



THE WOODS HOLE RESEARCH CENTER

*149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax 508.540-9700 · www.whrc.org*

CO2 Emissions Continue Significant Climb

The annual rate of increase in carbon dioxide emissions from fossil fuels has more than tripled in this decade, compared to the 1990s, reports an international consortium of scientists, who paint a bleak picture of the Earth's future unless "CO2 emissions [are] drastically reduced."

These CO2 emissions increased at a rate of 3.4% per year from 2000 to 2008, in contrast to 1% each year in the previous decade, scientists from the Global Carbon Project report in the current issue of *Nature Geoscience*. The team comprises some 30 researchers from around the world, including Richard A. Houghton, senior scientist and acting director of the Woods Hole Research Center and Scott C. Doney, senior scientist at the Woods Hole Oceanographic Institution.

Since 2000, the scientists documented an overall increase of 29% in global CO2 emissions. They attributed the rise to increasing production and trade of manufactured products, particularly from emerging economies, the gradual shift from oil to coal and the planet's waning capacity to absorb CO2.

Doney led a team that developed ocean-model simulations for estimating the historical variations in air-sea CO2 fluxes.

"Over the last decade, CO2 emissions have continued to climb despite efforts to control emissions," Doney said.

"Preliminary evidence suggests that the land and ocean may be becoming less effective at removing CO2 from the atmosphere, which could accelerate future climate change."

A key element of the report, according to Doney, was the work of Dr. Houghton, acting director of the Woods Hole Research Center (WHRC). "He developed the estimates of carbon emissions from deforestation, a major source of human-driven carbon emissions," Doney said.

"Although the emissions of CO2 from deforestation accounted for only about 15% of total CO2 emissions over the period 2000-2008, reducing deforestation is one of the activities that could contribute significantly to stabilizing the concentration of CO2 in the atmosphere," Houghton said. Negotiations at COP-15 in Copenhagen next month will take up this issue in earnest.

WHOI and WHRC, along with the Marine Biological Laboratory, make up the Woods Hole Consortium, an alliance that focuses on the interlocking issues of climate change and ecosystems health and human well-being.