

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

CLIMATE JUSTICE AND DISASTER LAW

Climate disasters demand an integration of multilateral negotiations on climate change, disaster risk reduction, sustainable development, human rights and human security for a post-2015 world. Via detailed examination of recent law and policy initiatives from around the world, and making use of a Capability Approach, Rosemary Lyster develops a unique approach to human and non-human Climate Justice and its application to all stages of a disaster. These include: prevention; response, recovery and rebuilding; and compensation and risk transfer. She comprehensively analyses the complexities of climate science and their interface with the law- and policy-making processes, and also provides an in-depth analysis of multilateral climate change negotiations dating from the establishment of the 1992 United Nations Framework Convention on Climate Change (UNFCCC) to the Twentieth Conference of the Parties in Lima (COP 20) in December 2014.

ROSEMARY LYSTER is Professor of Climate and Environmental Law at Sydney Law School, The University of Sydney. She is also the Director of the Law School's Australian Centre for Climate and Environmental Law.

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

Endorsements

“All who care about environmental and climate issues should feel deeply indebted to Rosemary Lyster. It is indeed fortunate that a distinguished lawyer and ethicist has immersed herself in the technicalities of this field, and written an authoritative book that is not only hugely informative but which also sets out pathways towards a just and effective response to the threats of climatic disasters.”

*Lord Martin Rees, Astronomer Royal, Fellow of Trinity College
and Emeritus Professor of Cosmology and Astrophysics at the
University of Cambridge*

“This book makes a compelling case for Climate Justice, not just as a matter of law and collective action, but rather as a moral imperative. That imperative, as outlined through theory and practice, is watertight in its ethical foundations and in its evidence. This book demonstrates clearly how dealing with disasters is intimately related to these fundamental questions of justice.”

*Professor Neil Adger, University of Exeter
Lead author, Chapter 12, IPCC Working Group II, Fifth Assessment Report*

“Rosemary Lyster has made an important contribution to the climate change debate by highlighting the risks that future disasters pose to the planet today. She persuasively argues that we need to consider the concept of justice in using the law coupled with other policy tools to undertake disaster risk reduction measures now. Her book fills an important gap in addressing the many challenges in managing the risks of climate disasters ranging from the economic development of hazard-prone areas to food insecurity and water shortages.”

*Howard Kunreuther, James G. Dinan Professor of Decision Science and
Public Policy and Co-director of the Wharton Risk Management and
Decision Processes Center, Wharton School University of Pennsylvania.
Lead author, Chapter 2, IPCC Working Group III, Fifth Assessment Report*

“This highly interesting volume is the first thorough exploration of the relationship between Climate Justice and disaster law. The book covers disaster risk reduction, response, recovery and rebuilding. In addition to analyzing the relationship between Climate Justice and disaster law from an academic and policy perspective practical insights are provided as well inter alia through various case studies. This book will undoubtedly be of high importance and interest to both academics and policy-makers interested in the way forward as far as Climate Justice and disaster law is concerned.”

*Daniel A Farber, Sho Sato Professor of Law, Berkeley Law and
Michael G. Faure, Professor of Comparative and International
Environmental Law, Maastricht University*

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

“This new book by Professor Rosemary Lyster, one of the world’s leading authorities on climate change law, significantly advances our understanding of how the law can address this most complex problem. She deftly brings together climate change law and disaster law – two fields with different conceptual foundations and time frames – and shows how they can and must operate together. She does so using an explicit philosophical framework that gives a structure to her argument that goes well beyond merely tactical considerations. The balance of this century – and, many of us fear, far beyond – will be dominated by disasters that are created or worsened by climate change, and a thorough understanding of the current legal tools to prepare, respond and cope, and a set of proposals for how to do all of this far better, as presented by Professor Lyster, could not be more important and timely.”

*Michael B. Gerrard, Andrew Sabin Professor of Professional Practice and
Director, Sabin Center for Climate Change Law, Columbia Law School*

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

CLIMATE JUSTICE AND DISASTER LAW

ROSEMARY LYSTER



Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781107107229

© Rosemary Lyster 2015

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.

First published 2015

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

Library of Congress Cataloguing in Publication data

Lyster, Rosemary, author.

Climate Justice and Disaster Law / Rosemary Lyster.

pages cm

Includes index.

ISBN 978-1-107-10722-9 (Hardback) – ISBN 978-1-107-51468-3 (Paperback)

1. Climatic changes–Law and legislation. 2. Disaster relief–Law and legislation.

3. Risk assessment. I. Title.

K3585.5.L97 2015

344.05'34–dc23 2015021117

ISBN 978-1-107-10722-9 Hardback

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
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

‘The focus on actual lives in the assessment of justice has many far reaching implications for the nature and reach of the idea of justice’
Amartya Sen *The Idea of Justice*

(Penguin Books 2009, p.xi) Copyright © Amartya Sen, 2009.

Reproduced by permission of Penguin Books Ltd.

