

21 April 2010 20:17 UK

# 'Paltry' Copenhagen carbon pledges point to 3C world

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Poorer nations are unlikely to make a low-carbon switch without a Western lead

**Pledges made at December's UN summit in Copenhagen are unlikely to keep global warming below 2C, a study concludes.**

Writing in the journal *Nature*, analysts at the Potsdam Institute for Climate Impacts Research in Germany say a rise of at least 3C by 2100 is likely.

The team also says many countries, including EU members and China, have pledged slower carbon curbs than they have been achieving anyway.

They say a new global deal is needed if deeper cuts are to materialise.

"There's a big mismatch between the ambitious goal, which is 2C... and the emissions reductions," said Potsdam's Malte Meinshausen.

“ It is like racing towards the cliff  
and hoping you stop just before it  
”

Dr Malte Meinshausen

"The pledged emissions reductions are in most cases very unambitious," he told BBC News.

In their *Nature* article, the team uses stronger language, describing the pledges as "paltry".

"The prospects for limiting global warming to 2C - or even to 1.5C, as more than 100 nations

demand - are in dire peril," they conclude.

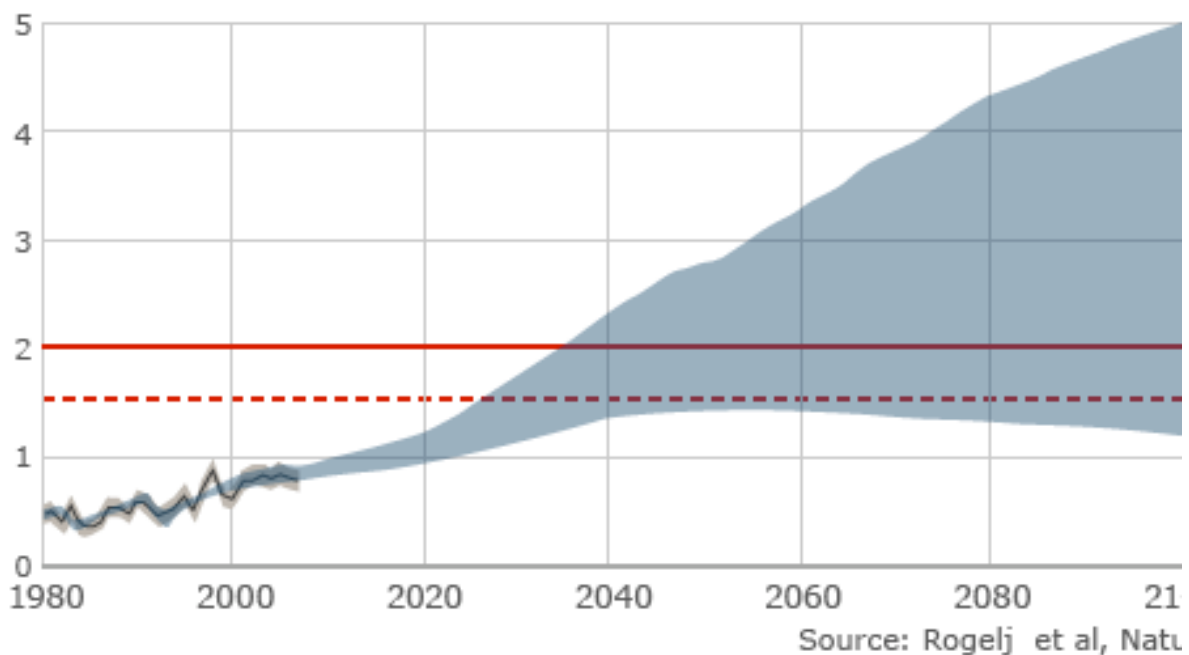
Between now and 2020, global emissions are likely to rise by 10-20%, they calculate, and the chances of passing 3C by 2100 are greater than 50%.

According to the Intergovernmental Panel on Climate Change (IPCC), this implies a range of serious impacts for the world, including

- significant falls in crop yields across most of the world
- damage to most coral reefs
- likely disruption to water supplies for hundreds of millions of people.

## Projected global temperature increase

Temperature rise from pre-industrial times °C



Chances of a 3C rise are higher than evens, the team calculates (*simplified from Potsdam Institute's Nature paper*)

More than 120 countries have now associated themselves with the Copenhagen Accord, the political document stitched together on the summit's final day by a small group of countries led by the US and the BASIC bloc of Brazil, China, India and South Africa.

