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Scientists Issue Bali Climate Change Warning

ScienceDaily (Dec. 7, 2007) — More than 200 leading climate scientists have warned the United Nations Climate Conference of the need to act immediately to cut greenhouse gas emissions, with a window of only 10-15 years for global emissions to peak and decline, and a goal of at least a 50 per cent reduction by 2050.

The roll-call of top climate researchers includes five University of East Anglia scientists: Prof Corinne Le Quéré (also of the British Antarctic Survey), Prof Andrew Watson, Dr Dorothee Bakker, Dr Erik Buitenhuis and Dr Nathan Gillett.

The signatories warn that if immediate action is not taken, many millions of people will be at risk from extreme events such as heat waves, drought, floods and storms, with coasts and cities threatened by rising sea levels, and many ecosystems, plants and animal species in serious danger of extinction.

The researchers, who include many of the world's most acclaimed climate scientists, have issued the 'Bali Climate Declaration by Scientists' in which they call on government negotiators from the 180 nations represented at the meeting to recognize the urgency of taking action now. They say the world may have as little as 10 years to start reversing the global rise in emissions.

Prof Le Quéré said: "Climate change is unfolding very fast. There is only one option to limit the damages: stabilise the concentration of CO₂ and other greenhouse gases in the atmosphere.

"There is no time to waste. I urge the negotiators in Bali to stand up to the challenge and set strong binding targets for the benefit of the world population."

The Bali Declaration emphasises the current scientific consensus that long-term greenhouse gas concentrations need to be stabilised at a level well below 450ppm CO₂e (450 parts per million measured in carbon dioxide equivalent).

Building on the urgency of the recent Synthesis Report of the Intergovernmental Panel on Climate Change (IPCC) released on 17 November in Valencia, Spain, the declaration calls on governments to reduce emissions "by at least 50 per cent below their 1990 levels by the year 2050".

The Bali Declaration endorses the latest scientific consensus that every effort must be made to keep increases in the globally averaged surface temperature to below 2 degrees C. The scientists say that "to stay below 2 degrees C, global emissions must peak and decline in the next 10 to 15 years".

The critical reductions in global emissions of greenhouse gases and the atmospheric stabilisation target highlighted in the Bali Declaration places a tremendous responsibility on the Bali United Nations Framework Convention on Climate Change.

Negotiations at Bali must start the process of reaching a new global agreement that sets strong and binding targets and includes the vast majority of the nations of the world. The Bali Declaration concludes:

"As scientists, we urge the negotiators to reach an agreement that takes these targets as a minimum requirement for a fair and effective global climate agreement."

Saturday, 15 December 2007, 16:03 GMT

At a glance: Bali climate deal

The UN climate change convention has concluded in the Indonesian island of Bali.

The agreement launches a two-year negotiating process - the "Bali roadmap" - aiming to secure a binding deal at the 2009 UN summit in Denmark.

Here are some key elements of the roadmap and other issues agreed in Bali.

CUTTING EMISSIONS

Acknowledges that evidence for the planet warming is "unequivocal", and that delays in reducing emissions increase the risks of "severe climate change impacts".

Windmills in Maharashtra

Clean technologies like wind turbines will be spread

Recognises that "deep cuts in global emissions will be required to achieve the ultimate objective" of the UN climate convention, namely "avoiding dangerous climate change".

Decides to look at "a long-term global goal for emission reductions".

Developed nations to take on commitments that are "measurable, reportable and verifiable", and "nationally appropriate". May or may not include quantified, binding targets for all or some.

For developing nations, "measurable, reportable and verifiable" actions "in the context of sustainable development, supported by technology and enabled by financing and capacity-building" - ie only with Western support.

FORESTS

Pledges to consider "policy approaches and positive incentives" to reduce

deforestation and conserve forest cover.

Funds pledged to World Bank to initiate pilot projects under the banner of Reducing Emissions from Deforestation in Developing countries (Redd).

ADAPTATION

Enhanced co-operation to "support urgent implementation" of measures to protect poorer countries against climate change impacts.

Acknowledges that economic diversification can "build resilience".

Resolves to consider ways of reducing the occurrence or damage from natural disasters.

