

## BOOK REVIEWS

### Managing Climate Change

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THESE days debate over climate change (aka global warming) pervades every facet of our lives from politics to conservation, from small talk to international conferences. *Managing Climate Change* presents the papers from one of those conferences, Greenhouse 2009. Remarkably, Greenhouse 2009 was the fifth in the Greenhouse series, occupied four days, was attended by more than 500 delegates, and comprised more than 150 presentations and I had never heard of it. Admittedly I've turned off a bit on climate change viewing it all as "too little, too late" and at my age no longer my problem. Still, given my efforts in the 1980s to alert people to the challenges of climate change<sup>2</sup>, I could not understand how I missed all this so turned to the internet for details.

CSIRO's web site informed me that the conference was held in Perth, Western Australia in March 2009 and was organized by CSIRO in conjunction with the Australian Climate Change Science Program. I also learned that Australia has climate change conferences biennially. The first Greenhouse conference in the series was held in 1987 and the series became biennial after the 2005 meeting in Melbourne. Obviously I have turned off about climate change, so reading *Managing Climate Change* should have been a good way to rekindle my old interests, if not enthusiasm. Do not misunderstand me. Climate change is real and undoubtedly poses the single greatest environmental threat to life on Earth since the last big asteroid strike 75 million years ago, but when all the science demonstrating the reality of climate change and pointing to its consequences for human civilization and global biodiversity is comprehensively ignored by world governments and big business, it is hard to stay excited. Angry maybe, but not excited. Of course a large part of the problem in getting government action on climate change arises from the scientific community. Just for example, the Foreword of *Managing Climate Change* tells us that climate change "is a problem characterized by uncertainty, complexity, urgency and inequity. It is a problem outside our prior experience and for which we don't have established mechanisms to respond." How true and how sad. These words reminded me of why I stopped attending Faculty of Science meetings at the University of Armidale when I was on the staff there. I got bored being told that we couldn't do something because "we haven't done that before". It is tragic when the future of so many species is threatened simply because we don't have "mechanisms". Of course we have mechanisms to deal with climate change. In Australia, for example,

we could stop land clearing and cutting down forests. We could stabilize and then reduce our population (something the whole planet needs to do urgently, climate change or not). Air conditioning could be phased out and restricted to those who really need it; design and build buildings and houses that do not need to be air conditioned. Install windows that can be opened, unlike the environmentally award winning science building on the Joondalup campus of Edith Cowan University where I also worked. Build cycleways instead of roads. Impose heavy costs on non-essential use of personal vehicles forcing people to use public transport. Yes, I do mean "forcing" and I mean it because we have long gone past the time when climate change can be addressed with requests and polite words, as I predicted in the 1980s. I guess I still get worked up about climate change and the failure of people to act.

According to the editors (p. xi), *Managing Climate Change* "...provides a ... snapshot ... of the conference". Considering that only 23 of the more than 150 conference papers are presented, *Managing Climate Change* is indeed a snapshot of what is a complex and vexing issue. Some of that complexity and the reasons why people don't understand and why governments won't take action on climate change is illustrated within the first chapter by Graeme Pearman and Charmine Hartel who write "The climate change issue abounds with uncertainties...". If you are a climate change sceptic, you don't need to read any further to remain sceptical and unwilling to make personal, much less national sacrifices. Scientists have to learn that there comes a time when the "uncertainties" of science need to be put away and clear, simple to understand statements that ordinary people can understand need to be made. Either climate change is real or it is not. Either we need to act or we do not. If we need to act, we need to do x, y, and z and we need to do it now, not tomorrow. No ambiguity, just black and white. Unfortunately the history of climate change science is full of shades of grey and of scientists unwilling to make a true commitment to the community. I was disappointed with the first chapter. It is not only difficult to read and understand, but there are too many weasel words which will do nothing more than allow "business as usual" to proceed regardless of climate consequences.

At least the second chapter by Ross Garnaut isn't ambivalent. Garnaut is clear about the threats posed by climate change and the need for urgent action at both personal and national (Australia) levels. His concluding words and the quoting of W.B. Yeats sum it all up:

"Alas, it has recently been a time when the Australian discussion [of climate change] has been claimed disproportionately by the private interest, the ignorant, the myopic and the excessive."

Turning and turning in the widening gyre

The falcon cannot hear the falconer

Things fall apart; the centre cannot hold

W.B. Yeats "The Second Coming"

<sup>2</sup>The only paper I ever had rejected outright was about "global warming", which the referee from CSIRO considered too alarmist for publication. As it turns out, my alarmism was way too conservative and things have become far worse than even I imagined at the time. Now even CSIRO is concerned; some might say "alarmed", but I digress.

