STAND UP for the Ozone Layer! and the Millennium Development Goals
What is the **Ozone Layer**?

The *ozone layer* is a protective layer of molecules that filter out harmful UV radiation from the Sun before it can reach the surface of the planet. Without the *ozone layer*, human health, ecosystems, and life on Earth are threatened.

Why do we need the **Ozone Layer**?

The *ozone layer* protects humans, animals and plants from the damaging effects of UV-B radiation.

*Source:* UNEP DTIE OzonAction
A Hole in the Ozone Layer—What Harm Can It Cause Us?

A hole in the ozone layer means that Earth’s shield to the sun has been damaged. We are exposed to more UV radiation which leads to increased skin cancer, chronic eye problems, cataracts, malignant melanoma, and other health hazards.

Increased UV radiation also affects the essential ecological processes of our environment which is detrimental to crop yield and agricultural productivity.
What are **Ozone Depleting Substances** (ODS)?

In the early 1970s, scientific evidence had accumulated showing that manmade substances called chlorofluorocarbons (CFCs), were damaging the *ozone layer* in the stratosphere and increasing the amount of ultraviolet B (UV-B) radiation reaching Earth’s surface. CFCs and a group of more than 90 related chemicals known as ODS were identified as the culprits.

While the ozone layer is depleted, more UV rays can go through and harm us.

*Source:* UNEP DTIE OzonAction
What are Ozone Depleting Substances (ODS)? (continued)

ODS were used worldwide in manufacturing and in consumer goods like refrigerators, air conditioners, aerosols, and fire extinguishers. The discovery of the huge ozone hole over Antarctica (the Ozone Hole) helped focus public attention on the need to do something about CFCs and other ODS.
What Role does the Montreal Protocol Play in Protecting the Ozone Layer?

The Montreal Protocol on Substances that Deplete the Ozone Layer (1987) is a landmark international environmental agreement that continues to be remarkably successful in meeting its time targeted deadlines. Production and consumption of the most damaging ODS were eliminated, except for a few critical uses, by 1996 in developed countries and should be phased out by 2010 in developing countries (data reporting is still underway for 2010).

Subsequent generations will know about these chemicals only from the *history books*
Montreal Protocol and Millennium Development Goals (MDGs)

Most of the actions associated with the Montreal Protocol, particularly the work done through the Protocol’s Multilateral Fund supports the implementation of the Millennium Development Goals, especially Goal 7: Ensure environmental sustainability.
What are the *Millennium Development Goals*?

The Millennium Development Goals (MDGs) are eight goals to be achieved by 2015 that respond to the world’s main development challenges. The MDGs are drawn from the actions and targets contained in the *Millennium Declaration* that was adopted by 189 nations-and signed by 147 heads of state and governments during the *UN Millennium Summit* in September 2000.
MDGs

1. Eradicate extreme poverty and hunger;
2. Achieve universal primary education;
3. Promote gender equality and empower women;
4. Reduce child mortality;
5. Improve maternal health;
6. Combat HIV/AIDS, malaria and other diseases;
7. Ensure environmental sustainability; and
8. Develop a global partnership for sustainability.
How does the Ozone Layer Stand Up for the Achievement of the Millennium Development Goals?

Through specific initiatives, UNEP Division of Technology, Industry and Economics (DTIE), OzonAction Programme contributes to the implementation of the Millennium Development Goals.
Ozone and Climate Linkages

Most ODS such as chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (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 CO$_2$.

The Unparalleled Success of the *Montreal Protocol* Shows that *Action on Climate Change* is within our Grasp.

*The Millennium Development Goals Report, 2010*
Without the action prompted by the *Montreal Protocol* and its Vienna Convention, atmospheric levels of ozone-depleting substances would have grown 10-fold by 2050.

The resulting exposure to the sun’s ultraviolet radiation would likely have led to up to 20 million additional cases of skin cancer and 130 million more cases of eye cataracts; it would also have caused damage to human immune systems, wildlife and agriculture.

*The Millennium Development Goals Report, 2010*
Accelerated HCFC Phase Out

Parties to the Montreal Protocol are now examining ways to use the treaty’s vigorous implementation regime to promote even greater climate change benefits.

In 2007, they took an important step by accelerating the phase-out of Hydrochlorofluorocarbons (HCFCs), replacement chemicals that contributes to Ozone Depletion and Climate Change.
Which Products Contain **HCFCs**?

