This book provides a cutting-edge assessment of policy options for future global climate governance, written by a team of 30 leading experts from the European Union and developing countries.

Global climate governance is at a crossroads. The 1997 Kyoto Protocol was merely a first step, and its core commitments expire in 2012. This book addresses three questions that will stand at the centre of any new climate agreement:

- What is the most effective overall legal and institutional architecture for successful and equitable climate politics?
- What role should non-state actors play, including multinational corporations, non-governmental organizations, public–private partnerships and market mechanisms in general?
- How can we deal with the growing challenge of the necessity to adapt our existing institutions to a substantially warmer world?

The 19 chapters integrate a variety of approaches that range from quantitative research and formal modelling to qualitative and legal analysis.

The book will be attractive both to practitioners and academics from a variety of backgrounds. Practitioners active in mitigation and adaptation policy development, analysis and negotiation will refer to this book for in-depth qualitative and quantitative assessments of the costs and benefits of a range of novel policy options. Academics from a number of disciplines – including international relations, international law, environmental studies, economics, geography and development studies, and ranging from final-year undergraduates to researchers – will benefit from description of innovative approaches of their disciplines towards international climate negotiations, and will also learn about the possibilities and advantages of integrating insights across disciplines.

Three other books arise from the ADAM Project, all published by Cambridge University Press, and, together with this volume, derive from research funded by DG-RTD as part of the Sixth Framework Programme of the European Commission:

*Making Climate Change Work for Us: European Perspectives on Adaptation and Mitigation Strategies*
Edited by Mike Hulme and Henry Neufeldt
Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation?
Edited by Andrew Jordan, Dave Huitema, Harro van Asselt, Tim Rayner and Frans Berkhout

Mainstreaming Climate Change in Development Cooperation: Theory, Practice and Implications for the European Union
Edited by Joyeeta Gupta and Nicolien van der Grijp

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Fariborz Zelli is a research fellow at the German Development Institute in Bonn, Germany. He is also a visiting fellow at the Tyndall Centre for Climate Change Research, United Kingdom, where he was a senior research associate from 2006 to early 2009. Since 2004, he has been a research fellow of the Global Governance Project, where he co-coordinates the research group Multiple Options, Solutions and Approaches: Institutional Interplay and Conflict (MOSAIC).
GLOBAL CLIMATE GOVERNANCE
BEYOND 2012
Architecture, Agency and Adaptation

Edited by
FRANK BIERMANN
PHILIPP PATTBERG
and
FARIBORZ ZELLI
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**Fariborz Zelli** has been a research fellow at the German Development Institute in Bonn, Germany, since February 2009. He is also a visiting fellow at the Tyndall
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This book is the result of a collective effort of more than two dozen scientists, all sharing an interest in finding effective solutions to the imminent crisis of global warming and large-scale alterations of the Earth system. Our common goal was to develop new ideas and insights that may assist negotiations of new global agreements on global climate governance for the period after 2012, when the current commitment period under the 1997 Kyoto Protocol to the 1992 United Nations Framework Convention on Climate Change expires.

Many have described the creation of a stable long-term architecture for global climate governance as one of the largest political challenges of our time, with tremendous implications for most areas of human life. These implications range from far-reaching reforms in the richer industrialized countries with high per capita emissions of greenhouse gases to the parallel quest of the many poorer societies in the developing world to lift the living standards and eradicate poverty while limiting growth in greenhouse gas emissions to the extent possible. While mitigation of global warming must have centre stage in current policies to prevent further build-up of greenhouse gases in the atmosphere, it is also vital to prepare for a world that may be substantially warmer than today due to failed or belated climate policies in the past. This book thus addresses both governance for mitigation and governance for adaptation, and, in particular, possible synergies and conflicts between both policy objectives.

The research documented in this volume has been part of a larger research programme on Adaptation and Mitigation Strategies: Supporting European Climate Policy (the ADAM Project). The ADAM Project lasted from 2006 to 2009 and was funded as an ‘integrated project’ by a major grant from the European Commission under its sixth framework research programme (Global Change and Ecosystem Priority, contract No. 018476). In total, more than 100 researchers from 26 institutes in Europe, India and China were part of the ADAM Project at one stage. This book brings together the results of one sub-project within the ADAM
Project, the working group ‘Post-2012 Options in Global Climate Governance’. While funding as well as most researchers for this project came from the European Union, the analysis presented here is motivated by a global perspective that seeks to advance stable global governance without protecting or preserving the parochial interest of any region. The book thus draws from insights of scientists from countries like Bangladesh, India and South Africa, and many more developing country experts have contributed their views in a series of workshops that were held under the auspices of this project.

The core research for this book has been carried out by seven institutions in six countries: the Institute for Environmental Studies, Vrije Universiteit Amsterdam, the Netherlands, which also coordinated this effort; the Centre for International Climate and Environmental Research (CICERO), Oslo, Norway; the Lund University Centre for Sustainability Studies (LUCSUS) and the Department of Political Science at Lund University, Sweden; the Netherlands Environmental Assessment Agency (PBL) in the Netherlands; the Potsdam Institute for Climate Impact Research, Germany; The Energy and Resources Institute (TERI), New Delhi, India; and the Tyndall Centre for Climate Change Research, United Kingdom, which also provided the overall coordination of the ADAM Project.

