



Media Release



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Human emissions rise 2% despite GFC

Despite the economic effects of the global financial crisis (GFC), carbon dioxide emissions from human activities rose 2 per cent in 2008 to an all-time high of 1.3 tonnes of carbon per capita per year, according to a paper published today in *Nature Geoscience*.

The paper – by scientists from the internationally respected climate research group, the Global Carbon Project (GCP) – says rising emissions from fossil fuels last year were caused mainly by increased use of coal but there were minor decreases in emissions from oil and deforestation.

"The current growth in carbon dioxide (CO₂) emissions is closely linked to growth in Gross Domestic Product (GDP)," said one of the paper's lead authors, CSIRO's Dr Mike Raupach.

"CO₂ emissions from fossil fuel combustion are estimated to have increased 41 per cent above 1990 levels with emissions continuing to track close to the worst-case scenario of the Intergovernmental Panel on Climate Change (IPCC).

"There will be a small downturn in emissions because of the GFC, but anthropogenic emissions growth will resume when the economy recovers unless the global effort to reduce emissions from human activity is accelerated."

The GCP estimates that the growth in emissions from developing countries increased in part due to the production of manufactured goods consumed in developed countries. In China alone, 50 per cent of the growth in emissions from 2002 to 2005 was attributed to the country's export industries.

According to the GCP's findings, atmospheric CO₂ growth was about four billion metric tonnes of carbon in 2008 and global atmospheric CO₂ concentrations reached 385 parts per million – 38 per cent above pre-industrial levels.

According to co-author and GCP Executive Director, CSIRO's Dr Pep Canadell, the findings also indicate that natural carbon sinks, which play an important role in buffering the impact of rising emissions from human activity, have not been able to keep pace with rising CO₂ levels.

"On average only 45 per cent of each year's emissions remain in the atmosphere," Dr Canadell said.

"The remaining 55 per cent is absorbed by land and ocean sinks.

"However, CO₂ sinks have not kept pace with rapidly increasing emissions, as the fraction of emissions remaining in the atmosphere has increased over the past 50 years. This is of concern as it indicates the vulnerability of the sinks to increasing emissions and climate change, making natural sinks less efficient 'cleaners' of human carbon pollution."

More than 30 experts from major international climate research institutions contributed to the GCP's annual *Global Carbon Budget* report – now considered a primary reference on the human effects on atmospheric CO₂ for governments and policy-makers around the world.

Image available at: <http://www.scienceimage.csiro.au/mediarelease/mr09-206.html>

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