

CLIMATE CODE RED

The case for emergency action

War time style rationing is one of the solutions proposed for slashing our carbon emissions, in a new book calling for the most radical transformation of the economy and society since the Industrial Revolution. We've only got 10 years to do it – but it's possible. Alexandra De Blas spoke with the authors.

Imagine swiping your smart card to register your carbon ration every time you fuel up at the bowser. Your personal carbon allowance – which gets debited when you pay for carbon-based services or goods – would be granted annually and its value would decline every year. That strict, citizen-account approach to emissions cutting is being advocated by *Climate Code Red: The Case for Emergency Action*, just published in July.

Co-author Phillip Sutton says, 'the planet is already too hot. We reached a dangerous level of climate change at least two decades ago and the challenge now is to stop releasing new emissions, pull excess carbon out of the atmosphere and take steps to cool the planet.'

Sutton is the convenor of the Greenleap Strategic Institute, a non-profit environmental strategy think tank promoting the very rapid shift to global and local ecological sustainability. His fellow Melbourne-based author, David Spratt, is also a businessman, climate policy analyst and co-founder of Carbon Equity, which advocates carbon allowances as the most equitable means of reducing emissions.

'Very few, if any, people in government get the whole story, so there's a gaping hole between what the science is telling us and the policy response,' says Spratt.

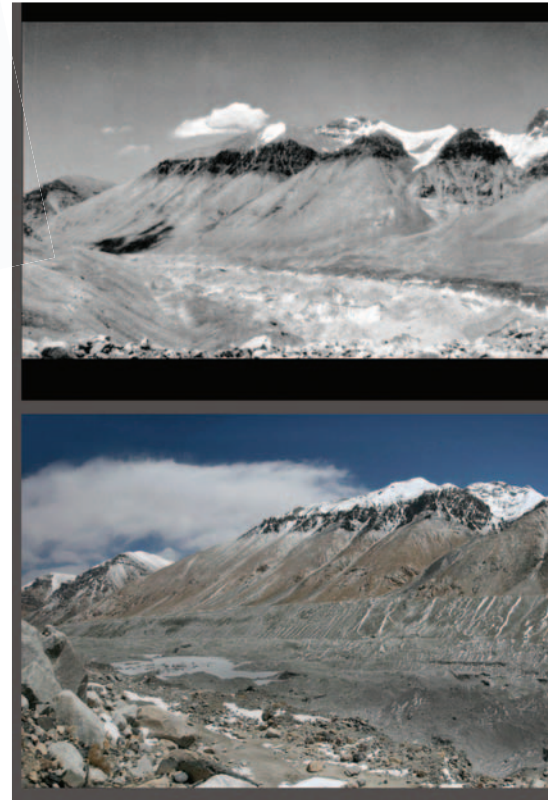
'Politicians think you can negotiate with the laws of physics and chemistry, but you do so at the planet's peril. If business-as-usual pollution continues there will be catastrophic consequences.'

'Code Red' refers to the system employed in hospitals to alert staff that a patient needs advanced life support; it activates an emergency response. The planet, the authors contend, needs that level of life support now.

The tipping point which has signalled the 'code' is the melt of the summer sea-ice in the Arctic. Just two years ago it was forecast to disappear in 2030. In September 2007 the ice cover fell to a record low of 4.13 million square kilometres, a 22 per cent decline on the previous year. At that rate, summer sea-ice could be completely gone within three to five years.

But debate about this season's melt suggests the ice may even vanish this summer.

This melting could kick-start positive feedback loops that escalate warming at the regional and global levels, triggering tipping points that lead to large and abrupt lurches where the environment changes rapidly in unpredictable ways. If the sea-ice disappears, regional temperatures in the Arctic could soar by 5 degrees. The loss of ice could prompt what scientists are

