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OF ENVIRONMENTAL LAW

General Editor: Michael Faure



CLIMATE CHANGE LAW



Edited by
Daniel A Farber
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VOLUME I

Climate Change Law

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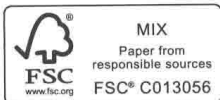
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CLIMATE CHANGE LAW

Elgar Encyclopedia of Environmental Law

General Editor: Michael Faure

The *Elgar Encyclopedia of Environmental Law* is a landmark reference work, providing definitive and comprehensive coverage of this dynamic field. The *Encyclopedia* is organised into 12 volumes around top-level subjects – such as water, energy and climate change – that reflect some of the most pressing issues facing us today. Each volume probes the key elements of law, the essential concepts, and the latest research through concise, structured entries written by international experts. Each entry includes an extensive bibliography as a starting point for further reading. The mix of authoritative commentary and insightful discussion will make this an essential tool for research and teaching, as well as a valuable resource for professionals and policymakers.

1. Climate Change Law

Edited by Daniel A Farber and Marjan Peeters

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Foreword to the Encyclopedia

It is our privilege, on behalf of the IUCN Academy of Environmental Law, to introduce this set of volumes comprising the *Elgar Encyclopedia of Environmental Law* and to thank General Editor Michael Faure and the outstanding group of volume editors for their invaluable contribution and commitment to the project.

The decision to initiate development of this multi-volume Encyclopedia was taken by the Governing Board of the IUCN Academy of Environmental Law in 2011 in response to a proposal from Ben Booth of Edward Elgar Publishing. It has been a pleasure for the Academy Secretariat to work with EEP and Professor Faure throughout the implementation process over the past several years. We must specifically acknowledge Ben Booth and Laura Mann of EEP for their diligent and systematic guidance at every stage.

The *Elgar Encyclopedia of Environmental Law*, a challenging and ambitious undertaking, has represented an important opportunity for the IUCN Academy in collaboration with a wider range of distinguished scholars and researchers to pursue its mission: environmental law is essential for the achievement of a sustainable world that values and conserves nature under the rule of law and justice.

Based on the quality and experience of the specialists whose commentaries and discussion are included in the set, we are confident that the *Elgar Encyclopedia of Environmental Law* will serve as a valuable and respected source of reference for students, scholars, professionals, policy makers and other interested readers who will have occasion to consult its content.

Jamie Benidickson and Yves Le Bouthillier
Executive Directors
IUCN Academy of Environmental Law
Faculty of Law
University of Ottawa

Foreword to Volume I

It is with great pride that we can now present the first volume in a new set, the *Encyclopedia of Environmental Law*. The idea of this Encyclopedia was launched several years ago when it was felt that there would be a need to have a major research-focused resource covering the field of environmental law. The idea of this Encyclopedia is to provide researchers with first-hand insights into a particular field of research and to provide detailed bibliographies allowing scholars to continue further research.

The idea behind the Encyclopedia is to focus on central concepts in environmental law which go beyond the details of national legislation. The separate volumes in the Encyclopedia should therefore be of interest to any researcher (or for that matter other interested environmental lawyers) who seek information on specific issues related to environmental law.

A unique collaboration has been set up between the IUCN Academy of Environmental Law and Edward Elgar Publishing in which my modest task consisted of overseeing the entire project and selecting volume editors, together with the colleagues of the IUCN Academy of Environmental Law.

We can be happy that the entire set-up of this prestigious project has worked out very well. Together with the IUCN Academy of Environmental Law and Edward Elgar, the most important topics that needed coverage have been identified and volume editors have been selected. We are very happy that we were able to get many excellent scholars on board as editors for the individual volumes.

The current volume on Climate Change Law is the first one and a few others will be published soon after. It is envisaged that within a period of one year a first set of approximately seven volumes will be published in the Encyclopedia.

This volume on Climate Change Law is one on which the IUCN Academy of Environmental Law, Edward Elgar and I as editor of the set are truly very proud. We had two excellent volume editors, Dan Farber and Marjan Peeters, both renowned experts in Climate Change Law who have published widely in the field. They were able to produce a volume with no fewer than 56 chapters with contributions from some of the most famous scholars publishing in the area of Climate Change Law. Moreover, this volume represents precisely the approach we wanted to pursue in this Encyclopedia. It is not approaches in national law that are the central focus, but rather cross-cutting themes, bringing the research and the volume to a higher level. We are very proud that we launch this Encyclopedia on Environmental Law with this excellent volume on Climate Change Law. I wholeheartedly congratulate my colleagues Dan Farber and Marjan Peeters, as well as the contributors, for an excellent job done within a short period of time. Dan and Marjan have set a very high standard for the volumes to come and I am sure, given that we were able also to contract excellent editors for the coming volumes, that those expectations will indeed be met.

