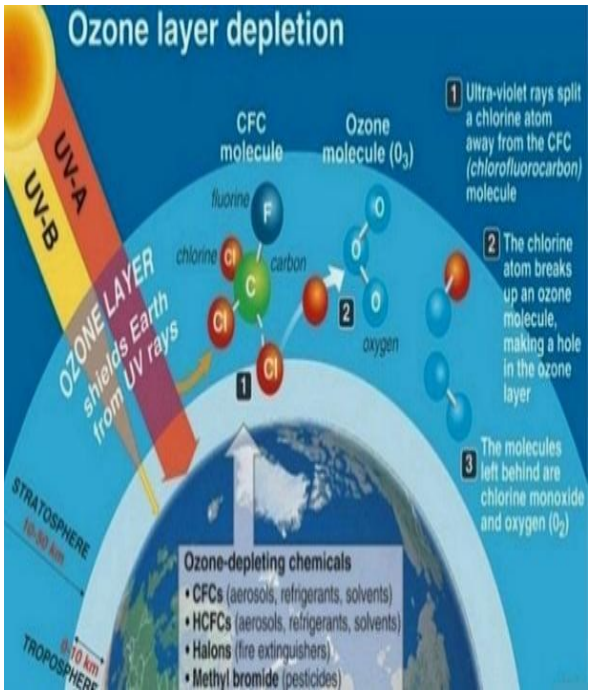
# A REPORT ON

# "WORLD OZONE DAY CELEBRATION ON 16thSEPTEMBER 2020"


## Regional Directorate
## Central Pollution Control Board,
## Bhopal

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 phase out 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. The ultraviolet radiation or UV rays emitted by the sun have the potential to cause skin cancer and cataract. These harmful rays also cause significant damage not only to humans but also to plant and marine life. Hence, the ozone layer acts as a protective shield against all such harmful radiations from the sun.




A number of commonly used chemicals have been found to be extremely damaging to the ozone layer. Halocarbons are chemicals in which one or more carbon atoms are linked to one or more halogen atoms (fluorine, chlorine, bromine or iodine). Halocarbons containing bromine usually have much higher ozone-depleting potential (ODP) than those containing chlorine. The man-made chemicals that have provided most of the chlorine and bromine for ozone depletion are methyl bromide, methyl chloroform, carbon tetrachloride and families of chemicals known as halons, chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs).

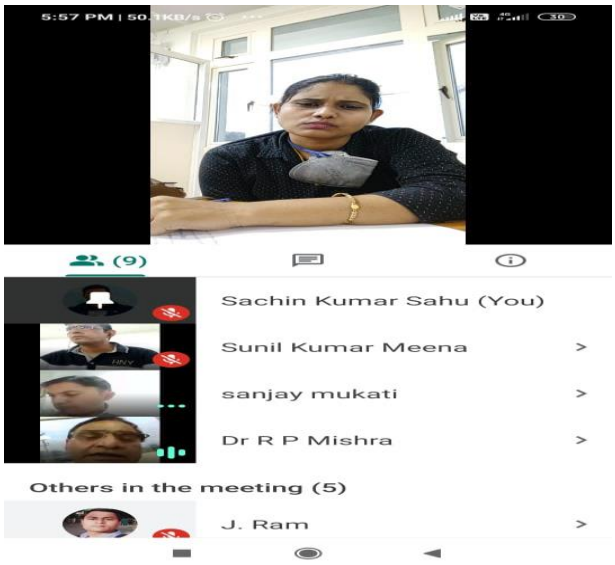
- One of the important ways to protect ozone layer is to avoid using harmful gases like CFCs chlorofluorocarbons (CFCs), halogenated hydrocarbon, methyl bromide and nitrous oxide in various processes.
- The second option is to minimise the use of personal vehicles like cars that releases carbon monoxide and nitrogen oxides and resort to public transport thereby saving financial resources and the environment.
- Another way to save the ozone layer is to properly maintain your air conditioners. If ACs are not properly maintained, there are high chances that CFC gas is released into the atmosphere.
- People should also avoid using cosmetics, hair sprays, room fresheners as these products release Chlorofluorocarbons (CFCs).
- Several greenhouse gases are produced during the manufacturing of chemical fertilisers. Hence, we should avoid the use of fertilisers in agriculture and replace them with organic ones.

World Ozone Day will be celebrated on 16thSeptember every year to mark the achievements made in protection of ozone layer. This year, we celebrate 35 years of the Vienna Convention and 35 years of global ozone layer protection. In this year of the COVID-19 pandemic that has brought such social and economic hardship, the ozone treaties' message of working together in harmony and for the collective good is more important than ever. The slogan of the day, 'Ozone for life', reminds us that not only is ozone crucial for life on Earth, but that we must continue to protect the ozone layer for future generations for that we must give more focus on creating awareness among the public on ozone layer depleting substances etc.

## World Ozone Day Celebration at Regional Directorate, Central Pollution Control Board, Bhopal:

With reference to head Office letter dated 14.9.2020 the world ozone day was celebrated during 16th& 17th September 2020 in the office of the Regional Directorate, Central Pollution Control Board, Bhopal.