Several researchers from other research institutions participated in this effort, including from the Bangladesh Centre for Advanced Studies, Bangladesh; the Energy Research Centre at the University of Cape Town, South Africa; the German Development Institute, Bonn, Germany; the International Institute for Environment and Development, United Kingdom; the Centre for Climate Science and Policy Research at Linköping University, Sweden; and the London School of Economics and Political Science, United Kingdom.

In addition, the design of this research programme has benefited substantially from the Science and Implementation Plan of the Earth System Governance Project, a ten-year global research effort under the auspices of the International Human Dimensions Programme on Global Environmental Change (www.earthsystemgovernance.org).

This book draws on the work and input of many colleagues and stakeholders. First of all, we wish to thank for their various contributions and insights all our team members who have contributed chapters to this book, as well as Karin Bäckstrand, Alex Haxeltine, Richard Klein, Eric Massey and Åsa Persson, who have all provided valuable additional input. In addition, we are grateful to the members of the ADAM Contact Group who provided an invaluable ‘reality check’ for the proposals that have been developed in this research programme: Marcel Berk, Daniel Bodansky, Chandrashekhar Dasgupta, Dagmar Droogsma, Bo Kjellén, Benito Müller, Lars Müller, Willem Thomas van Ierland and Michael Wrigglesworth. In addition, Sebastian Oberthür, Youba Sokona, Simon Tay and Oran R. Young
Preface

provided important comments at conference presentations. Last but not least, this book benefited substantially from the useful suggestions and critique from Steinar Andresen, Mike Hulme, Norichika Kanie and Henry Neufeldt.

Putting 19 chapters from 30 authors into one single coherent volume is no easy task, and we are highly grateful for the efforts of the project’s student assistant in Amsterdam, Jonathan Berghuis, for implementing our house-style and making the many parts a whole. Moreover, we would like to give our special thanks to the staff at Cambridge University Press – in particular Laura Clark, Anna Hodson, Abigail Jones and Matt Lloyd – for their professionalism, assistance and understanding throughout the preparation of this volume.

This research programme benefited also from the lively discussions and pleasant interactions at numerous ‘ADAM weeks’ with the more than 100 researchers involved in the many other work packages in the project’s four core domains A-adaptation, M-mitigation, P-policy and S-scenarios. We wish to thank here for all their efforts in bringing this large consortium together – and keeping it together! – in particular Mike Hulme, director of the ADAM Project, and Henry Neufeldt, the project manager.
### Abbreviations

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<tr>
<td>ADAM</td>
<td>Adaptation and Mitigation Strategies: Supporting European Climate Policy</td>
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<td>AD-FAIR</td>
<td>Adaptation in the Framework to Assess International Regimes for differentiation of commitments</td>
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<td>AD-RICE</td>
<td>Adaptation in the Dynamic Integrated model of Climate and the Economy</td>
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<tr>
<td>CCP</td>
<td>Cities for Climate Protection</td>
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<td>CDM</td>
<td>Clean Development Mechanism</td>
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<td>CDP</td>
<td>Carbon Disclosure Project</td>
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<td>CSD</td>
<td>Commission on Sustainable Development</td>
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<td>DICE</td>
<td>Dynamic Integrated model of Climate and the Economy</td>
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<td>EU</td>
<td>European Union</td>
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<td>FAIR</td>
<td>Framework to Assess International Regimes for differentiation of commitments</td>
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<td>FAO</td>
<td>United Nations Food and Agriculture Organization</td>
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<tr>
<td>FUND</td>
<td>climate Framework for Uncertainty, Negotiation and Distribution</td>
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<td>GAMS</td>
<td>General Algebraic Modelling System</td>
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<td>GATS</td>
<td>General Agreement on Trade in Services</td>
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<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<td>GD</td>
<td>gross or potential Damages</td>
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<td>GDP</td>
<td>gross domestic product</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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<td>IATAL</td>
<td>International Air Travel Adaptation Levy</td>
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<td>ICLEI</td>
<td>Local Governments for Sustainability</td>
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<td>IEA</td>
<td>International Energy Agency</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>MAC</td>
<td>marginal abatement costs</td>
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<tr>
<td>MAGICC</td>
<td>Model for the Assessment of Greenhouse-gas Induced Climate Change</td>
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<th>Abbreviation</th>
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<tr>
<td>NGO(s)</td>
<td>non-governmental organization(s)</td>
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<td>NPV</td>
<td>net present value</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<tr>
<td>OPEC</td>
<td>Organization of the Petroleum Exporting Countries</td>
</tr>
<tr>
<td>PC</td>
<td>adaptation cost</td>
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<td>ppm</td>
<td>parts per million</td>
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<tr>
<td>RD</td>
<td>residual damage</td>
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<tr>
<td>REDD</td>
<td>Reducing Emissions from Deforestation and Forest Degradation in Developing Countries</td>
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<tr>
<td>RICE</td>
<td>Regional Integrated model of Climate and the Economy</td>
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<td>TIST</td>
<td>International Small Group and Tree Planting Programme</td>
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<td>TRIPS</td>
<td>Trade-Related Aspects of Intellectual Property Rights</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<tr>
<td>WSSD</td>
<td>World Summit on Sustainable Development</td>
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<td>World Trade Organization</td>
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