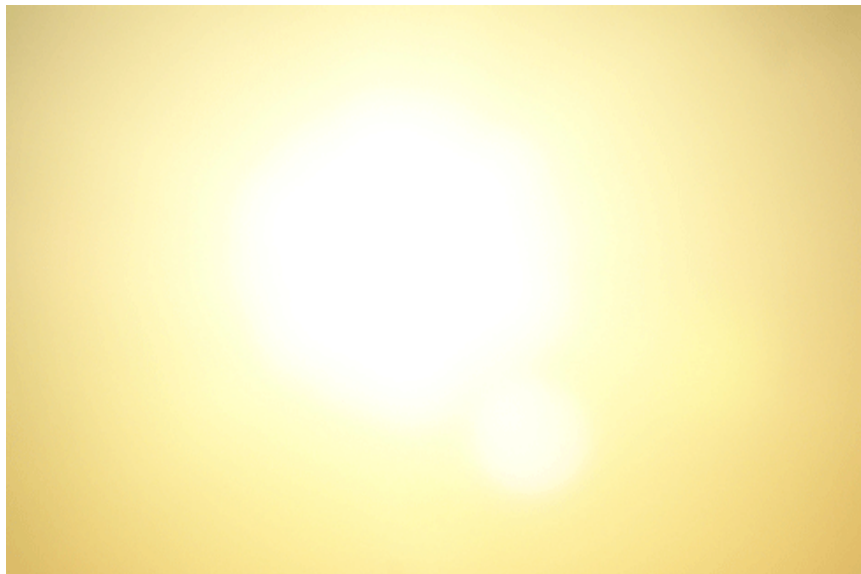


## Emissions put us on track to overshoot two degrees of warming

**Carbon dioxide emission reductions required to limit global warming to 2°C are becoming a receding goal based on new figures in the latest Global Carbon Project (GCP) calculations published in the online edition of *Nature Climate Change*.<sup>1</sup>**



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‘A shift to a 2°C pathway requires an immediate, large, and sustained global mitigation effort,’ GCP executive-director and CSIRO co-author of the paper, Dr Pep Canadell said.

Global CO<sub>2</sub> emissions have increased by 58 per cent since 1990, rising 3 per cent in 2011, and 2.6 per cent in 2012. The most recent figure is estimated from a 3.3 per cent growth in global gross domestic product and a 0.7 per cent improvement in the carbon intensity of the economy.

Dr Canadell said the latest carbon dioxide emissions continue to track at the high end of the range of [Intergovernmental Panel on Climate Change – IPCC] emission scenarios, widening the gap between what we are doing now and what we need to do to keep global warming below 2°C.

He said international climate negotiations need to address the growing gap between the current pathway of global greenhouse emissions and the likely chance of holding the increase in global average temperature under the critical level of 2°C above pre-industrial levels.

The research, led by Dr Glen Peters from CICERO, Norway, compared recent carbon dioxide emissions from fossil fuel combustion, cement production, and gas flaring with emission scenarios used to project climate change by the Intergovernmental Panel on Climate Change (IPCC).

‘We need a sustained global CO<sub>2</sub> mitigation rate of at least 3 per cent if global emissions are to peak before 2020 and

follow an emission pathway that can keep the temperature increase below 2°C,' Dr Peters said.

'Mitigation requires energy transition led by the largest emitters of China, the US, the European Union and India.'

He said that remaining below a 2°C rise above pre-industrial levels will require a commitment to technological, social and political innovations and an increasing need to rely on net negative emissions in future.

The Global Carbon Project, supported by CSIRO and the Australian Climate Change Science Program, generates annual emission summaries contributing to a process of informing policies and decisions on adaptation, mitigation, and their associated costs. The summaries are linked to long-term emission scenarios based on the degree of action taken to limit emissions.

Source: CSIRO

<sup>1</sup> Peters GP, Andrew RM, Boden T, Canadell JG *et al.* (2012) The challenge to keep global warming below 2 °C. *Nature Climate Change*, doi:10.1038/nclimate1783

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