

Shadow over Kyoto Protocol threatens UN climate talks

November 21 2011, by Marlowe Hood and Anthony Lucas



Smoke belches from a coal-powered power plant on the outskirts of Linfen, in China's Shanxi province, December 2009. A new round of UN climate talks opens in South Africa next week against a backdrop of record greenhouse-gas emissions but deep frustration in the quest for a solution.

A new round of UN climate talks opens in South Africa next Monday, testing global resolve to tackle what scientists warn is a time bomb with an ever-shorter fuse.

Even as the latest research paints a future of climate-inflicted chaos and misery, the quest for a political solution remains elusive.

Analysts say the UN process is still traumatised by the near-collapse of the 2009 Copenhagen Summit and, in Durban, faces a bustup over the [Kyoto Protocol](#), the only agreement setting legal curbs on [greenhouse](#)

[gases](#).

Brandished by its defenders as a model of climate cooperation between rich and poor, Kyoto's first roster of pledges expires at the end of 2012.

But the treaty has been gravely weakened by the absence of the [United States](#) and the lack of binding constraints over emerging giants such as China and India.

The stage is set for a "very complicated dance" determining whether Kyoto has a future, said Alden Meyer, a [climate negotiations](#) veteran from the Washington-based Union of Concerned Scientists.

"The worst-case scenario leads to gridlock and the collapse of the whole process," he said.

Canada, Japan and Russia have already refused to sign on for a second commitment period, objecting to the lack of legal constraints on the world's biggest carbon polluters.

Europe says it can accept a continuation, provided China and the United States show they are serious about major cuts in the coming years.

Dispatching Kyoto into limbo would be politically devastating.

Next June, world leaders gather for the 20th anniversary of the Rio Summit where the [UN Framework Convention on Climate Change](#) (UNFCCC) was born.

"Durban is the last real opportunity for countries to provide certainty on a future climate regime," says the green group WWF.

"The world's citizens are waiting for a clear signal about what countries

will do in a second commitment period that will help save the planet and its people."

Other think otherwise

"Although the protocol remains an important emblem of multilateralism, it has become, in reality, more of an impediment than a means to genuine progress," Elliot Diringer of the Center for Climate and Energy Solutions, a US thinktank, wrote in the journal Nature last week.

But such big-horizon rhetoric contrasts sharply with the low-key pragmatism that marks the climate process these days, a mood sharpened by financial crisis and austerity.

The new matrix is the Copenhagen Accord, which set down a target of limiting warming to two degrees Celsius (3.6 degrees Fahrenheit), formally adopted by the UN body at last year's talks in Cancun, Mexico.

But no deadline or tools have been set for achieving this goal beyond a voluntary roster of emission curbs.

"The pledges that are on the table right now, we reckon that maybe you get 60 percent of what needs to be done in order to stay below 2 C (3.6 F)," Artur Runge-Metzger, the EU's top negotiator, said in Brussels this month.

"If we move to a 4 C (7.2 F) world, the 2003 (European) summer, where we had this extraordinary heatwave in August, is an average summer in the 2040s and one of the cooler ones in the 2060s."

There were some 70,000 excess deaths across the continent that summer.

Deeply concerned by the widening "gigatonne gap," Europe wants

Durban to set a roadmap towards a global pact by 2015, an idea shared by Australia, Norway and vulnerable small-island states.

But notions of where the roadmap would lead, and how long it might take to get there, vary.

Durban's low expectations are in part a rebound from Copenhagen, where a frantic scramble by 130 heads of state to forge a planet-wide climate deal degenerated into a welter of bitching and backbiting.

The 12-day Durban talks start at the level of senior officials and end with environment ministers. Presidents and prime ministers will be in short supply.

In addition to the haggles over carbon mitigation, the meeting is tasked with advancing a proposed Climate Green Fund, sketched in Copenhagen and launched in Cancun.

The goal is to ramp up provisions to at least 100 billion dollars a year by 2020 to help poor countries fight climate change and adapt to worsening floods, droughts and storms. But talks on the Fund's design have hit a roadblock, with objections raised by the United States and Saudi Arabia.