TECHNOLOGY TRANSFER

Will consider how to "remove obstacles to, and the provision of financial and other incentives for, scaling up" the transfer of clean energy technologies from industrialised nations to the developing world.

Decides to re-instate an expert group on technology transfer to advise developing countries.

TIMESCALES

A subsidiary body will begin work on the Bali roadmap as soon as possible. Views of parties to be sought by late February, and the first meeting in March or April.

Further review meetings scheduled; process to complete at 2009 UN summit in Copenhagen.

Saturday, 15 December 2007, 15:22 GMT

US sets terms for climate talks



The deal should lead to better protection for tropical forests

Delegates at the UN summit in Bali have agreed a deal on curbing climate change after days of bitter wrangling.

Agreement was reached after a U-turn from the US, which had wanted firmer commitments from developing countries.

Environment groups said they were disappointed by the lack of firm targets for reducing emissions.

The "Bali roadmap" initiates a two-year process of negotiations designed to agree a new set of emissions targets to replace those in the Kyoto Protocol.

“ We said we needed a roadmap, but this conference has failed to give us a clear destination ”

Tony Juniper, Friends of the Earth

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The EU had pressed for a commitment that industrialised nations should commit to cuts of 25-40% by 2020, a bid that was implacably opposed by a bloc containing the US, Canada and Japan.

The final text does not mention specific emissions targets, but does acknowledge that "deep cuts in global emissions will be required to achieve the ultimate objective" of avoiding dangerous climate change.

It also says that a delay in reducing emissions will make severe climate impacts more likely.

'Spirit of flexibility'

"This is a real breakthrough, a real opportunity for the international community to successfully fight climate change," said Indonesian Environment Minister Rachmat Witoelar, who served as conference president, at the conclusion of the talks.

UN Secretary General Ban Ki-moon said he appreciated "the spirit of flexibility" shown by key delegations - and was aware that "there is divide of position between and among countries".



The US was the principal focus of opposition from activists

"But as this global warming is an issue which affects the whole humanity, whole planet earth, we must have co-ordinated and concerted efforts to address this issue," Mr Ban said.

In London, UK Prime Minister Gordon Brown declared: "This agreement is a vital step forward for the whole world.

"The Bali roadmap agreed today is just the first step. Now begins the hardest work, as all nations work towards a deal in Copenhagen in 2009 to address the defining challenge of our time."

Environmental groups and some delegates have criticised the draft as being weak and a missed opportunity.

"This deal is very disappointing," said Tony Juniper of Friends of the Earth.

"We said we needed a roadmap, but this conference has failed to give us a clear destination."

Emotional times

As talks overran their scheduled close by more than a day, delegates from the EU, US and G-77/China embarked with UN officials on a series of behind-the-scenes consultations aiming to break the remaining deadlock.



Bali deal: At a glance

The EU and US agreed to drop binding targets; then the EU and China agreed to soften language on commitments from developing countries.

With delegates anxious to make a deal and catch aeroplanes home, the US delegation announced it could not support the amended text.

A chorus of boos rang out. And a member of Papua New Guinea's delegation told the US: "If you're not willing to lead, please get out of the way."

Shortly after, the US delegation announced it would support the revised text after all.

There were a number of emotional moments in the conference hall - the UN's top climate official Yvo de Boer in tears after being accused by China of procedural irregularities, and cheers and hugs when the US indicated its acceptance.

On the road

The document coming out of the meeting, the "Bali roadmap", contains text on emissions cuts, the transfer of clean technology to developing countries, halting deforestation and helping poorer nations protect their economies and societies against impacts of climate change such as rising sea levels and falling crop yields.

The roadmap sets the parameters and aims for a further set of negotiations to be finalised by the 2009 UN climate conference, to be held in Denmark.

By that stage, parties should have agreed on a comprehensive plan for curbing global warming and adapting to its impacts.

This will include:

- emissions targets for industrialised countries, possibly but not necessarily binding
- some softer form of targets or ambitions for major developing countries
- mechanisms for leveraging funds from carbon trading to fund adaptation projects

Earlier, consensus was reached on the principle of rewarding poorer

countries to protect their forests.

This is widely acknowledged as the cheapest single way of curbing climate change, and brings benefits in other environmental areas such as biodiversity and fresh water conservation.

