

Climate Code Red – David Spratt & Philip Sutton

You must buy this book as it is becoming more true every day

Summary

The time for partial solutions has expired. We have passed the temperature at which the world becomes unstable. Declaration of a state of emergency is essential in which all resources are committed to achieving a rapid return to a safe climate. Cuts in emissions alone, even to zero, will not be sufficient because existing greenhouse gases and the loss of aerosols will result in further warming. Rapid emission reduction must be accompanied by removal of CO₂ from the atmosphere and global cooling measures.

Key phrases are as follows:-

- 2 It is critical that non-scientists engage with science if all of us are to plot a pathway to a safe climate.....we must cast aside policies that are doomed to fail.
- 4 Transition to global warming will not be linear, like turning up an oven control, but liable to flip without warning into another state, like the rapid loss of the Arctic ice.
Similarly 4 or 5 consecutive drought years in the Amazon could trigger forest fires destroying most of the rainforest.
- 24 Lenny Smith, LSE “We need to drop the pretence that models are nearly perfect.”
- 26 Global temperatures have already exceeded those that thawed Greenland's icecap 130,000 years ago..... and seas were 5 to 6 metres higher than today.
- 28 The majority of the Antarctic ice is contained in the East Antarctic Ice Sheet, the biggest slab of ice on earth which has been in place for 20 million years and if fully melted would raise sea levels by more than 60 metres.
Considered more vulnerable is the West Antarctic Ice Sheet which if melted could raise sea levels by 5 metres.
- 29 Air over the West Antarctic Peninsular has warmed more than 6 degrees since 1950. Beech trees are taking root on the ice fringes due to the warming seas.
200 metre thick Larsen B ice shelf collapsed in 2002 after 12,000 years in place.
- 30 We thought of the Southern Hemisphere climate being inherently more stable but all of our time scales seem to be shortened now.
1978 John Mercer, Ohio State University
- 31 Pine Island Bay “primed for runaway destruction” drains 40% of the West Antarctic ice into the sea.
- 36 'Business as Usual' would almost certainly lead to a 5 metre rise in sea level this century
- 37 Oxygen isotopes in deep ocean fossil plankton indicate that the earth was last 2-3 degrees warmer 3 million years ago with carbon dioxide levels between 350-450 ppm and sea level 15 – 35 metres higher
- 38 IPCC predictions do not take into account collapse of ice sheets and other slow feedbacks like methane release from permafrost.
- 38 Faster sea level rises are well known such as 20 metres in 400 years 14,000 years ago.
- 38 The earth is gaining more heat than it is loosing currently at about 0.5 to 1 watt per square metre. This is sufficient energy to melt ice at one metre of sea level per decade.
- 125 3 simultaneous remedies are proposed as no single measure will act quickly enough.
 1. Cut emissions to zero

2. Remove greenhouse gases from the atmosphere
 3. Global cooling
- 135 What level of temperature is safe? May decide 0.5 degrees above pre-industrial or 0.3 degrees below today's temperature.
It must be a level at which Arctic ice is restoring.
- 137 A Global Emissions Superfund is proposed with countries paying in proportion to their historic emissions
- 139 Arguments for a declaration of emergency
- 143 Description of emergency actions
- 152 When “reasonable” is not enough – repeated failure to act.
- 155 **Circular reluctance to state the truth and set true targets**
- 157 **No policy group has ever asked “What do we need to do to achieve a safe climate future?”**
- 158 **Public safety considerations are 'risk averse'. No major trade off's are possible.**
- 160 Environment organisations downplay the risk to gain donations.
- 171 The Advocacy Dilemma is the gap between what is reasonable to propose and what needs to be done.
Actions must pass the test of “Double Practicality”. The actions proposed must be capable of being implemented and when fully implemented, of fully solving the problem.
- 173 Face the facts even though we do not have all the answers
Churchill in WW2 said he 'had no need of cheering dreams'.
- 174 How do you motivate people with brutal facts?
Jim Collins – expending energy to motivate people is largely a waste of time. Get the right people on the bus and they will be self motivated.
- 179 Describes 'New Business as Usual' which invites us to build, drive, buy, fly, shop, eat, drink, and wear sustainability. Double edged fraud.
- 180 Inadequate actions:- Clean Coal, Current Biofuels, Voluntary Carbon Offsets, Clean Development Mechanism, Carbon Trading
- 195 *Zero Carbon Britain 2007* illustrates how UK could be powered by renewables by 2020 without nuclear. A similar report in USA. The gap is in political and social will.
- 201 An areas 35 square kilometres of solar collectors could power Australia.
- 211 Can politics as usual solve the problem? Too slow. We need to
- invent plan and model the new economy
 - build physical infrastructure to deliver safe climate services
 - develop national efficiency programmes and assist householders
 - phase out fossil fuel power stations replacing with sustainable energy
 - shift transport to rail
 - provide expertise to less developed nations
 - re-skill workers
 - develop carbon capture industries
- 227 Emergencies provide employment and economic growth.
From 1940 to 1945 USA unemployment fell from 14.6% to 1.9% while GNP grew 55%.
Wages grew 65% over the course of the war.
Savings increased through war bonds and 40% of the economy was directed towards the war effort.

