

Cambridge University Press

978-1-107-00256-2 - Economic Choices in a Warming World

Christian de Perthuis

Frontmatter

[More information](#)

ECONOMIC CHOICES IN A WARMING WORLD

Since the publication of the Stern Review, economists have started to ask more normative questions about climate change. Should we act now or tomorrow? What is the best theoretical carbon price to reach long-term abatement targets? How do we discount the long-term costs and benefits of climate change?

This provocative book argues that these are the wrong sorts of question to ask because they don't take into account the policies that have already been implemented. Instead, it urges us to concentrate on existing policies and tools by showing how the development of carbon markets could dramatically reduce world greenhouse-gas emissions, triggering policies to build a new low-carbon energy system while restructuring the way agriculture interacts with forests. This provides an innovative new perspective on how a post-Kyoto international climate regime could emerge from agreements between the main greenhouse-gas emitters capping their emissions and building an international carbon market.

CHRISTIAN DE PERTHUIS is a professor of economics at the University Paris-Dauphine, where he is also the Director of the Masters programme in Energy, Finance and Carbon, and a member of the Council on Economics and Sustainable Development, a body advising the French Minister for the Environment. His most recent book is *Pricing Carbon* (Cambridge University Press, 2010), co-edited with A. Denny Ellerman and Frank Convery.

Cambridge University Press

978-1-107-00256-2 - Economic Choices in a Warming World

Christian de Perthuis

Frontmatter

[More information](#)

Economic Choices in a Warming World

Christian de Perthuis



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
978-1-107-00256-2 - Economic Choices in a Warming World
Christian de Perthuis
Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Tokyo, Mexico City
Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org
Information on this title: www.cambridge.org/9780521175685

© Christian de Perthuis 2011

This publication is in copyright. Subject to statutory exception
and to the provisions of relevant collective licensing agreements,
no reproduction of any part may take place without the written
permission of Cambridge University Press.

Authorized translation from the French language edition,
entitled *Et pour quelques degrés de plus*, by Christian de Perthuis,
published by Pearson Education France,
© Christian de Perthuis 2009.

First published in French 2009
English edition first published 2011

Printed in the United Kingdom at the University Press, Cambridge

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data
Perthuis, Christian de.
[Et pour quelques degrés de plus. English]
Economic choices in a warming world / Christian de Perthuis.

p. cm.
First published in French 2009.
ISBN 978-0-521-17568-5 (pbk.)
1. Global warming—Economic aspects. 2. Climatic changes—Economic
aspects. 3. Environmental policy—Economic aspects. 4. Greenhouse gas
mitigation. I. Title.
QC981.8.G56P475 2011
363.738'74—dc22
2010051872

ISBN 978-1-107-00256-2 Hardback
ISBN 978-0-521-17568-5 Paperback

Cambridge University Press has no responsibility for the persistence or
accuracy of URLs for external or third-party Internet websites referred to in
this publication, and does not guarantee that any content on such websites is,
or will remain, accurate or appropriate.

Cambridge University Press

978-1-107-00256-2 - Economic Choices in a Warming World

Christian de Perthuis

Frontmatter

[More information](#)

*For Manon and Cloé,
In memory of Claire*

*The English version of this book is the translation of the second edition of
Et pour quelques degrés de plus, translated by Michael Westlake,
with the assistance of Natalie Frank and the financial backing of the
Finance et Développement Durable (FDD) Chair, sponsored by
Electricité de France (EDF), Crédit Agricole-CIB and the
Caisse des Dépôts.*