### CLIMATE CHANGE GLOSSARY

Select a term from the dropdown:

Glossary  
Adaptation  
Annex I countries  
Annex II countries  
Anthropogenic climate change  
Aosis  
AR4  
Atmospheric aerosols  
Bali action plan  
Bali roadmap  
Baseline for cuts  
Biofuel  
Black carbon  
Boxer-Kerry bill  
Business as usual  
Cap and

tradeCarbon  
capture and storage (CCS)Carbon  
dioxide  
(CO<sub>2</sub>)Carbon dioxide (CO<sub>2</sub>)  
equivalentCarbon footprintCarbon  
intensityCarbon leakageCarbon  
neutralCarbon offsettingCarbon  
sequestrationCarbon sinkCertified  
Emission Reduction (CER)Clean  
Coal TechnologyClean Development  
Mechanism  
(CDM)Climate  
changeCFCCO<sub>2</sub>Commitment  
periodCOP15Country in  
transitionDangerous climate  
changeDeforestationEmission Trading  
Scheme (ETS)EU Burden-sharing  
agreementFeedback loopFlexible  
mechanismFossil\_fuelsG77Geological  
sequestrationGlobal average  
temperatureGlobal energy budgetGlobal  
dimmingGlobal warmingGlobal  
Warming Potential (GWP)Greenhouse  
gases (GHGs)Greenhouse effectHockey  
stickIPCCJoint implementationKyoto  
ProtocolLDCsLULUCFMajor Economies  
Forum on Energy and  
ClimateMethaneMitigationNairobi work  
programNatural greenhouse effectNon-  
annex I countriesOcean  
acidificationppm (350/450)Per-capita  
emissionsPre-industrial levels of  
carbon dioxideREDDRenewable  
energyStern  
reviewTechnology transferTipping  
pointTwenty-twenty-twenty (20-20-20)  
UNFCCCWaxman-Markey  
energy billWeather

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The accord "recognises" the 2C target as indicated by science. It was also backed at last year's G8 summit.

Many of those 120-odd have said what they are prepared to do to constrain their greenhouse gas emissions - either pledging

cuts by 2020, in the case of industrialised countries, or promising to improve their "carbon intensity" in the case of developing nations.

Some of the pledges are little more than vague statements of intent. But all developed countries, and the developing world's major emitters, have all given firm figures or ranges of figures.

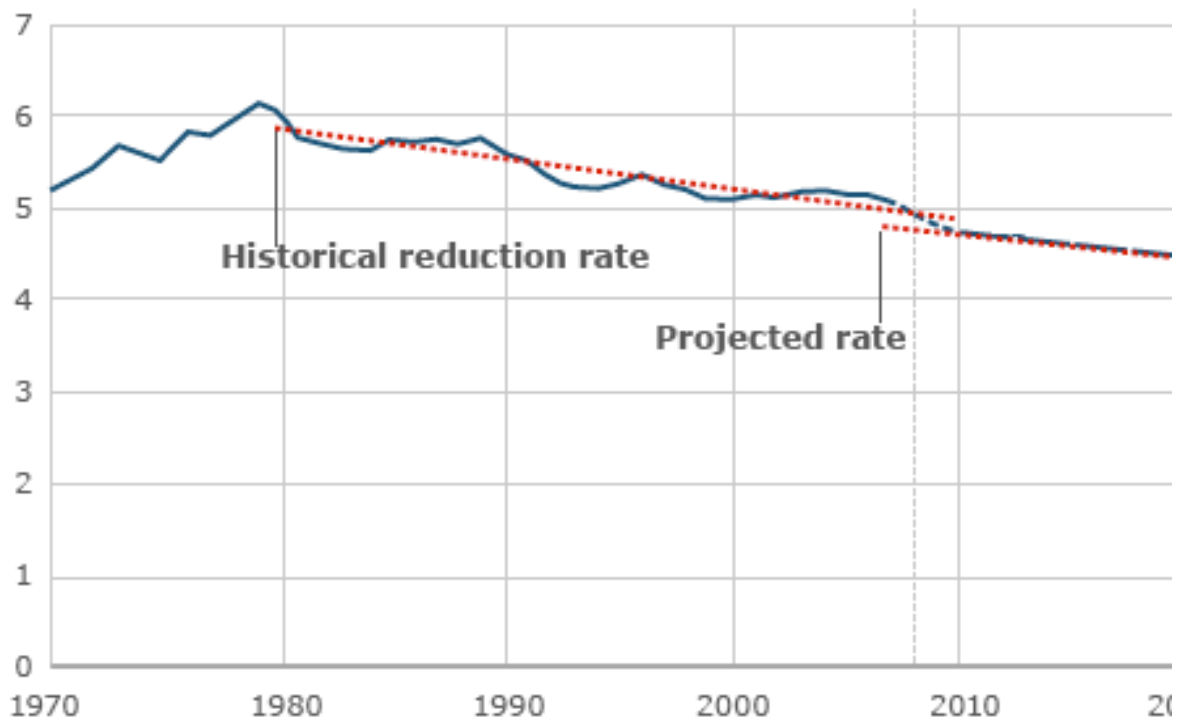
The EU, for example, pledges to cut emissions by 20% from 1990 levels by 2020; China promises to improve carbon intensity by 40-45% by 2020 compared against 2005; and Australia vows an emission cut of 5-25% on 2000 levels by 2020.