- 233 John Paul Lederach, author of *Building Peace*, argues that (major) change needs to be catalysed at 3 levels: the population at large; the managerial-cultural-and-innovation elites; and the controlling elite.
- 233 There is no complete sustainability emergency package that is ready to be put into use. It must be developed.
- 234 Mobilising Community Networks
- 235 Building deliberative democracy. We need to help large numbers of people look at all the issues in depth and over time.
Example The Victorian Women's Trust in Watermark Australia.
2000 people across Australia in 200 groups met for 2 periods of 3 to 5 months each discussing how the water system works and could be improved in Australia.
Resulting book "Our Water Mark" distributed 37,000 copies across Australia
- 236 Figuring out how it can work.
- 237 Experiencing the climate options includes
Virtually experiencing climate catastrophe and alternative futures.
Books like Mark Lynas "Six Degrees" and Fred Pearce "With Speed and Violence"
Science fiction scenarios in which turnaround is achieved in spite of distractions, vested interests and inertia.
- 237 Creating a radical innovation programme to match fundamental human needs in an emergency (Netherlands Government Study *Sustainable Technology Development 1990*)
- 238 Learn from the rapid transformations of the tiger economies.
- 238 Developing a Public Computer Modelling Agency to tackle unanswered questions like:-
How much would the complete loss of the Arctic Ice raise regional and global temperatures?
No specific modelling has been done even though ice loss looks imminent.
How much greenhouse gas would have to be taken out of the atmosphere to trigger sufficient cooling to get the Summer Arctic Ice back?
What would a safe climate emissions scenario look like?
What is our capacity to produce biochar using existing waste biomass?
- 241 We have gone too far. The planet is already too hot.
We are not standing on the threshold of dangerous climate change; we passed that doorway decades ago.
- 243 The total quantity of all greenhouse emissions would be best controlled by rationing.
Existing cap and trade systems are generally deficient: they include only some emissions, they give away permits, they legitimise rorts, and they fail to deal effectively with cross border problems.
A system of personal carbon allowances considered by the British Government looks capable of guaranteeing the achievement of the national emissions target.
- 244 Carbon rationing method explained
- 245 UK Rationing in WW2 was a response to the unhappy experience of free market trading in WW1 where there was rampant profiteering in the face of shortages.
- 246 UK studies show carbon allowances would work better than a carbon tax even if tax revenues were recycled to low income households. Good arguments support this.
- 247 David Miliband, 2006, *Carbon rationing can limit the carbon emissions by end users, based on the science, and then use financial incentives to drive efficiency and innovation.*
- 248 For several decades we will face the challenge to satisfy the basic needs of more than 6 billion people while, at the same time, carrying out the most profound rebuilding of the world economy since the beginning of the industrial revolution. There will also be the

challenge to take at least 200 billion tons of CO2 out of the atmosphere and of helping the world to cool down in other ways until these measures can take effect.

This will require high levels of output and employment

249 Are there conditions in which economic growth could go on indefinitely while still being ecologically sustainable? Debate

251 How much of the world's economic capacity will be needed compared with the last major mobilisation?

252 Military Burden 1939-1945 (as a percentage of national income)

Harrison M (2000) *Economics of the Second World War* :CUP

	1939	1940	1941	1942	1943	1944
US	1	2	11	31	42	42
UK	15	44	53	52	55	53
Ger	23	40	52	64	70	
Jap	22	22	27	33	43	76

252 As a rough estimate A\$300-400 billion invested in renewable energy efficiency in Australia would allow the nation to close every coal fired electricity generator, transform key industries and the transport sector and provide a just transition.

This would be just 3-4% of the total production for 10 years.

A very cheap investment with dividends forever.

257 Group Work – A Climate Code Red Scenario

258 Scenarios to explore in groups

1. failed co-operation (everyone for themselves) in which no real agreement is reached between the most influential players.
2. The agreement between critical parties on partial measures
3. A timely agreement of critical parties on safe climate measures (full strength measures that solve the problem)

260 Scenarios explored in more detail

264 Cooling the earth strategies are explored

265 Declaration of emergency not possible unless communities are engaged in the deliberative process to learn about climate change and help them reach a genuine understanding of the severity of the problem and the necessity for urgent action on a huge scale.

265 Questions to ask. Number 7

Will your organisation take a proactive position on a 'safe climate' future?