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MEDIA RELEASE

Monday, 4 September 2023

Re: International Day for the Preservation of the Ozone Layer, 16 September 2023



International Day for the Preservation of the Ozone Layer | 16 September

With all the attention fixed on climate change, it is easy to forget that there is another very important atmospheric process that is both vital to health and can reduce anthropogenic climate change: the preservation of the ozone layer.

What is ozone?

Ozone is a gas. It is a form of oxygen that Is present in the atmosphere, The atmosphere is built of several 'layers'; the two most important for humanity are the *troposphere*, which extends from ground level up to around 12 km and is where most of the 'weather' and 'climate' occurs, and the *stratosphere* (which extends from about 12 km up to around 50 km). and the lower levels of which are where commercial jet aircraft fly.

Where is Ozone Found and What Does it Do?

Ozone is mainly found in the stratosphere between 10 and 40 km (although some is found in the troposphere). Through a series of complex reactions, ozone is able to absorb the portion of ultraviolet radiation known as UV-B rays. Ozone is the only atmospheric gas that can absorb UV-B rays. These rays are highly damaging to life. therefore, the ozone lay needs protecting.

Why Does the Ozone Layer Need Preserving?

In 1985, researchers from the British Antarctic Survey found that the amount of ozone had diminished, creating a thinner ozone layer. Further research found that a class of man-made chemicals called Chlorofluorocarbons (CFCs) were the primary cause of the destruction of ozone.

Additional research also found that a thinning of ozone was occurring in the Arctic.

Because of the evidence of the thinning of the ozone, the implications for life and the fact that there were alternatives to CFCs for most applications, meant that action could and had to be taken to preserve the ozone layer. In 1987, the Montreal Protocol was signed which stipulated limits to the production of ozone depleting chemicals (the list of such chemicals now extends to approximately 100 across a number of different types of chemicals, not just CFCs).

A side benefit of phasing out ozone-depleting substances is a slight reduction in global warming, as such substances have very potent global warming effects (more than carbon dioxide, the traditional 'bad boy' of global warming).

To mark the importance of the ozone layer and the Montreal Protocol in preserving it, in 1994, the United Nations General Assembly proclaimed the 16th September as the International Day for the Preservation of the Ozone Layer, as it commemorates the date of signing of the Montreal protocol in 1987.

Due to these efforts, the 'hole' is gradually closing; the layer of ozone is slowly recovering and should be at pre-thinning layers by the mid-2040s.

To find out more, please visit the UNs webpage <u>www.un.org/en/observances/ozone-day</u>.

You can also view the size of the 'hole' courtesy of NASA: www.ozonewatch.gsfc.nasa.gov.

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