

Students may well be stimulated by this wide ranging book (49 chapters on as many major themes) and have their views confirmed and green activism encouraged. The introduction by John Holdren (Obama's Director of Science and Technology Policy) would assure them that the science is 'solid', and that contemporary floods, droughts, heat waves and wild fires are manifestations of climate change. He recommends the book as the 'goldilocks solution' for graduate students and researchers wanting to bridge the gap between the difficult and long reports of the Intergovernmental Panel on Climate Change (IPCC, where some ifs and buts are included), and its over-brief summaries for policy-makers. Indeed, the message of the book and the IPCC are identical, and former closely follows the structure of the reports only with less emphasis on climate and more on impacts and mitigation policies, though adaptation is mentioned. Predictions of doom are however followed by messages of salvation through policy interventions and engineered behavioural change. Fundamental debates between believers and doubters are ignored; critics are labelled 'deniers' and treated as political enemies. Like the IPCC, which supports a treaty of 1992 that assumes that man-made emissions will dangerously warm the planet, Schneider and co-authors use 'their' science to stifle debate. They make claims to their own ethical superiority that some may find deeply offensive.

The book is based on a policy model political scientists tend to reject as simplistic and unsuitable for international negotiations: that natural science (or is it computer model 'predictions?') are adequate to justify major global economic and technology policies changes, with decarbonization policies selected and implemented by 'big' government. The book's structure and argument support my earlier conclusion: that dangerous anthropogenic global warming, not just climatic change and variability, became an exploding topic not only for greening bureaucracies facing energy 'challenges', but also for a still expanding number of academic disciplines, organized research lobbies, not to mention hedge funds, promising or expecting a rapid transition to what is called sustainability. Did not a small group of environmental scientists, an epistemic community, and assorted national bureaucrats 'capture' the United Nations' treaty making bureaucracy via the UN Environment Programme, the World Meteorological Organization and the International Council of Scientific Unions?

Only one of the editors is a climate scientist, the recently deceased Schneider. He is supported in Chapter 2 by some of the 'villains' of the 'ClimateGate' affair that involved not only British researchers at the University of East Anglia, but led to much soul searching and continuing legal proceeding in the USA; nothing of all of this here. The remaining 47 chapters assume the gloomy predictions of the climate modellers and translate them into the 'impacts' arena, where it is often difficult to disentangle whether 'evidence' of harm, decline or catastrophe is derived from model predictions or real-world observation. I conclude by listing the five main weaknesses of the contents:

- No engagement in genuine scientific debate.
- Uncritical approach to the IPCC and its major sponsors, the United Nations and the European Union.
- Strong USA bias, with *c.* 75% of the contributors coming from a small number of North American institutions.
- Lack of political analysis; advocacy is centred on magical 'policy makers' whose powers and limitations are not analysed but who are expected to deliver much.

- A lamentably weak analysis of the economic impacts of the recommended rapid decarbonization of the energy supplies. When dealing with corporate responses, only those of the beneficiaries of decarbonization are considered.

I noticed that Greece, in 2000, is described as the country most worried about climate change (p. 177); and that the book ends with a chapter on the renaissance of nuclear power.

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The Rising Sea

BY ORRIN H. PILKEY AND ROB YOUNG

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 hardback, US\$ 25.95, Washington, DC, USA: Island Press, 2009

Sea level rise is without a doubt one of the most urgent problems facing coastal communities. *The Rising Sea* is a short, but comprehensive book covering the science and policy of this issue. It appears to be aimed primarily at a non-specialized audience, although it will be a helpful resource to students as well.

The Rising Sea provides readers with an excellent summary of all aspects of sea level rise (SLR), from the science of ocean warming to strategies for coping with SLR. Each of its nine chapters covers an important topic, including: the complex factors that control sea level; the uncertainty in predicting future SLR and shoreline retreat, especially the behaviours of the human system and of the Greenland and Antarctic ice sheets; the implications of SLR for coastal ecosystems and communities; the current response to SLR around the world; and the options for the future. Of particular note are Chapter 5 (A Sea of Denial), which analyses very effectively the opposition to the mainstream science on global warming and sea level rise; and Chapter 8 (Ground Zero: The Mississippi Delta), which examines in detail the complex human and biophysical dynamics of a region that is certainly among the most vulnerable to SLR. Throughout the book, abstract concepts are enlivened by concrete examples from around the world, including the USA's Atlantic and Gulf coasts, the Arctic island of Shishmaref and Pacific atoll nations.

The authors bring to the book a strong viewpoint on SLR, a perspective that is informed by their wealth of experience and knowledge. As they proceed through the book, they make a series of convincing and well-reasoned arguments: that SLR is a substantial threat; that society is not yet treating this threat with the seriousness it deserves; that attempts to fight SLR with hard engineering will ultimately be unsuccessful; that a policy of managed retreat is the best option; that it is critical to plan now for higher sea levels; and that planning must take into account the best projections for the future but also a healthy respect for the scientific and

social uncertainty associated with those projections. The book thus provides a comprehensive set of policy prescriptions along with a strong foundation of knowledge. To my mind, the main weakness in their arguments may be insufficient acknowledgement that the superiority of retreat over protection becomes less clear when dealing with large coastal cities, which have massive pre-existing infrastructure investments. In addition, I am not completely convinced by their recommendation that planners should assume a sea level rise of 2 m over the course of this century, when the available evidence suggests that this is an unlikely worst-case scenario.

