



Media Release

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Human emissions rise 2% despite global financial crisis

Despite the economic effects of the global financial crisis (GFC), carbon emissions from human activities rose 2 per cent in 2008 to an all-time high of 1.3 tons 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) – said that rising emissions from fossil fuels were caused mainly by increased use of coal but that 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, Dr Mike Raupach of Commonwealth Scientific and Industrial Research Organization (CSIRO).

“CO₂ emissions from fossil fuel combustion 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),” Dr Raupach said. “There will be a small downturn in emissions because of the GFC, but emissions growth will resume when the economy recovers unless the global effort to reduce emissions is accelerated.”

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 from exports.

According to the GCP’s findings, atmospheric CO₂ growth was about four billion metric tonnes of carbon (4 PgC) in 2008 and global atmospheric CO₂ concentrations reached 385 parts per million – 38 per cent above pre-industrial levels.

According to GCP Executive Director at National Institute for Environmental Studies (NIES) Japan Dr Shobhakar Dhakal, 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 Dhakal 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.”

The study also highlights the stark difference of contributions by developing and developed countries with and without accounting the CO₂ embodied in the international trade. “The contribution of developed countries (Annex B of UNFCCC) for CO₂ emissions is 45% in 2008. But, if we take into account the embodied carbon in international trade, their contribution surpasses that of the developing countries”, says Dr. Dhakal based on GCP coordinated *Global Carbon Budget 2008*.

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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.

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Further information available at:
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