The Potsdam team concludes that many of the detailed pledges are nowhere near as ambitious as their proponents would claim.

They calculate that the EU's 20% pledge implies an annual cut of 0.45% between 2010 and 2020, whereas it is already achieving annual reductions larger than that.

### EUROPE'S 'AMBITIOUS' CARBON CUTS

GHG Emissions, GtCO<sub>2</sub> eq/yr



Source: Potsdam Instit

The Potsdam team calculates that the EU's emissions have fallen on average by 0.6% per year since 1980. During 2009, emissions from the bloc's power sector alone fell by 11% owing to the recession. Consequently, the current 20% by 2020 pledge equates to 0.45% per year - less than the historical average.

China's 40% minimum pledge also amounts to nothing more than business as usual, they relate; and among developed countries, only pledges by Norway and Japan fall into the 25-40% by 2020 range that the Intergovernmental Panel on Climate Change (IPCC) recommends as necessary to give a good chance of meeting the 2C target.

### **Hot air**

Whereas many countries, rich and poor, have indicated they are willing to be more ambitious if there is a binding global deal, the Potsdam team notes that in the absence of a global deal, only the least ambitious end of their range can be counted upon.

Writing in the BBC's Green Room this week, Bryony Worthington from the campaign group Sandbag argues that the EU can easily move to its alternative higher figure of 30% - and that it must, if it wants to stimulate others to cut deeper.



**EU can increase  
carbon ambition**

"Many countries are looking to Europe to show how it is possible to achieve growth without increasing emissions," she said.

"Only when they see that this is possible will they be inclined to adopt absolute reduction targets of their own."

An additional factor flagged up in the analysis is that many countries have accrued surplus emissions credits under the Kyoto Protocol.

Countries such as Russia and other former Eastern bloc nations comfortably exceeded their Kyoto targets owing to the collapse of Communist economies in the early 1990s.

Without a binding global agreement preventing the practice, these nations would be allowed to put these "banked" credits towards meeting any future targets - meaning they would have to reduce actual emissions less than they promised.

These "hot air" credits could also be traded between nations.

### **Stern words**

This is not the first analysis of the Copenhagen Accord pledges, but it is one of the starkest.

Lord Stern's team at the Grantham Research Institute for Climate Change and the Environment in London has also run the figures; and although their conclusions on the numbers are similar, they do not see things in quite such a pessimistic light.

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The Bolivian-hosted  
"Mother Earth"  
summit is lobbying  
for faster cuts

"You cannot characterise an emissions path for a country or the world by focusing solely on the level in 2020 or any other particular date," said the institute's principal research fellow Alex Bowen.

"It is the whole path that matters, and if more action is taken now to reduce emissions, less action will be required later, and vice versa."

The Potsdam team acknowledges that if emissions do rise as they project, it would still be possible to have a reasonable chance of meeting 2C if very strict carbon curbs were applied thereafter, bringing emissions down by 5% per year or so.

"In an ideal world, if you pull off every possible emission reduction from the year 2021 onwards, you can still get to get to 2C if you're lucky," said Dr Meinshausen.

"But it is like racing towards the cliff and hoping you stop just before it."

They argue that positive analyses may "lull decision-makers into a false sense of security".

The UN climate process continues through this year, with many countries saying they

still want to reach a binding global agreement by December.

But stark divisions remain between various blocs over emission cuts, finance, technology transfer and other issues; and it is far from certain that all important countries want anything more binding than the current set of voluntary national commitments.

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