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

CONTENTS

<i>Preface</i>	xv
<i>Table of statutes</i>	xxii
<i>List of abbreviations</i>	xxv
1 Climate science at the interface with law- and policy-making	1
1.1. Establishment of the Intergovernmental Panel on Climate Change	2
1.2. The science, law- and policy-making interface	4
1.2.1. The normative underpinnings of science	6
1.2.2. The normative underpinnings of law	10
1.2.3. The normative underpinnings of politics and policy-making	11
1.3. The destabilisation of climate science	15
1.3.1. Climate scepticism: the early years	16
1.3.2. The impact of Freedom of Information demands	19
1.3.3. Climate science at the law and policy interface	21
1.3.4. 'Climategate'	22
1.3.5. Concerns about the IPCC's 2007 Fourth Assessment Report	23
1.3.6. Harassment of individual scientists: the case of Michael Mann and the 'hockey stick' graph	25
1.3.7. Political interference with climate science	26
1.4. The relevance of climate scepticism to moral corruption	32
1.5. The IPCC's Fifth Assessment Report: an example of 'post-normal' science?	33
1.5.1. The IPCC deals with questions of confidence and likelihood	34
1.5.2. Climate Change 2013: the Physical Science Basis	36
1.5.3. What's new?	38
1.5.4. Observed and likely future changes in the climate system	40
1.5.5. Climate Stabilisation, Climate Change Commitment and Irreversibility	45

1.5.6.	Anthropogenic attribution to climate change	46
1.6.	Towards the multilateral negotiations on climate change	47
2	The international climate change negotiations: nothing more than sounding brass or tinkling cymbals?	49
2.1.	International climate change negotiations in the context of sustainable development and international law	51
2.1.1.	Warming up to the United Nations Convention on Climate Change	52
2.1.2.	The key International Law principles underlying the UNFCCC	55
2.1.3.	The Rio Declaration and Agenda 21	56
2.2.	Essential elements of the <i>United Nations Framework Convention on Climate Change</i>	58
2.2.1.	Political groupings under the UNFCCC	59
2.2.2.	The text of the UNFCCC	60
2.2.3.	The Kyoto Protocol	62
2.2.4.	The post-Kyoto arrangements: from Bali to Lima	66
2.3.	The IPCC reviews the mitigation options for a post-2015 world	84
2.3.1.	Mitigation pathways in the context of sustainable development	85
2.3.2.	Proposed mitigation policies and institutions	90
2.4.	The Lima Call for Climate Action on the road to Paris	92
2.4.1.	In pursuit of the ultimate objective of the Convention	93
2.4.2.	General objective	94
2.4.3.	Mitigation	95
2.4.4.	Adaptation	95
2.4.5.	Loss and damage	96
2.4.6.	An international capacity-building mechanism	96
2.4.7.	Transparency of action and support	96
2.4.8.	Timeframes	96
2.4.9.	Strategic review	97
2.4.10.	Facilitating implementation and compliance	97
2.5.	Where are the concerns?	97
2.6.	A way forward: focusing on the actual lives of those most likely to suffer not on the narrow pursuit of self-interest	99
3	Towards a vision for Climate Justice in a post-2015 world	104
3.1.	A Capabilities-inspired Climate Justice approach to Disaster Law	105
3.1.1.	The Capability Approach	107
3.2.	Envisioning an integrated post-2015 world	110
3.2.1.	Climate change and disaster risk reduction	110
3.2.2.	Sustainable development and climate change	120

CONTENTS

xi

3.2.3.	Humanitarian action and climate change	122
3.2.4.	Human rights and climate change	123
3.2.5.	Human security and climate change	124
3.3.	Existing theories of Climate Justice	125
3.3.1.	Contribution to the problem – a corrective approach	126
3.3.2.	Ability to pay principle – a distributive approach	129
3.3.3.	A hybrid approach – a corrective and distributive approach	129
3.3.4.	Beneficiary pays principle	130
3.3.5.	Greenhouse development rights	131
3.3.6.	Are existing Climate Justice theories still helpful?	131
3.4.	The characteristics of, and loss and damage caused by, climate disasters	132
3.5.	Understanding vulnerability, adaptive capacity, disaster risk reduction and resilience to support Capabilities	134
3.5.1.	Vulnerability to climate disasters	135
3.5.2.	Adaptive capacity to climate disasters	137
3.5.3.	Resilience in the face of climate disasters	138
3.5.4.	The Capability Approach and climate disasters	139
3.6.	The many faces of climate disasters	139
3.6.1.	Cities	140
3.6.2.	Food insecurity	141
3.6.3.	Floods and cyclones	144
3.6.4.	Extreme heat, bushfires and other health impacts	146
3.6.5.	Water scarcity	147
3.6.6.	Climate displaced persons	148
3.6.7.	Species and ecosystems impacts	151
3.7.	Invoking a procedural approach to Climate Justice	152
3.7.1.	The role of the media in undermining a procedural approach to Climate Justice	154
3.8.	What are the next steps?	154
4	Preventing climate disasters: integrating adaptation and disaster risk reduction	156
4.1.	Understanding adaptation: resilience, transition and transformation	156
4.1.1.	Adaptation as transformation	158
4.2.	The IPCC evaluates risks, adaptation and vulnerability	160
4.2.1.	Differential risks from climate change	161
4.2.2.	Current adaptation experience	162
4.2.3.	The decision-making context	165
4.2.4.	Future risks and opportunities for adaptation	166
4.2.5.	Managing future risks and building resilience	167
4.2.6.	Barriers to adaptation	168

