CLIMATE CHANGE LAW, POLICY AND PRACTICE SERIES

An Inconvenient Deliberation

The Precautionary Principle's Contribution to the Uncertainties Surrounding Climate Change Liability

By Miriam Haritz

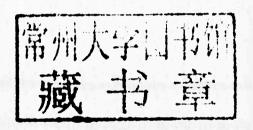




An Inconvenient Deliberation

The Precautionary Principle's Contribution to the Uncertainties Surrounding Climate Change Liability

Miriam Haritz



Published by:
Kluwer Law International
PO Box 316
2400 AH Alphen aan den Rijn
The Netherlands
Website: www.kluwerlaw.com

Sold and distributed in North, Central and South America by:
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21704
United States of America
Email: customer.service@aspenpublishers.com

Sold and distributed in all other countries by: Turpin Distribution Services Ltd. Stratton Business Park Pegasus Drive, Biggleswade Bedfordshire SG18 8TQ United Kingdom Email: kluwerlaw@turpin-distribution.com

Printed on acid-free paper.

ISBN 978-90-411-3521-6

© 2011 Kluwer Law International BV, The Netherlands

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

Permission to use this content must be obtained from the copyright owner. Please apply to: Permissions Department, Wolters Kluwer Legal, 76 Ninth Avenue, 7th Floor, New York, NY 10011-5201, USA. Email: permissions@kluwerlaw.com

Printed in Great Britain.

An Inconvenient Deliberation

Climate Change Law, Policy and Practice Series

VOLUME 5

Editor

Professor Kurt Deketelaere

Professor of Law, University of Leuven, Belgium
Honorary Chief of Staff, Flemish Government
Honorary Professor of Law, University of Dundee, UK
Secretary-General, League of European Research Universities (LERU), Belgium

The aim of the Editor and Publishers is to publish works of excellent quality that focus on Climate Change.

Through this series the Editor and Publishers hope:

- to contribute to combating climate change, to protecting biodiversity, to reducing the impact of pollution on health and better use of natural resources;
- to provide information on cutting use of energy-improving energy efficiency, emissions and emissions trade, renewable energy, carbon capture and geological storage policy;
- to increase the access to information on climate change issues for students, academics, non-governmental organizations, government institutions, and business;
- to facilitate cooperation between academic and non-academic communities in the field of climate change throughout the world.

The titles published in this series are listed at the end of this volume

To my son,

Gaspar Salomon,

my inspiration and most persisting reason for never giving up

About the Author

Miriam M. Haritz was born in Aachen on September 4, 1973 to a German father and a Spanish mother. Growing up in Germany and Belgium, she completed the *Abitur* at the *Kaiser-Karls-Gymnasium* in Aachen. Thereafter, she studied law at the University of Cologne, Germany, and at University College London, in the UK. Upon graduation, she obtained her law degree from the High Court of Cologne (*Erstes Juristisches Staatsexamen*) in 1998, and continued studying the interdisciplinary European Public Affairs Master program offered jointly by Maastricht University and the European Institute of Public Administration (EIPA). She graduated *cum laude* in 2000 and returned to Germany, where she trained as a judge and as a lawyer. After giving birth to her son, Gaspar, she obtained her second legal degree (*Zweites Juristisches Staatsexamen*) from the Ministry of Justice of the Land North Rhine-Westphalia in 2003.

In 2004, Miriam started working as a junior lecturer at the Faculty of Social Sciences in the European Studies Bachelor program at Maastricht University. In 2005, she changed to the Faculty of Law where she worked as a Ph.D. researcher at the International and European Law Department and the Maastricht European Institute for Transnational Legal Research (METRO). Next to her research on the topic of the present dissertation, she was involved in research, teaching and organizational activities on European Institutional Law and international risk regulation. She completed the training of the *Ius Commune* Research School and was a fellow of the *Netherlands Organization for Scientific Research* (*NWO*), who funded her Ph.D. research within the multidisciplinary VAM project group (the social, legal and behavioral aspects of Climate Change Vulnerability, Adaptation and Mitigation). She defended her Ph.D. thesis successfully at Maastricht University on December 17, 2010.