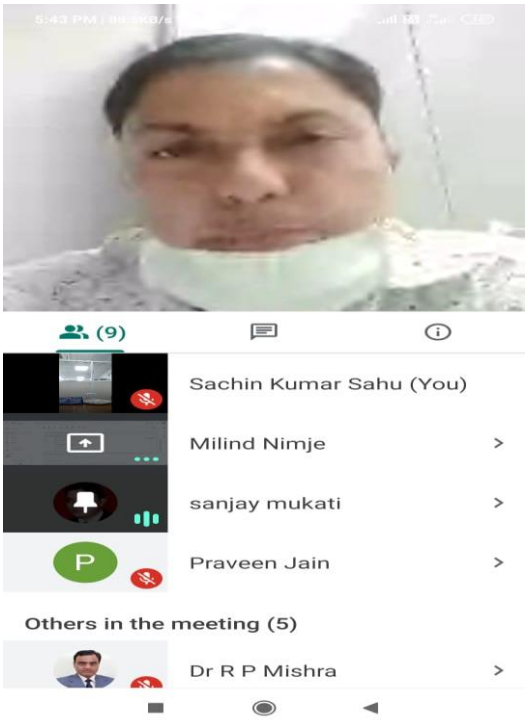
On occasion of World Ozone Day on 16thSeptember, 2020, Lectures and Environmental Awareness Quiz on **Ozone layer depletion** were organised on the digital platform on Google Meet App by Sh Sachin Kumar Sahu Senior Research Fellow.




First Lecture was delivered by Dr. Ranu C Verma, 'Scientist B' on the topic **"The Ozone Depleting Substances (Regulations and Control) Rules, 2000 and its amendments"**. She explained all the points mentioned in this Rules viz.

- Regulation of production and consumption of ozone depleting substances prohibition on export or import from countries.
- Ozone depleting substances are to be exported or imported from countries specified in schedule-VI under a licence.

- Regulation of the sale of ozone depleting substances.
- Regulation on the purchase of ozone depleting substances.
- Regulation on the use of ozone depleting substance.
- Prohibition on new investment with ozone depleting substances.
- Regulation of import, export and sale of products made with or containing ozone depleting substances.
- Regulation on reclamation and destruction of ozone depleting substances.
- Regulation on manufacture, import and export of compressors.
- Procedure for registration, cancellation or registration and appeal against such orders.
- Monitoring and reporting requirements.
- Exemption.




Second Lecture was delivered by Sh. S.K.Mukati, Senior Scientific Assistant on the topic "**Guidelines for sampling and analysis for ozone in ambient air (Chemical Method)**".

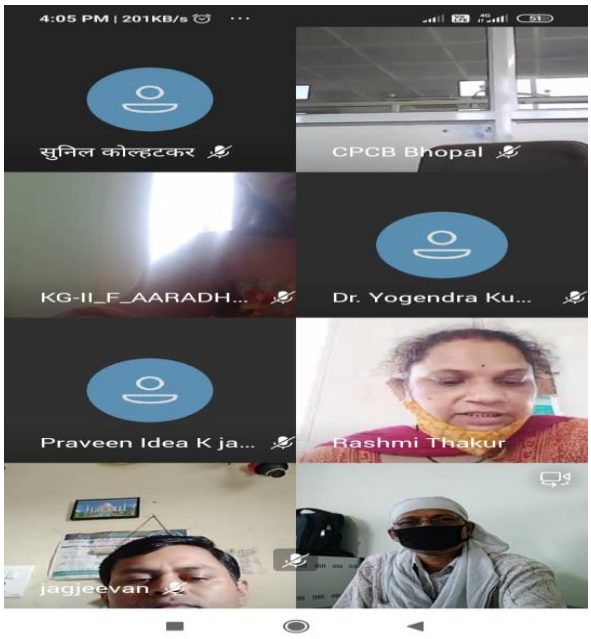
He illustrated the principle of the method used for the determination of oxidizing substances in the atmosphere i.e. micro-amounts of ozone and the oxidants liberate iodine when absorbed in a 1% solution of potassium iodine buffered at pH-6.8 + 0.2. The iodine is determined spectrophotometrically by measuring the absorption of tri-iodide ion at 352 nm.
The stoichiometry is approximated by the following reaction:

$$O_3 + 3\,KI + H_2O \longrightarrow KI_3 + 2\,KOH + O_2$$

The lectures were finally concluded by summary speech delivered by Sh. P Jagan, Regional Director

Dr. R.P. Mishra, 'Scientist-D' delivered vote of thanks to all the participants and the officials on *occasion of the world Ozone Day*.

***<u>On second day</u>*** *dated 17th September*, 2020 an **"Environmental Awareness Quiz based on Ozone: Ozone Layer Depletion"**was organised digitally via. Micro Soft Teams Platform, which was anchored by Ms. Rashmi Thakur, Senior Scientific Assistant. Nine members participated in the awareness quiz with a great enthusiasm.




The motto of the quiz was to spread the awareness among the staff about the Ozone and its importance to our environment.

**<u>Conclusion:</u>**

The activities, devoted to the World Ozone Day, was successful, all participants updated and re-learn about global environmental problem – depletion of the ozone layer and related negative effect of the UV radiation on human health, the results of the Montreal Protocol in phasing out ODS.

**"The slogan 'Ozone For Life' is a reminder for people to care for the environment for sustainable and healthy life on earth."**

(Rashmi Thakur)
Senior Scientific Assistant
CPCB, RD, Bhopal

(P Jagan)
Regional Director
CPCB, RD, Bhopal