Delegates agreed on a framework that could allow richer nations and companies to earn "carbon credits" by paying for forest protection in developing countries.

"We need to find a new mechanism that values standing forests," said Andrew Mitchell, executive director of the Global Canopy Programme, an alliance of research institutions.

"Ultimately, if this does its job, [deforestation] goes down to nothing."

Mr Mitchell said the only feasible source of sufficient funds was a global carbon market.

But many economists believe mandatory emissions targets are needed to create a meaningful global market.

6 April 2007, 15:54 GMT 16:54 UK

Billions face climate change risk



The impact of climate change has been a major source of dispute

Billions of people face shortages of food and water and increased risk of flooding, experts at a major climate change conference have warned.

The bleak conclusion came ahead of the publication of a key report by

hundreds of international environmental experts. Agreement on the final wording of the report was reached after a marathon debate through the night in Brussels. People living in poverty would be worst affected by the effects of climate change, the gathered experts said. "It's the poorest of the poor in the world, and this includes poor people even in prosperous societies, who are going to be the worst hit," said Rajendra Pachauri, chairman of the Intergovernmental Panel on Climate Change (IPCC). Mr Pachauri said those people were also the least equipped to deal with the effects of such changes.

Key findings

READ THE IPCC FINDINGS

Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability

[547KB]

Most computers will open this document automatically, but you may need Adobe Reader

[Download the reader here](#)

Analysis: Stark picture

Map: Climate change impact

Outlining the report's findings, Martin Parry, co-chairman of IPCC Working Group II, said evidence showed climate change was having a direct effect on animals, plants and water.

"For the first time, we are no longer arm-waving with models; this is empirical data, we can actually measure it," he told a news conference.

Key findings of the report include:

- 75-250 million people across Africa could face water shortages by 2020
-
- Crop yields could increase by 20% in East and Southeast Asia, but decrease by up to 30% in Central and South Asia
-
- Agriculture fed by rainfall could drop by 50% in some African countries by 2020
-
- 20-30% of all plant and animal species at increased risk of extinction if temperatures rise between 1.5-2.5C
-
- Glaciers and snow cover expected to decline, reducing water availability in countries supplied by melt water

The report states that the observed increase in the global average

temperature was "very likely" due to man-made greenhouse gas emissions.

The scientific work reviewed by IPCC scientists includes more than 29,000 pieces of data on observed changes in physical and biological aspects of the natural world.

Eighty-nine percent of these, it believes, are consistent with a warming world.

Year of reports

Scientists and politicians have welcomed the report.

"This further underlines both how urgent it is to reach global agreement on reducing greenhouse gas emissions and how important it is for us all to adapt to the climate change that is already under way," European Environment Commissioner Stavros Dimas told the Reuters news agency.

Phenomenon	Likelihood
Warmer days. Less cold days/nights	Virtually certain
More warm spells and heatwaves	Very likely
More heavy rain events	Very likely
More areas hit by drought	Likely
More intense tropical cyclones	Likely
More extreme sea levels (not tsunamis)	Likely

Probability definitions:
Virtually certain: over 99%
Very likely: over 90%
Likely: over 66%

SOURCE: IPCC

Farewell to a melting glacier Briny future for Malta

"This is another wake up call for governments, industry and individuals. We now have a clearer indication of the potential impact of global warming, some of which is already inevitable," said Martin Rees, president of the Royal Society.

"The challenge is now to support those people living in the most vulnerable areas so that they are able to adapt and improve their ways of life."

The wording of the summary of the report, which will be sent to world leaders in time for a G8 summit of industrialised nations in June, was finally decided after scientists and government officials from more

than 100 countries worked through the night.

Several delegations, including the US, Saudi Arabia, China and India, had asked for the final version to reflect less certainty than the draft.

It is the second in a series of IPCC reports coming out this year, together making up its fourth global climate assessment.

The first element, on the science of climate change, released in February, concluded it was at least 90% likely that human activities are principally responsible for the warming observed since 1950.

The third part, due in May, will focus on ways of curbing the rise in greenhouse gas concentrations and temperature.

A fourth report in November will sum up all the findings.