

Greenhouse Gases, Global Warming & Climate Change

What is the difference between climate change and global warming?

- Climate change refers to any significant change in measures of climate.
- Global warming is an average increase in the temperature of atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming could be a cause of climate change.

What causes global warming?

The vast majority of qualified scientists believe it is caused, in large measure, by the greenhouse effect.

What is the greenhouse effect?

It is the process by which Earth's atmosphere behaves like the glass windows on a greenhouse, as it allows the sun's heat to pass through, but does not allow it to escape back into space, thus raising the temperature inside. Gases that trap heat in Earth's atmosphere are often called greenhouse gases. One example of a greenhouse gas is carbon dioxide (CO₂).

What are the consequences of global warming?

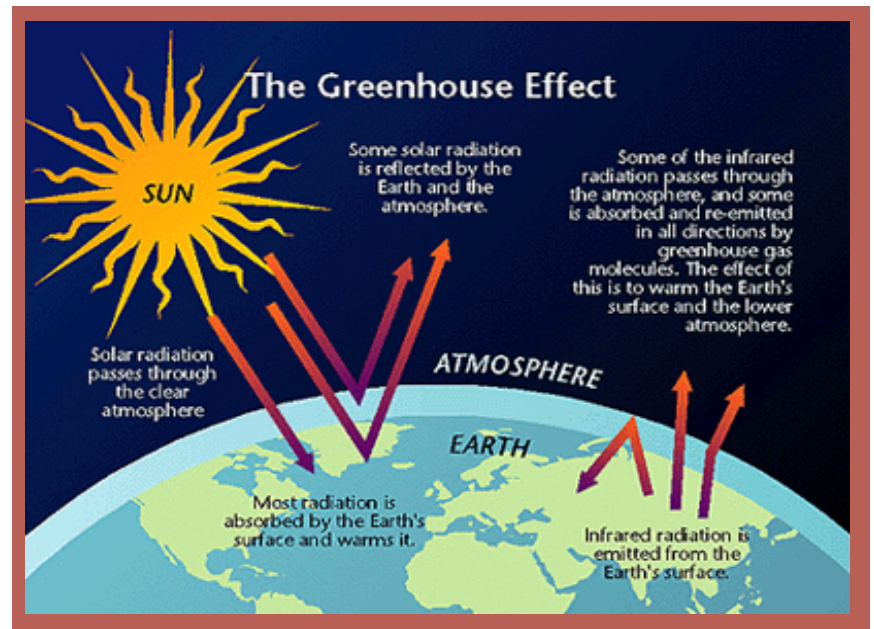
It is impossible to predict with any precision, but consequences could include: increased ambient temperatures, increased flooding of lower lying areas of the world due to rising ocean levels, increased storm activity, and more frequent and severe droughts.

Is global warming related to the "hole" in the ozone layer?

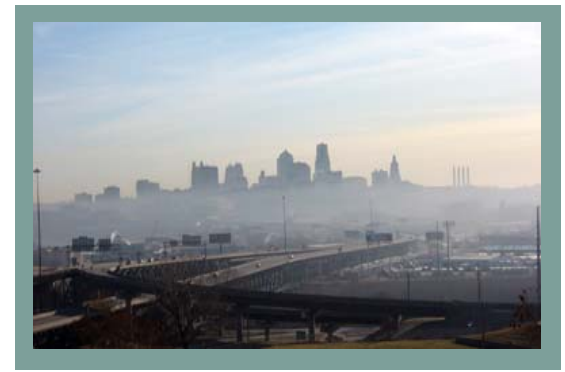
The planet's ozone layer is a protective layer in the atmosphere that reduces our exposure to ultraviolet radiation, which is harmful to plants, animals, and humans. Ozone depletion and global warming are linked because some gases emitted by human activity, chlorofluorocarbons, for example, both trap heat (increasing the greenhouse effect) and destroy the ozone layer. They are separated in the sense that the destruction of the ozone layer actually allows more heat to escape into space, thus partially reducing the greenhouse effect. The use of chlorofluorocarbons was banned by an international treaty in 1989.

Is human activity contributing to global warming?

Yes. A 2007 report issued by the United Nations Intergovernmental Panel on Climate Change (IPCC), the world's foremost scientific authority on global warming, declared that "warming of the climate system is unequivocal" and that there is "very high confidence" that human activity since 1750 has played a significant role in the overloading of the atmosphere with CO₂.



Source: www.climatechange.org



Temperature inversion, Kansas City, 2006



What are the health effects of global warming?

According to the EPA, the prevalence of some diseases and other threats to human health depend largely on local climate. Extreme temperatures can directly lead to loss of life, while climate-related disturbances in ecological systems, such as changes in the range of infective parasites, can indirectly impact the incidence of serious infectious diseases. In addition, warm temperatures can increase air and water pollution, which in turn harm human health. Sunlight and high temperatures, combined with other pollutants such as nitrogen oxides and volatile organic compounds, can cause ground-level ozone to increase. While the ozone layer protects us from UV radiation, ozone at ground-level can damage lung tissue, and is especially harmful for those with asthma and other chronic lung diseases. Ozone is good up high but bad nearby.

What is still not understood about global warming?

Predicting the precise timing and effects of global warming remains a work in progress.

It is too late to take constructive action on global warming?

No, there is a bright side. There are many opportunities, especially in the reduction of greenhouse gas emissions, to head off the worst of global warming's predicted results. The actions we take to reduce greenhouse gases also reduce other air pollutants which contribute to ground-level ozone.

What are some actions to take the reduce air pollutants including greenhouse gases?

We emit air pollutants, including greenhouse gases, as a result of burning fuel to drive, using electricity to light and heat our homes, and through other activities that support our quality of life like growing food, raising livestock and throwing away garbage. We can improve the air we breathe and reduce our contribution to global warming by adopting simple measures like saving energy, recycling, and keeping our cars tuned up.

IT'S OUR AIR KANSAS

Suggestions for how we can breathe a little easier, now and in the future.

KIDS' ZONE "Green" it up with AI at the youth pages.



BAR employee working with ground-level ozone equipment



**KANSAS
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