletion comparable to that in the 1990s.

Environmental Effects Assessment Panel (EEAP): Co-Chair Janet Bornman (Australia) presented highlights from the EEAP's forthcoming quadrennial assessment. She provided a brief overview of the report's key findings relating to the interactive effects of stratospheric ozone and climate change on a number of issues, including human health, ecosystems, natural and synthetic materials, and microplastics in the environment.

Technology and Economic Assessment Panel (TEAP): Co-Chair Bella Maranion (US) outlined the TEAP's forthcoming quadrennial assessment. On foams, she noted progress in the adoption of low-GWP foam blowing agents, but continued challenges in the accessibility of these alternatives. On halons, she noted that proposed changes to legislation around perfluoroalkyl and polyfluoroalkyl substances (PFAS) could leave halons as the only viable alternative to HFCs. She further explained that viable technical alternatives now exist for uses of methyl bromide but some present concerns due to their GWP.

After President Mubarak opened the floor for questions, participants discussed, among other items, information available on unknown emissions of CTC; projections on short-lived substances; and the impacts of volcanoes and wildfires on the stratosphere.

Presentation by the Chair of the Executive Committee on the MLF for Implementation of the Montreal Protocol on the Work of the Executive Committee, the MLF Secretariat and the Fund's Implementing Agencies

President Mubarak opened this item ([UNEP/OzL.Pro.34/2; 34/7](#)) and, as Chair of the Executive Committee of the MLF (ExCom), presented relevant intersessional decisions and updates, with a focus on efforts to phase down HFCs.

Chair Mubarak highlighted that the ExCom requested the Secretariat to develop criteria for pilot projects on the energy efficiency of replacement technologies and to prepare an operational framework on institutional activities that could be undertaken by the MLF in the manufacturing and servicing sectors for the phase-down.

Chair Mubarak reported that: the UN Development Programme had enhanced capacity building through more than 30 online webinars; UNEP had continued to assist 93 countries with enabling projects; the UN Industrial Development Organization is helping to implement HPMPs in 64 countries; and the World Bank has been exploring ways to maximize climate change mitigation co-benefits.

Statements by Heads of Delegations and Discussions on Key Topics

High-level Roundtable: On [Thursday](#) morning, Mona Nemer, Chief Science Advisor of Canada, moderated a high-level roundtable discussion on the theme: "Montreal Protocol @35: The Kigali Amendment and its potential impact on climate." Panelists included: Cécile Siewe, Associate Assistant Deputy Minister, Environmental

Protection, Environment and Climate Change Canada; Jan Dusík, Deputy Minister, Climate Protection, Czechia; Dawda Badgie, Executive Director, Environmental Protection Agency, The Gambia; Kerryne James, Minister, Climate Resilience, Environment, and Renewable Energy, Grenada; Abdulla Naseer, Minister of State, Environment, Climate Change and Technology, Maldives; Kylie Farrelley, General Manager, Refrigerant Reclaim Australia; and Klaus Peter Schmid Spilker, President, Chilean Chamber of Refrigeration and Air Conditioning.

Participants addressed themes including: the Montreal Protocol's contribution to delivering on the Paris Agreement's 1.5°C target for limiting global warming; challenges to phasing down HFCs; energy-related aspects of the HFC phase-down; and applying the Protocol's successful partnership between governments and industry to implementation of the Kigali Amendment.

Delegations' statements: Heads of delegations delivered statements on Thursday and Friday. The statements delivered on Thursday are summarized [here](#).

On Friday morning, MALAYSIA announced substantial progress on the country's HPMP, but noted challenges such as availability and cost of new technologies.

TANZANIA expressed pride in his country's various programmes and regulations established to meet its obligations, highlighting successful cooperation with the MLF, Secretariat, and implementing agencies. He called for a continuation of such capacity building for the implementation of the Kigali Amendment.

TÜRKIYE highlighted the country's implementing actions, such as establishing a licensing system for the export/import of HFCs that will be implemented at the beginning of 2023.

NEPAL also spoke on domestic actions on ODS and noted a country assessment report that identifies gaps that will need to be filled for the country to implement the Kigali Amendment.

Emphasizing that we stand on the brink of a changing environment that is threatening the existence of every nation on the planet, the BAHAMAS outlined its work to implement the Montreal Protocol and called for action to ensure a brighter tomorrow for our successors.

