

Potential areas of focus for the 2026 quadrennial reports of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel

Noting with great appreciation the excellent and highly useful work of the members of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel and their colleagues worldwide in preparing their 2022 assessment reports, in particular the efforts made to condense vast amounts of pertinent information into a concise and understandable form for better use by policymakers,

1. To request the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel to prepare quadrennial assessment reports and submit them to the Secretariat by 31 December 2026 for consideration by the Open-ended Working Group and the Meeting of the Parties in 2027, as well as presenting a synthesis report by 30 April 2027, noting that the panels should continue to exchange information during the process of developing their respective reports in order to avoid duplication and to provide comprehensive information to the parties to the Montreal Protocol;
2. To request the assessment panels to bring to the notice of the parties any significant developments which in their opinion deserve such notice, in accordance with decision IV/13;
3. To encourage the assessment panels to closely involve relevant scientists from Article 5 parties with a view to promoting gender and regional balance, to the best of their ability, in producing the reports;
4. To request the Environmental Effects Assessment Panel, in preparing its 2026 assessment report, to pay particular attention to the most recent scientific information, including forward looking projections and scenarios, and to assess the ~~effect~~effects from changes in the ozone layer and ultraviolet radiation and their interaction with the climate system, on:
 - (a) Human health;
 - (b) The biosphere, biodiversity, health of flora, fauna and the ecosystem, including on biogeochemical processes and global cycles;
 - (c) ~~Effects~~Ecosystem services, agriculture and materials, including for construction, transport, photovoltaic use and microplastics;
- ~~(e)~~5. To further request the EEAP, in preparing its 2026 assessment report, to assess the effects and accumulation of breakdown products from controlled substances and their alternatives, in particular ~~those~~any substances that are very persistent in the environment such as perfluoro- and polyfluoro alkyl substances (PFAS)~~),~~ including trifluoroacetic acid, in ground and surface waters and other relevant sinks as well as in humans and biota as the ubiquitous presence of TFA in environmental samples in various studies highlights the need to better study potential human and environmental toxicity at a chronic low dose exposure ;
 - ~~(e)(a)~~ Ecosystem services, agriculture and materials, including for construction, transport, photovoltaic use and microplastics;
6. That the 2026 report of the Scientific Assessment Panel should include:
 - (a) An assessment of the state of the ozone layer and its future evolution;

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(b) An evaluation of global and polar stratospheric ozone, including the Antarctic ozone hole and Arctic winter/spring ozone depletion and the predicted changes in these phenomena as well as any other occurring events of ozone depletion;

(c) An updated assessment of past and projected contributions of the Montreal Protocol to mitigating climate change in terms of total avoided CO₂ equivalent emissions and avoided temperature increase.

~~(c)~~(d) An evaluation of trends in the top-down derived emissions, abundances and fate in the atmosphere of trace gases of relevance to the Montreal Protocol, in particular controlled substances and other substances of importance to the ozone layer, which should include a comparison of bottom-up and top-down estimations of such emissions with a view to ~~addressing unidentified~~identifying currently unknown emission sources and explaining discrepancies between reported emissions and observed atmospheric concentrations;

~~(d)~~(e) An evaluation of consistency with reported production and consumption of those substances and the likely implications for the state of the ozone layer, including its interaction with the climate system;

~~(e)~~(f) An assessment of the interaction between changes in stratospheric ozone and the climate system, including consideration of possible future policy scenarios relating to ozone depletion and climate ~~impacts~~change;

(g) Suggestions of policy scenarios to further contribute to ozone layer protection and climate change mitigation, taking into account potential timelines to allow for the implementation of such scenarios, and presenting their benefits in terms of impacts on the total column ozone and equivalent effective stratospheric chlorine, advancing the recovery the ozone layer, and avoiding CO₂ equivalent emissions, as relevant.

~~(f)~~(h) Early identification and quantification of any substances that could be of concern, including other halogenated gases in particular those with a high GWP, breakdown products of controlled substances and their alternatives that remain for a long time in the environment such as perfluoro- and polyfluoro alkyl substances (PFAS) including trifluoro acetic acid, N₂O and very-short lived substances such as dichloromethane; and their main sources of emissions;

~~(e)~~(i) An assessment of information and research related to solar radiation management;

~~(h)~~(j) An assessment of the potential effects of supersonic aircrafts, rockets, wildfires and volcanic eruptions ~~on their potential effect~~ on the stratospheric ozone layer and interactions with the climate;

~~(i)~~(k) Relevant information on any newly detected substances that are relevant for the Montreal Protocol;

~~(i)~~(l) ~~Early identification~~Identification and quantification, where possible, of any other issues of importance to the ozone layer and the climate system, consistent with the objectives of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol;

7. That, in its 2026 report, the Technology and Economic Assessment Panel should include an assessment and evaluation of the following topics:

(a) Technical progress in the production and consumption sectors in the transition to technically and economically feasible and climate and environmental-

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friendly, sustainable alternatives that pose no harm or other lasting effects to the environment and practices that minimize or eliminate the use of controlled substances in all sectors;

(b) Process agents and feedstock uses for which the use of controlled substances is no more required and ~~identify~~identification of alternative pathways or technologies that can replace these uses taking into account costs, energy use and other environmental ~~or economical~~and economic considerations;

(c) An assessment of information and research ~~efon~~ relevant ~~emission levels of the most~~emissions of controlled substances from common feedstock ~~and production~~ processes, ~~and identify~~identification of best ~~practice~~practices and technologies ~~for these processes to minimize such emissions.~~

(d) The status of banks and stocks of controlled substances, their alternatives and other substances of importance to the ozone layer, including those used as feedstocks and resulting from by-production, and the options available for managing them so as to avoid emissions to the atmosphere;

(e) Challenges facing all parties to the Montreal Protocol in implementing Montreal Protocol obligations and maintaining the phase-outs already achieved, ~~especially those on substitutes and substitution technologies,~~ including challenges ~~for parties~~ related to preventing emissions from feedstock uses and ~~by production to prevent emissions, and potential by-production, and~~ technically and economically feasible options to ~~face~~address those challenges;

(f) The impact of the phase-out of controlled ozone-depleting substances and the ~~phasedown~~phase-down of HFCs on sustainable development;

(g) Technical advancements in developing alternatives to HFCs, taking into account in particularly ~~with regard to~~ energy efficiency ~~and~~ safety, ~~as well as their and suitability for usage in countries within~~ high ambient ~~temperatures~~temperature countries.