Since 2010, Miriam has served as a Legal Advisor to the German Federal Office of Civil Protection and Disaster Assistance (*Bundesamt für Bevölkerungsschutz und Katastrophenhilfe*, BBK) in Bonn, an independent agency in the portfolio of the German Federal Ministry of the Interior.

"We would be taking a great risk with future generations if, having received this early warning, we did nothing about it..."

Margaret Thatcher*

"On voit se dessiner la proposition philosophique d'un élargissement de la responsabilité, non plus seulement tournée vers le passé, pour la reparation des dommages causés, mais également tournée vers l'avenir, en une exigence de prudence, de prévention, et de précaution qui rejaillit sur l'humanité à venir."

Catherine Thieberge**

^{*} Extract from a speech on the occasion of opening the Hadley Center for Climate Prediction and Research, UK, May 25, 1990.

^{**} Libres propos sur l'évolution du droit de la responsabilité—vers un élargissement de la fonction de la responsabilité civile?, in: Revue trimestrielle de droit civil (RTDC), nr. 3, July–September 1999, 561–584 (577).

Preface

The book takes into account the state of affairs until October 2010.

In December 2010, the U.S. Supreme Court decided in the case *Connecticut v. AEP* to accept an appeal of the defendants to grant a *petition of certiorari* over the questions of standing and the political question doctrine (the case is now *American Electric Power v. Connecticut*, 10-174, decision of December 6, 2010).

The Court will consider and decide the case in the first half of 2011, with Justice Sotomayor, who was on the 2nd Circuit panel that heard the case, not taking part in the Supreme Court's consideration of the issue. The outcome of the case may be in favor of the defendant companies, in favor of the plaintiff states and organizations or it could be that the court could split in a 4-4 voting, leading to upholding the previous court's decision without a Supreme Court precedent, allowing for a trial on the merits.

Also in December 2010 the Cancún Climate Summit that started already with much lower expectations compared to the chronology of an anticipated failure that we witnessed in Copenhagen in 2009, ended with some respectable regional and sectoral advances (such as the Green Climate Fund for financing adaptation) and the reiteration of the intent to come to a successor to the Kyoto Protocol at some point. Yet, the international community failed once more to agree on substantial binding commitments on a global scale in terms of emissions reductions.

Whatever the outcome of the new Supreme Court case is, it is clear that while public regulation would be indeed a more desirable tool to get hold of Climate Change, the question of judicial intervention, should public regulation stay behind what precautionary considerations dictate, remains of fundamental importance.

Coming back to the initial quotes in my book from Margaret Thatcher and Catherine Thieberge, the words of the former British Prime Minister, who is not

Preface

renowned for her ambitions in the field of environmental protection, should be viewed from the perspective of Thieberge's findings that translate as follows:

We see the dawn of a philosophical proposition of an extension of liability, not just turned towards the past, for reparation of damage that has been caused, but equally turned towards the future, by means of demanding prudence, prevention and precaution, shedding its light onto the mankind to come.

Public and private decision-makers need to be judged by the meaning of their words, with corresponding legal consequences if words of precaution are not followed by deeds of precaution.

Miriam Haritz December 2010

Acknowledgments

When I commenced my legal studies immediately after graduating from high school, I did so for very idealistic reasons: I wanted to help those in need of help; law, to me, translated into legal justice, and I somehow thought—with the naivety of youth—that I could contribute to making this world a better place.

Seventeen years later, the world has certainly not become a better place, but I have nonetheless succeeded in maintaining my idealism despite having become a

lawyer.

Out of this idealism, the safeguarding of human life and our living environment has always been at the heart of my professional interest, and very soon I realized that assuming only a legal perspective would always fall short of grasping the full picture. This insight brought me to Maastricht University for the first time where I followed an interdisciplinary Master program after having completed my legal studies in Germany and the UK.

