

# **MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER**

## **Introduction to the Montreal Protocol**

The Montreal Protocol is widely considered as the most successful environment protection agreement. The Protocol sets out a mandatory timetable for the phase out of ozone depleting substances. This timetable has been reviewed regularly, with phase out dates accelerated in accordance with scientific understanding and technological advances.

The Montreal Protocol sets binding progressive phase out obligations for developed and developing countries for all the major ozone depleting substances, including CFCs, halons and less damaging transitional chemicals such as HCFCs.

The Multilateral Fund, the first financial mechanism to be created under an international treaty, was created under the Protocol in 1990 to provide financial assistance to developing countries to help them achieve their phase out obligations.

The Montreal Protocol targets 96 chemicals in thousands of applications across more than 240 industrial sectors. The Multilateral Fund has provided more than US \$2.5 billion in financial assistance to developing countries to phase out production and consumption of ozone depleting substances since the Protocol's inception in 1987.

The Protocol has been further strengthened through five Amendments - London 1990, Copenhagen 1992, Vienna 1995, Montreal 1997 and Beijing 1999 - which have brought forward phase out schedules and added new ozone depleting substances to the list of substances controlled under the Montreal Protocol.

The Montreal Protocol has also produced other significant environmental benefits.

Most notably, the phase out of ozone depleting substances is responsible for delaying climate forcing by up to 12 years.

## **Universal ratification of the Montreal Protocol on Substances that Deplete the Ozone Layer**

Damage to the Earth's protective ozone layer has sparked unprecedented worldwide concern and action. Since it was agreed internationally in 1987 to phase out ozone depleting substances (also known as ODS), 196 countries have ratified the Montreal Protocol. In September 2009, East Timor ratified the Montreal Protocol, making it the first international environmental treaty to achieve complete ratification - a truly remarkable effort that reflects the universal acceptance and success of the agreement.

# Montreal Protocol control measures

## Summary of Montreal Protocol control measures

Ozone depleting substances	Developed countries	Developing countries
Chlorofluorocarbons (CFCs)	Phased out end of 1995 <sup>a</sup>	Total phase out by 2010
Halons	Phased out end of 1993	Total phase out by 2010
CCl <sub>4</sub> (Carbon tetrachloride)	Phased out end of 1995 <sup>a</sup>	Total phase out by 2010
CH <sub>3</sub> CCl <sub>3</sub> (Methyl chloroform)	Phased out end of 1995 <sup>a</sup>	Total phase out by 2015
Hydrochlorofluorocarbons (HCFCs)	Freeze from beginning of 1996 <sup>b</sup> 35% reduction by 2004 75% reduction by 2010 90% reduction by 2015 Total phase out by 2020 <sup>c</sup>	Freeze in 2013 at a base level calculated as the average of 2009 and 2010 consumption levels 10% reduction by 2015 35% reduction by 2020 67.5% reduction by 2025 Total phase out by 2030 <sup>d</sup>
Hydrobromofluorocarbons (HBFCs)	Phased out end of 1995	Phased out end of 1995
Methyl bromide (CH <sub>3</sub> Br) (horticultural uses)	Freeze in 1995 at 1991 base level <sup>e</sup> 25% reduction by 1999	Freeze in 2002 at average 1995-1998 base level <sup>e</sup> 20% reduction by 2005

	50% reduction by 2001	Total phase out by 2015
	70% reduction by 2003	
	Total phase out by 2005	
Bromochloromethane (CH <sub>2</sub> BrCl)	Phase out by 2002	Phase out by 2002

<sup>a</sup> With the exception of a very small number of internationally agreed essential uses that are considered critical to human health and/or laboratory and analytical procedures.

<sup>b</sup> Based on 1989 HCFC consumption with an extra allowance (ODP weighted) equal to 2.8% of 1989 CFC consumption.

<sup>c</sup> Up to 0.5% of base level consumption can be used until 2030 for servicing existing equipment, subject to review in 2015.

<sup>d</sup> Up to 2.5% of base level consumption can be used until 2040 for servicing existing equipment, subject to review in 2025.

<sup>e</sup> All reductions include an exemption for pre-shipment and quarantine uses.

**Notes:**

1. The timetable set by the Montreal Protocol applies to bulk consumption of ozone depleting substances. Consumption is defined as the quantities manufactured plus imported, less those quantities exported in any given year. Percentage reductions relate to the designated 'base year' for the substance. The Protocol does not forbid the use of existing or recycled controlled substances beyond the phase out dates.

