

OZONE LAYER DEPLETION ESSAY

The ozone layer is a protective shield that exists in the U earth's stratosphere (the layer above the troposphere where aircraft fly) and absorbs the sun's ultraviolet rays. It saves the earth from the ultraviolet rays falling directly on the surface of the earth.

The ozone layer absorbs about 97-99 percent of the Sun's ultraviolet radiation which would otherwise cause a lot of damage to all life forms near the earth's surface. The layer contains a major proportion of ozone gas (O₃) which is formed in the stratosphere when ultraviolet rays strike oxygen molecules.

The ozone layer is depleting at a fast pace for the past few decades due to ODS (Ozone depleting sources) like CFCs (Chlorofluorocarbons), halons, methyl bromide, methyl chloroform, carbon tetrachloride, and trichloroethane. ODS are stubborn substances that stay in the earth's atmosphere even after rains and get transported to the stratosphere, which causes depletion of the ozone layer.

It leads to numerous biological consequences such as an increase in sunburn, skin cancer, cataracts, damage to plants, and a reduction in the population of aquatic animals in the oceans. CFCs are a by-product of human manufactures. They are used as packaging materials, aerosol spray cans, and cooling units in refrigerators and air conditioners. These are also used as disinfectants and bleaching agents and expected to be released up to a level of 5000 tonnes every year in India.

Polar Regions, Mid-latitude areas including Australia and Antarctica are some of the areas where the ozone.

the layer is depleting at a very fast rate. It is believed that not only human causes but also volcanic eruptions lead to thinning of the ozone layer. Therefore, countries like America, India, Canada, Sweden, Denmark, and Norway are working to eliminate the use of CFCs in aerosol spray cans, air conditioners, and refrigerators. Due to the initiatives are taken by these countries. The Intergovernmental Panel on Climate Change (IPCC) report review of ozone observations and model calculations concluded that the global amount of ozone has now been approximately stabilized.

Also, the Montreal Protocol of the United Nations Environment Programme 1989 on Substances that Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer) is an international treaty devised to protect the ozone layer by eliminating the production of numerous substances that are responsible for ozone depletion including the ODCs.

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