I sincerely thank the IUCN Academy of Environmental Law and more particularly Jamie Benidickson and Yves Le Bouthillier, the Academy's directors, for an excellent

collaboration and for useful feedback and input that contributed to the quality of this volume. I am equally grateful to the publisher, Edward Elgar, and more particularly to Ben Booth and Laura Mann for the pleasant and professional way in which they have accompanied this publication process.

I sincerely hope and expect that this volume and those to come will meet the expectations of our readership.

Michael Faure
General Editor
Encyclopedia of Environmental Law

Abbreviations

AAU	Assigned amount unit
AB	Appellate Body
ASEAN	Association of Southeast Asian Nations
ASR	Articles on State Responsibility
BECCS	Bioenergy with carbon capture and sequestration
BIT	Bilateral investment treaty
BTU	British Thermal Unit
BOD	Biochemical oxygen demand
CAC	Command-and-control
CAFE	Corporate average fuel economy
CBD	Convention on Biological Diversity
CBDR	Common but differentiated responsibility
CBDRRC	Common but differentiated responsibilities and respective capabilities
CC	Climate change
CCA	Climate change adaptation
CCAC	Climate and Clean Air Coalition
CCP	Cities for Climate Protection
CCS	Carbon capture and storage
CDM	Clean development mechanism
CDR	Carbon dioxide removal
CER	Certified Emission Reductions
CFL	Compact fluorescent lamp
CHP	Combined heat and power
CJEU	Court of Justice of the European Union
COP	Conference of Parties
CSR	Corporate Social Responsibility
DDA	Doha Development Agenda
DICE	Dynamic Integrated Climate-Economy
DOE	Designated Operational Entity
DRR	Disaster risk reduction
DSB	Dispute Settlement Body
DSU	Dispute Settlement Understanding
EAG	Environment Advisory Group
EC	European Commission
ECtHR	European Court of Human Rights
EEA	European Economic Area
EEDI	Energy Efficiency Design Index
EEZ	Exclusive economic zone
EIA	Environmental impact assessment
EIS	Environmental impact statement

EPA	Environmental Protection Agency
ETS	Emissions Trading Scheme
EU	European Union
FCCC	Framework Climate Change Convention
FET	Fair and equitable treatment
FIP	Feed-in premium
FIT	Feed-in-tariff
FVA	Framework for Various Approaches
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCF	Green Climate Fund
GEF	Global Environment Facility
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
GIACC	Group on International Aviation and Climate Change
HAP	Hazardous air pollutant
IACHR	Inter-American Commission on Human Rights
IAM	Integrated assessment model
ICAO	International Civil Aviation Organization
ICCPR	International Covenant on Civil and Political Rights
ICJ	International Court of Justice
ICLEI	International Council for Local Environmental Initiatives
ICSID	International Centre for Settlement of Investment Disputes
IDP	Internally displaced person
IEA	International Energy Agency
IET	International emissions trading
IIA	International investment agreement
ILC	International Law Commission
ILS	Insurance-linked security
IMO	International Maritime Organization
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
IPSO	International Programme on the State of the Ocean
IRENA	International Renewable Energy Agency
ITLOS	International Tribunal for the Law of the Sea
JI	Joint Implementation
KP	Kyoto Protocol
LDC	Least-developed country
LED	Light-emitting diode
LEV	Low Emissions Vehicle
LID	Low impact development
LRTAP	Long-Range Transboundary Air Pollution
LULUCF	Land Use, Land-Use Change and Forestry
MBI	Market-based instrument
MBM	Market-based mechanism
MEA	Multilateral environmental agreement

MEPC	Marine Environment Protection Committee
MFN	Most favoured nation
MOU	Memorandum of Understanding
MPR	Minimum Program Requirement
MRV	Monitoring, Reporting and Verification
NAFTA	North American Free Trade Agreement
NAP	National Allocation Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMM	New market mechanism
NT	National treatment
OAU	Organization of African Unity
ODS	Ozone-depleting substance
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the High Commissioner for Human Rights
OPEC	Organization of Petroleum Exporting Countries
OPIC	Overseas Private Investment Corporation
PAGE	Policy Analysis of the Greenhouse Effect
PAT	Perform Achieve Trade
PET	Punctuated equilibrium theory
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PM	Particulate matter
PPM	Processes and production method
PTC	Production tax credit
REC	Renewable energy credit
REDD	Reducing Emissions from Deforestation and Forest Degradation
RES	Renewable Electricity Standard
RGGI	Regional Greenhouse Gas Initiative
RIEL	Research Institute of Environmental Law
RIN	Renewable Identification Number
RPS	Renewable portfolio standard
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCM	Subsidies and Countervailing Measure
SEA	Strategic environmental assessment
SEEMP	Ship Energy Efficiency Management Plan
SLCP	Short-lived climate pollutant
SLR	Sea level rise
SPS	Sanitary and phytosanitary
SRM	Solar radiation management
SST	Surface sea temperature
TBT	Technical barriers to trade
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
UCLG	United Cities and Local Governments
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	UN Development Programme