4.3.	Multi-level governance approaches to adaptation	169
4.3.1.	The United States: a case study in multi-agency adaptation governance	172
4.4.	Climate adaptation law: what kind of law?	177
4.4.1.	'Adaptive law': the new paradigm	179
4.5.	Disaster risk reduction laws for climate disasters	184
4.5.1.	The European Union's Disaster Risk Management Policy and Resilience Agenda	185
4.5.2.	Vietnam's Law on Natural Disaster Prevention and Control 2013	187
4.6.	Integrating climate change adaptation, disaster risk reduction and sustainable development	193
4.6.1.	The Philippines: a case study	196
4.7.	Sectoral adaptation case studies	197
4.7.1.	Coasts: the EU and Australia case studies	198
4.7.2.	Floods	206
4.7.3.	Critical Infrastructure	217
4.7.4.	Bushfires	221
4.7.5.	Drought and desertification	223
4.7.6.	Planned relocation and resettlement	225
4.8.	Cities: the adaptation and disaster risk reduction microcosm	226
4.8.1.	Climate change threats to urban areas in Europe	228
4.8.2.	Planning urban adaptation	231
4.9.	Concluding reflections	234
5	Response, recovery and rebuilding	236
5.1.	Climate Justice implications	238
5.1.1.	Climate Justice and Hurricane Katrina	239
5.2.	What is the role of law in climate disaster risk reduction?	241
5.3.	Emergency preparedness and response	243
5.3.1.	Emergency Action Plans	244
5.3.2.	Early warning systems	245
5.3.3.	European Union Civil Protection Mechanism: a case study	249
5.4.	Response: who is in charge?	252
5.4.1.	Hurricane Katrina: a case study	253
5.4.2.	Multi-jurisdictional response governance frameworks – European Union: a case study	254
5.5.	Tax-funded government relief funds	255
5.5.1.	A law and economics, neoliberal response	256
5.5.2.	A distributive justice approach	259
5.5.3.	The features of disaster relief funds	261
5.6.	Recovery and rebuilding: a multi-governance approach	269

CONTENTS

xiii

5.6.1.	The Hurricane Sandy Rebuilding Task Force	270
5.6.2.	New York State climate change adaptation and disaster risk reduction pre-Hurricane Sandy	275
5.6.3.	A Stronger, More Resilient New York City	279
5.7.	Concluding reflections	281
6	Compensating the victims of climate disasters	283
6.1.	Part I – Public and private insurance as social institutions for compensating the victims of climate disasters	285
6.1.1.	Can insurance effectively reduce risk?	289
6.1.2.	The government as insurer and reinsurer	290
6.1.3.	The private insurance market	293
6.1.4.	The challenges of climate disasters, or catastrophic threats, to insurers	295
6.1.5.	Empirical insights on the uptake of insurance offered by psychology and behavioural economics	298
6.1.6.	Less conventional climate disaster insurance products	300
6.1.7.	Shifting the risks of climate disasters to the capital markets	301
6.1.8.	Flood Insurance	302
6.1.9.	Insurance in Developing Countries	314
6.2.	Part II – Civil liability as a compensation mechanism	320
6.2.1.	Institutional, practical and legal obstacles	320
6.2.2.	Courts begin to blend tort and public law actions	324
6.2.3.	The doctrine of pre-emption frustrates the hearing of massive tort claims	328
6.2.4.	A proposed Model Statute on Legal Remedies for Climate Change	330
6.3.	Part III – Transferring the uncompensated damages of climate disasters to the top 200 fossil fuel companies	331
6.3.1.	Precedents for upstream levies on feedstocks	334
6.3.2.	The asbestos example: a fund for long-tail, mass injuries	337
6.3.3.	The Japanese nuclear disasters: deciding on categories of loss that can be compensated	337
6.3.4.	Design of the proposed Fund	339
6.4.	Concluding reflections	344
7	Towards an inclusive and impartial practical reasoning process on Climate Justice and Disaster Law in a post-2015 world	346
7.1.	Building the public reasoning platform	349
7.1.1.	The co-production of knowledge and boundary organisations	350
7.1.2.	Publicly funded climate science agencies	352

7.1.3.	The provision of open data	355
7.1.4.	Public funding for climate change research	356
7.2.	Procedural Climate Justice: education and awareness-raising, public participation, access to information, and legal remedies	356
7.2.1.	Education and awareness-raising	358
7.2.2.	Public participation	361
7.2.3.	Access to information	376
7.3.	The role of the media in public and impartial reasoning	377
7.3.1.	Can new media enhance practical reasoning on climate change?	380
7.4.	Concluding reflections	384
<i>Index</i>		386

