



<http://www.epa.gov/climatechange/emissions/index.html>

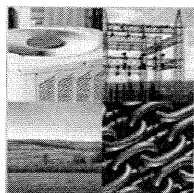
Last updated on Tuesday, April 15th, 2008.

## Climate Change - Greenhouse Gas Emissions

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# Greenhouse Gas Emissions

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### **2008 Inventory of Greenhouse Gas Emissions and Sinks**

*Prepared annually by EPA, the national greenhouse gas inventory report presents estimates of U.S. greenhouse gas emissions and sinks for the years 1990 through 2006. This report also discusses the methods and data used to calculate the emission estimates.*

### **Greenhouse Gas Overview**

Gases that trap heat in the atmosphere are often called greenhouse gases. This section of the EPA Climate Change Site provides information and data on emissions of greenhouse gases to Earth's atmosphere, and also the removal of greenhouse gases from the atmosphere. For more information on the science of climate change, please visit EPA's [climate change science home page](#).

Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- **Carbon Dioxide (CO<sub>2</sub>):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N<sub>2</sub>O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

### Related Links

#### EPA

- [Greenhouse Gas Reporting Rule](#)
- [U.S. Greenhouse Gas Inventories](#)
- [Methane to Markets](#)
- [Personal Greenhouse Gas Emissions Calculator](#)
- [Greenhouse Gas Equivalencies Calculator](#)

#### IPCC's National Greenhouse Gas Inventories Programme

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#### UNFCCC

- [Greenhouse Gases Database](#) [EXIT Disclaimer](#)
- [National Inventory Submissions 2006](#) [EXIT Disclaimer](#)