<sup>1</sup>The Australian Museum, 6-8 College St., Sydney 2000, NSW, Australia.

The first two chapters were plenary presentations and introductory. Part 1 of *Managing Climate Change* contains six papers on climate change science, including a brief, but informative review by Paul Hoper of Australia's climate change research programme. Aureal Moise and Robert Colman then review the likely impacts of climate change on tropical Australia, but begin with the words "Large uncertainties remain". Why on God's Earth would you use such words if you actually wanted something done to mitigate climate change? At least the chapter by Pandora Hope and Catherine Ganter on rainfall trends in southwestern Australia avoids such language and is a good, if technical, explanation of rainfall patterns past, recent and future in the South West. The next three chapters review the influence of human-induced aerosols (sulphate, organic carbon, black carbon, nitrate, and dust) on ocean-atmosphere circulation, the impact of climate change on freshwater biodiversity, and reasons that Southern Hemisphere weather systems have been changing. All are again somewhat technical and obviously aimed at a scientific, rather than non-scientist, audience, but are informative and not that difficult to follow. Still I would have preferred a better effort at simple English to entice a wider audience. Who knows, maybe CSIRO can work with Reader's Digest to produce an abridged version.

Part 2 contains 11 chapters on "impacts and adaptation" to climate change in Australia. These cover a range of issues from managing heatwaves in southeastern Australian vineyards to managing climate risk in human settlements. Michael Nolan has an interesting chapter on the risks to infrastructure (water, power, transport, buildings, and communications) from climate change noting that we continue to design and build on climate past instead of climate future. This is probably why Sydney Water declined to install a graywater recycling system when it sewered the communities of the lower Hawkesbury River where I live preferring instead to discharge all the treated effluent with its nutrients and freshwater into the river where it could stimulate algal blooms. Given that Sydney is on water restrictions and rainfall models of future rainfall in its catchments are not very optimistic some of us thought it would be better to recycle, but engineers thought differently; they thought climate past. Peter Newman is his challenging best with a chapter on cutting CO<sub>2</sub> emissions by reducing the use of oil based transport in cities. Yes, there are simple solutions to climate change and yes, there are scientists like Peter Newman (and economists like Ross Garnaut) providing sound, practical advice. Unfortunately no one will listen so long as the "uncertainties" continue to dominate the debate.

The four chapters in Part 3 look at ways to communicate climate change. The first of these is about "hot air" and "zero-carbon lifestyles". In the abstract, I found the following: "What might it be like living in a zero-carbon community? . . . We sought to help fill this gap by integrating diverse perspectives across and within community and business to simulate positive, solutions-focused dialogue." Enough hot-air. In the next chapter, we find that CSIRO has an "Energy Transformed Flagship". Apparently CSIRO also has an initiative

called "Energymark" which uses a "longitudinal kitchen table approach" to evaluate public perceptions of climate change. I'm not certain what all this means, but I do know that torturing the English language is not the best way to communicate — with anyone. For a section on communication, you might have expected more. The third chapter is about communicating climate change with "the bush", meaning people who live outside the major cities. The chapter describes a programme to identify the needs of agriculture and rural communities in respect to information about climate change. Not surprisingly the people who participated wanted information relevant to their industries and they wanted it presented in simple English (the chapter used "digestible"). Good, interesting chapter and what appears to have been a useful initiative. Let's hope it is followed through. The final chapter in this section suggests ways of using Google Earth to communicate climate scenarios to the community. As someone who grew up without electricity or running water (not really), I never cease to be amazed at the ingenuity displayed in computer technology. I cannot even get used to flicking a switch and seeing a light go on, but this chapter is really fascinating. Early days yet, but obviously lots of potential and lots of potential users given Australian's addiction to computers and ipods and the like.

No concluding chapter to the book. No effort to pull it all together in a synthesis. Given the seriousness of climate change I anticipated greater effort from the editors and publisher in two ways. First and foremost, a serious effort should have been made at simplifying the text to enhance its readability and usefulness to non-experts. Just removing the plethora of redundant words would have helped, not to mention eliminating the mind bending long sentences and technical jargon. Secondly, brief syntheses in each section that introduced and summarized the contents would have been really useful, as would a concluding synthesis. The editors might like to look at some of the publications of the Royal Zoological Society (NSW) to see how this is done.

Can I recommend this book? At AU\$120, not really. It is not something you can sit down and read in comfort. There is a wealth of information, but you will really need to be committed to winkle it out.