PREFACE

Why Climate Justice and Disaster Law? I began my intellectual foray into the world of Climate Law in 1997 in the lead up to the multilateral negotiations under the 1992 United Nations Framework Convention on Climate Change (UNFCCC), which resulted in the establishment of the Kyoto Protocol. This was long before Climate Law was identified as a specialised area of Environmental Law. For the next twelve years, I devoted almost all of my academic writing to international and domestic legal instruments designed to mitigate greenhouse gas (GHG) emissions, especially in the Energy sector. This included interdisciplinary approaches to emissions trading schemes, renewable energy, energy efficiency and Smart Grids, while keeping a forensic eye on the annual Conferences of the Parties (COPs) to the UNFCCC, and devouring the documentation arising out of those meetings. In 2008, I added Reducing Emissions from Deforestation and Degradation (REDD+) to my range of mitigation research projects. It seemed to me, at least in the early stages, that the COPs would deliver the level of emissions reduction commitments for which the Intergovernmental Panel on Climate Change (IPCC) called in the short-, medium-, and long-term, to avoid the worst impacts of climate change. I understood of course that moving forward beyond the Kyoto Protocol developing countries, especially the high emitters, would also have to submit to the international legal arrangements for reducing greenhouse gas emissions.

Perhaps the warning bells about the post-2012 UNFCCC regime began to ring at the 2007 Thirteenth Conference of the Parties (COP 13) in Bali. This COP was to focus specifically on the post-2012 arrangements and to give the Parties five years within which to reach agreement on the way forward. At Bali, no agreement was reached on whether the Kyoto Protocol would continue beyond 2012 and whether developing countries would take on legally binding emissions reduction targets under the Protocol, or indeed whether an altogether new agreement was needed. Consequently, two working groups were established to delay a decision

on whether future legally binding GHG reduction commitments would be made under the Kyoto Protocol. They were the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) and the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP). These groups were crucial to keeping multilateral negotiations alive in the lead up to the annual COPs. They met quarterly until their gradual disbandment at subsequent COPs. Although the outcomes of COP 13 will not be discussed in any detail here, the text of the AWG-LCA provided the essential underpinning of the 2009 Copenhagen Accord, from which all subsequent negotiations for an inclusive agreement have followed.

As is now rather well-known, the Copenhagen negotiations failed to deliver a legally binding agreement for the post-Kyoto era, although they did deliver a definitive step change with developing countries agreeing to take on voluntary emissions reduction targets for the first time. It was at the Seventeenth Conference of the Parties (COP 17) that a second commitment period of the Kyoto Protocol was established. This second commitment period, like the first, does not include the United States, the second highest emitter of GHGs after China. Japan, New Zealand, Canada and Russia also withdrew leaving only approximately 13 per cent of global greenhouse gases covered by a legally binding agreement. COP 17 also established the Ad Hoc Working Group on the Durban Platform for Enhanced Action to put before the 2015 Twenty First Conference of the Parties (COP 21) in Paris ‘a Protocol, or other legal instrument or an agreed outcome with legal force under the UNFCCC’ for their agreement. The COP has to decide in Paris precisely what this agreement will entail for developed and developing countries, and when this new agreement will come into force, but it is likely to be either 1 January 2020 or 1 January 2021.

The Twentieth Conference of the Parties (COP 20) concluded in Lima in December 2014. The negotiating text for COP 21 is one of the outcomes of this COP. It, and the outcomes of all other COPs, is analysed in detail in Chapter 2. Suffice it to say, most aspects of a future agreement remain unresolved including whether or not this new agreement will include any compliance mechanism at all. So, eighteen years after the establishment of the UNFCCC in 1992, there is still considerable uncertainty about whether or not developed and developing countries will agree to take the decisions needed to reduce greenhouse gas emissions in line with the IPCC’s recommendations in its Fifth Assessment Report (AR5).

Perhaps unsurprisingly, over the years attention has begun to focus more closely on the need for countries to adapt to the impacts of climate change, given the evidence about current and likely future changes to the Earth's climate. Indeed, evidence that climate change is human-induced has led some scientists to claim that the Earth is entering a new geological age – the Anthropocene – which, unlike any other preceding age, is caused by humans. It is now also accepted by the Parties to the UNFCCC that adaptation will only go some way towards staving off the worst impacts of climate change. It has therefore become necessary, in the past three years, to establish the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts to protect developing countries most vulnerable to the impacts of climate change. In other words, the negotiations are now putting in place mechanisms to deal with climate disasters – whether they arise as a result of extreme weather or slow onset events.

It is important to note that the Parties to the UNFCCC state consistently at the various COPs that they accept the evidence put to them by the IPCC, with the IPCC's First Assessment Report being released in 1990 and the most recent in 2013 and 2014. However, as discussed in Chapter 1, the authority of climate science has been deliberately destabilised by those seeking to undermine the case for international and domestic regulation of greenhouse gases. The most notorious of these efforts was the 'Climategate' scandal which erupted immediately before the 2009 Copenhagen negotiations, as well as the questions raised about the reliability of the IPCC's 2007 Fourth Assessment Report in early 2010. These disruptions to a consensus on climate science, which was emerging in most countries by 2007, have not been entirely resolved, despite the efforts of many governments to fund national science academies to report on climate change at a national and regional level.

