

# International Day for the Preservation of the Ozone Layer

**INTERNATIONAL DAY  
FOR THE  
PRESERVATION OF THE  
OZONE LAYER**



## How Jamaica is Involved



Source: News Online; [www.newsonline.media](http://www.newsonline.media)

Internal Review Committee Presentation  
9 September 2022  
Vivian Blake  
Manager, National Ozone Unit

# How World Ozone Day was Established

- In 1998, the UN General Assembly adopted the annual International Day for the Preservation of the Ozone Layer (16 September). The day is meant to raise awareness about the importance of the ozone layer and how its depletion is leading to global warming and climate change across the world.
- In 2003, the former UN Secretary General Kofi Annan stated that the Montreal Protocol is 'perhaps the single most successful international environmental agreement to date'.
- The theme for World Ozone Day 2022 is:



Source: News Online; [www.newsonline.media](http://www.newsonline.media)

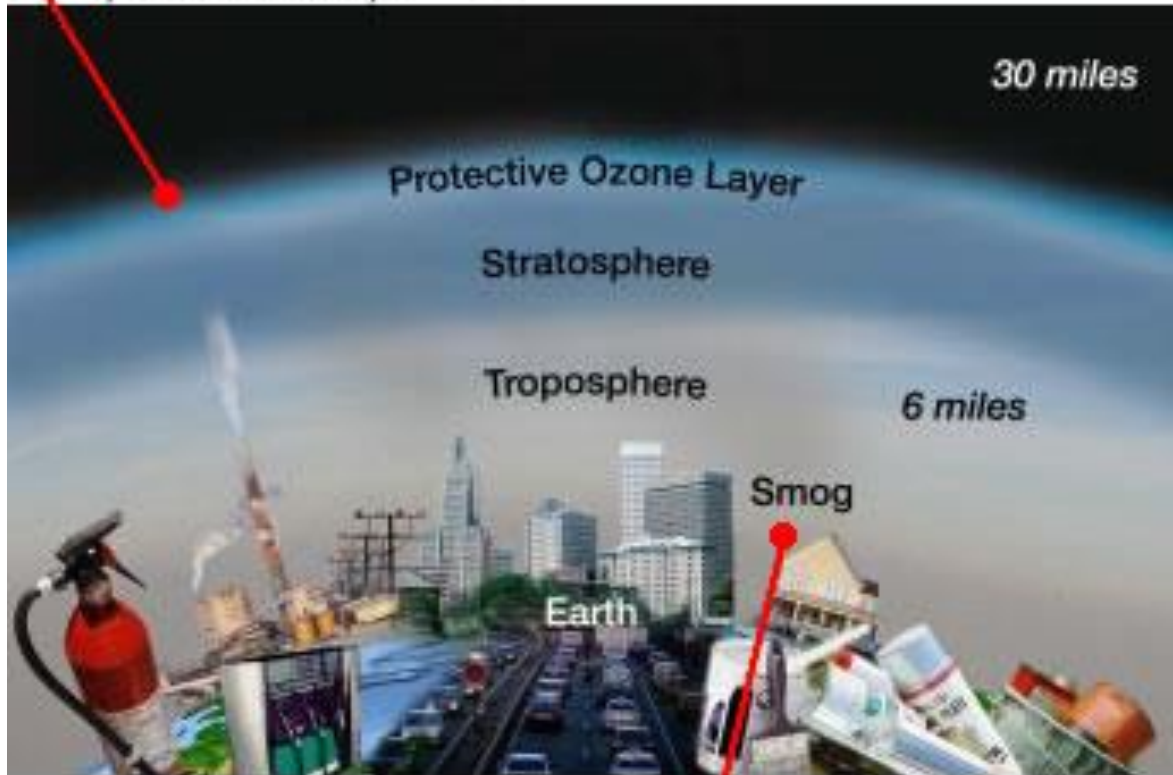
**Montreal Protocol@35:  
global cooperation protecting life on earth**

# The Ozone Shield and How it Protects Us

---

- Normal oxygen is a gas made of two oxygen atoms ( $O_2$ ), but ozone is made of three oxygen atoms ( $O_3$ ).
- Ozone gas occurs both in the Earth's upper atmosphere (the stratosphere) and at ground level. Ozone can be good or bad for people's health and the environment, depending on its location in the atmosphere. In short, **ozone is good up high, bad nearby.**
- Good ozone (about 90%) is produced naturally in the stratosphere, high above the ground. It's good because it blocks many harmful UV rays from the sun, reducing the amount of UV that reaches people, animals and plants. The Montreal Protocol's controls on Ozone Depleting Substances (ODS) aim to protect this stratospheric ozone.