The Rising Sea manages to mostly achieve the twin goals of accessibility and accuracy, goals that can sometimes be hard to reconcile in a book aimed at a general audience. The book is well-written and quite readable, and I believe it will be accessible and useful to the interested layperson and to the introductory student. The authors are largely able to accomplish this without sacrificing accuracy, although there are several places where I would quibble with them over specific issues. Most of these are relatively minor points: zooxanthellae are not true plants (p. 112); local relative sea level rise includes both isostatic and eustatic components (p. 32); the contribution of wetland plants to sediment accumulation is largely roots and rhizomes, not leaves and stems (p. 146).

A slightly larger lapse in accuracy, in my view, is represented by the second half of Chapter 2, which suggests that sea level 'has clearly been rising at an accelerating rate through the twentieth century and into the twenty-first' (p. 40). I believe this is an overstatement that ignores the difficulty of interpreting sea level records, with their complex patterns of variability at different temporal (and spatial) scales. Depending on the type of data examined, some studies have indeed found an acceleration in SLR during the last 100 years, but there is still much debate over the significance, timing and spatial extent of this acceleration. Given the limitations of sea level data over the last century and the inherently high natural variability, it is quite challenging to distinguish a true (ongoing) acceleration from decadal variability or from a one-time shift in rate, and the authors don't sufficiently emphasize the uncertainty associated with any such conclusions. (The evidence is considerably stronger for a higher average rate of SLR in the 20th century compared to previous centuries, a fact that the authors don't acknowledge.) Still, this is a relatively minor issue in a book that is, on the whole, quite accurate, comprehensive and readable.

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Global Environmental Harm. Criminological Perspectives

EDITED BY ROB WHITE

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Global environmental harm, which takes the form of transboundary ecological exploitation and destruction, has existed for centuries.

However, new pathways of actual and potential forms of environmental harm, such as climate change, have recently provoked criminologists to ask a series of complex questions about global governance priorities, state/corporate responsibility for transgovernmental environmental harm, and the nature and dynamics of global environmental justice.

Rob White's edited collection of essays on global environmental crime reflects this trend. In *Global Environmental Harm: Criminological Perspectives*, White has brought together authors from various parts of the world to address a range of cutting-edge issues about global environmental harm. The book is divided into three parts. In the first, entitled 'Global Problems', the authors provide a conceptual, analytical overview of the nature of global environmental harm. White's chapter on ecoglobal criminology, which is a criminological approach that is informed by worldwide ecological considerations, serves as the starting point for the section. White carefully lays the foundation for the book by providing a deeply insightful overview of ecoglobal criminology, and some of the central issues and challenges tied to the study of global environmental harm. Also included in this section of the book is a profoundly important, carefully researched chapter on climate change by Lynch and Stretesky. Given that climate change is the most pressing global environmental problem, this chapter alone makes the book indispensable for criminology, particularly since the discipline has been slow to recognize climate change as a relevant area of study. Lynch and Stretesky provide a compelling discussion of the interconnection between global warming and various forms of crime and environmental harm.

The second section of the book, 'Specific Issues', is devoted to a detailed discussion of various global environmental problems, ranging from issues such as the illegal reptile trade in South Africa to the pollution practices of multinational corporations in China. Included in this section is a chapter by Smandych and Kueneman, which provides a deeply critical analysis of the Alberta tar sands project. They skillfully outline the enormous level of environmental harm created by this form of oil extraction. Since the project is scheduled to expand, and Canada is now the largest foreign supplier of oil to the USA, this is a valuable chapter that should be read by North American students in particular. The graphic photos of illegal collections of wild reptiles in the chapter by Herbig also enhance this section. These images often overpower the author's words and serve to foster a visual literacy about the illegal trade in animals.

The third and final section of the book, 'Alternative Visions', offers chapters that address the perception, investigation and analysis of global environmental harm. The title of this section is a bit confusing as the reader may assume, at the fore, that the chapters will discuss means to reduce global environmental harm. This is not the case. In fact, a shortcoming of the book is that it provides very few ideas about how to turn the world in a different direction. Several of the chapters devote a couple of pages to legal and conceptual perspectives on accountability and responsibility, but overall the reader is left without much direction or 'hope-based' learning. For example, an entire chapter on the precautionary principle and how precautionary norms might be able to create expectations for enlarging obligations of responsibility towards all nations and future generations would have made the book more comprehensive. That said, the final section does include many thought-provoking chapters. Brisbane's chapter, by way of example, raises very interesting questions about why ecologically benign