



WORLD OZONE DAY: 16TH SEPT, 2022

Theme: "Montreal Protocol@35: global cooperation protecting life on earth"

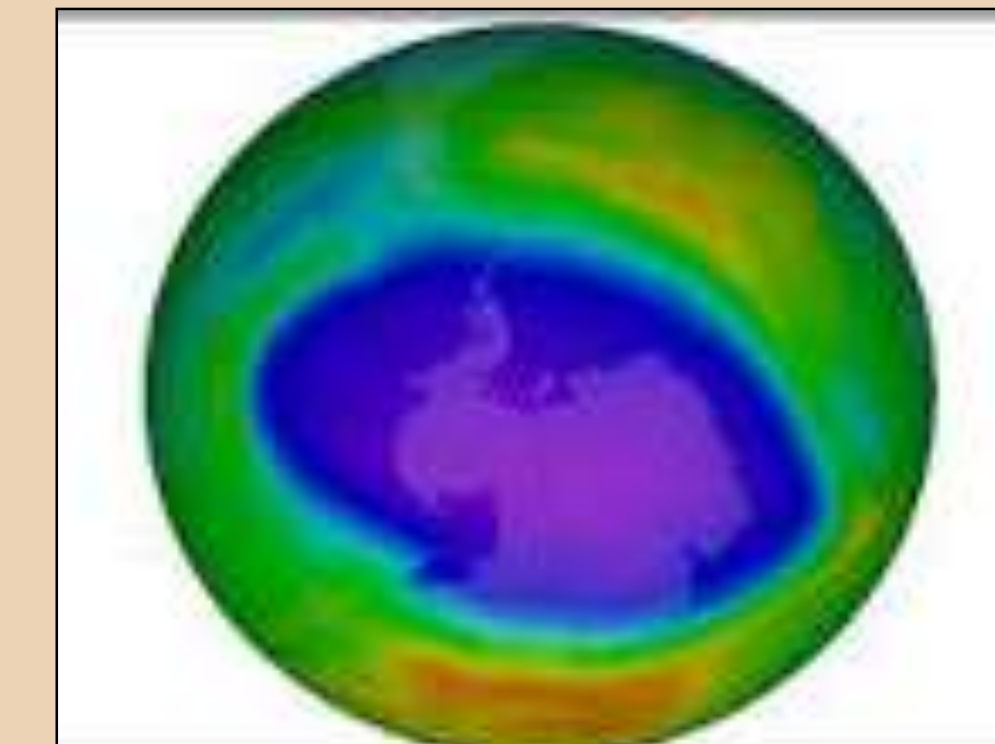
