

2023-05-10

Developing Strategic Environmental Assessment for the Protection of Marine Areas Beyond National Jurisdiction

Gu, Kristine

Gu, K. (2023). Developing strategic environmental assessment for the protection of marine areas beyond national jurisdiction (Master's thesis, University of Calgary, Calgary, Canada).

Retrieved from <https://prism.ucalgary.ca>.

<http://hdl.handle.net/1880/116522>

Downloaded from PRISM Repository, University of Calgary

UNIVERSITY OF CALGARY

Developing Strategic Environmental Assessment for the
Protection of Marine Areas Beyond National Jurisdiction

by

Kristine Gu

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF LAWS

GRADUATE PROGRAM IN LAW

CALGARY, ALBERTA

MAY, 2023

© Kristine Gu 2023

Abstract

The marine environment of areas beyond national jurisdiction (ABNJ) is complex, interconnected, and vulnerable to a multitude of threats from human activities, both on land and in water. The broad scope of environmental obligations established by the legal and normative frameworks that operate in marine ABNJ is one of their greatest strengths, but there remain significant gaps and weaknesses that need to be addressed. There has been increased interest in strategic environmental assessment (SEA) as one way to respond to the need for improved environmental governance. The central aim of SEA is the integration of environmental considerations into strategic-level decisions. Its use in marine ABNJ can help to uphold mandates established by the *United Nations Convention on the Law of the Sea* and international environmental law. However, its application at an international level is underdeveloped and lacks cohesiveness. Developing a comprehensive SEA for marine ABNJ will require a strong understanding of the normative and institutional characteristics of a multifaceted decision-making context, as well as an understanding of SEA itself.

This thesis begins with a doctrinal analysis of the current international legal framework governing marine ABNJ, with special attention on the elements that relate to the use of SEA. A study of SEA as a “family of approaches” is used to underscore its benefits and the importance of context in shaping the contours of SEA practice. The status of SEA in international law is also assessed, along with its relationship with due diligence and the principles of integration and interrelationship. These discussions contribute to an examination of what will define the contours of SEA form and content in marine ABNJ. This thesis concludes that, while the specifics of SEA practice will require further elaboration, at the heart of SEA exists both a legal foundation for its inclusion in international law as an obligation for marine ABNJ and the potential for it to promote more than just environmental protection, but also a more cohesive approach to the environmental governance of marine ABNJ as a whole.

Preface

This thesis is original, unpublished, independent work by the author, K. Gu.

Acknowledgements

My most sincere and profound thanks to Professor Anna-Maria Hubert, Faculty of Law, University of Calgary. Your expertise, unwavering support, and contributions to my research and career have been invaluable to me.

My thanks to Professor Neil Craik, University of Waterloo, for your guidance and the meaningful opportunities you provided to me during my time as a Master of Laws student. Thanks also to Professor Lyndsay Campbell, for your patience and encouragement, to the members of the examination committee, Professors Nigel Bankes and David Wright, and to Professor Robert Hamilton.

I gratefully acknowledge the generous funding received through and from Professors Anna-Maria Hubert and Neil Craik's SSHRC project, *The International Law of the Commons: Towards a Global Constitutional Framework*, and the Honourable N.D. McDermid Graduate Scholarships in Law. I would like to express my gratitude to the staff at the Faculty of Law, the Faculty of Graduate Studies, and the Bennett Jones Law Library.

My deepest thanks to my parents and sister for your unconditional love and patience.

Dedication

To my parents, sister, and my niece, Mckenzie.

To my grandmother, whom I miss dearly.

Table of Contents

Abstract	ii
Preface.....	iii
Acknowledgements	iv
Dedication	v
Table of Contents	vi
Chapter 1: Introduction	1
1.1 Background.....	1
1.2 Research Questions and Thesis Statement	5
1.3 Methodology.....	6
1.4 Structure and Outline	7
Chapter 2: International Legal Framework for Marine ABNJ.....	11
2.1 Introduction.....	11
2.2 The Global Commons	12
2.3 Challenges to Governing the Environment of ABNJ	16
2.4 The Negotiation History of UNCLOS	19
2.4.1 The 1958 Geneva Conventions.....	19
2.4.2 The Third Conference on the Law of the Sea	21
2.5 Environmental Obligations in UNCLOS	29
2.5.1 General Obligations in Part XII on the Protection and Preservation of the Marine Environment.....	29
2.5.2 Part VII on the High Seas	36
2.5.3 Part XI on the Area	39
2.6 Advancing the Legal Regime for Marine Protection.....	45
2.6.1 The Relationship Between UNCLOS and Other Agreements.....	46
2.6.2 Responding to Fragmentation in the High Seas.....	48
2.6.3 Agenda 21	52
2.6.4 Convention on Biological Diversity	55
2.6.5 Intergovernmental Conference on Marine Biodiversity	57
2.7 Conclusion	59
Chapter 3: Strategic Environmental Assessment.....	60
3.1 Introduction.....	60
3.2 Transboundary Environmental Impact Assessment in International Law	61

