

MONTREAL PROTOCOL INFORMATION SHEET

25 Years of the Montreal Protocol



20 Years of UNIDO Implementation

Montreal Protocol

What is the ozone layer?

The ozone layer is a natural protective layer of ozone molecules that filter out harmful ultraviolet (UV) radiation from the sun before it can reach the surface of the Earth. The ozone layer is found in the lower stratosphere, which is one of Earth's atmospheric layers.

Why is the ozone layer important?

Without the ozone layer, human health, ecosystems and life on Earth are threatened. By absorbing 97-99% of the sun's UV rays, the ozone layer protects humans, animals and plants from the damaging effects of UV radiation.

A hole in the ozone layer means that the Earth's shield against the sun has been damaged, exposing us to more UV radiation. Increased exposure to UV radiation leads to increased cases of skin cancer, chronic eye problems, cataracts, malignant melanoma, weakened immune systems and other health issues. Increased UV radiation also affects ecological processes of our environment, seriously impacting biodiversity. For example, fish stock is decreasing due to the reduced levels of plankton in oceans. Plant growth is also affected, which reduces agricultural productivity.

Why is the ozone layer depleting?

The depletion of the ozone layer can be attributed to the release of man-made ODS into the atmosphere. ODS are chemicals which are used in everyday applications and manufacturing processes. They are found in refrigerators, air conditioner, plastic foams, fire extinguishers, spray cans and various other products. All ODS are halogenated organic compounds, such as CFCs, HCFCs and other groups, such as bromides.

During the 1970's, scientists began to connect the thinning of the ozone layer with the heightened use of CFCs and other ODS. In May

1985, a group of scientists discovered a hole in the ozone layer over the Antarctic, giving evidence to ozone depletion.

How is the ozone layer being protected?

In response to the discovery of the Antarctic ozone hole, the **Montreal Protocol on Substances that Deplete the Ozone Layer** (of the Vienna Convention) was opened for signature on September 16, 1987. The international treaty sought to phase out the use and production of ODS, in order to restore the ozone layer. The universally ratified protocol binds all parties to scheduled phase-out targets. The Montreal Protocol was the first environmental treaty to establish the principle of common but differentiated responsibilities among parties, having different compliance targets set for developed and developing countries. For example, the total phase-out of CFCs was set for end of 1995 for developed countries, and by 2010 for developing countries.

In 1991, the **Multilateral Fund for the Implementation of the Montreal Protocol** was established. Its objective is to assist developing countries to reach their compliance targets under the Montreal Protocol. The Fund operates through contributions made by some 45 countries and is managed by the Executive Committee (ExCom). The work of the Fund is carried out by four implementing agencies: UNEP, UNDP, the World Bank and UNIDO. **UNIDO** joined the other three implementing agencies of the Multilateral Fund in 1992. UNIDO started out with a modest portfolio, which was gradually expanded over the years. Today, the Organization has assisted nearly 100 developing countries to phase-out their consumption and production of ODS.

Since the 19th Meeting of the Parties in 2007 (Decision XIX/6), the focus on adopting low-GWP alternatives has increased. It followed with Decision 54/39 at the ExCom Meeting in April 2008, which called on countries and implementing agencies to take into account the GWP and energy use of alternative technologies being considered. Since then, all HCFC phase-out projects approved by the Fund include climate impact components. The process in selecting ODS-free technology, deliberately favors low GWP, non-ozone depleting alternatives in order to avoid the use of known greenhouse gases, such as most HFCs.

KEY: ODS – ozone depleting substances · CFC – chlorofluorocarbons · HCFC- hydrochlorofluorocarbons · HFC – hydrofluorocarbons · ODP – ozone depleting potential, reference value given as ODP=1.00 for CFC-11 · GWP – global warming potential