Given the tenuous nature of the multilateral UNFCCC negotiations, the failure of the United States and Australian governments to pass emissions trading legislation, and the disputation around climate science, I decided in 2010 to devote my research to an area of law which I have labelled Climate Disaster Law. This builds on the efforts of other legal academics who, following Hurricane Katrina and the events of 9/11 in the United States, established a new area of legal academic endeavour – Disaster Law. In this book, Climate Disaster Law means a portfolio of legal rules which deal with: prevention; emergency response, recovery and rebuilding; and compensating the victims of climate disasters. It

acknowledges the IPCC's framing of climate disasters as those where hazards, like natural climate variability and anthropogenic climate change, influence the climate extremes that contribute to disasters when they intersect with the exposure and vulnerability of human society and natural ecosystems to these extremes. Consequently, in this book I acknowledge that Climate Disaster Law intersects with areas outside of the UNFCCC's traditional ambit including disaster risk reduction, sustainable development, human rights, humanitarian actions and human security. Each of these is dealt with under separate international instruments and agencies although the challenges posed by climate change have witnessed some recent convergence between them.

What about Climate Justice? Climate Justice has always been at the heart of the multilateral negotiations under the UNFCCC. It is the basis for embedding within the text of the UNFCCC the International Law 'common but differentiated responsibilities' principle. This has proved to be an enduring UNFCCC principle, despite the attempts of some developed countries to oust it, and requires developed countries to take on a larger share of the burden of reducing greenhouse gases than developing countries. It also requires developed countries to fund the adaptation and disaster risk reduction activities of developing countries. Many scholars have written detailed accounts of what Climate Justice means, especially in the context of reducing greenhouse gas emissions. Fewer have countenanced what Climate Justice means for adaptation and none has investigated in detail what it means in the context of climate disasters. Inspired particularly by the work of Amartya Sen, and others, I have adopted a Capability Approach to understand and illuminate the risks which climate disasters pose to humans and non-humans. I find the Approach inspirational for two reasons. First, it resonates well with the fact that climate disasters fundamentally destroy and undermine Capabilities unless vulnerability and exposure are reduced, and resilience building is actively pursued. Even then, extensive uncompensated economic and non-economic losses are likely to linger well into the future. The capacity of developed countries to respond to the challenge of climate disasters depends primarily on the political will of politicians to embrace climate science and respond accordingly. In developing countries, the capacity to respond depends largely on having the financial resources to engage in adaptation and disaster risk reduction activities, while compensation remains a significant difficulty. In both cases, the disasters are very likely to take governments and even insurers beyond their limits and functions to cope and offer compensation.

A second reason for relying on Amartya Sen's work is his conception of justice enunciated in *The Idea of Justice*. Although Sen espouses a more general theory of global justice, it is his insistence on procedural justice – the idea that justice should extend to, and take account of, the actual lives of those affected by injustice – that resonates in the context of Climate Disaster Law. It goes beyond all the other theories of Climate Justice, discussed in this book, by insisting that a conception of justice be based on impartial and practical public reasoning about how a society should respond to an issue like climate change. That reasoning should embrace the consequences of decisions taken in any nation state on others who are far away. For me, those 'others' are far away on both a spatial and a temporal scale if we take future generations into account. Given the manipulation of climate science by vested interests, and the consequent failures at the international and domestic levels to adequately respond to climate change, Sen's insistence on impartial practical reasoning is intrinsically important to notions of Climate Justice. I propose that an essential aspect of Climate Justice is a 'willingness to pay' on the part of all negotiating parties, and that this can be derived via Sen's notion of a deliberative global justice. Of course Sen's idea of justice is deeply embedded in his Capability Approach, which is itself highly relevant to notions of vulnerability and resilience to climate change, and the attempts of public and private sector agents to adapt to it, and compensate for its effects.

Given my desire to produce a work which comprehensively analyses the interface between Climate Justice and Disaster Law the book considers: in Chapter 1 – the complexities of climate science and its interface with the law- and policy-making process; in Chapter 2 – the multilateral climate change negotiations from the establishment of the 1992 United Nations Framework Convention on Climate Change (UNFCCC) to the Twentieth Conference of the Parties in Lima (COP 20) in December 2014; in Chapter 3 – a vision of Climate Justice where a Capability Approach to climate disasters demands a better integration of multilateral negotiations on climate change, disaster risk reduction, sustainable development and human rights for a post-2015 world, as well as a process of impartial practical reasoning; in Chapter 4 – the imperative of preventing disasters, or at least ameliorating their impacts, through adaptation and disaster risk reduction responses; in Chapter 5 – mechanisms for the response, recovery and rebuilding phases of a disaster; in Chapter 6 – existing avenues for compensating the victims of disaster, as well as my own proposed fossil fuel-funded Climate Disaster

Response Fund for compensating victims in developing countries most vulnerable to the impacts of climate change; and finally in Chapter 7 – an approach towards an impartial practical and public reasoning process to aid the Climate Justice and Disaster Law project.

