

Preservation of Ecosystems of  
International Watercourses  
and the Integration of  
Relevant Rules

---

*An Interpretative Mechanism to  
Address the Fragmentation  
of International Law*

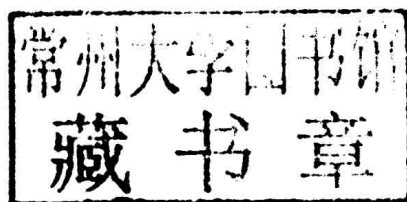
LEE JING

# Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules

*An Interpretative Mechanism to Address  
the Fragmentation of International Law*

By

LEE Jing



BRILL  
NIJHOFF

LEIDEN | BOSTON

Library of Congress Cataloging-in-Publication Data

Lee, Jing, author.

Preservation of ecosystems of international watercourses and the integration of relevant rules an  
interpretative mechanism to address the fragmentation of international law by / Lee Jing.

pages cm. — (International water law series)

Originally published as author's thesis (doctoral – University of Dundee), 2013.

Includes bibliographical references and index.

ISBN 978-90-04-26838-8 (hardback : alk. paper) — ISBN 978-90-04-26839-5 (e-book)

1. Watershed management—Law and legislation. 2. Environmental law, International. 3. International rivers  
4. Freshwater ecology—Government policy. I. Title.

K3498.L44 2014

346.04'69162—dc23

2014019416

This publication has been typeset in the multilingual 'Brill' typeface. With over 5,100 characters covering Latin, IPA, Greek, and Cyrillic, this typeface is especially suitable for use in the humanities.  
For more information, please see [brill.com/brill-typeface](http://brill.com/brill-typeface).

ISSN 2351-9606

ISBN 978 90 04 26838 8 (hardback)

ISBN 978 90 04 26839 5 (e-book)

Copyright 2014 by Koninklijke Brill nv, Leiden, The Netherlands.

Koninklijke Brill nv incorporates the imprints Brill, Brill Nijhoff, Global Oriental and Hotei Publishing.  
All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system,  
or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise,  
without prior written permission from the publisher.

Authorization to photocopy items for internal or personal use is granted by Koninklijke Brill nv provided  
that the appropriate fees are paid directly to The Copyright Clearance Center, 222 Rosewood Drive,  
Suite 910, Danvers, MA 01923, USA. Fees are subject to change.

This book is printed on acid-free paper.

## Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules

# International Water Law Series

*Series Editor*

Stephen C. McCaffrey

*Editorial Board*

Laurence Boisson de Chazournes

Edith Brown Weiss

Lucius Caflisch

Joseph Dellapenna

Malgosia Fitzmaurice

Christina Leb

Owen McIntyre

Salman M.A. Salman

Attila Tanzi

Patricia Wouters

VOLUME 2

The titles published in this series are listed at [brill.com/iwl](http://brill.com/iwl)

*To my parents, Lee Ah Hoy and Kuan Gim Siew*



# Foreword

How will we address one of the world's most pressing issues—to ensure 'water for all', especially during times of grave challenges? The UN's Intergovernmental Panel on Climate Change most recent report, called an "official prophecy of doom", details the significant adverse impacts predicted to result from global warming. Millions will be displaced, economies will fail and conflicts will increase.<sup>1</sup> Many of these occurrences will be linked to water: the IPPC study finds renewable surface water and groundwater resources will be reduced significantly in most dry subtropical regions, increasing competition for diminishing freshwater resources and threatening terrestrial and freshwater species. While these matters pose problems within a nation State, things become exponentially more complex when considered within an international transboundary context. With close to 300 major freshwaters crossing national borders around the world, serving burgeoning economic needs and populations, the scale of the problem is readily apparent. Add to this mix the enormous contemporary challenges related to the effectiveness of international law and we have hard issues to address. How are we to effectively implement the international rule of law that requires the protection and preservation of the ecosystems that are integral to the transboundary water resources shared around the world?