Another couple of years later, I returned to my *Alma Mater* in The Netherlands to commence a Ph.D. project, of which the present book is the outcome (the thesis

was defended at Maastricht University in December 2010).

I am grateful for all the support that I received from numerous people over the

course of the past years, of which I can only mention a few here.

First and foremost, I would like to express my gratitude to my two supervisors, Prof. Dr. Ellen Vos and Prof. Dr. Michael Faure of Maastricht University, who have always supported me and assisted me with their profound legal understanding. I also owe thanks to many other academic and secretariat staff from Maastricht University that made my years of working and researching there so rich and so full of valuable experiences.

I also wish to thank NWO/VAM for generously funding my Ph.D. and for enabling me to cover my research expenses for books, travel and research time abroad. In this context, I also want to express my gratitude to all the people who

made my stay at the U.S. Universities of Berkeley and Stanford so valuable during spring 2007, most notably Prof. Dr. Robert Rabin, Stanford University, Prof. Dr. Stephen Sugarman, U.C. Berkeley, Prof. Dr. Daniel Farber, U.C. Berkeley and the late so-called "climate warrior" Prof. Dr. Stephen Schneider, Stanford University.

I also thank the Assessment Committee composed of Prof. Dr. Marjan Peeters, Maastricht University, Prof. Dr. Joyeeta Gupta, Vrije Universiteit Amsterdam / UNESCO-IHE and Prof. Dr. Jaap Spier, Advocate General at the Supreme Court of

the Netherlands, for reading and commenting on my Ph.D.

Finally, I thank my family, my partner and my friends, for all their invaluable support, patience and thus contribution to the realization of this book over the course of the past years.

Miriam Haritz Cologne, December 2010

List of Abbreviations

AOSIS Alliance of Small Island States

ATCA Aliens Tort Claim Act

AWG-KP Ad Hoc Working Group on Further Commitments for

Annex I Parties under the Kyoto Protocol

AWG-LCA The Ad Hoc Working Group on Long-term Cooperative

Action under the Convention

BBK Bundesamt für Bevölkerungsschutz und Katastrophenhilfe

(Federal Office of Civil Protection and Disaster Assistance,

Germany)

BGB Bürgerliches Gesetzbuch

BMU Bundesministerium für Umwelt, Naturschutz und

Reaktorsicherheit (Federal Ministry for the Environment,

Nature Conservation and Nuclear Safety)

BSE Bovine Spongiform Encephalopathy (the so-called *Mad Cow*

Disease)

C Celsius, centigrade CC Climate Change

CCAs Climate Change Agreements CCS Carbon Capture and Storage

CEC Commission of the European Communities

CERCLA Comprehensive Environmental Response, Compensation

and Liability Act (USA)

CERT Carbon Emissions Reduction Target

CFCs Chlorofluorocarbon

CH₄ Methane

CJD Creuzfeld-Jakob-Disease (the human variant of BSE)

List of Abbreviations

CO₂ Carbon Dioxide

CoP Conference of the Parties (to the UNFCCC)

DES Diethylstilboestrol

DKKV Deutsches Komitee Katastrophenvorsorge e.V. (German

Committee for Disaster Reduction)

EC European Communities

ECHR European Court of Human Rights EEA European Environment Agency

EC European Community
ECJ European Court of Justice

ECT Treaty establishing the European Community
EPA Environmental Protection Agency (USA)

ETH Eidgenössische Technische Hochschule (Swiss Federal

Institute of Technology, Zurich)

ETS Emissions Trading Scheme (in the European Union

EU ETS)

EU European Union

FSM Federated States of Micronesia GWP Global Warming Potential

G7 Group of seven major industrial nations (France, Germany,

Italy, UK, USA, Canada).

