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Fossil Fuel CO$_2$ Emissions

+41% since 1990

Time (years)

billion tons CO$_2$ y$^{-1}$

data: CDIAC; Global Carbon Project
Fossil Fuel CO$_2$ Emissions

Data: CDIAC; Global Carbon Project
Fate of CO$_2$ Emissions (2000-2008)

- 85% (industry)
- 15% (deforestation)
- 45% (atmosphere)
- 29% (natural sinks)
- 26% (sea uptake)

Data: Global Carbon Project

The Copenhagen Diagnosis
Updating the World on the Latest Climate Science
www.copenhagendiagnosis.com
Global Temperature Change Since 1980 from GISS Data

30-year linear trend
range of natural variability

2009 (preliminary)
Observed and Modeled Arctic Sea-ice Extent
The 2 ºC Limit
To stay below $2^\circ$C (with probability 66 - 75%) we can still emit 700 – 800 gigatons CO$_2$ until 2050.

At current rate we will have used up this budget in 20 years.

Meinshausen et al 2009
A Race Against Time

CO₂ budget 2010-2050: 750 Gt (Meinshausen et al. 2009)

- Peak 2011
- Peak 2020
- -80% in 2050