



United Nations Environment Programme
environment for development



Climate
Change



Disasters
& Conflicts



Ecosystem
Management



Environmental
Governance



Harmful
Substances



Resource
Efficiency

BANGKOK TO CANCUN AND BEYOND

On the Road from Ozone to Climate Protection: a Virtual Tour

OZONE AND CLIMATE CHANGE LINKAGES

The success of the Montreal Protocol shows that action on climate change is within our grasp!

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As the so - called 'ozone hole' appears to have stabilized and begins its recovery the effect of ceasing production of CFCs has provided significant benefits to climate change. While the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol represent the principal agreements addressing climate change, the Montreal Protocol has emerged as a significant mechanism for getting a dual benefit: protecting the ozone layer and mitigating climate change as well. Certain ozone depleting chemicals are also potent greenhouse gases.

Most ODS such as CFCs and HCFCs are also global warming gases which contribute to climate change. The Montreal Protocol has made significant contributions to protecting the ozone layer and delaying dangerous climate change. Between 1986 and 2008, global consumption of ODS was reduced by 98 percent. Furthermore, from 1990 to 2010, the Montreal Protocol's control measures on production and consumption of such substances will have reduced greenhouse gas emissions by the equivalent of 135 gigatons of CO₂.



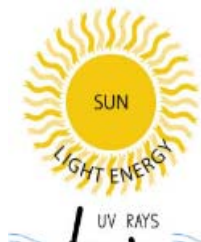
OZONE DEPLETION AND THE MONTREAL PROTOCOL

A quarter of a century has now passed since ozone depletion in Antarctica was first discovered by scientists from the British Antarctic Survey and reported in the internationally renowned journal *Nature* in May 1985. The discovery of the huge ozone 'hole' over Antarctica helped focus public attention on the need to address the problem of ozone depletion.

After a series of meetings and negotiations, the Montreal Protocol on Substances that Deplete the Ozone Layer was finally agreed upon on 16 September 1987 in Montreal.

About the Ozone Layer

The ozone layer is a protective layer of molecules that filters out harmful UV radiation from the sun before it can reach the Earth's surface. Ozone layer



can disrupt terrestrial and aquatic ecosystems and damage common building materials.

About the Montreal Protocol

The Montreal Protocol on Substances That Deplete the Ozone Layer was adopted on September 16th, 1987 and entered into force on January 1st, 1989.

The objective is to protect the ozone layer by phasing-out production and consumption of nearly 100 industrial chemicals. Under this treaty, developing and industrialized countries have equal but differentiated responsibilities. Both groups of countries have binding, time-targeted and measurable commitments.

The Protocol was designed so that the phase-out schedules could be revised on the basis of periodic scientific and technological assessments.

The Montreal Protocol now has universal ratification; no other global environmental treaty has achieved this feat so far. To date, the Montreal Protocol has achieved more than 97 per cent reduction in the production and consumption of ODS. This extraordinary accomplishment is a prime example of both the integration of sustainable development principles into national policy frameworks and a global partnership for environment.

Given all of these factors, the Protocol has often been widely praised as one of the most successful multilateral environmental agreements.

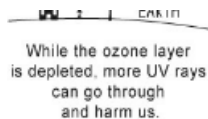
Still, challenges remain. Foremost among them is the phasing out of HCFCs while avoiding the use of alternatives with a high global warming potential. In 2007, the Parties to the Protocol at their 19th meeting took the historic decision to accelerate the phase out of HCFCs, and while doing so, to promote the selection of alternatives to HCFCs that minimize environmental impacts, in particular impacts on climate. The Parties thereby acknowledged the importance of achieving additional climate protection benefits during the HCFC phase out process.

CLIMATE CHANGE AND THE KYOTO PROTOCOL

About Climate change

The scientific evidence regarding climate change is compelling. Based on a review of thousands of scientific publications, the Intergovernmental Panel on Climate Change (IPCC) has concluded that the warming of the Earth's climate system is "unequivocal", and that human activities are "very likely" the cause of this warming. It is estimated that, over the last century, the global average surface temperature has increased by about 0.74° C. Moreover, many greenhouse gases remain in the atmosphere for long periods of time, and as a result global warming will continue to affect the natural systems of the planet for several hundred years.

When greenhouse gases emitted in the past are included in the calculations, it has been shown that we are likely to be already committed to global warming of between 1.8° and 2.0° C. Most worrying, however, is that global greenhouse gas emission levels are still growing, and are projected to continue growing over the coming decades unless there are



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