



सत्यमेव जयते

Government of Puducherry

DEPARTMENT OF SCIENCE, TECHNOLOGY & ENVIRONMENT

PUDUCHERRY POLLUTION CONTROL COMMITTEE

PUDUCHERRY CLIMATE CHANGE CELL

ENVIS HUB, PUDUCHERRY

REPORT ON CELEBRATION OF

"WORLD OZONE DAY 2020"




Introduction:

The International Day for the Preservation of the Ozone Layer, more generally known as the World Ozone Day, is celebrated on the 16th of September every year, commemorating the date on which the Montreal Protocol for the abatement of substances that deplete the Ozone Layer was signed in 1987. Every year, the UN Environment Programme will declare a specific theme to protect and preserve the ozone layer. The theme for 2020 is “Ozone for Life - 35 Years of Ozone Layer Protection”.

The Ozone Layer shields the Earth from most of the sun’s harmful ultraviolet radiation. In the late 1970s, scientists discovered that ozone-depleting substances used in aerosols and refrigerants in refrigerators and air-conditioners is creating a hole in this protective shield, popularly known as the Ozone Hole. This hole allowed the harmful UV rays penetrate through Ozone layer increased the cases of skin cancer and cataracts, and damaged plants, crops, and the ecosystems.

So, in 1985, the world’s governments adopted the Vienna Convention for the Protection of the Ozone Layer, under which governments, scientists and industries worked together to cut out 99 per cent of all ozone-depleting substances. Thanks to the Montreal Protocol, the ozone layer is healing and expected to recover almost completely by 2050s. In support of the Protocol, the Kigali Amendment, which came into force in 2019, will work towards reducing the usage of Hydrofluorocarbon (HFCs), a gas with powerful climate warming potential.

As a part of the “World Ozone Day” Puducherry Pollution Control Committee (PPCC) through ENVIS Hub and Puducherry Puducherry Climate Change Cell (PCCC) organized following activities on 16.09.2020.



Activity 1:

Mr. Nagalla Srinivasa Rao, Scientific Officer, DSTE has given the Welcome Address of the event.



Dr. R. Sagaya Alfred, Senior Scientific Officer, DSTE has given the Opening Remarks of the event.

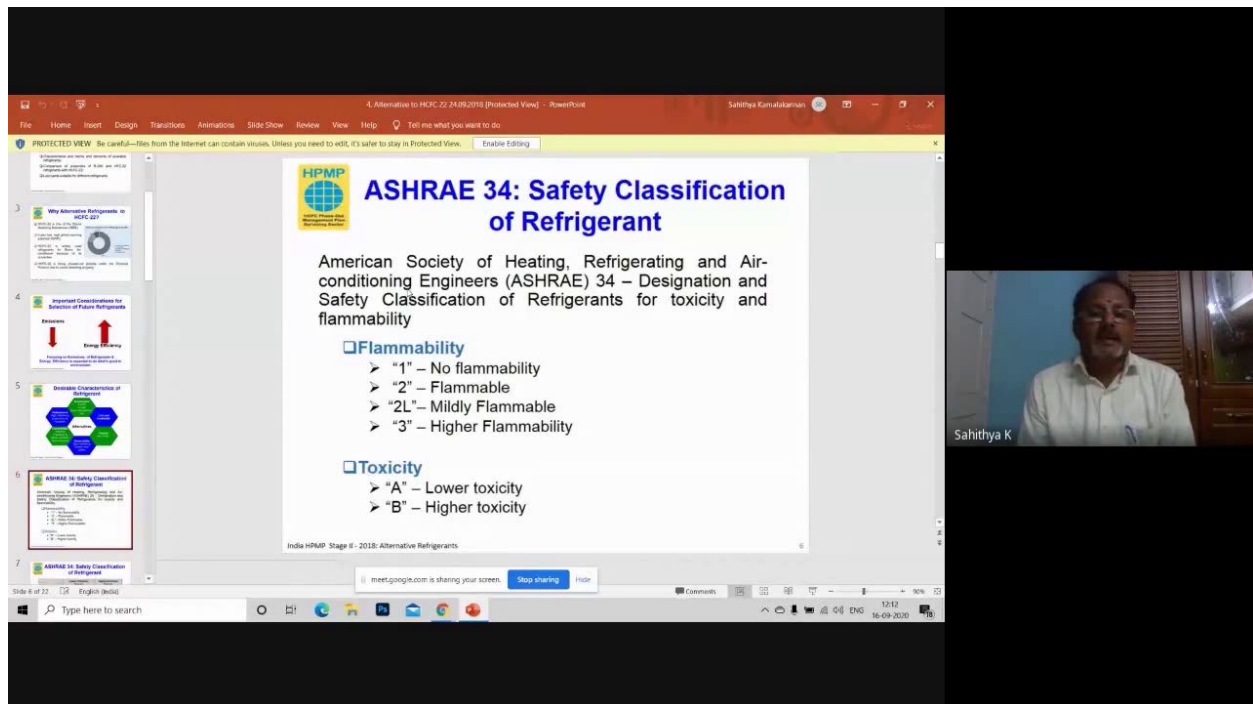


Webinar Session 1 on the topic “Ozone Depletion and Global warming” by Thiru.S. Kanagasabapathi, Technical Trainer, HPMP Training Project under GIZ and Ministry of Environment, Forest & Climate Change, Govt of India, New Delhi for the regions of TN and Puducherry for 2 years in association with Sakthi Refrigeration and AC, Chennai.