TURKMENISTAN described its work on ODS and highlighted policies to promote gender equality and participation of women in training, consultation, and decision-making.

VIET NAM highlighted its achievements to manage ODS, flagged challenges related to alternative technologies and financial and human resources, and said technical and financial support would enable his country to implement the Kigali amendment.

BRAZIL highlighted that it has eliminated 63% of its consumption of HCFCs through its HPMP, noted its recent ratification of the Kigali Amendment, and said the upcoming replenishment of the MLF represents an opportunity to raise ambition.

TUNISIA expressed concern about the high cost of alternative technologies, particularly in the refrigeration sector, and affirmed its commitment to protecting the climate from HFCs.

PALESTINE highlighted its adoption of laws, regulations and technical directives to manage the import, export and illegal trade of ODS, and emphasized that Israeli occupation has led to massive destruction of refrigerants and other dangerous substances in commercial and residential buildings. He underscored the need for cooperation and called for greater support for Article 5 parties.

BURUNDI expressed appreciation for capacity-building mechanisms for cooling, such as provision of equipment, training, and awareness-raising.

INDONESIA announced the country's president had signed its instrument of ratification of the Kigali Amendment on 1 November 2022 and it would be submitted to the depositary as soon as possible.

MONGOLIA stressed the theme of global cooperation, calling on parties to cooperate to protect Mother Earth.

GRENADA outlined steps her country has taken toward Kigali Amendment implementation, including a strategic gap analysis in the refrigeration and air-conditioning sector and the establishment of a national cooling action plan and strategy, noting the co-benefits these will have for the climate.

CUBA underscored that current HFC baselines are unsustainable for many member countries, pointed to its draft decision on this issue, and emphasized the importance of financing to support the transition away from HFCs.

CHINA outlined its domestic work to support accelerated phase out of HCFCs and full control of HFCs, including through improved regulation.

ZAMBIA highlighted that it is ahead of schedule in its work to phase out ODS and said it is working hard to phase down HFCs.

The INTERNATIONAL INSTITUTE OF REFRIGERATION highlighted that refrigeration is now recognized by the UN as a development priority due to its benefits to human life and as an environmental priority due to its impact on climate change.

Report by the Co-Chairs of the Preparatory Segment and Consideration of the Decisions Recommended for Adoption by MOP 34

On Friday evening, President Mubarak introduced this item ([UNEP/OzL.Pro.34/2](#)). Co-Chair Álvarez-Pérez listed the substantive work that the preparatory segment had completed, and the decisions forwarded for adoption by the MOP. He noted that the consideration of aligning panels' periodic reviews and quadrennial assessment reports was deferred to 2023. He highlighted the spirit of compromise on several extremely challenging issues that parties considered, including the terms of reference for the study of MLF replenishment; enabling enhanced access to energy-efficient and low and zero GWP alternatives for Article 5 parties; and gaps in the global coverage of atmospheric monitoring of controlled substances and options for enhancing such monitoring.

Dates and Venue for MOP 35

On Friday, the Secretariat reported that MOP 35 is scheduled to be held 23-27 October 2023 in Nairobi, Kenya, unless other arrangements are made by the Secretariat in consultation with the Bureau. She also reported that OEWG 45 is scheduled for 3-7 July 2023 in Bangkok, Thailand. She said the location for each meeting is tentative.

Adoption of Decisions by MOP 34

On Friday evening, MOP 34 Rapporteur Cyrus Mageria (Kenya) led delegates in adopting the MOP decisions forwarded to the high-level segment by the preparatory segment (contained in [UNEP.OzL.Pro.34/L.2](#)). Early Saturday morning, MOP 34 Rapporteur Mageria presented the decision on the terms of reference for the study on the replenishment of the MLF for 2024-2026. It was adopted.

Delegates adopted 24 decisions in total, which have been summarized under the relevant agenda items above.

Adoption of the Report of the Meeting

MOP 34 Rapporteur Mageria led delegates through the adoption of the report ([UNEP/OzL.Pro.34/L.1](#) and [L.1/Add.1](#)). While reviewing the report, several parties suggested edits for accuracy and completeness to better reflect their interventions. When considering the section of the report on statements from heads of delegation, the EU and CANADA asked for their statements on Russia's military aggression to be reflected in the report. Parties adopted the report as amended.