G8 Informal group of eight countries: G7 + Russia

G77 Informal group of 77 founding developing countries (by

now including 130 developing countries)

GDP Gross Domestic Product

GHG Greenhouse Gas

GMO Genetically Modified Organisms

HFCs Hydrofluorocarbons

HMT Her Majesty's Treasury (UK)

IACHR Inter-American Court of Human Rights

ICCF The International Council for Capital Formation

ICTM International Center for Toxicology and Medicine (USA)

ICJ International Court of Justice IEA International Energy Agency IMF International Monetary Fund

IPCC Intergovernmental Panel on Climate Change

ISA International Studies Association

ISDR International Strategy for Disaster Reduction

KNMI Koninklijk Nederlands Meteorologisch Instituut (Royal

Netherlands Meteorological Institute)

MoP Members of the Protocol (the Kyoto Protocol as attached

to the UNFCCC)

MTBE Methyl-T-Butyl-Ether (fuel oxygenate responsible for

drinking water contamination)

N.A. Not applicable

NASA National Aeronautics and Space Administration (USA)

NCDC National Climatic Data Centre (USA)

N₂O Nitrous Oxide NO_x Nitrogen Oxide

NWO Nederlandse Organisatie voor Wetenschappelijk Onderzoek

(Netherlands Organisation for Scientific Research)

OAS Organization of American States

ODP Ozone Depletion Potential ODS Ozone Depleting Substance

OECD Organisation for Economic Co-operation and Development

PCBs Polychlorinated Biphenyls

PFCs Perfluorocarbons

PP Precautionary Principle

PPM Parts per Million (quantification of atmospheric CO₂

concentration)

R&D Research and Development

SBSTA Subsidiary Body for Scientific and Technological Advice

(UNFCCC)

SF₆ Sulfur Hexafluoride

SME Small- and Medium-Sized Enterprise

SO₂ Sulfur Dioxide

SRU Sachverständigenrat für Umweltfragen (The German

Advisory Council on the Environment)

TEU Treaty on European Union

TFEU Treaty on the Functioning of the European Union

(New article numbering following the ECT after the

Lisbon Treaty) United Kingdom

UKMO United Kingdom Meteorological Office

UN United Nations

UK

UNCED United Nations Conference on Environment and Development

(3-14 June 1992, Rio de Janeiro, Brazil)

UNEP United Nations Environment Program

UNESCO United Nations Educational, Scientific, and Cultural

Organization

UNFCCC United Nations Framework Convention on Climate Change

UNFSA United Nations Fish Stocks Agreement

UNU-EHS United Nations University, Institute for Environment and

Human Security

U.S. United States

USA United States of America

VAM Vulnerability, Adaptation and Mitigation

WBGU Wissenschaftlicher Beirat der Bundesregierung Globale

Umweltveränderungen (German Advisory Council on

Global Change)

List of Abbreviations

WHO World Health Organization

WMO World Meteorological Organization

WRR Wetenschappelijke Raad voor het Regeringsbeleid (Dutch

Scientific Council for Government Policy)

WTO World Trade Organization
WWF World Wide Fund For Nature

WWW World Wide Web

Table of Contents

AU	out the Author	VII
Pr	eface	xvii
Ac	knowledgments	xix
Lis	st of Abbreviations	xxi
Int	troduction: A Novel Legal Perspective on a	
M	eteorological Phenomenon	1
1.	Reasons for This Research	1
2.	Problem Definition	6
3.	Research Questions, Structure and Methodology	7
Ch	napter 1	
Cli	imate Change and Uncertainty: Defining the Framework	
Set	tting of a Global Problem	11
1.	Introduction	11
2.	The Terminology of Climate Change	12
3.	A Brief History of Scientific Evidence of Climate Change	18
4.	Measuring and Forecasting Climate Change: The Actual,	
	Calculated, and Estimated Consequences	25
	4.1. Factual Effects	25
	4.1.1. General Temperature Rise	27
	4.1.2. The Rise in Sea Level	27
	4.1.3. Extreme Weather Events	28
	4.1.4. Infectious Diseases and Other Health Problems	31
	4.1.5. Ecological Harm to Flora and Fauna	31
	4.1.6. Other Predicted Effects	32