No book is possible without the inspiration and assistance of many people. First, I owe a debt of gratitude to Amartya Sen for providing me with the intellectual base from which to prosecute my own approach to this book. Perhaps it was serendipity when, in 2010, I stood outside Heffers Bookshop in Cambridge and saw *The Idea of Justice* in the window. Feeling rather despondent at the time about the shape of climate change law and policy in the world, I felt, as I was reading it, that every word resonated perfectly. I felt certain that it is important to reach a clear understanding of how climate disasters impact on the freedoms and functioning of humans and non-humans, and a less oppositional and more reasoned way of thinking about these impacts. So began a journey where this book marks simply a destination along the way. I hope that this approach shines a light on the way forward for future multilateral climate change negotiations and domestic law and policy.

I am so grateful that, while variously a visiting scholar to Trinity College, Cambridge and a Herbert Smith Freehills Visiting Professor at Cambridge Law School, I have had the distinct privilege of meeting Amartya Sen, discussing some aspects of my work with him, and having him read one of my very early pieces on Climate Justice. All of this has encouraged me to take on the sometimes daunting task of writing this book. I am also most grateful to Kevin Gray, Professor of Law and Dean of Trinity College, for facilitating my appointment as a visiting scholar to the College, and to Herbert Smith Freehills for sponsoring my appointment to Cambridge Law School in 2013. I have done some of the most important research and writing for this book while sitting in the Squire Law and Trinity College Libraries at Cambridge. However, it is my home institution, Sydney Law School, The University of Sydney, which has supported and sustained my research and teaching over the past nineteen years. I am particularly grateful to the current Dean, Professor Joellen Riley, and the Pro Dean, Professor Cameron Stewart, for their enduring interest in, and support for the research into and teaching of, Climate and Environmental Law at the Law School.

To write a book entitled *Climate Justice and Disaster Law*, I have also been inspired by, benefited enormously from the work of and enjoyed my various interactions with many other leading scholars including: Dan Farber, Sho Sato Professor of Law at the University of California,

Berkeley; Michael Faure, Professor of International and Comparative Law at Maastricht University; Michael Gerrard, Professor of Law and Director of the Sabin Centre for Climate Change Law at Columbia Law School; Jonathan Verschuuren, Professor of International and Environmental Law at Tilburg University; David Schlosberg, Professor of Environmental Politics and Co-Director of the Sydney Environment Institute at The University of Sydney; Tim Stephens, Professor of International Law, at Sydney Law School, The University of Sydney; Chris Field, Melvin and Joan Lane Professor for Interdisciplinary Environmental Studies and Director of the Carnegie Institution's Department of Global Ecology at Stanford University, and co-chair of Working Group II of the IPCC; Lisa Alexander, Chief Investigator at the Climate Change Research Centre, University of New South Wales and lead author of the IPCC's Working Group I Fifth Assessment Report; Professor Lesley Hughes, Department of Biological Sciences at Macquarie University, lead author of IPCC Assessment Reports and member of Australia's Climate Council; and countless others.

I am deeply appreciative of the support which my partner, Mark Lyster, has given me throughout the writing of this book and also for his insights, as a sustainability consultant, into many of the concepts and ideas which I raise. My children, Kathryn and Matthew, who are building their own careers and who are deeply committed to social and animal justice, are a constant source of inspiration. My extended family and friends have also been generous with their encouragement and tolerant of my many absences.

No-one has been more instrumental to my research and writing over the past ten years than my researcher, Chris Cain, who has been a diligent and devoted collector, and reader, of the vast array of materials upon which I have relied. Her efforts to assist me in the writing of this book went way beyond the call of duty. Thank you, Chris.

Johanne Brady, the Administrative Assistant of the Australian Centre for Climate and Environmental, of which I am Director, has supported me and the Centre over a long period of time, for which I am very grateful.

Finally, my thanks go to Elizabeth Spicer and Richard Woodham at Cambridge University Press for their patience, assistance and guidance with bringing this book to completion and ultimately to publication.