Dr. Lee Jing's monograph, *Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules: An Interpretative Mechanism to Address the Fragmentation of International Law*, provides a robust and innovative legal analysis of how we might implement the duty to preserve the ecosystems of international watercourses. In so doing she contributes to addressing the two critical over-arching questions identified above—the impending global water crisis, and the recurring concerns about the effectiveness of international law. The book devises and applies a three-tiered legal analytical framework, anchored on the interpretative mechanisms offered under Article 31(3)(c) of the Vienna Convention of the Law of Treaties (VCLT), to interrogate the systemic integration required to give meaningful effect to the duty to preserve the ecosystems of international watercourses. Dr. Lee hones in on Article 20 of the 1997 Watercourses Convention (UNWC), which elaborates a global duty to preserve the ecosystems of international watercourses, the first of this type of normative obligation ("Watercourses States shall, individually and, where appropriate,

---

<sup>1</sup> Tom Bawden, "Official Prophecy of Doom: Global Warming will Cause Conflict, Displace Millions and Devastate Economy" (The Independent—18 March 2014) <<http://www.independent.co.uk/environment/climate-change/official-prophecy-of-doom-global-warming-will-cause-widespread-conflict-displace-millions-of-people-and-devastate-the-global-economy-9198171.html>> accessed 7 April 2014.

jointly, protect and preserve the ecosystems of international watercourses"). Through applying her three-tiered framework (consolidated and applied in Chapter 8), Dr. Lee reveals the troublesome state of fragmentation in this field, which militates against the effective legal protection of the ecosystems of international watercourses. Despite this, she finds that Article 31(3)(c) of the VCLT provides an operational platform for the systemic integration of the normative content of Article 20 of the UNWC.

The monograph is structured in 10 chapters, presented in a systematic way that identifies and addresses the legal issues linked with the legal protection of ecosystems of international watercourses. Dr. Lee begins by setting the scene, introducing the complex notion of 'ecosystem' and providing the legal parameters of her research. The overall aim is to study the issue of fragmentation through a legal lens using the Vienna Convention on the Law of Treaties Article 31(3)(c) as an operational interpretative tool of the key relevant aspects of the norms in this field. Thus, the work revolves around the specific means through which to shed light and clarity on the normative content of Article 20 of the UNWC. It is an ambitious and thorough treatment. Following a detailed explanation of the legal analytical framework that is devised for this study, Dr. Lee selects the case studies of the Ramsar Convention and Biodiversity Convention to apply her framework. The research culminates with proposing a structure for the systemic integration of the relevant rules of international law in this area. Through this approach she succeeds in offering an enlightened application of Article 31(3)(c) of the VCLT, elevating its operational reach as a tool capable of unravelling the fragmented legal approach to protecting the world's transboundary freshwater ecosystems. This provides significant insight into how international law might work effectively in this complex field.

On a personal note, it has been my sincere pleasure to supervise, and to continue to interact with, Dr. Lee Jing (now in Malaysia). She continues to be a true inspiration! We need more legal scholars thinking out of the box like this young woman, who has worked so hard and achieved so much, with surely more to come! As a female scholar she has faced a number of added challenges that I appreciate fully and would like to recognise here. Well done Jing! Thanks for providing me with this true honour to offer a foreword to this superb study.

The global community faces difficult challenges on a number of fronts—without water resources and the ecosystems that sustain them, civilisation will suffer serious adverse consequences. In an international context it is essential to be able to identify and implement the rules of law that apply. In the current state of affairs the duty to preserve the world's transboundary water ecosystems is confounded by fragmentation and incoherence. Dr. Lee provides a legal analytical framework and detailed study of how we might unravel the confusion in this field. It provides us all with pause for deeper reflection.



*If we have a right to benefit from the earth's bounty, then we have the obligation to respect, care for and restore the earth and its natural resources.<sup>2</sup>*

*Professor Dr Patricia Wouters*

Xiamen Law School—China International Water Law Programme

University of Dundee Centre of Water Law, Policy and Science, under the  
auspices of UNESCO

---

<sup>2</sup> InterAction Council, "A Universal Declaration of Human Responsibility" (Report on the Conclusions and Recommendations by a High-Level Expert Group Meeting Chaired by Helmut Schmidt, 20–22 April 1997, Vienna, Austria) at p. 4 <<http://interactioncouncil.org/sites/default/files/1997%20UDHR.pdf>>, cited in Dr. Lee's Introduction.

## Preface and Acknowledgements

This book is a revised and updated version of my Ph.D. thesis submitted to the University of Dundee in 2013. The book highlights the unprecedented degradation of freshwater ecosystems, exacerbated by the rampant exploitation of water resources. The underlying motivation of the book is to call upon the international community to reassess the natural limitation of the environment to support existing economic growth and development. More importantly, it seeks to reestablish the importance of the preservation of the internal structures and processes of ecosystems in their natural or near natural condition in order to ensure the continued viability of freshwater ecosystems to support human livelihood and the lives of all beings on earth.