Too little there...Many popular consumer products like air conditioners and refrigerators involve CFCs or halons during either manufacture or use. Over time, these chemicals damage the earth's protective ozone layer.



Too much here...Cars, trucks, power plants and factories all emit air pollution that forms ground-level ozone, a primary component of smog.

**Ozone is good up high, bad nearby**

# The Ozone Shield and How it Protects Us

- A study by US EPA estimated that actions to protect the ozone layer will avoid 6.3 million deaths from skin cancer, 299 million cases of non-fatal skin cancer, and avoid 27.5 million cases of cataracts, in the USA alone, during the period 1990-2165.
- Savings worth more than US\$ 2.2 trillion are expected by the middle of this century due to the health benefits and avoided damage to agriculture, fisheries and materials that would have been caused by depletion of the ozone layer.
- Without the Montreal Protocol (MP), the use of ozone-depleting substances would have increased greatly.
- Several studies have made estimates of the ill health avoided as a result of global restrictions on ODS.
- Van Dijk et al, Skin cancer risks avoided by the Montreal Protocol, Photochemistry & Photobiology (2013) 89, p.234-246 estimated that, without the Montreal Protocol's controls on ODS, the incidence of skin cancer would have increased by two million cases per year by 2030.

# International Agreements

---

- The Vienna Convention for the Protection of the Ozone Layer was signed in 1985 by 27 countries. It entered into force on 22 September 1988 and Caribbean countries such as Trinidad and Tobago signed in 1989, Barbados, 1992, Jamaica and Grenada, 1993.
- In 1987 scientific studies of the Antarctic ozone hole conclusively demonstrated that ozone depleting refrigerants known as Chlorofluorocarbons (CFCs) were the most probable cause of the ozone hole.
- The Montreal Protocol on Substances that Deplete the Ozone Layer was adopted in 1987 by 60 countries, including more than 30 developing nations. Currently, 197 countries have ratified this agreement.
- Jamaica became a party to the agreement in 1993 and phased out the use of CFCs as at 1 January 2006, four years ahead of the Montreal Protocol schedule for developing countries.

# Kigali Amendment

---

- The phasing out of CFCs resulted in the use of Hydrochlorofluorocarbons (HCFCs) which at first was seen as better alternatives.
- Over a period of time, scientists discovered that they caused ozone depletion.
- To rectify this issue, a phase out of HCFCs was agreed on and HFCs were advocated as the substitutes.
- The Kigali Amendment to the Montreal Protocol was agreed to in October 2016 in Kigali, Rwanda by 197 countries.
- This was done to gradually reduce global production and consumption of Hydrofluorocarbons (HFCs) which are potent greenhouse gases that cause global warming.

# Refrigerants

---

- A refrigerant is a substance used in a heat cycle to transfer heat from one area, and remove it to another. Usually a gas at room temperature and found in pretty much everything that cools, and sometimes in things that heat, most commonly air conditioners, fridges, freezers, and vehicle air conditioners
- In the naming of refrigerants, the R number is the refrigerant designation - a unique identification number for each refrigerant substance or blend (mixture). Some common refrigerants include the synthetic, chemical based HCFCs like R-22, the HFCs, such as R-134a, and the natural refrigerants such as ammonia (R-717), carbon dioxide (R-744), the hydrocarbons propane (R-290) and isobutane (R-600a).



# Jamaica: Protecting the Climate and Ozone Layer

---

- The National Ozone Unit (NOU) was established in 1997 and is the main entity responsible to facilitate the phase out of chlorofluorocarbons (CFCs) and other Ozone Depleting Substances (ODSs) in Jamaica. The country is currently phasing out Hydrochlorofluorocarbons (HCFCs), the alternatives to the CFCs.
- The phase out is part of Jamaica's obligations under the Montreal Protocol on substances that deplete the ozone layer, an agreement between countries to phase out the use of ODSs within stipulated time frames. 31 December 2039 is the date stipulated for zero consumption of HCFCs.