Rosemary Lyster
July 2015

TABLE OF STATUTES

Act on Compensation for Nuclear Damage (Japan)
 Act on Indemnity Agreements for Compensation of Nuclear Damage (Japan)
 Act on Special Measures Concerning the Handling of Environment Pollution by
 Radioactive Materials Discharged by the Nuclear Power Station Accident
 Associated with the Tohoku District – Off the Pacific Ocean Earthquake that
 Occurred on March 11, 2011 (Japan)
 African Union Convention for the Protection and Assistance of Internally Displaced
 Persons in Africa (AU)
 Agenda 21 (UN)
 Biggert-Waters Flood Insurance Reform Act of 2012 (US)
 Clean Air Act (US)
 Clean Energy Act 2011 (Cth)
 Climate Change Act 2008 (UK)
 Coastal Protection Act 1979 (NSW)
 Companies Act 2006 (UK)
 Comprehensive Environmental Response, Compensation and Liability Act of
 1980 (US)
 Convention on the Conservation of Biological Diversity (UNEP)
 Convention on the Elimination of All Forms of Discrimination against Women (UN)
 Convention on the Law of the Sea (UN)
 Convention Relating to the Status of Refugees (UN)
 Convention to Combat Desertification (UN)
 Council Regulation (EC) No 2012/2002 (EU) establishing the European Union
 Solidarity Fund
 Declaration on the Right to Development 1986 (UN)
 Declaration on the Rights of Indigenous Peoples 2007 (UN)
 Directive 2007/60/EC on the Assessment and Management of Flood Risks (EU)
 Directive 2009/147/EC on the Conservation of Wild Birds (EU)
 Directive 2014/89/EU establishing a Framework for Maritime Spatial Planning (EU)
 Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and
 Flora (EU)
 Disaster Relief Appropriations Act 2013 (US)

TABLE OF STATUTES

xxiii

Energy Independence and Security Act (US)
 European Parliament Resolution on Green Infrastructure (EU)
 False Claims Act (Criminal) (US)
 Federal False Statements Act (US)
 Flood and Water Management Act 2010 (UK)
 Freedom of Information Act (US)
 Freedom of Information Act 1989 (NSW)
 General Education Act (Dominican Republic)
 Hazardous Substance Response Revenue Act of 1980 (US)
 Homeowner Flood Insurance Affordability Act of 2014 (US)
 Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and
 Communities to Disasters (UN)
 Immigration Act (US)
 Insurance Contracts Amendment Act 2012 (Cth)
 International Convention on Civil Liability for Oil Pollution Damage (IMO)
 Kyoto Protocol (UN)
 Law on Natural Disaster Prevention and Control 2013 (Vietnam)
 Local Government Act 1993 (NSW)
 Millennium Declaration (UN)
 Monitoring Mechanism Regulation (EU)
 Montreal Protocol on Substances that Deplete the Ozone Layer (UN)
 National Environmental Policy Act of 1969 (US)
 National Strategy for Natural Disaster Prevention, Response and Mitigation to 2020
 (Vietnam)
 Natural Disaster Relief and Recovery Arrangements under Appropriation Act (No. 2)
 2006–07 (Cth)
 Nuclear Damage Compensation Facilitation Corporation Act (Japan)
 Oil Pollution Act of 1990 (US)
 Openness of Public Information Act (Indonesia)
 Outer Space Treaty (UN)
 Ozone Protection and Synthetic Greenhouse Gas (Import Levy) Act 1995 (Cth)
 Ozone Protection and Synthetic Greenhouse Gas (Manufacture Levy) Act 1995 (Cth)
 Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth)
 Philippines Climate Change Act 2009 (Philippines)
 Philippines Disaster Risk Reduction and Management Act 2010 (Philippines)
 Protocol on Environmental Protection to the Antarctic Treaty (UN)
 Regulation (EU) 661/2014 of the European Parliament and of the Council of 15 May
 2014 amending Council Regulation (EC) No 2012/2002 establishing the European
 Union Solidarity Fund (EU)
 Regulation (EU) No 525/2013 of the European Parliament and of the Council of
 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas
 emissions

Cambridge University Press
978-1-107-10722-9 - Climate Justice and Disaster Law
Rosemary Lyster
Frontmatter
[More information](#)

xxiv

TABLE OF STATUTES

Right to Information Act (India)
Rio Declaration (UN)
Robert T. Stafford Disaster Relief and Emergency Assistance Act (US)
Sale of Land Act 1962 (Vic)
Sandy Disaster Relief Appropriations Act 2013 (US)
Sandy Recovery Improvement Act of 2013 (US)
Sendai Framework for Disaster Risk Reduction 2015–2030
Small Business Act (US)
Social Security Legislation Amendment (Disaster Recovery Allowance) Act 2013 (Cth)
Statement of Principles for the Sustainable Management of Forests (UN)
Stockholm Declaration 1972 (UN)
Strategy on Adaptation to Climate Change (EU)
Treasury and General Government Appropriations Act for Fiscal Year 2001 (US)
United Nations Framework Convention on Climate Change 1992 (UN)
Vienna Convention for the Protection of the Ozone Layer 1985 (UN)
Water Act 2014 (UK)