The notion of the common heritage of mankind greatly influences the strive towards the preservation of the environment in its natural form, where Article 20 of the 1997 Watercourses Convention made explicit the obligation of the international community, apart from the international watercourse states, to preserve the ecosystems of international watercourses. However, the interpretation and the subsequent application of this obligation are complicated by the proliferation of international instruments concerning the environment that leads to the congestion of treaties. Treaty congestion seriously undermines the operational efficiency of each treaty. In response to the apprehension raised over the undesirable consequences of treaty congestion, which is one facet of the problems arising from the fragmentation of international law, the potential of Article 31(3)(c) of the 1969 Vienna Convention as an interpretative mechanism that enables the systemic integration of rules comes into the limelight.

The objective of the book, titled *Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules: An Interpretative Mechanism to Address the Fragmentation of International Law*, is to develop an interpretative framework for the operationalisation of Article 31(3)(c) that allows the full realisation of its potential as a tool of integration. Existing interpretations of Article 31(3)(c) are reconstructed via the conceptual framework of the interactional theory of international law, which interprets a rule of international law through the prisms of shared understanding, criteria of legality, and a practice of legality. The reinterpretation of Article 31(3)(c) provides a new understanding of the Article, which enables the realisation of its systemic integration potential. The application of this framework of operationalisation in the interpretation of the obligation to preserve ecosystems of international watercourses stipulated under Article 20 reflects contemporaneous development in international environmental law, and enhances the normative content and scope of Article 20.

The systemic integration potential realised through the operationalisation of Article 31(3)(c) of the 1969 Vienna Convention proposed in this book would have lim-

ited application in the face of deep intransigence between international watercourse states where occurrences of rupture in the cooperation between states are common. It is vital to restate that a legal approach merely forms part of the solution to problems arising from political asymmetries in international relations. This is anticipated in the drafting of the UN Charter where it is provided that, in the event of dispute (or an allegation of non-cooperation), Article 33 of the UN Charter imposes on the UN state parties to seek the pacific settlement of disputes in accordance with the Article. The pacific settlement of disputes includes negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, or to resort to regional agencies or arrangements, or other peaceful means of their own choice, failing which, would invoke the authority of the Security Council to call upon the parties to settle their dispute by such means. A genuine non-cooperation could be an indication of rogue state that is to be dealt with more appropriately under the political arm of the UN. In this instance, a purely legal approach would be incapable of resolving genuine political conflicts, where the peaceful settlement of conflicts requires recourse to other means of dispute settlement provided under the UN Charter.

Nevertheless, the ascertainment of the shared legal understanding implicit to a rule of international law through the interactional framework indirectly promotes cooperation in good faith between states, especially in the negotiation of new treaties where existing international obligations committed in other international law-making fora could serve as the catalyst of cooperation. This is what the present book is trying to do, which is, to unravel the consensus among the international community on the obligation to preserve ecosystems of international watercourses attained in various international institutionalised treaty regimes and undertaken in a practice of legality. The concrete evidence of state practice in relation to a declared rule of international law on the obligation to preserve freshwater ecosystem of international watercourses strengthens the common recognition of the international community that the obligation to preserve is indeed a licit concern of mankind.

I would not be able to complete this research without the generous funding provided by the Ministry of Higher Education, Government of Malaysia and the National University of Malaysia (GGPM-2013-083). For the scholarship and the opportunity to undertake my PhD Programme at the University of Dundee, I am deeply grateful to Y.Bhg. Prof. Dato' Dr. Mazlin Mokhtar and Puan Normah Adam.

I would like to express my heartfelt gratitude to my supervisors Prof. Dr. Patricia Wouters and Dr. Sarah Hendry for their valuable advice, unwavering support, and constant encouragement. I would never be able to complete this research without their insightful and critical comments; and the comforting words and a shoulder to lean on when I am going through some of my deepest abysses. My supervisors are my pillars of strength.

In addition, I would like to thank my examiners, Prof. Attila Tanzi and Dr. Alistair Rieu-Clarke, and the convenor of my *viva voce*, Prof. Colin Reid for a robust and in-depth discussion of my thesis, and imparting words of wisdom that will continue to inspire for years to come.