2. Further information on these ODSs can be seen in the United Nations Environment Programme Ozone Secretariat's Handbook for the International Treaties for the Protection of the Ozone Layer (See Section 1.2 for links to graphs displaying ODSs phase outs timetables).

3. For Australia's accelerated HCFC phase out timetable see Part IV of the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*

## **Impact of control measures on levels of ODS**

Graphs provided by CSIRO Marine and Atmospheric Research illustrate the global observations of the impact the Montreal Protocol on the levels of ozone depleting substances in the atmosphere, and suggest the impact into the future to 2050:

- Effective Chlorine (all substances) in the atmosphere and the scenario with and without the Montreal Protocol
- Effective Chlorine (all substances) in the atmosphere
- Chlorofluorocarbons
- Methyl bromide and Halons
- Total Ozone and its relationship with Effective Stratospheric Chlorine

## **Australia and the Montreal Protocol**

As one of the first countries to ratify the Montreal Protocol, Australia continues to be a leader in the phase out of ozone depleting substances. In many cases, Australia is well ahead of the Protocol requirements. Australia's approach has been based on a cooperative partnership between industry, community, and all levels of government.

Australia acceded to the Vienna Convention for the Protection of the Ozone Layer in 1987 and ratified the Montreal Protocol on Substances that Deplete the Ozone Layer originally in 1989, and then again for each of the five amendments agreed between 1990 and 1999.

Australia continues to take an active role in ongoing Montreal Protocol negotiations, ensuring that further actions to protect the ozone layer are scientifically based and technically feasible, and that developing countries are supported in their efforts to phase out ozone depleting substances.

Australia has met or exceeded all of its phase out obligations under the Montreal Protocol. For example, Australia will largely phase out consumption of HCFC by 2016, four years ahead of the schedule required under the Protocol. In doing so, Australia will consume 61 per cent less HCFC in the period to 2020 than permitted under the Montreal Protocol - even after the Parties to the Montreal Protocol agreed in 2007 to advance HCFC phase out globally.

## **Annual Meetings of Parties**

Annual Meetings of Parties allow countries to review, update scientific information and make decisions to improve compliance with the Protocol and the information base upon which Parties rely. Australia is a member of important decision-making bodies within the Protocol framework including the Executive Committee which administers the Multilateral Fund.

An active role allows Australia a degree of influence over the nature and direction of global ozone protection issues. Australians are also well represented on the various scientific and technical bodies of the Montreal Protocol, and have been since the start of the Protocol.

The global alliance of nations to protect the ozone layer represents the single most effective measure for preventing depletion of the ozone layer over Australia.

Australia accounts for less than one percent of global emissions of ozone-depleting substances and so our participation in the Protocol is the best means to reduce ozone depletion.

## **Register of Montreal Protocol Countries**

Under the Act all licences to import or export ozone depleting substances carry a condition that the licensee must only import or export the substance from a country that has ratified the Montreal Protocol and the relevant subsequent Amendments.

To help facilitate this, the Minister must maintain a Register of Montreal Protocol Countries and the substances for which those countries are to be treated as a Montreal Protocol country.