# Jamaica: Protecting the Climate and Ozone Layer

---

## Role of the National Ozone Unit (NOU):



- To create and increase national awareness on ozone depleting substances.
- To prepare annual reports on the consumption of ODSs in Jamaica.
- To facilitate timely phase out of ODS consumption through the implementation of projects through assistance from the Multilateral Secretariat Fund.
- To collaborate with the relevant ministries and agencies with respect to the establishment of policy instruments and relevant legislation concerning controls on ODS.

# OUR PARTNERS

---

- Ministry of Economic Growth and Job Creation, National Environment and Planning Agency, Planning Institute of Jamaica, Ministry of Health and Wellness, Jamaica Customs Agency, Trade Board and Maritime Authority of Jamaica
- The United Nations Development Programme (UNDP) is the lead United Nations implementing agency assisting Jamaica in the implementation of its Hydrochlorofluorocarbon Phase-out Management Plan (HPMP). The phase out the HCFCs is also being done in collaboration with the United Nations Environment Programme (UNEP).
- In 2018, Jamaica agreed to work with the UNDP to commence enabling activities to ratify the Kigali Amendment to phase down the use of Hydrofluorocarbons (HFCs), climate warming refrigerants and alternatives to the HCFCs.

# The Institutional Strengthening Project (ISP)

---

The Institutional Strengthening Project (ISP) provides financial support for the National Ozone Unit (NOU). The United Nations Environment Programme (UNEP) is the implementing agency.

The main objectives of the project are as follows:

- Adoption/implementation of legislation and regulation to control and monitor HCFC and HFC consumption;
- Efficient and timely data collection and reporting;
- Consultations and coordination with other national agencies/stakeholders;
- Supervision of timely implementation of phase-out and phase down activities;
- Awareness raising and information exchange;
- Regional cooperation and participation in Montreal Protocol meetings

# Public, Private and Academic Sectors

---

- Due to the complex and diverse nature of the work of the Montreal Protocol, the support of a number of agencies and groups are required to ensure the success of activities. These include:
  - The Ministry of Economic Growth and Job Creation - The Focal Point for the Montreal Protocol and the ratification of the Kigali Amendment.
  - The Jamaica Customs Agency - responsible for the enforcement of import restrictions and prohibitions under Ministerial Orders.
  - The Trade Board - issues licenses to importers for the importation of equipment, and motor vehicles which adhere to environmental and energy efficiency standards.

# Public, Private and Academic Sectors

---

- Pharmaceutical and Regulatory Affairs Department (PRAD), Standards and Regulation Division, Ministry of Health and Wellness - responsible for issuing import permits for the importation of refrigerants based on quotas.
- Office of the Attorney General - provides legislative support.
- The Bureau of Standards Jamaica:- responsible for developing and enforcing labelling standards for refrigerants and equipment containing same offered for sale.
- Jamaica Air-conditioning Refrigeration and Ventilation Association (JARVA) - supports the execution of programmes and projects aimed at improving servicing practices and maintaining industry standards. JARVA also assists with the training of technicians.

# Public, Private and Academic Sectors

---

- Refrigerant Importers - provide support by adhering to the requirements of the quota system and importation of non-ozone depleting refrigerants.
- Equipment Importers - support the phase out effort through the introduction of ozone, climate friendly and energy efficient technologies.
- Training and Academic Institutions, e.g. University of Technology, Caribbean Maritime University, HEART Trust NTA - provide relevant training in refrigeration and air conditioning technologies as they emerge and evolve.

# WOD and our children



*Managing and protecting Jamaica's land, wood and water*



# Poster Competitions from 2020 & 2021



# World Ozone Day 2022 activities

---

The main activity for World Ozone Day is the launch of the National Ozone Unit Webpage

Other activities to be undertaken include:

- NEPA Internal Sensitization
- Engagement of the public through social media
- Radio and television interviews

# World Ozone Day

---

## 16 September 2022



**National Environment  
and Planning Agency**



**Montreal Protocol@35: global cooperation protecting life on earth.**

*Managing and protecting Jamaica's land, wood and water*



**National Environment  
and Planning Agency**