

BRIEF PRIMER ON THE MONTREAL PROTOCOL



The Montreal Protocol has evolved over the 20 years of its history and today features eight key elements:

- It requires each of the 191 Parties that have ratified the Montreal Protocol on Substances that Deplete the Ozone Layer virtually to eliminate in accordance with agreed timelines the production and import of nearly 100 chemicals that have ozone depleting properties;
- It includes special provisions for developing countries. Specifically, developing countries were given a “grace period” of 10 to 15 years, depending on the chemical, beyond the dates established for developed countries in order to comply with the control provisions of the Protocol;
- In addition, the Protocol established a Multilateral Fund with the goal of enabling qualifying developing country compliance with specific timebound reduction targets for the chemicals controlled by the Protocol. Contributions to the Fund come from 43 developed countries. The Fund is overseen by an Executive Committee made up of 14 Parties, 7 from developed countries and 7 from developing countries. To date it has funded over 5,200 activities in over 140 developing countries, including the closure of plants producing ozone depletion substances and the conversion of manufacturers, large and small, that relied on the use of ozone depleting substances;
- The Protocol requires each Party to report annually on its production, import and export of each of the chemicals it has committed to phasing out (most countries use no more than four or five of these chemicals);
- Reports containing data on the production and consumption of ozone depleting substances by the Parties are reviewed by an Implementation Committee made up of 10 Parties from different geographical regions. The Committee assesses the compliance status of countries and makes recommendations to the Meeting of the Parties regarding Parties in non-compliance. Non compliant Parties participate in the development of plans of action that contain time-specific benchmarks for ensuring their prompt return to compliance;
- The Protocol includes trade provisions that preclude Parties from trading in ozone depleting substances with non-parties. Related provisions, which have never been explicitly used to preclude trade, have helped the Protocol to achieve near universal participation;
- The Protocol includes a regular assessment requirement intended to enable the Parties to make informed decisions on the basis of the most up-to date information available on science, environmental effects, technology and economics;
- The Protocol includes an adjustment provision that enables the Parties to respond to evolving science and accelerate the phase-out of agreed ozone depleting substances without going through the lengthy formal process of national ratification. It also includes an amendment provision which has facilitated the addition of new chemicals and institutions within the Protocol. The Protocol has been amended 5 times since its initial adoption in 1987.



Chemicals controlled by the Montreal Protocol

As noted above, the Protocol requires the control of nearly 100 chemicals, which are dealt with under the Protocol in several categories:

CFCs: The most commonly used of the chemicals controlled by the Protocol were chlorofluorocarbons, or CFCs. These chemicals were widely used in a large variety of activities and products including refrigeration, foams and metals cleaning. CFCs have been virtually phased out in developed countries, with remaining uses limited primarily to medical inhalers. Developing countries have already phased out over 75 per cent of CFC use and have until 2010 to complete the task;

Halons: Probably the second most commonly used class of chemicals was halons, which were used as fire fighting agents in everything from extinguishers to total flooding systems in computer rooms. Developed countries have phased out new production of these chemicals but use from stockpiles still continues for such things as airplanes and military applications. Developing countries have already phased out over 90 per cent of their halon use; total phase-out is scheduled for 2010;

Carbon tetrachloride: Another commonly used ozone depleting substance was carbon tetrachloride, which was used primarily as an industrial cleaning solvent. Developed countries phased out the use of this chemical in 1996, while developing countries have achieved an 85 per cent reduction and are due to achieve total phase-out in 2010. Carbon tetrachloride is also used as a feedstock. As its use as a feedstock results in very small emissions, this use is not controlled by the Montreal Protocol;

HCFCs: Another commonly used class of ozone depleting substances, and the largest by number of individual chemicals, is hydrochlorofluorocarbons, or HCFCs. These chemicals are also known as transitional substances, because they have been used as a replacement for CFCs in many refrigeration and foams uses. Their use was preferable to CFCs due to the fact that they were far less potent at destroying ozone than CFCs. Given the long lifetimes of the applications of these chemicals (e.g., in refrigeration equipment), the Protocol Parties agreed to an extended phase-out period with a total developed country phase-out in 2030 and a final developing country phase-out in 2040. Despite this, developed country phase-out of these chemicals is proceeding well in advance of schedule. By contrast, developing country use has been increasing significantly, as they are not required to limit their production and import of these chemicals until 2016. According to the most recent in-depth studies, based on an unconstrained growth scenario, the use of HCFCs in developing countries is likely to increase around 100% between the 2005 levels and 2016;

Methyl chloroform: Methyl chloroform was used as an industrial cleaning solvent. This use has been phased out in developed countries and developing countries had by 2005 achieved a 67 per cent reduction on their way to complete phase-out in 2015;

Methyl bromide: Another widely used ozone depleting substance is methyl bromide, an agricultural fumigant. This chemical, which was added to the Protocol in 1992, has a wide variety of agricultural uses and has been difficult for some countries to phase out. Developed countries were to have achieved phase-out in 2005, but about 30 per cent of historic use, although declining, continues through the Protocol's critical use exemption process. Developing countries have already phased out approximately 40 per cent of this chemical on their way to complete phase-out in 2015. Methyl bromide is also used by a large number of countries and for a large number of commodities in trade related uses referred to as quarantine and pre-shipment applications. This use of methyl bromide is exempt from controls under the Protocol and presents major challenges to the development and adoption of alternatives for such applications;

Other chemicals: The final categories of ozone depleting substances, hydrobromofluorocarbons (HBFCs), bromochloromethane (BCM) and other fully halogenated CFCs were niche chemicals with very small markets. They were generally included in the Protocol as a precaution, to eliminate the possibility that their usage would increase.