The Fund remains "an empty shell," UN Secretary General Ban Ki-moon complained last Monday in a speech in the Bangladesh capital of Dhaka.

Meanwhile, the news from [climate](#) science is relentlessly bad.

On November 4, the US Department of Energy reported that 2010 saw the biggest-ever increase in global warming emissions -- a nearly six-percent year-on-year rise from 8.6 billion tonnes to 9.1 billion tonnes, as countries turned to cheap and plentiful coal to meet energy needs.

"Science tells us that we are driving in a fog headed toward a cliff but are unsure just how far away it is," said US scientist Scott Mandia.

"Given this warning, it is quite foolish to be stepping on the accelerator."

Climate change: Factfile on the scientific evidence

Following is a snapshot of scientific evidence for global warming and its impacts ahead of the November 28-December 9 UN climate talks in Durban, South Africa.

Except where stated, the source is the Fourth Assessment Report published by the UN's Intergovernmental Panel on Climate Change (IPCC) in 2007.

-- Evidence of global warming is "unequivocal", with a more than 90-percent probability that humans are largely responsible. The main culprit is greenhouse gas from fossil fuels, which traps solar heat in the atmosphere, warming Earth's surface.

-- Levels of carbon dioxide (CO₂) have risen by around a third since pre-industrial times and are now at their highest in 650,000 years. They surged by 2.3 parts per million (ppm) between 2009 and 2010, according to the World Meteorological Organisation (WMO). This was higher than the average for the 1990s (1.5 ppm) and in the past decade (2.0 ppm).

-- Between 1990 and 2010, there has been a 29 percent increase in "radiative forcing", meaning the warming effect on our climate system, the WMO said. CO₂ in the atmosphere will linger for decades to come, adding to warming even if all emissions stopped tomorrow.

-- Since 1900, sea level has risen by 10-20 centimetres (four to eight inches). Global average surface temperature has risen by 0.8 degrees

Celsius (1.44 degrees Fahrenheit). Average temperatures above land have risen far faster, by 0.91 C (1.64 F) since the mid-20th century, according to the Berkeley Earth Surface Temperature Project.

-- Climate change is already visible in sea-level rise, loss of alpine glaciers and snow cover, shrinking Arctic summer sea ice, thawing permafrost and poleward migration of many animals and plants towards cooler habitats.

-- By 2100, "best estimates" for the rise in global average surface temperatures run from 2.4-4.0 C (4.3-7.8 F) depending on fossil-fuel use. These figures also mask big variations, according to region and country.

-- In 2007, the IPCC projected sea levels will rise by at least 18 cms (7.2 inches) by 2100. Since then, many studies point to the risk of melt-off from the Greenland and West Antarctic ice sheets. Most experts now say a one-metre (39-inch) increase is plausible.

-- 20-30 percent of plant and animal species are threatened with extinction if average global temperatures increase by 1.5-2.5 C (2.7-4.5 F) compared to the average temperature during the two last decades of the 20th century.

-- In Africa, by 2020, up to 75 to 250 million people will be exposed to increased water stress. Yields from rain-fed agriculture in some African countries could be reduced by up to 50 percent. Desert-like areas could expand by five to eight percent by 2080.

-- In Asia, available fresh water will decrease by mid-century. Coastal mega-deltas will be at risk from flooding due to rising seas. Mortality due to diseases associated with floods and droughts will increase.

-- Extreme weather events such as heatwaves, droughts and rainstorms are likely to become more frequent and/or intensive, according to an IPCC special report published on November 18.

-- Stabilising emissions at 445-535 ppm of CO₂ equivalent would limit the overall rise in global warming since pre-industrial times to 2.0-2.8 C (3.6-5.0 F). Concentrations are currently 389 ppm. A level of 450 ppm corresponds roughly to the target of 2.0 C (3.6 F) embraced at the UN climate talks in Cancun in 2010.

-- Countries have to close a CO₂ "gigatonne gap" to meet the 2.0 C (3.6 F) target. Researchers at the Institute for Atmospheric and Climate Science at ETH Zurich calculate emissions would have to fall by 8.5 percent by 2020 compared to 2010 and then continue to decline.

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