HCFCs, potent ODS and Global Warming Gases are found in refrigeration units, air conditioning units, fire extinguishers, foams, feedstock and solvents.
What are Developing Countries Doing to Ensure HCFC Phase Out?

Developing countries are gearing up to formulate an HCFC Phase-out Management Plan with the following components:

1. Projects to phase out HCFCs in HCFC producing and consuming enterprises;
2. Policies and legislations for HCFC phase-out;
3. Training and capacity building activities for facilitating HCFC phase-out; and
4. Information outreach on HCFC phase-out, its benefits, technical options available and how everyone can contribute.

Source: UNEP DTIE OzonAction
Examples of Successful Initiatives in Asia and the Pacific Region under the Montreal Protocol which Contribute to the achievement of the MDGs by 2015.
Preventing Illegal Trade in ODS:

UNEP DTIE OzonAction Programme collaborates with the World Customs Organization, Customs authorities and various international organization partners to carry out initiatives to prevent Illegal Trade in ODS.

These include:

- **Green Customs Initiative** which encourages coordinated intelligence gathering, information exchange, guidance and training amongst the partner organizations.

- **Project Sky Hole Patching** which established a monitoring and notification system among member administrations to keep track of the movement of suspicious shipments of ODS and dangerous waste.
Regional Partner’s Forum on Combating Environmental Crime which helps curb illegal trade in environmentally sensitive commodities.

Preventing Illegal Trade in ODS Stands Up for the MDGs:

**Goal 7: Ensure environmental sustainability**

Illegal Trade in ODS is a substantial and increasingly lucrative business. It directly threatens the environment and seriously undermines the effectiveness of multilateral environmental agreements (MEAs). Preventing illegal trade in ODS is one of the key bases to ensure that the ozone layer will regain its health.

and

*Green Customs Initiative website:* www.greencustoms.org
Phasing Out *CFC Metered Dose Inhaler* (MDI):

Montreal Protocol shows how the sustained effort of 196 countries can reverse environmental damage and benefit health. UNEP DTIE OzonAction Programme is working together with governments, the private sector and NGOs for the benefit of respiratory patients, to instigate a successful transition to CFC-free inhalers in Asia and the Pacific region.
Phasing Out **CFC MDI** Stands Up for the MDGs:

**Goal 8:** Develop a global partnership for development

In cooperation with pharmaceutical companies, governments and NGOs, UNEP DTIE OzonAction is assisting countries to have a successful transition to CFC-free inhalers in all countries, so that all respiratory patients will have access to affordable essential drugs which are also ozone-friendly.

**For more information:**
See publication: *Transition to CFC-free Inhalers package for National Ozone Units:*
www.unep.fr/ozonaction/information/mmc/lib_detail.asp?r=5310
Phasing Out **ODS** in Military Establishments:

In collaboration with defense officers, publication “Ozone Protection and National Security: A military Perspective- Toolkit for Defense Forces” has been developed to provide information to defense establishments across the globe. It is a guideline for them to design and implement ozone-friendly approaches in their regular equipment operation and maintenance activities.

Some of the useful phase out strategies include:

- Announcing policies restricting purchase of new ODS using equipment once alternatives are available.
- Monitoring ODS bank, reviewing deposits and withdrawals.
- Using national and international forums on military issues to address ODS phase out issues.
Phasing Out **ODS** in Military Establishments Stands Up for the MDGs:

**Goal 7:** Ensure environmental sustainability

UNEP DTIE OzonAction is working with military establishments in developing detailed summaries of military applications using ODS in their respective country and seek to find the best solutions in adopting environmentally and ozone friendly policies and practices.

**For more information:**

www.unep.fr/ozonaction/information/mmc/lib_detail.asp?r=5325
Examples of Successful Global Initiative under the *Montreal Protocol* which Contribute to *MDGs*
The **Ozone** and **Climate** Safe Solar Chill Initiative

**Solar Chill** is a global initiative that is developing a climate and ozone friendly vaccine cooler that is powered by solar energy, which will directly improve the health of children in developing countries.
The Solar Chill Initiative Stands Up for the **MDGs:**

**Goal 4: Reduce child mortality**

Solar Chill Initiative helps deliver vaccines and refrigeration to regions of the world without electricity or with inadequate electrical supply. It will therefore help save children’s lives in remote areas.
**Goal 7: Ensure environmental sustainability**

SolarChill is a versatile refrigeration technology that is environmentally sound, battery-free, technologically-reliable, affordable and multi-source powered.