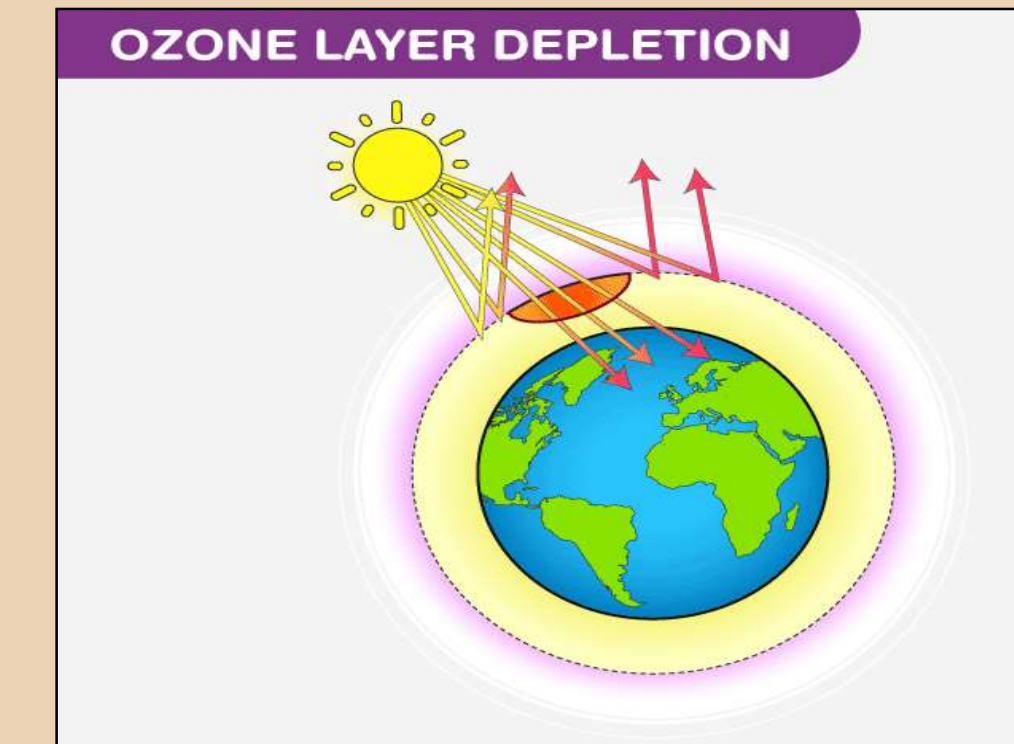
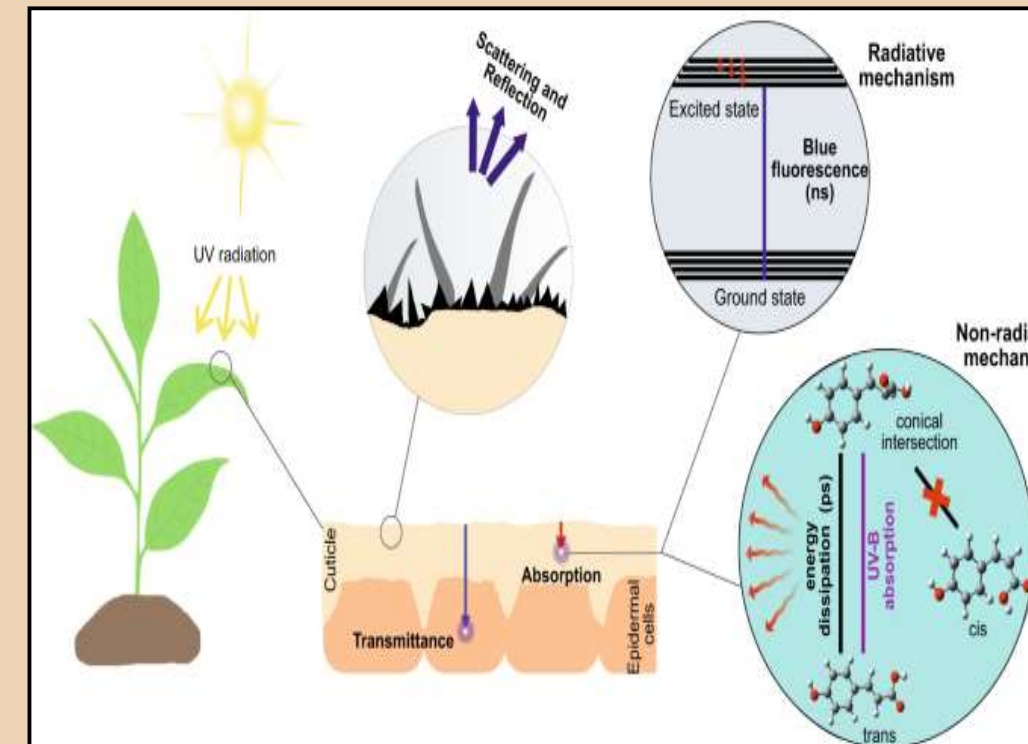
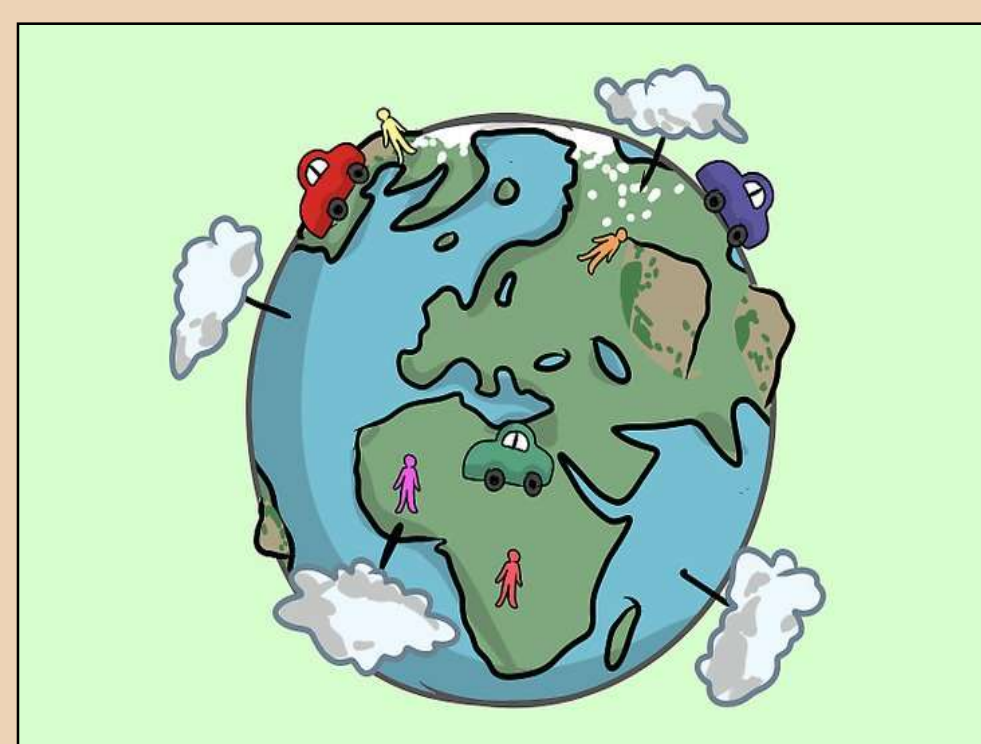
Organised by: ENVIS Resource Partner on Environmental Biotechnology