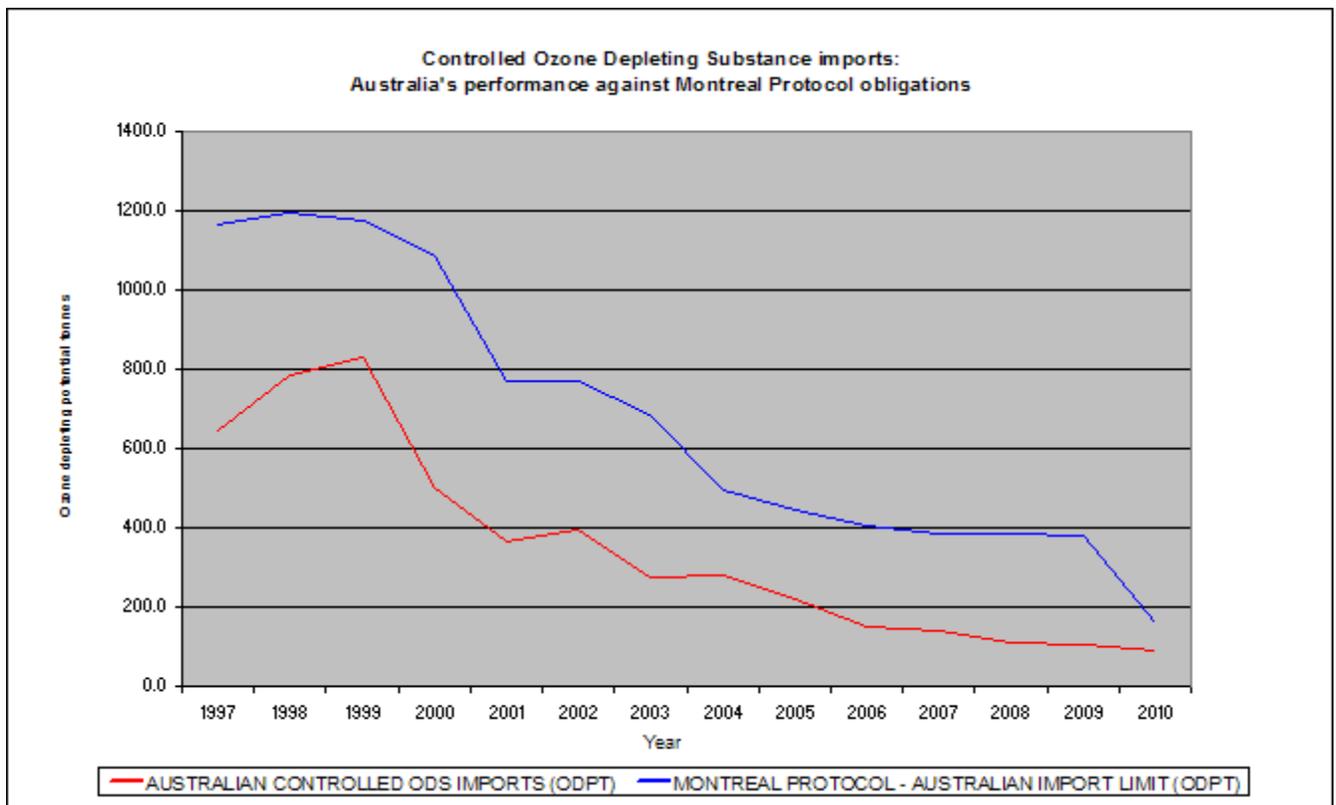
## **Australia's performance in phasing out ozone depleting substances**

Australia has met or exceeded all of its phase out obligations under the Montreal Protocol. For example, Australia will essentially phase out consumption of HCFC by 2016, four years ahead of the schedule required under the Protocol.

In doing so Australia will consume 61 per cent less HCFC in the period to 2020 than required under the Protocol, even after the Parties to the Montreal Protocol agreed in 2007 to advance HCFC phase out globally.

In addition, many Australian experts have been recognised for their contribution to the implementation of the Montreal Protocol, the work they have done in helping Australia meet its phase-out obligations and for their international contribution to phase-out the use of ozone depleting substances, you can view this information at the link below.

## **Australia's performance in phasing out ozone depleting substances against its Montreal Protocol obligations**



## **Montreal Protocol — support for developing countries**

The Multilateral Fund for the Implementation of the Montreal Protocol provides funds to help developing countries to phase out the use of ozone depleting substances (ODSs). ODSs are used in refrigeration, foam extrusion, industrial cleaning, fire safety and fumigation.

The Multilateral Fund was the first financial mechanism to be created under an international treaty. It embodies the principle agreed at the United Nations Conference on Environment and Development in 1992 that countries have a common, but differentiated, responsibility to protect and manage the global commons.

The Fund is managed by an Executive Committee with an equal representation of seven industrialized and seven Article 5 countries which are elected annually by a Meeting of the Parties. The Committee reports annually to the Meeting of the Parties on its operations.

The Fund is replenished on a three-year basis by the donors. Pledges amounted to more than US\$2.8 billion over the period 1991 to 2011. Funds are used, for example, to finance the conversion of existing manufacturing processes, train personnel, pay royalties and patent rights on new technologies, and establish national Ozone Offices. To date more than US\$2.3 billion has been approved to support more than 6000 projects and activities in 148 developing countries.

Australia is active in the Multilateral Fund, seeking to ensure it continues to result in the maximum benefit in terms of ozone layer protection. Australia contributes funding through AusAID, and is a member of the 14 member Executive Committee which manages the Fund on a **cost-effective basis**.

As part of its contribution to the Multilateral Fund, Australia also undertakes a number of bilateral projects in developing countries. These projects use Australian skills and technology and help to raise the profile of Australian know-how and expertise regarding ozone protection initiatives.

Source: <https://www.environment.gov.au/protection/ozone/montreal-protocol>