**Goal 8: Develop a global partnership for sustainability**

The Solar Chill Project bridges health, development and environmental issues through cooperation between major international organizations, research institutes and industry. Refrigerants, Naturally! Initiative

**For more information:**

*UNEP DTIE OzonAction Website:* www.unep.fr/ozonAction/partnerships/solarchill.htm
Refrigerants, Naturally!

Refrigerants Naturally Initiative! is a global initiative of companies committed to combat ozone layer depletion and climate change by substituting harmful fluorinated gases (“F-gases”, such as CFCs, HCFCs and Hydrofluorocarbons -HFCs) in the food and drink, food services and retail sectors with natural refrigerants (carbon dioxide, hydrocarbons and ammonia).

The Refrigerants, Naturally! Initiative Stands Up for the MDGs:

Goal 7:

Natural refrigerants have a low climate impact and do not harm the Earth’s ozone layer.
Goal 8:

The partners share a commitment to eliminate HFCs in point-of-sale cooling applications. This is driven a conviction that natural refrigerant technologies work efficiently and reliably, offer environmental benefits (including being more energy-efficient than the F-gas alternatives) and are, or are becoming, commercial available.

Refrigerants, Naturally! is open to discussing options with policy-makers that could encourage the emergence of more ozone and climate-friendly practices in the future.

For more information:

Refrigerants, Naturally Website: www.refrigerantsnaturally.com
**Ozone Layer Protection Provide Great Benefits to the Economies**

By being in compliance with the Montreal Protocol, countries have avoided significant future human health costs, agricultural loss, and biodiversity loss. The Protocol has also contributed to improved industrial competitiveness of developing countries through industry conversions and access to markets.
Who Can Contribute to *Ozone Layer* Protection?

We are all responsible for the consumption of ODS and together, we can all stop the production of ODS.

The Montreal Protocol shows what can be achieved through international cooperation - mobilization of international agencies, governments, businesses, communities and individuals.
The United Nations Environment Programme (UNEP), along with other international agencies like World Bank, United Nations Development Programme (UNDP) and United Nations Industrial Development Organization (UNIDO), has been working with developing countries and countries with economies in transition to help achieve and sustain compliance with the Montreal Protocol on Substances that Deplete the ozone layer.
Montreal Protocol provides funding to help developing countries comply with obligations under the Protocol - i.e., to phase-out the use of ozone-depleting substances at an agreed schedule. To date, more than US $ 2.5 billion has been disbursed to developing countries mainly to the industries for phasing-out Ozone Depleting Chemicals.
Every *Action* Counts!

What Can We *Do*?

Protect yourself, Protect the *ozone layer*. 
As Responsible Citizens

- Buy only those products that are labeled “ozone friendly”, “CFC-free” or “HCFC-free”.
- The seller should be consulted in case of doubt.
- Maintain appliances containing ODS regularly to prevent the release of ODS into the atmosphere, hiring trained personnel for all servicing of existing equipments to ensure efficiency and prevention of leakage.
- Replace ODS in appliances with ozone friendly substance wherever possible.
- Dispose of old appliances responsibly, making sure the ODS are removed carefully by technicians and submitted for recycling or re-use.
- Inform other people about the importance and ways of protecting the ozone layer.
As farmers

- Eliminate methyl bromide as pesticide and soil fumigant, and switch to safer and more effective alternatives available today (such as integrated pest management).
- Eliminating Methyl bromide and protecting the ozone layer will benefit everyone, including the farmers.
- Too much UV radiation can harm crop development which means less vegetable and fruit productivity.
As servicing technicians

- Regularly check and fix leaks, and ensure that refrigerants recovered from air conditioners, refrigerators, or freezers are not accidentally released into the atmosphere
- Inform consumers about alternative environment-friendly technologies available today, and encourage their use
- Start a refrigerant recovery and recycling programme in your community
As company or office workers

• Identify existing equipment that use ODS and develop plans to replace them with cost-effective substitutes. Suppliers should be consulted to make this process more effective. Companies might be eligible for financial and technical assistance from the Multilateral Fund.

• Inform other staff members and stakeholders about the harmful effects of using ODS, and encourage alternative technologies where available.

• Ask what your office is currently doing to help protect the ozone layer, and how they can get involved in such replacement or retrofit programmes.