ABBREVIATIONS

AAU	Assigned Amount Unit
ABI	Association of British Insurers
AEP	American Electric Power
AFOLU	Agriculture, Forestry and Other Land Use
AGDRP	Australian Government Disaster Recovery Payment
AILAC	Association of Independent Latin American and Caribbean States
AMOC	Atlantic Meridional Overturning Circulation
AOSIS	Alliance of Small Island States
AR	Assessment Report of Intergovernmental Panel on Climate Change
ATP	Adaptation Tipping Point
AWG-KP	Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action under the UNFCCC
BAL	Bushfire Attack Level
BASIC	Brazil, South Africa, India and China
BCA	Benefit Cost Analysis
BECCS	Bioenergy with CCS
BMO	Bushfire Management Overlay
BW12	Biggert-Waters Flood Insurance Reform Act of 2012
CCA	Climate Change Adaptation
CBDR	Common But Differentiated Responsibilities Principle
CCPR	Council on Climate Preparedness and Resilience
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CCS	Carbon Capture And Storage
CDM	Clean Development Mechanism
CDP	Climate Displaced Person
CDR	Carbon Dioxide Removal
CECIS	Common Emergency Communication and Information System
CEQ	Council on Environmental Quality
CER	Certified Emission Reductions

CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFC	Chlorofluorocarbon
CH ₄	Methane
CIP	Climate Insurance Pool
CLC	International Convention on Civil Liability for Oil Pollution Damage
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO ₂	Carbon Dioxide
COP	Conference of the Parties to the UNFCCC
CPM	Carbon Price Mechanism
CRU	Climate Research Unit of University of East Anglia
CSCNDPC	Central Steering Committee for Natural Disaster Prevention and Control
CSIRO	Commonwealth Scientific and Industrial Research Organisation of Australia
DA	Development Application
DCLG	Department of Community and Local Government
DEFRA	UK Department for Environment, Food and Regional Affairs
DFID	UK Department for International Development
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction And Management
EAP	Emergency Action Plan
EC	European Commission
ECP	Emergency Climate Programme
EEA	European Environment Agency
EERC	European Emergency Response Capacity
EISA	Energy Independence and Security Act of 2007
ENSO	El Niño-Southern Oscillation
EPA	Environment Protection Agency
ERCC	Emergency Response Coordination Centre
ERU	Emission Reduction Unit
ETS	Emissions Trading Scheme
EU	European Union
EUSF	EU Solidarity Fund
EWS	Early Warning Systems
FAO	Food and Agriculture Organisation
FEMA	Federal Emergency Management Agency
FIFM	Federal Interagency Floodplain Management
FOI	Freedom of Information
GEF	Global Environment Facility

LIST OF ABBREVIATIONS

xxvii

GCF	Green Climate Fund
GHG	Greenhouse Gas
GT	Gigatonne
GTC	Gigatonnes of carbon
HDR	Human Development Report 2014: Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience
HFA	Hyogo Framework for Action
HHWS	Heat Health Warning Systems
IAR	International Assessment And Review
ICZM	Recommendation on Integrated Coastal Zone Management
IFPRI	International Food Policy Research Institute
IFRCRCs	International Federation of Red Cross and Red Crescent Societies
IGAD	Intergovernmental Authority on Development
INDC	Intended Nationally Determined Contribution
IOM	International Organisation for Migration
IOPC Fund	International Oil Pollution Compensation Fund
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation Mechanism
LDC	Least Developed Country
LDCF	Least Developed Countries Fund
LNDPC	Vietnamese Law on Natural Disaster Prevention and Control 2013
MARD	Vietnamese Ministry of Agriculture and Rural Development
MCII	Munich Climate Insurance Initiative
MONRE	Vietnamese Ministry of Natural Resources and Environment
MRV	Monitoring, Reporting And Verification
MS	EU Member State
MSP	Marine Spatial Planning
N ₂ O	Nitrous Oxide
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NAS	US National Academy of Science
NDIR	National Disaster Insurance Review
NDPC	Vietnamese Natural Disaster Prevention And Control
NDRF	National Disaster Recovery Framework
NDRRA	Natural Disaster Relief and Recovery Arrangements
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NGO	Non-Government Organisation
NOAA	National Oceanic and Atmospheric Administration
OCHA	UN Office for the Coordination of Humanitarian Affairs
OHCHR	Office of the High Commissioner for Human Rights
OMB	Office of Management and Budget

OPA	Oil Pollution Act
OPEC	Organisation of the Petroleum Exporting Countries
PCCA	Philippines Climate Change Act 2009
PDRMA	Philippines Disaster Risk Reduction and Management Act 2010
PPM	Parts Per Million
PSC	Public Service Commission
RCP	Representative Concentration Pathways
REDD+	Reducing Emissions from Deforestation and Degradation
RFC	IPCC Reasons For Concern
RMU	Removal Unit
SBI	Subsidiary Body on Implementation under UNFCCC
SBSTA	Subsidiary Body for Scientific and Technological Advice under UNFCCC
SCCF	Special Climate Change Fund
SIDS	Small Island Developing States
SPP	State Planning Policy
SREX	IPCC WG II's Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
SRM	Solar Radiation Management
SSAs	Sector Specific Agencies
TASSC	The Advancement of Sound Science Centre
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UNISDR	United Nations Integrated Strategy for Disaster Reduction
UNISDR	United Nations Office for Disaster Risk Reduction
USACE	US Army Corps of Engineers
VAST	Vietnam Academy of Science and Technology
WG	Working Group of the Intergovernmental Panel on Climate Change
WMO	World Meteorological Organisation