

Book Review

Dessler, A. E. & Parson, E. A. (2006). *The Science and Politics of Global Climate Change. A Guide to the Debate*. Cambridge: Cambridge University Press. ISBN: 0-521-53941-2, 190 pp. Paperback: £19.99.

Reviewed by: Esteve Corbera, Overseas Development Group, University of East Anglia, and Tyndall Centre for Climate Change Research, UK.

‘While the crew is arguing, the ship is getting closer to the rocks. Somehow, what we need is to get someone upstairs to start steering us away from the rocks—now’.

In such a poetical way, Andrew Dessler and Edward Parson conclude their new book and support the scientific consensus that the Earth’s climate is changing, negative impacts are likely, and remedial action must be undertaken. Their book, however, is not an exercise of poetry and environmental lobbying but a useful compendium of the current debates in the science and politics of climate change. For senior academics, most of what the book says is not new, and neither is it written in the way conventional academic books are. The book draws upon the authors’ breadth of knowledge on the topic and it is aimed ‘to help *the concerned, non-expert citizen* to understand what is known about climate change, and how confidently it is known, in order to develop an informed opinion of what should be done’ (p. 5; my emphasis in italics).

With this objective in mind, the book is structured in five chapters. The introduction sketches the scientific basis of climate change and provides an introductory background to international climate change policy. Chapter 2 explains that public policy debates are made of a combination of *positive*—what we know and what we can prove—and *normative*—what we believe—judgements. Understanding these distinct types of judgement is essential to understanding a policy debate and being able to form an independent judgement on the issue at stake. The chapter then highlights how the scientific and political process works, and it examines the way in which science and policy making interact with each other and how policy judgements are formed.

Chapter 3 identifies and discusses the most important positive questions about climate change: *Is the Earth warming? Are human activities responsible for such warming? What future changes in the climate can we expect? And what will be the impacts of such changes?* The authors review each of these questions through available scientific data—mainly through IPCC reports—and conclude that the climate is definitely getting warmer and that it is likely that greenhouse gas emissions from human activities have caused most of the rapid warming in the last few decades. In the future, the Earth’s climate will continue to warm but specific impacts cannot be predicted with a high confidence level. The nature and distribution of such impacts will vary according to changes in the global mean temperature, concentrations of greenhouse gases and feedbacks in the climate system.

Chapter 4 enters the policy domain and examines possible responses for adapting to and mitigating climate change. In assessing adaptation, the authors recognize that the effects of any specified climatic change on particular people or communities will depend ‘on a host of

socio-economic details’—e.g. how rich or poor you are (p. 91)—and that the impacts and actions to be undertaken will be contingent upon the sector or issue under consideration. They explain the importance of anticipatory adaptation and the role of government policy in promoting such process. In discussing climate change mitigation, the authors review likely future emission trends according to the IPCC and the available technological options for reducing greenhouse gas emissions. The chapter outlines action pathways at national and international levels, including existing and potential policy measures such as carbon-related taxation, emission fees and systems of tradable permits.

Chapter 5 focuses on the UNFCCC policy process in order to analyse key arguments adopted by different countries and organizations to stand for and against multilateral action to tackle climate change. The authors assess the consistency of climate sceptics’ judgements in international negotiations and stress the role played by uncertainty in the formation of such judgements. The authors advocate for a series of long- and near-term actions to tackle the climate change problem. Succinctly, they argue for the stabilization of atmospheric CO₂ to 450 p.p.m. and they acknowledge that, in doing so, the combination of energy efficiency measures and energy sources that emit no CO₂ will be critical. Major emission cuts should be undertaken by developed countries—about 60% below 2000 levels by 2050. The authors thus argue that the most cost-effective way to foster such reductions at national and international levels would be a tradable emission permit system which could include an ‘escape valve’; that is a commitment to sell additional permits if their price rises above some specified level (p. 159). This central mechanism would need to be accompanied by other country-specific policy measures, which could regulate other economic sectors through other means (e.g. energy efficiency specifications in the car and building industries). To conclude, the authors underscore the main pitfalls of the UNFCCC and the Kyoto Protocol in their aim to achieve significant emission reductions across participating countries. Instead, they advocate for the creation of a ‘coalition of the willing’: a reduced number of highly industrialized countries which jointly deploy a series of mechanisms, such as an emission trading scheme and a set of energy, trade, and investment measures, to achieve substantial emission reductions in greenhouse gases. The discussion of this proposal can be seen as the major and more radical contribution of this book to the climate change policy debate.

Two main criticisms can be made of the book. The first one concerns its content and the incomplete treatment of specific issues. For instance, the inclusion of summary tables in chapters 3 and 4 outlining climate impacts and response options could have contributed to illustrate more graphically the central contents of these chapters. Seemingly, chapter 4 misses the opportunity to review current debates on adaptive capacity and vulnerability, and the way in which these concepts have been framed and analyzed (i.e. at different scales and using distinct sets of indicators and methodological approaches). The same can be said about those sections dealing with mitigation options and costs, which lack examples about ‘mitigation in practice’ and the identification of their environmental benefits and economic costs. This could have been easily resolved through the inclusion of boxes and footnotes along the text.

The second criticism relates to referencing and the book’s target audience. Several statements and passages in the book are poorly referenced and the source of information cannot be identified (e.g. reference to studies on weed–crop–pest interactions, p. 93; reference to mitigation cost study, p. 122). Moreover, although each chapter is accompanied by a selection of reading material, which must be welcomed, the reading list is mostly US-centric and only a few of these references are available through the Internet. A more geographically balanced list would have been welcomed by readers from European and developing countries. It should also be acknowledged that the amount of scientific jargon may make the book understandable only to highly educated individuals.

Nevertheless, these pitfalls do not take away any merits from Dessler and Parson's succinct and consistent book. The content gaps in many parts of the book represent a trade-off between scientific rigour and the need to ensure fluent reading for non-expert, yet educated, citizens. The book is logically structured and it should become a key reading and teaching source in geography and environmental sciences. It can also be valuable to doctoral students and senior researchers interested in learning about climate change science and politics. Overall it is a book worth having on one's shelf.