



Emissions rising faster, not falling



Total emissions from India, China and other developing countries are rising faster than those from the developed world. iStockphoto

Scientists from the internationally renowned Global Carbon Project say global carbon emissions rose rapidly last year, with developing nations such as China and India accounting for more than half of the global community's output of carbon dioxide.

In their recent report, they also warned that anthropogenic carbon dioxide emissions – largely from fossil fuel use – had grown about four times faster from 2000–2007 than during the 1990s, despite emission

reduction efforts by the 37 nations signed up to the Kyoto Protocol.

The project's Australian-based Executive Director, CSIRO's Dr Pep Canadell, says total annual emissions from developing countries now exceed those from the developed world. China's total emissions are higher than the US, and India is set to overtake Russia to become the world's third largest carbon dioxide emitter.

Methane levels are also on the rise again, after eight years of near-zero growth, according

to a paper co-authored by CSIRO's Dr Paul Fraser and published in *Geophysical Research Letters*.

Methane is the second most significant greenhouse gas after carbon dioxide, accounting for nearly 20 per cent of global warming since the Industrial Revolution. It is emitted from wetlands, rice fields, cattle, forest and grassland fires, coal mines, natural gas and other sources.

Rajendra Pachauri, the head of the UN's Intergovernmental Panel on Climate Change, believes it is still possible for the world to reach an agreement that will avoid the risk of catastrophic global warming. Dr Pachauri says world attention on climate change would increase despite the current economic crisis, leading people to call for tougher action to keep global temperatures from rising above 2–2.4°C.

'I think unbridled capitalism without any regulation, without some control, is something people are not going to accept now. Therefore there is going to be an effort to define how government and business and individuals can work together to see that issues like climate change can be handled effectively.'
www.globalcarbonproject.com

Consumer guide to carbon offset providers

The Total Environment Centre (TEC), CHOICE and the Institute of Sustainable Futures (ISF) have launched what they say is the first independent ranking of Australian carbon offset providers – Carbon Offset Watch.

The guide ranks 20 of the largest offset providers from 'outstanding' to 'adequate' with the most outstanding performers being Climate Friendly, Cleaner Climate, Climate Positive, SMRC (Southern Metropolitan Regional Council) and the Carbon Reduction Institute.

According to the TEC, the Australian carbon offset industry is worth over \$44 million a year and includes more than 50 carbon offset providers. Carbon Offset Watch recommends that consumers purchase offsets only after having first reduced their carbon footprint.

The full results, rankings, reports and tips for buying carbon offsets can be found at www.carbonoffsetwatch.org.au.

The heat is on Australian fisheries and Antarctic krill stocks

Changes in temperature, ocean currents, rainfall and extreme weather events due to global warming could significantly influence fish stocks and marine ecosystems, according to a report launched recently by the Minister for Climate Change and Water, Senator Penny Wong.

The report found that climate change would not only affect the fishing industry, but also the regional and coastal communities it supports.

Among the fisheries impacted would be:

- northern Australian prawn fisheries
- the Tasmanian rock lobster and abalone fisheries, due to the spread of the long-spined sea urchin south along the east coast of Tasmania
- coral reefs, due to increased coral bleaching; this would have flow-on effects for fisheries based on reef-associated species, such as coral trout and red emperor

- northern barramundi, prawn and mud crab fisheries through changes in rainfall patterns.

There may also be new opportunities for some wild fisheries where tropical species shift southward.

In a separate University of Tasmania/Australian Antarctic Division study on the effect of carbon dioxide on Antarctic krill, a researcher found detrimental effects on the development of larvae and eggs from increasing carbon dioxide levels.

Krill are the small ubiquitous crustaceans at the base of the Antarctic food chain, and



Increasing carbon dioxide could reduce stocks of krill. Lili Hale/UTAS

their demise would have a catastrophic impact on other species further up the food chain, including whales, seals and seabirds.
www.climatechange.gov.au/impacts