The screenshot shows a presentation slide with the following elements:

- HPMP Logo:** HPMP Phase II, 2018-2020, Ministry of Environment, Forest & Climate Change, Government of India.
- Title:** Formation of Stratospheric Ozone
- Diagram:** A sun wearing sunglasses emits a purple arrow labeled "UV" towards two oxygen molecules (O₂). A double-headed arrow labeled "Equilibrium" points to two ozone molecules (O₃).
- Text:** "meet.google.com is sharing your screen." with "Stop sharing" and "Hide" buttons.
- Page Number:** 4
- Footer:** India HPMP Stage II, 2018 : Impact of Refrigerants on Environment
- Video Feed:** A small video window on the right shows a person with the name "Sivasubramanian Sksabapathi" below it.

Webinar Session 2 on the topic “Environmental Refrigerants” by Thiru. R.Kamalakaran, Organizer-cum-Technical Trainer, HPMP Training Project under GIZ and MOEF & CC, Govt of India for the regions of Tamilnadu and Puducherry for 12 years in association with Sakthi Refrigeration and Air Conditioner, Chennai.



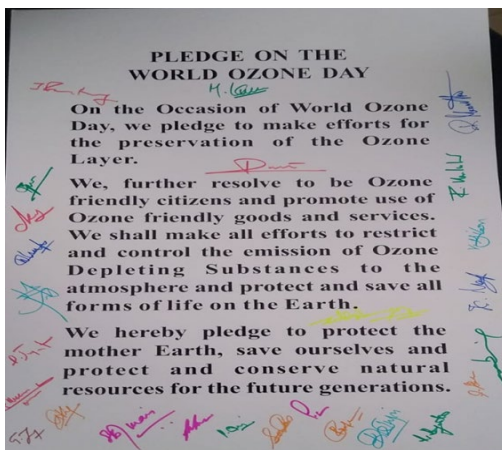
The Webinar was conducted for the Polytechnic students, School students and General public. It was highly useful to the students who are studying in Mechanical (Refrigeration and Air-conditioning) and Electrical Disciplines to handle the refrigerant and air conditioner gases effectively which otherwise leads to environmental issues. Nearly 70 participants were participated in the event and E-certificate issued to them.

Activity 2:

Organized an interactive session with Industries to promote reduction and elimination of chemicals that destroy the Ozone layer and encourage them to pledge to use only ozone-friendly chemicals.

As a part of World Ozone day, industries activities are as follows

- 1) World Ozone Day was celebrated at SICA with overwhelming participation of employees **M/s. SICA, Breweries, Puducherry**, Banners and Posters displayed at predominant locations in the factory. Pledge on the World Ozone Day was taken by all employees. The celebration was started with a WORLD OZONE DAY video in our virtual Daily Safety meeting



2) World Ozone Day was celebrated with overwhelming participation of employees **M/s. Chemfab Alkalis limited, Periyakalapet, Puducherry**, Banners and Posters displayed at predominant locations in the factory. Pledge on the World Ozone Day was taken by all employees. The celebration was started with a WORLD OZONE DAY video in our virtual Daily Safety meeting



3) World Ozone Day was celebrated with overwhelming participation of employees **M/s. Lucas TVS, Nettapakkam, Puducherry.** Pledge on the World Ozone Day was taken by all employees.



- 4) World Ozone Day was celebrated with overwhelming participation of employees **M/s. Hindustan Unilever Limited, Bahour, Puducherry** Pledge on the World Ozone Day was taken by all employees.



Vote of thanks of the event was given by Mr. L. Xavier Kennedy, JSA, DSTE.



At the end of the session, an awareness poster and pamphlet were released digitally during the occasion. To spread the message about the protection of Ozone layer

ATMOSPHERE LAYERS

What is Ozone Layer?

The ozone layer, a fragile shield of gas, protects the Earth from the harmful portion of the rays of the sun, thus helping preserve life on the planet.

The phasout of controlled uses of ozone depleting substances and the related reductions have not only helped protect the ozone layer for this and future generations, but have also contributed significantly to global efforts to address climate change. Furthermore, it has protected human health and ecosystems by limiting the harmful ultraviolet radiation from reaching the Earth.

Ozone for life: 35 years of ozone layer protection

This year, we celebrate 35 years of the Vienna Convention and 35 years of global ozone layer protection. Life on Earth would not be possible without sunlight. But the energy emanating from the sun would be too much for life on Earth to thrive were it not for the ozone layer. This stratospheric layer shields Earth from most of the sun's harmful ultraviolet radiation. Sunlight makes life possible, but the ozone layer makes life as we know it possible.