Contents

<i>Acknowledgements</i>	page ix
<i>Introduction: Manaus opera house</i>	i
1 Climate risk	8
2 Some like it hot: adaptation to climate change	34
3 Building a low-carbon energy future	57
4 Pricing carbon: the economics of cap-and-trade	88
5 Intensifying agriculture to safeguard forests	117
6 The price of carbon: the economics of projects	146
7 Macroeconomic impacts: sharing carbon rent	169
8 International climate negotiations	191
<i>Conclusion: both action and inaction entail risks</i>	217
<i>References</i>	223
<i>Appendix 1: Thirty key readings</i>	225
<i>Appendix 2: Thirty key sets of figures</i>	231
<i>Appendix 3: Greenhouse gas emissions around the world</i>	237
<i>Glossary</i>	243
<i>Index</i>	247

Cambridge University Press

978-1-107-00256-2 - Economic Choices in a Warming World

Christian de Perthuis

Frontmatter

[More information](#)

Acknowledgements

Economic Choices in a Warming World is an English translation of the second edition of *Et pour quelques degrés de plus* that has been completely reworked. The structure of the book has been reorganized and a large part of it rewritten. I was encouraged to make these changes by the reactions of readers to the first edition, and it is to them that my initial thanks are due: their feedback was invaluable.

Through the support of the Caisse des Dépôts – whose directors, beginning with the general manager Augustin de Romanet, I warmly thank – I joined the Finance et Développement Durable (FDD) Chair, attached to Paris-Dauphine University and the École Polytechnique, and was able to launch the new Climate Economics Chair, a joint initiative by CDC Climat and Paris-Dauphine University under the aegis of the Europlace Finance Institute Foundation. I would also like to thank the directors of the FDD Chair for their welcome, Pierre-Louis Lions and Jean-Michel Lasry; the directors of the Centre Géopolitique de l'Énergie et des Matières Premières (CGEMP) at Paris-Dauphine University, Jean-Marie Chevalier and Patrice Geoffron; and the directors of the Europlace Finance Institute Foundation (IEF), Arnaud de Bresson and Jean-Michel Beacco.

Cambridge University Press

978-1-107-00256-2 - Economic Choices in a Warming World

Christian de Perthuis

Frontmatter

[More information](#)**x • Acknowledgements**

I have been fortunate in benefiting from discussion with numerous colleagues, whom I thank for their encouragement: Dominique Bureau, Jean-Christophe Bureau, Frank Convery, Patrick Criqui, Denny Ellerman, Pierre-Noël Giraud, Olivier Godard, Christian Gollier, Stéphane Hallegatte, Jean-Charles Hourcade, Pierre-André Jouvét, Jan Horst Keppler, Delphine Lautier, Franck Lecocq, Jean-Hervé Lorenzi, Jacques Percebois, Jean-Pierre Ponssard, Gilles Rotillon, Jean Tirole, Bertrand Villeneuve, Jacques Weber and Jonathan Wiener.

I owe an immense debt of gratitude to the Climate Economics Chair research team; and to CDC-Climat Recherche, the carbon finance subsidiary of the Caisse des Dépôts. I warmly thank all their members. In particular I would like to thank Emilie Alberola, Valentin Bellassen, Malika Boumaza, Stéphane Buttigieg, Henri Casella, Agnès Cassagne, Anaïs Delbosc, Jérémy Elbeze, Damien Fessler, Ignacio Figueras, Natalie Frank, Jessica Lecolas, Stephen Lecourt, Benoît Leguet, Alexia Leseur, Maria Mansanet, Suzanne Shaw, Boris Solier and Raphaël Trotignon.

I would like to thank all those who helped me by reading and commenting on the manuscript, in particular Guillaume Bouculat, Clément Chesnot, Ariane de Dominicis, Jean Jouzel, David Molho and Jacques Saint-Marc.

My thanks also go to my editors Gaëlle Jullien-Picard at Pearson Editions and Chris Harrison at Cambridge University Press, for their informed advice; to Michael Westlake, who was responsible for the translation; and to Gildas Bonnel and Sébastien Louveau, of Sidiese, for their sales promotion of the book.

Naturally, writing such a book made considerable demands on my family – first and foremost I give my fond thanks to my wife Brigitte, for her patience and forbearance, as well as to our children and grandchildren.