Impacts, mitigation, stabilisation

News in climate science since IPCC’s last report
EU side event Copenhagen, 15 December 2009

Leo Meyer
Impacts and vulnerability

- New findings since 2006 confirm or reinforce main findings WG II IPCC 2007
- Large scale changes more apparent
- Carbon storage capacity forests may decrease
- Crops generally negatively affected > 2 degrees
- Coral reefs severely threatened
Projections Acidification of oceans unprecedented

Ocean acidification

Netherlands Environmental Assessment Agency
Growth in GHG gases slows down

Global greenhouse gas emissions by region and gas

[Graph showing global greenhouse gas emissions by region and gas, with a legend indicating different gases and regions.]

Netherlands Environmental Assessment Agency

Extreme climate change 12 Dec 09
Current emissions are within IPCC range

Greenhouse gas emissions, IPCC scenarios and historic trend

Long term

Gt CO₂ eq

Historic trend
Uncertainty range from literature

A1FI
A1b
B1
B2

Short term

Gt CO₂ eq

1970 1990 2010 2030 2050

Netherlands Environmental Assessment Agency

Extreme climate change 12 Dec 09
Mitigation in 2030 at least offsets growth in emissions

Emission reduction relative to baseline per sector, 2030

Netherlands Environmental Assessment Agency

Extreme climate change 12 Dec 09
For 2 degrees, emissions must curb around 2020