Science, Technology, and New Challenges to Ocean Law

A Law of the Sea Institute Publication

Edited by

Harry N. Scheiber James Kraska Moon-Sang Kwon





BRILL NIJHOFF

LEIDEN | BOSTON

Library of Congress Cataloging-in-Publication Data

Law of the Sea Institute Conference (2013: Berkeley, Calif.)

Science, technology, and new challenges to ocean law / edited by Harry N. Scheiber, James Kraska, Moon-Sang Kwon.

pages cm

"A Law of the Sea Institute Publication"

Includes index.

ISBN 978-90-04-29960-3 (hardback: alk. paper) — ISBN (invalid) 978-90-04-29961-0 (e-book)

1. Law of the sea—Congresses. 2. Technological innovations—Law and legislation—Congresses. 1. Scheiber, Harry N., editor. 11. Kraska, James, editor. 111. Kwon, Moon-Sang, editor. 1v. Law of the Sea Institute, sponsoring body. v. Title.

KZA1141.L39 2013 341.4'5—dc23

2015017091

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.

ISBN 978-90-04-29960-3 (hardback) ISBN 978-90-04-29961-0 (e-book)

Copyright 2015 by Koninklijke Brill NV, Leiden, The Netherlands.

Koninklijke Brill NV incorporates the imprints Brill, Brill Hes & De Graaf, Brill Nijhoff, Brill Rodopi 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.

Contents

Acknowledgments IX

Introduction 1

Harry N. Scheiber, Director, LOSI

PART 1

Adjudication

Law and Science in the Jurisprudence of the International Tribunal for the Law of the Sea 15
Tullio Treves

PART 2 An Historical Overview

From the Age of Discovery to the Atomic Age: The Conflux of Marine Science, Seapower, and Oceans Governance 29

James Kraska

PART 3 Ecosystem Management and Sustainability in Ocean Resources Use

- 3 A European Law Perspective: Science, Technology, and New Challenges to Ocean Law 65 Ronán Long
- Developing an Equitable and Ecosystem-Based Approach to Fisheries
 Management 124
 Ruth Davis and Quentin Hanich
- 5 Sustaining Atlantic Marine Species at Risk: Scientific and Legal Coordinates, Sea of Governance Challenges 149 David L. VanderZwaag

6 Implementing the Nagoya Protocol in Pacific Island Countries 165

Justin Rose

PART 4 Resource Challenges above and below the Oceans

- 7 The Deep Ocean: Advancing Stewardship of the Earth's Largest Living Space 187 Kathryn J. Mengerink
- 8 Submarine Communications Cables and Science: A New Frontier in Ocean Governance? 209

 Tara Davenport
- 9 Offshore Energy: Troubled Waters in the Eastern Mediterranean Sea 253 Maria Gavouneli
- International Legal Challenges Concerning Marine Scientific Research in the Era of Climate Change 280 Alexander Proelss
- 'Idle Iron' versus 'Rigs-to-Reefs': Surviving Conflicting Policy Mandates in the Gulf of Mexico 296 Richard J. McLaughlin

PART 5 Regional Issues: The Arctic and the South China Sea

- Dividing and Managing Increasingly International Waters: Delimiting the Bering Sea, Strait and Beyond 313 Clive Schofield
- The Role of Indigenous Peoples in Managing Offshore Arctic Resources 345 Jordan Diamond

VII

China's Emerging Arctic Strategy and the Framework of Arctic Governance 367 Jun Zhao

Boundary Conflict: The China-Philippines Confrontation over the Scarborough Reef, and the Viability of UNCLOS Dispute Resolution Procedures 395

Joel C. Coito

PART 6 Enforcement in Ocean Management Regimes

Combating Illegal and Unauthorized Fishing: An Assessment of Contemporary Practice 435

Stuart Kaye

PART 7

A Remembrance of Stefan A. Riesenfeld 453

John Briscoe

Index 467