So, when scientists working in the late 1970s discovered that humanity was creating a hole in this protective shield, they raised the alarm. The hole – caused by ozone-depleting gases (ODGs) used in aerosols and cooling such as refrigerators and air-conditioners – was threatening to increase cases of skin cancer and cataracts, and damage plants, crops, and ecosystems.

The global response was decisive. In 1985, the world's governments adopted the Vienna Convention for the Protection of the Ozone Layer. Under the Convention's Montreal Protocol, governments, scientists and industry worked together to cut out 99 per cent of all ozone-depleting substances. Thanks to the Montreal Protocol, the ozone layer is healing and expected to return to pre-1980 values by mid-century. In support of the Protocol, the Kigali Amendment, which came into force in 2019, will work towards reducing hydrofluorocarbon (HFCs) greenhouse gases with powerful climate warming potential and damaging to the environment.

4th September, 2020

The latest false-color view of total ozone over the Antarctic pole. The purple and blue colors are where there is the least ozone, and the yellow and reds are where there is more ozone.

What is a Dobson Unit?

The Dobson Unit (DU) is the unit of measure for total ozone. If you were to take all the ozone in a column of air stretching from the surface of the earth to space, and bring it all that ozone to standard temperature (0°Celsius) and pressure (1013.25 millibars, or one atmosphere, or "atm"), the column would be about 0.3 centimeters thick. Thus, the total ozone would be 0.3 atm-cm. To make the units easier to work with, the "Dobson Unit" is defined to be 0.001 atm-cm. Our O3 atm-cm would be 300 DU.

What is the ozone hole?

The ozone layer, a fragile shield of gas, protects the Earth from the harmful portion of the rays of the sun, thus helping preserve life on the planet.

The phasout of controlled uses of ozone depleting substances and the related reductions have not only helped protect the ozone layer for this and future generations, but have also contributed significantly to global efforts to address climate change. Furthermore, it has protected human health and ecosystems by limiting the harmful ultraviolet radiation from reaching the Earth.

Causes of Ozone Layer Depletion

1. Ozone depleting substances (ODS)
2. Chlorofluorocarbon (CFCs), HCFCs, Halogens, VOC and NOx

Ozone in the stratosphere, they release halogen atoms through photo-dissociation, which catalyze the breakdown of ozone (O₃) into oxygen (O₂), thus depleting Ozone.

Effects of Ozone Depletion

Ozone depletion could cause increased cancer risks and other negative effects such as Skin cancer, sunburn, and cataracts, genetic and immune system damage as well as harming plants and animals.

Vienna Convention for the Protection of the Ozone Layer

The scientific confirmation of the depletion of the ozone layer prompted the international community to establish a mechanism for cooperation to take action to protect the ozone layer. This was formalized in the Vienna Convention for the Protection of the Ozone Layer, which was adopted and signed by 28 countries, on 22 March 1985. In September 1987, this led to the drafting of The Montreal Protocol on Substances that Deplete the Ozone Layer.

Montreal Protocol

In 1994, the United Nations General Assembly proclaimed 16 September the International Day for the Preservation of the Ozone Layer, commemorating the date of the signing in 1987 of the Montreal Protocol on Substances that Deplete the Ozone Layer (resolution 49/114).

Implementation of the Montreal Protocol

Implementation of the Montreal Protocol progressed well in developed and developing countries. The HCFC phase-out schedule was introduced in 1992 for developed and developing countries, the latter with a freeze in 2015, and final phase-out by 2030 in developed countries and 2040 in developing countries. In 2001, Parties to the Montreal Protocol decided to accelerate the HCFC phase-out schedule for both developed and developing countries.

Puducherry Envis Hub

Host Centre - Puducherry Pollution Control Committee
Funded by Ministry of Environment, Forest & Climate Change Govt. New Delhi

16th September, 2020

World Ozone Day

Theme:
Ozone for life: 35 Years of Ozone Layer Protection

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ENVIS Puducherry | envispudhy/

Government of Puducherry
Department of Science, Technology & Environment
Puducherry Pollution Control Committee
Puducherry ENVIS HUB
Puducherry Climate Change Cell (PCCC)

Ozone layer absorbs ultraviolet rays

World Ozone Day

Theme:
Ozone for life: 35 years of ozone layer protection

16th September, 2020
11.00 A.M - 12.30 P.M

Webinar

Mr. S. K. Subapathi,
Technical Trainer
HPMP
Topic : Ozone Depletion & Global Warming

Mr. Kamala Kannan
Organizer & Technical Trainer
HPMP
Topic : Environmental Refrigerants

Google Meet ID: tai-piz-tsj

Google Meet Link: <https://meet.google.com/tai-piz-tsj>

Live on YouTube: <https://youtu.be/q79L5hY1qGM>

Registration: <https://fb.gg/v9mh0e>

Note: Participants will be issued with E-Certificate