



Climate Change : Global Warming Basics

Greenhouse Gas: Lifegivers and Lifetakers

In what seems like nature's brutal irony, the gases that make life on Earth possible now threaten our very existence. Read our greenhouse gas profiles and find out why CO₂, methane, and nitrous oxide might become benevolent climate killers — and how we can react.



A CO₂ symbol aflame in front of a coal power plant in Germany. Carbon dioxide is the most important man-made warming agent (Photo: Reuters)

Greenhouse gases heat up our planet. They are part of Earth's atmosphere and trap warmth emitted by the sun, thus heating Earth. It is this process – the greenhouse effect – that makes life on the planet possible.

Natural greenhouse gases like carbon dioxide, methane, and nitrous oxide have always been in the atmosphere. Without them, the world's average surface temperature would be a chilly -18 degrees Celsius. Thanks to the greenhouse effect, however, we enjoy an average temperature of 14 degrees.

Throughout Earth's history, temperatures have varied greatly, mostly depending on the concentration of greenhouse gases in the atmosphere. All signs now suggest that a major temperature change is happening again, but this time humanity is the cause. Read our gas profiles and learn more about the causes of climate change and how we can reduce them.

Methane - A Ticking Timebomb

Nitrous Oxide - Nothing to Laugh About

Carbon Dioxide - Endless Warming

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