Closure of the Meeting

In her closing remarks, Executive Secretary Seki paid tribute to OEWG Co-Chair Sirois ahead of his impending retirement, saying it is "with thanks to his leadership, knowledge, and expertise that we have achieved successful outcomes in our meetings." Several delegations expressed deep appreciation for the contributions of both Sirois and Gilbert Bankobeza, Ozone Secretariat Legal Officer, who will be retiring from the Secretariat, wishing both men well.

President Mubarak thanked the OEWG Co-Chairs for their outstanding leadership, the co-facilitators for successfully negotiating agreements on a host of issues, and expressed appreciation for the work of the Secretariat, interpreters, and report writers. Wishing all participants well, he closed the meeting at 1:03 am on Saturday morning, 5 November 2022.

A Brief Analysis of MOP 34

Thirty-five years after the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer, parties reconvened in the treaty's namesake city for the first in-person Meeting of the Parties (MOP) since 2019. The salience of many issues on the MOP's agenda was high; delegates were gathering immediately before the opening of the high-profile Sharm el-Sheikh Climate Change Conference, and only days after the release of the UN Environment Programme (UNEP) Emissions Gap report, which warns that "the international community is falling far short" of the goals set by the 2015 Paris Agreement on Climate Change, "with no credible pathway to 1.5°C in place."

In this alarming context, many delegates highlighted two lesser-known achievements of the Montreal Protocol: the 0.5-1°C warming by mid-century already avoided thanks to its long-term implementation, and the additional benefits promised by implementation of the 2016 Kigali Amendment on hydrofluorocarbons (HFCs), which are powerful greenhouse gases. Still, despite incredible work in phasing out 98% of ozone depleting substances (ODS) worldwide relative to a 1990 baseline and, in doing so, making major inroads in avoiding catastrophic climate change, parties had to grapple with a number of important issues. These included: scientific findings that underscored the importance of maintaining focus on the treaty's core purpose; whether and how to build on the Protocol's success to tackle other environmental issues; and ensuring parties deliver on the Kigali commitments.

Thirty-Five Years of Pioneering and Impactful Work

The scientific work of the Montreal Protocol was most prominently displayed during the high-level segment, when experts from the Montreal Protocol's three panels—the Scientific

Assessment Panel (SAP), the Environmental Effects Assessment Panel (EEAP), and the Technology and Economic Assessment Panel (TEAP)—summarized their soon-to-be-released 2022 quadrennial assessment reports. These presentations provided rich documentation of key achievements under the Protocol, while also highlighting the challenges ahead.

The SAP opened with a striking yet familiar graph showing the continued decline of ODS emissions from their peak in the 1990s. The SAP also reported the good news that the Antarctic ozone hole is well on the path to recovery: it is expected to recover fully by about 2066. Arctic ozone is expected to recover even earlier, by about 2045.

The EEAP's 2022 report also emphasized successes, such as how avoided solar ultraviolet (UV) radiation has prevented harm to ecosystems, human health, and even infrastructure. For instance, the EEAP highlighted a recent study that concludes that, without the Protocol, increases in UV-B radiation would have led to drastic reductions in CO₂ uptake by terrestrial ecosystems, resulting in atmospheric levels of as much as 610 ppm of CO₂ today. The EEAP also reported on a US study that estimates, for people born in the US between 1890 and 2100, the implementation of the Montreal Protocol translates into 443 million avoided cases of skin cancer and the prevention of 63 million cases of cataracts. In addition, noting how much of the infrastructure necessary for a green transition relies on plastics, the EEAP underscored that avoided UV radiation has decreased the generation of micro- and nano-plastics by photodegradation.

In addition to the preview of its 2022 report, the TEAP also delivered several targeted reports during the preparatory segment. Underscoring the central role industry and scientific innovation have played in the Protocol's success, the TEAP relayed in a presentation on HFC alternatives that, by and large, many alternatives exist that have low or zero global-warming potential.

However, all panels also noted important caveats. For example, the SAP reported on unexplained emissions of certain ODS, as well as the fact that ozone in the lower stratosphere is not showing signs of recovery, despite modeling that shows it should be. Meanwhile the EEAP's happy news on what "the world avoided" because of the Montreal Protocol was a reminder of the importance of continued phase-out and sustained compliance. Finally, the TEAP's report clearly conveyed that while alternatives to HFCs exist, lack of accessibility is a formidable obstacle for Article 5 countries' implementation of the Kigali Amendment.

Expanding the "Ozone Family"?