• Start a comprehensive environmental programme in the office.
Ban Ki-moon
Secretary-General of The United Nations

Message on the International Day for the Preservation of the Ozone Layer, 16 September 2010

The Montreal Protocol could not have delivered such profound achievements without robust governance and compliance structures put in place by its Parties, both collectively and individually… I encourage Parties to the Montreal Protocol to continue to build on this model and to explore synergies that could help to address other environmental challenges, especially climate change. Let us use the governance tools contained in the existing ozone and climate treaties to reduce environmental threats to sustainable development and human well-being.
Achim Steiner
UN Under-Secretary General and Executive Director of UNEP

“...the lessons we have learnt in the Montreal Protocol are equally valid for the negotiations leading up to Copenhagen and I think have already influenced the nature of the deal. [...] The big prize is to have a deal in Copenhagen that allows the North-South partnership to transition towards a low carbon economy.”
Kofi Annan

Former Secretary General of the United Nations

“The effects of pollution driven by economic growth in some parts of the world are now driving millions of people into poverty elsewhere. At the same time, decades-old aid pledges continue to go unmet. The Millennium Development Goals are endangered. And the poor lack capacity to make their voices heard in international arenas, or attract public and private investment. For those living on the brink of survival, climate change is a very real and dangerous hazard. For many, it is a final step of deprivation.”
Developing Countries’ actions and contributions towards the Success of the Montreal Protocol

H.E. Mohamed Nasheed
President of the Maldives

“We believe that going green isn’t just ecologically sound but also economically beneficial. The Maldives is famed for its luxury resorts, whose refrigeration systems are the source of most of the country’s HCFC emissions. Moving early to phase out the use of HCFCs not only helps protect the beautiful tropical environment tourists come to see but also positions Maldives as a strong eco-destination.”
Private sector and celebrities are contributing to ozone layer protection

Emirsyah Satar
President & CEO Garuda Indonesia

The question for Garuda Indonesia in the future, is not the additional costs of being a green or environmentally aware airline, but to consider the long term benefits to our passengers, partners, stakeholders, and the planet as a whole, of being a “green” airline.

Note: Garuda Indonesia is the leader in Halon Bank Management in Indonesia and in Asia and the Pacific Region.
Li Bing Bing

UNEP’s National Goodwill Ambassador in China

We can change our planet’s destiny one country at a time… one community at a time… one individual at a time… one action at a time.

An easy suggestion? Next time you are shopping, reach for a product marked Non-HCFC or Ozone-friendly, your grandchildren will thank you.
Dilhan C. Fernando
Marketing Director of Dilmah

Sri Lanka has implemented various measures to comply with environmental-related international conventions and agreements where Sri Lanka is a signatory including the Montreal Protocol. To comply with the Montreal Protocol, usage of methyl bromide, which is used as a soil fumigant in the tea sector, was halted as it is known to be an ozone-depleting chemical. This measure was introduced to all Dilmah owned and affiliated plantations with facilitation and subsequent monitoring by the Sri Lanka Tea Research Institute (TRI). Dilmah tea gardens now use Basamid-Granular for soil fumigation. Although the new methodology is cumbersome, our plantations have adopted it unreservedly in order to reduce the damage to ozone layer.
Tata Young

Thailand’s International Recording Artist

We will use the power of music to capture people’s heart and encourage them to take action to protect the ozone layer and prevent climate change. There is a saying in Asia, people can be like bamboo when it comes to change... we must teach the old bamboo to bend to new ideas but the young bamboo is our future as they are the most flexible and will shape in new ways to protect and preserve our planet’s ozone shield.
Where Can We Find More Information on How to Protect the Ozone Layer and the Stand Up Campaign?

For more information, please visit our websites:

UNEP DTIE OzonAction website:
• www.unep.fr/ozonaction
• www.unep.fr/ozonaction/about/mdgs.htm

UN Millennium Campaign Asia Pacific Website:
• www.asiapacific.endpoverty2015.org

Stand Up Campaign Website:
• www.standagainstpoverty.org
Protect Yourself
Protect the Ozone Layer

Source: UNEP DTIE OzonAction
Unified Global Action 2010: “Make Noise for the MDGs” designed to grab public, political and media attention and to make sure that the global movement in support of the MDGs is seen and heard in every corner of the globe. For more information please go to: www.standagainstpoverty.org