I thank everyone at the IHP-HELP Centre for Water Law, Policy, and Science, especially Prof. Chris Spray, Mr. Andrew Allan, Dr. Monica Garcia Quesada, Dr. Armelle Guignier, Vishnu Rao, Dr. Michelle Lim Mei Ling, Dr. Sue Baggett, and Prof. Geoffrey Gooch. Thank you for creating such a wonderful and conducive, yet fun environment for research and discussions. My gratitude to everyone at the Centre for Energy, Petroleum and Mineral Law and Policy, especially Martin Farnworth, Dr. Xiaoyi Mu, Dr. Sergei Vinogradov, Angela Dunsire, Hugh Gunn, Rebecca Cree, Linn McFarlane, and Kathleen Shortt; and the Phd Seminar team, Dr. Sarah Hendry, Dr. Janet Liao, and Prof. Dr. Melaku Desta (now at the Faculty of Business and Law, Leicester De Montfort Law School).

I would like to express my sincere gratitude to Dr. Gordon Spark of the Academic Skills Centre, University of Dundee who helped me with my English. I thank all librarians, especially Mairi Robb and John McCaffrey of the Dundee University Library and Ms. Elizabeth Kirk of the University Dundee School of Law for their encouragement and kind assistance.

A huge thank you to my Phd family in Dundee, especially Komuniti Melayu Dundee, Dr. Hugo Tremblay (who acted as my devil's advocate and had never let me get away with any argument easily), Dr. Dinara Ziganshina (who guided me through the treacherous path of a researcher, and read through the first draft of my thesis), Dr. Yumiko Yasuda, Dr. Ana Maria, Dr. Tran Tran, Dr. Norfadhilah Mohamad Ali, Dr. Musa Abseno, Dr. Mohamad Mova Al'Afghani, Dr. Daniel Behn, Dr. Christopher Len, Julius Nayak, Dr. Bjørn-Oliver Magsig, and many others.

I am especially grateful to Dr. Gerard Briscoe for advising the drafting of my research proposal at the initial stage of my research. To my current colleagues and friends at the Institute for Environment and Development (LESTARI) and the Faculty of Law at the National University of Malaysia (UKM), thank you so much for your understanding and support.

I am very grateful to Ms. Lisa Hanson, Assistant Editor at BRILL/Nijhoff Publishers for her kind patience and support during the production of the book manuscript.

Finally, I would like to express my profound gratitude to my mentor, Y.Bhg. Prof. Datin Noor Aziah Hj. Mohd. Awal, my family and friends for their encouragement, patience, understanding, and love.

UKM Bangi, April 2014

# List of Abbreviations

AB	Appellate Body
ASEAN	Association of Southeast Asian Nations
CARU	Administrative Commission of the River Uruguay
CBD	Convention on Biodiversity
CETS	Council of Europe Treaty Series
CMP	Conference of the Parties Serving as the Meeting of the Parties
CTR	Claims Tribunal Reports
EC	European Community
ECE	Economic Commission for Europe
ECT	Energy Charter Treaty
EEC	European Economic Community
ETS	European Treaty Series
GAOR	General Assembly Official Records
GATT	General Agreement on Tariffs and Trade
ICJ	International Court of Justice
ICSID	International Centre for Settlement of Investment Disputes
ICTY	International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991
IGOS	Intergovernmental Organisations
ILA	International Law Association
ILC	International Law Commission
ILM	International Legal Materials
ILR	International Law Reports
IPCC	Intergovernmental Panel on Climate Change
ITLOS	International Tribunal of the Law of the Sea
IUCN	International Union for Conservation of Nature and Natural Resources
MA	Millennium Ecosystem Assessment
MEAS	Multilateral Environmental Agreements
MSENS	Multi-Sourced Equivalent Norms
NGOS	Non-Governmental Organisations
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PCA	Permanent Court of Arbitration
PCIJ	Permanent Court of International Justice
Res	Resolution

SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SCM Agreement	Subsidy and Countervailing Measures Agreement
Stat	United States Statutes at Large
STRP	Scientific and Technical Review Panel (Ramsar Convention)
Supp	Supplement
TIAS	Treaties and other International Agreements (US)
TRIPS Agreement	Agreement on Trade-Related Aspects of Intellectual Property Rights
TS	Treaty Series
UKHL	United Kingdom House of Lords
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention for Climate Change
UNGA	United Nations General Assembly
UNSC	United Nations Security Council
UNTS	United Nations Treaty Series
UNU	United Nations University