The Kigali Amendment, adopted just a year after the Paris Agreement, marked a significant turning point for the Protocol and significant step toward breaking down the silos that so often characterize global environmental governance. The Kigali Amendment sets out a phase-down schedule for HFCs. While HFCs are not ODS, they have been used as a substitute for hydrochlorofluorocarbons (HCFCs), which are ODS scheduled to be phased out worldwide by 2030, and both are very potent greenhouse gases. The Kigali Amendment challenges parties to identify alternatives that are not just ozone-friendly but also climate-friendly. These alternatives must also be accessible, technically feasible, cost effective, and safe.

The Kigali Amendment entered into force in 2019 and had been ratified by 141 parties by the close of MOP 34, demonstrating countries' strong commitment to tackle the climate challenge under the auspices of the ozone regime. However, the linkages between ozone and other environmental processes on display throughout the week caused some friction. Some parties questioned whether the ozone family was reaching too far outside its remit, with frequent entreaties to stay within the Protocol's scope, and, when making requests to the panels, to stay within their established spheres of expertise.

Just as with climate, the Protocol can yield co-benefits in other issue areas, including agriculture and food security, biodiversity, non-chemical insecticides and herbicides, renewable energy, plastic pollution, and human health. While some parties supported building on these contributions to sustainable development outcomes by expanding some areas of the Protocol's work, others were more hesitant to take on what they described as "tangential" concerns. Issues that prompted such tensions included cold chain management, energy efficiency, and the extent to which the Montreal Protocol should consider pending regulation on per- and polyfluoroalkyl substances (PFAS) that might impact the range of viable alternatives to controlled substances, especially in the fire-suppression sector.

Catching up on Kigali Amendment Implementation

Interventions during the high-level segment consistently attributed the successes of the Montreal Protocol to the support available to developing countries through the Multilateral Fund (MLF). The various ways in which the Protocol has served as an engine for technological innovation, and its flexibility to tighten mandates when alternatives became readily available, were also underscored. The Kigali Amendment provides for most Article 5 parties to freeze their HFC production and consumption by 1 January 2024. This looming deadline gave additional weight to anxious voices warning that this "scope creep" could come at the expense of success in meeting Kigali Amendment milestones. How much more, a few asked, could realistically be asked of the Secretariat, the expert panels, the MLF, and already overburdened party focal points?

Others characterized these concerns as being a reflection of MOP 34's unusually heavy agenda. To be sure, some of the issues on the table related to the built-in cycles of the Protocol, such as the terms of reference for the study on the next replenishment of the MLF and the previews of the panels' quadrennial assessments. The unusually high number of contact groups at MOP 34 could also be ascribed to a backlog of work that was postponed over the past two years due to the COVID-19 pandemic. Some parties indicated that they were feeling the pressure of lost time and changed circumstances due to the pandemic, and with impending milestones under the Kigali Amendment, many underscored the importance of funding, capacity building, and potentially even adjusted baselines.

Indeed, parties repeatedly contrasted the arduous road ahead to ensure the Kigali Amendment's successful implementation with the Protocol's past successes. Some called for sticking with the Protocol's proven template for success, seeking to build on what Steven Guilbeault, Canada's Minister of Environment and Climate Change, characterized in his welcome address as a "blueprint for effective cooperation." Others highlighted the need to forge new connections and pursuing more holistic solutions. While recognizing

that the intimacy of the “ozone family” facilitated agreement on resolutions at MOP 34, they suggested the expansion of the Protocol’s scope to include HFCs should go hand-in-hand with broadening the range of stakeholders and experts guiding parties in their work.

As MOP 34 concluded, many participants talked about their plans to travel directly to Egypt for the Sharm el-Sheikh Climate Change Conference, demonstrating the close connections between the instruments. This is the first of several meetings in a crowded schedule of negotiations with increasingly obvious connections to the Montreal Protocol, including plastics, biodiversity, the science-policy panel on chemicals, waste and prevention of pollution; and meetings of the Basel, Rotterdam and Stockholm Conventions. When parties convene again, it will be for the Open-ended Working Group in July 2023. By this time, it is expected that the Secretariat and the TEAP will have gathered substantial information, as specified in a range of decisions taken at MOP 34, that will underpin the next phase of the Montreal Protocol’s work.