Hosted by: University of Kalyani, West Bengal

Sponsored by: Ministry of Environment, Forests & Climate Change



- ✓ The UN General Assembly on 23.01.1995 adopted a resolution 49/114 which proclaims 16th September as the International Day for the Preservation of the Ozone Layer, to commemorate the signing of the **Montreal Protocol on the Substances that Deplete the Ozone Layer** which was signed on 16th September, 1987.
- ✓ In accordance with the UN resolution 49/114, the Ozone Cell, Government of India has been celebrating the International Ozone Day for the Preservation of the Ozone Layer since 1995 at the National and State level.
- ✓ India become party to the **Montreal Protocol** in June 1992 and prepared the country program in 1993 for phasing out the Ozone Depleting Substances.



Ozone Depleting Substances (ODS) ?

- Chloroflourocarbons (CFCs) –12 for Refrigeration, Chillers and Metered Dose Inhalers.
- Hydrochloroflourocarbons (HCFCs) – 22 for Air Conditioners
- Carbon Teterachloride (CTCs) for as solvent process agent mainly in the metal cleaning and textile industries.
- It is also used as feedstock in the manufacture of CFCs and DV Acid Chloride.

Alternatives of ODS

Sub-sector	Application	Alternative Technology
Domestic Refrigeration	Household Refrigerators And Freezers	HFC-134a, HFC-152a, Blends and mixtures, Hydrocarbons (for refrigerants) and HCFC-22, HCFC-22 + 142b, HCFC-141b, Hydrocarbons for foaming)
Commercial Refrigeration	Refrigerated Cabinets Water Coolers	HCFC-134a, HFC-152a, Blends and mixtures, Hydrocarbons (for refrigerants) and HCFC-22, HCFC-22 + 142b, Hydrocarbons (for foaming) HCFC-22, HFC-134a
	Ice-candy machines Walk-in coolers	HCFC-22, HFC-134a (refrigerants) and HCFC-14b (foaming)
Industrial Refrigeration	Cold Storages Process Chillers	HCFC-22, HFC-134a, Ammonia HCFC-22, HFC-134a, Ammonia
Transport Refrigeration	Perishable Transport	HCFC-22, HFC-134a, Blends and mixtures
Air Conditioning	Chillers Automotive-air conditioning	HCFC-123, HFC-134a, HCFC-22 HFC-134a, Blends and mixtures

Effect O₃ on Human Health

Ozone in the air we breathe can harm our health.

- ✓ People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.
- Depending on the level of exposure, ozone can:
 - ✓ Cause coughing and sore or scratchy throat.
 - ✓ Make it more difficult to breathe deeply and vigorously and cause pain when taking a deep breath.
 - ✓ Inflammate and damage the airways.
 - ✓ Make the lungs more susceptible to infection.
 - ✓ Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.
 - ✓ Increase the frequency of asthma attacks.