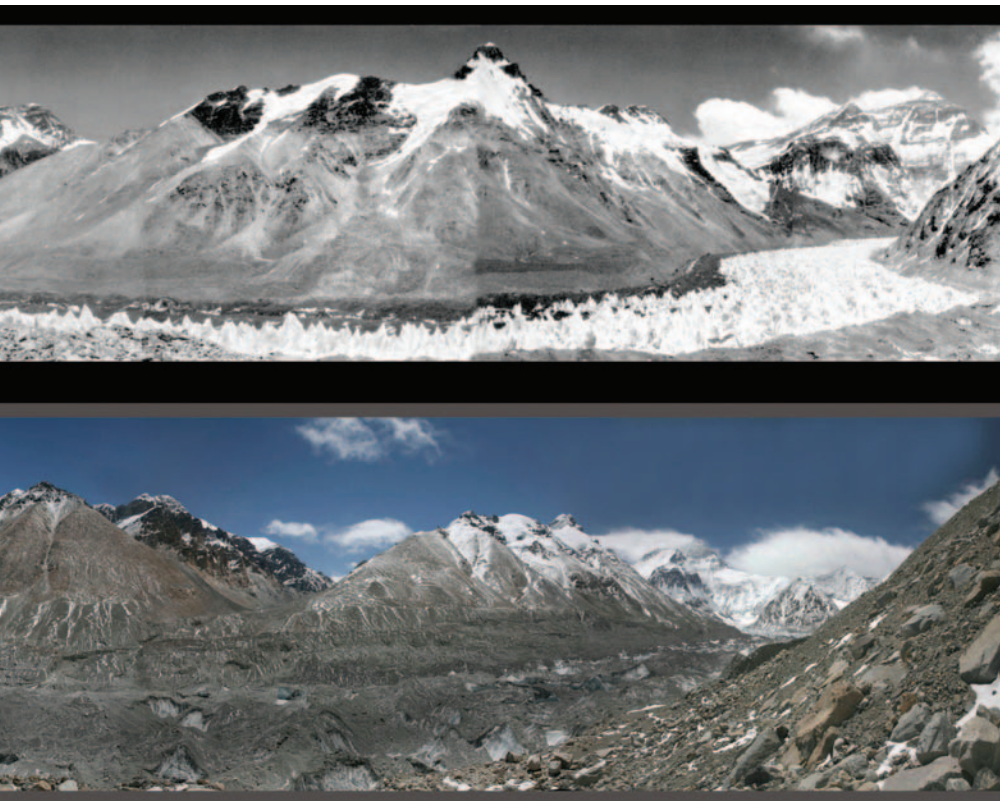


termining an 'albedo flip' where the reflective white ice is replaced by the dark and more heat absorbent water. Higher temperatures would trigger melting of the permafrost and the release of methane, a far more potent greenhouse gas than carbon dioxide.

This positive feedback would exacerbate warming and could push Greenland across a melting threshold. The West Antarctic too is less secure than previously thought. If pollution continues at current rates it could trigger 5 metres or more of sea-level rise by 2100.

Fortunately the positive feedbacks that magnify man-made heating can also work in the opposite direction. James Hansen, head of NASA's Goddard Institute for Space Studies, argues that if we can cool the globe before it reaches a point of no return we have an opportunity to pull the warming back.

The UN Framework Convention on Climate Change commits us to avoiding 'dangerous levels of anthropogenic climate change' – at around 450 parts per million (ppm). Carbon dioxide concentrations in the atmosphere have risen by 38 per cent since measurements began 50 years ago. When all the greenhouse gases are taken into account, they add up to the equivalent of 455 ppm of carbon dioxide. A dangerous level indeed!



The massive ice flow of the Rongbuk Glacier north of Mt Everest in 1968 (top) has since declined dramatically (2007 photo below).

Science Press, China/Greenpeace/John Novis

Global average temperature has already risen by 0.8 degrees above pre-industrial levels and there is another 0.5 already locked in over the next two decades. Many scientists and governments set the dangerous upper limit at 2 degrees of warming (450 ppm CO₂ equivalent). Yet Nicholas Stern in his 2006 economic review was prepared to accept 3 degrees (550 ppm CO₂-eq). The Rudd Labour Government's pre-election commitment of a 60 per cent cut in emissions by 2050 is consistent with a 3 degree target.

An upper limit of 2 degrees is unacceptable to Spratt and Sutton. They say a 2 degree increase is likely to initiate feedbacks in the oceans and ice sheets that could take us past critical tipping points, including the loss of Greenland and the West Antarctic. Other effects include the possible extinction of 15–40 per cent of plant and animal species, dangerous ocean acidification, widespread drought in Australia and other continents and the failure of agricultural crops in many countries.

But 3 degrees would be worse. It would likely see the loss of the Himalayan ice sheet, exposing billions of people in Asia to severe food and water shortages, within decades. The Amazon could collapse and burn and large areas of Earth's land

surface could be rendered uninhabitable by drought and heat. Drought intensity in Australia could triple.

Clearly, none of us would want either of these scenarios, yet it's what we may get if we base our targets on what is economically bearable. Spratt and Sutton see this as 'merely a slower path to catastrophe'.

They call for us to select a target where we know climate conditions will be safe and then design public policy to get us back to that zone. Their safe target for greenhouse gases is under 325 ppm – the level needed to fully restore Arctic sea-ice.

In taking such a strong position, Spratt and Sutton risk being relegated to the radical fringe. But they are part of a growing chorus of voices that recognise this situation as an emergency, including Melbourne University Professor David Karoly, a lead author with the Nobel Prize winning Intergovernmental Panel on Climate Change (IPCC).

'I agree with their conclusion. We've already reached dangerous levels of climate change. The IPCC Synthesis report said that we were at 450 ppm CO₂ equivalent two years ago. If we want to stabilise at 2 degrees, we urgently have to find ways to suck CO₂ out of the atmosphere.'

'The reason we're not experiencing 2 degrees now is that the warming effect is

being masked by aerosols from fossil fuel pollution.'

Professor Karoly, however, disagrees with the increasing use of the term 'safe climate'. 'There is no "safe climate" any more, from now on we are minimising the danger. Even at 325 ppm you can't be absolutely confident that there won't be adverse impacts.'

Spratt and Sutton contend that the economic and social transformation required over the next 10 years is only possible if the world goes onto an emergency footing as it did during the Second World War. During this period, countries dedicated more than a third of their economy to the war effort and innovation flourished.

'The first step required is brutal honesty about the scale of the problem. We must cool the planet by changing our energy systems; the way we move, work and produce', Spratt and Sutton say.

'Zero emissions is the goal and the coal industry will have no part to play in that future.' They argue, 'there isn't time to wait for new clean-coal technologies to be proven. The transition to renewable energy needs to happen now.'

Listening to the debate over rising fuel costs and emissions trading, it's hard to imagine how Australia might leapfrog to an emergency footing. But, despite the enormity of the task it outlines, *Climate Code Red* has generated a strong international response since the online version went live in February. 'It is a sober, balanced analysis, proposing a realistic framework to tackle the emergency', says former oil, gas and coal industry executive, Ian Dunlop.

Here in Australia the newly formed Climate Emergency Network is spreading the message of the book via a PowerPoint presentation, in the style of Al Gore.

'People have begun using it as a campaigning tool,' says an optimistic Phillip Sutton. 'One can now see the beginnings of a movement linking people, responding to the emergency, in all the major countries of the world.'

More information:

www.climatecoderead.org

www.climateemergencynetwork.org