

GLOBAL WARMING

For 2.5 million years, the earth's climate has fluctuated, cycling from ice ages to warmer periods. But in the last century, the planet's temperature has risen unusually fast – about 1.2 to 1.4 degrees Fahrenheit. Scientists believe it's human activity that's driving the temperatures up; a process known as global warming.

Ever since the industrial revolution began, factories, power plants, and eventually, cars, have burned fossil fuels such as oil and coal, releasing huge amounts of carbon dioxide and other gases into the atmosphere. These greenhouse gases trap heat near the earth through a naturally occurring process called the greenhouse effect.

The greenhouse effect begins with the sun and the energy it radiates to the earth. The earth and the atmosphere absorb some of this energy, while the rest is radiated back into space. Naturally occurring gases in the atmosphere trap some of this energy and reflect it back, warming the earth. Scientists now believe that the greenhouse effect is being intensified by the extra greenhouse gases that humans have released.

Evidence for global warming includes a recent string of very warm years. Scientists report that 1998 was the warmest year in measured history, with 2005 coming in second. Meanwhile, readings taken from ice cores show that the greenhouse gases, carbon dioxide and methane have hit their highest levels in the past 420,000 years. Arctic sea ice is also shrinking. According to NASA studies, the extent of Arctic sea ice has declined about 10% in the last 30 years.

As long as industrialized nations consume energy and developing countries increase their fossil fuel consumption the concentration of greenhouse gases in the atmosphere will continue to rise. Researchers predict that temperatures will increase about 2 to 10 degrees Fahrenheit by the end of the century. What's less certain is what rising temperatures mean for the planet.

Some climate models predict subtle changes. Others forecast rising sea levels which could flood coastal areas around the world. Weather patterns could change, making hurricanes more frequent. Severe droughts could become more common in warm areas and species unable to adapt to the changing conditions would face extinction.

Although much remains to be learned about global warming, many organizations advocate cutting greenhouse gas emissions to reduce the impact of global warming.

Consumers can help. By saving energy around the house, switching to compact fluorescent light bulbs and driving fewer miles in the car each week. These simple changes may help keep the Earth cooler in the future.