# Contents

Foreword	xi
<i>by Professor Dr. Patricia Wouters</i>	
Preface and Acknowledgements	xiv
List of Abbreviations	xvii
Introduction: Preserving Ecosystems of International Watercourses	1
1 The Fragmentation of International Law and Its Integration: Interpretation and Article 31(3)(c) of the 1969 Vienna Convention	19
1 Fragmentation of International Law on International Watercourse Ecosystems	24
2 Systemic Integration, Interpretation, and Article 31(3)(c) of the 1969 Vienna Convention on the Law of Treaties	35
3 Article 31(3)(c) of the 1969 Vienna Convention: An Examination	44
4 Article 31(3)(c): A Tool of Integration?	51
2 Relevant Preservation of Ecosystems of International Watercourses—An Ecosystem Approach	56
1 ‘Relevant’ Rules	56
2 Emergence of the Ecosystem Approach	68
3 ‘Relevant’ as Informed by the Ecosystem Approach	86
3.1 <i>The 1971 Ramsar Convention on Wetlands</i>	89
3.2 <i>The 1992 Convention on Biological Diversity</i>	94
4 Concluding Remarks	99
3 Rules of International Law Applicable in the Relations between the Parties: A Review of Existing Interpretation	101
1 Rules of International Law	101
2 Applicable in the Relations between the Parties	109
2.1 <i>Bindingness</i>	114
2.2 <i>Legal Bindingness</i>	120
2.3 <i>What is Applicable must be Binding?</i>	121
3 A Discussion of ‘the Parties’	130
4 The Four Possible Constructions of ‘the Parties’	140
5 Applicable in the Relations between the Parties—A Reflection	151

<b>4 Rules of International Law Applicable in the Relations between the Parties: An Interactional Theory of Law</b>	<b>156</b>
1 An Interactional Theory of International Law	157
2 Lon L. Fuller's Interactional Theory of Law and a Framework for an Interactional Theory of International Law	164
2.1 <i>Shared Understanding</i>	171
2.2 <i>Internal Morality of Law</i>	177
2.3 <i>Practice of Legality and the Community of Practice</i>	196
3 Concluding Remarks and a Proposal for Reinterpretation	204
 <b>5 Ramsar Convention: Rules of International Law Applicable in the Relations between the Parties</b>	 <b>214</b>
1 Shared Understanding	215
2 Satisfaction of the Criteria of Legality	232
2.1 <i>Generality</i>	233
2.2 <i>Promulgation</i>	236
2.3 <i>Non-Retroactivity</i>	236
2.4 <i>Clarity</i>	237
2.5 <i>Non-Contradiction</i>	240
2.6 <i>Law Not Requiring the Impossible—Reasonableness</i>	242
2.7 <i>Constancy</i>	245
2.8 <i>Congruence between Official Action and Declared Rules—         The Observation of the Rule of Law</i>	247
3 A Practice of Legality (Norm Application)	250
4 Applicable in the Relations between the Parties	253
5 Concluding Remarks	257
 <b>6 Biodiversity Convention: Rules of International Law Applicable in the Relations between the Parties</b>	 <b>259</b>
1 Shared Understanding	259
2 Satisfaction of the Criteria of Legality	281
2.1 <i>Generality</i>	281
2.2 <i>Promulgation</i>	284
2.3 <i>Non-Retroactivity</i>	285
2.4 <i>Clarity</i>	286
2.5 <i>Non-Contradiction</i>	289
2.6 <i>Law Not Requiring the Impossible—Reasonableness</i>	293
2.7 <i>Constancy</i>	296
2.8 <i>Congruence between Official Action and Declared Rules—         The Observation of the Rule of Law</i>	299



3	A Practice of Legality (Norm Application)	308
4	Applicable in the Relations between the Parties	313
5	Concluding Remarks	318
7	<b>Shall Take into Account, Together with the Context—Systemic Integration: An Architecture</b>	320
1	‘Context’	321
1.1	‘Context’ in the 1969 Vienna Convention on the Law of Treaties	323
1.2	‘Context’ in Judicial Practice	325
1.3	Preamble as Part of Context	327
1.4	Annexes as Part of Context	330
1.5	Text as Part of Context	331
2	Shall be taken into Account	346
3	Case Analyses	352
3.1	The Case of Oil Platforms	352
3.2	The Case of Esphahanian’s Claims	361
4	Systemic Integration: An Architecture	366
5	Concluding Remarks	370
8	<b>Systemic Integration: An Operationalisation</b>	371
1	Stage I: Relevant	372
2	Stage II: Rules of International Law Applicable in the Relations between the Parties	374
2.1	Ramsar Convention	376
2.2	Biodiversity Convention	379
3	Stage III: A Systemic Integration	382
3.1	The Context	383
3.2	Article 31(3)(c)—An Operationalisation	385
4	Concluding Remarks	389
9	<b>Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules: Reflection and Conclusion</b>	392
	<b>Bibliography</b>	401
	<b>Index</b>	425