Upcoming Meetings

Sharm el-Sheikh Climate Change Conference (UNFCCC COP 27): The 27th session of the Conference of the Parties (COP 27) to the UN Framework Convention on Climate Change (UNFCCC), the 17th meeting of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP 17), and the fourth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA 4) will begin work on the Global Stocktake, among other matters. **dates:** 6-18 November 2022 **location:** Sharm El-Sheikh, Egypt **www:** unfccc.int/cop27

63rd meeting of the Global Environment Facility (GEF) Council: The 63rd GEF Council meeting will be the first under the GEF’s eighth replenishment. **dates:** 28 November – 2 December 2022 **location:** virtual **www:** thegef.org/events/63rd-gef-council-meeting

UN Biodiversity Conference (CBD COP 15): This meeting includes the 15th meeting of the COP to the Convention on Biological Diversity (CBD), the 10th meeting of the COP serving as the MOP to the Cartagena Protocol on Biosafety, and the 4th meeting of the COP serving as the MOP to the Nagoya Protocol on Access and Benefit-sharing. The meetings will be preceded by the fifth meeting of the OEWG on the Post-2020 Global Biodiversity Framework from 3-5 December 2022. The meetings are scheduled to review the achievement and delivery of the CBD’s Strategic Plan for Biodiversity 2011-2020. They are also expected take a final decision on the post-2020 global biodiversity framework, as well as decisions on related topics, including capacity building and resource mobilization. **dates:** 7-19 December 2022 **location:** Montreal, Canada **www:** cbd.int/conferences/2021-2022

Science-Policy Panel to Contribute Further to the Sound Management of Chemicals and Waste and to Prevent Pollution, OEWG 1.2: The Second Segment of the first session of the Open-Ended Working Group (OEWG) on a Science-Policy Panel to Contribute Further to the Sound Management of Chemicals and Waste and to Prevent Pollution (OEWG 1.2) will address procedural matters, including the election of its Chair, as well as the rules of procedure for the conduct of its work. **dates:** 30 January – 3

February 2023 **location:** Bangkok, Thailand **www:** unep.org/events/conference/oewg1-science-policy-panel-contribute-further-sound-management-chemicals-and

IPCC-58: The 58th session of the Intergovernmental Panel on Climate Change (IPCC) is expected to approve the Synthesis Report for the sixth assessment cycle. **dates:** 13-17 March 2023 (TBC) **location:** Interlaken, Switzerland **www:** ipcc.ch

Basel COP-16, Rotterdam COP-11 and Stockholm COP-11: The next TripleCOP will address the listing of chemicals under the Rotterdam and Stockholm Conventions as well as technical guidelines for the sound management of wastes, including plastics. Technical and financial support, among other issues, will also be addressed. **dates:** 1-12 May 2023 **location:** Geneva, Switzerland **www:** brsmeas.org

45th Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol: This meeting is expected to consider reports from the assessment panels and engage in preparatory work for the 35th Meeting of the Parties. **dates:** 3-7 July 2023 **location:** TBC **www:** ozone.unep.org

ICCM-5: The Strategic Approach to International Chemicals Management’s (SAICM) governing body, the International Conference on Chemicals Management (ICCM), is due to consider recommendations for a post-2020 platform or instrument for the sound management of chemicals and waste. **dates:** 25-29 September 2023 **location:** Bonn, Germany **www:** saicm.org

35th Meeting of the Parties to Montreal Protocol: MOP 35 will convene to discuss issues related to the implementation of the Montreal Protocol. **dates:** 23-27 October 2023 **location:** TBC **www:** ozone.unep.org/

For additional upcoming events, see sdg.iisd.org

Glossary

CFC	Chlorofluorocarbon
COP	Conference of the Parties
CRP	Conference room paper
CTC	Carbon tetrachloride
CUE	Critical-use exemption
CUN	Critical-use nomination
EEAP	Environmental Effects Assessment Panel
ExCom	Executive Committee of the Multilateral Fund
ExMOP	Extraordinary Meeting of the Parties
GWP	Global warming potential
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
HPMP	HCFC phase-out management plan
ImpCom	Implementation Committee
MBTOC	Methyl Bromide Technical Options Committee
MLF	Multilateral Fund
MOP	Meeting of the Parties
ODS	Ozone-depleting substance
OEWG	Open-ended Working Group
SAP	Scientific Assessment Panel
TEAP	Technology and Economic Assessment Panel
UNEP	UN Environment Programme