3.3 Strategic Environmental Assessment.....	68
3.3.1 Product-Oriented versus Process-Oriented SEAs.....	70
3.3.2 Distinguishing Between Strategic Decisions	74
3.4 SEA in International Environmental Law	75
3.4.1 The Kiev Protocol	76
3.4.2 The EU SEA Directive.....	77
3.4.3 The Convention on Biological Diversity	77
3.5 The Rationale for SEA for Marine ABNJ	79
3.5.1 Adding the Principle of Integration and Interrelationship	83
3.6 Conclusion	86
Chapter 4: An SEA Framework for Marine ABNJ.....	88
4.1 Introduction.....	88
4.2 The Intergovernmental Conference on Marine Biodiversity of ABNJ.....	89
4.2.1 History of Negotiations.....	89
4.2.2 The Evolution of SEA at the IGC	93
4.2.3 SEA in the Final Draft of the BBNJ Agreement.....	96
4.3 Considerations for an SEA Approach in Marine ABNJ	97
4.4 The Methodological Framework	103
4.4.1 Environmental Impact Assessment.....	104
4.4.2 Strategic Environmental Assessment.....	106
4.5 Conclusion	114
Chapter 5: Conclusion.....	116
Bibliography	122

Chapter 1: Introduction

Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades.

– *Gabcikovo-Nagymaros Project (Hungary v Slovakia)*¹

1.1 Background

Tommy Koh, President of the Third Conference on the Law of the Sea (UNCLOS III), famously described the *United Nations Convention on the Law of the Sea* (UNCLOS)² as the “constitution for the oceans” following the conclusion of the agreement in 1982.³ Koh emphasized that, unlike previous attempts to codify the law of the sea, UNCLOS was “the first comprehensive treaty dealing with practically every aspect of the uses and resources of the seas and the oceans.”⁴ The wide array of issues covered by UNCLOS was the result of the unique consensus-based approach taken at UNCLOS III, where negotiations were conducted as a “package deal”⁵ to promote acceptance by all States on the agreement’s provisions. In addition to being general in its scope and content, negotiators also built in the ability for UNCLOS to expand to respond to new issues through various mechanisms embedded within the treaty text.⁶ Allowance in the text of the treaty for the “modernization”⁷ of UNCLOS is central to maintaining a resilient international legal regime for effectively managing the seas and oceans over time.⁸

¹ *Gabcikovo-Nagymaros Project (Hungary v Slovakia)*, Judgement, [1997] ICJ Rep 7 at 75.

² *Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994) [UNCLOS].

³ “A Constitution for the Oceans”, Remarks by Tommy TB Koh of Singapore, President of the Third United Nations Conference on the Law of the Sea, online: <www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf>.

⁴ *Ibid.*

⁵ See Hugo Caminos and Michael R Molitor, “Progressive Development of International Law and the Package Deal” (1985) 79:4 *American Journal of International Law* 871, DOI: <10.2307/2201830>.

⁶ See *supra* note 2, arts 197, 237, 311.

⁷ Kristina Gjerde, “Challenges to Protecting the Marine Environment Beyond National Jurisdiction” (2012) 27 *Marine and Coastal Law* 839, DOI: <10.1163/15718085-12341255> at 847.

⁸ *Ibid.*; Alan Boyle, “Further Development of the Law of the Sea Convention: Mechanisms for Change” (2005) 54 *International Comparative Law Quarterly* 563, DOI: <10.1093/iclq/lei018>.

A major driving force in the evolution of the law of the sea has been growing concern for the health of the marine environment.⁹ The emergence of new activities, like bioprospecting for marine genetic resources, the development of marine geoengineering as a measure to address anthropogenic climate change, and the prospect of large-scale deep seabed mining, underscore how much has changed since the conclusion of UNCLOS in 1982.¹⁰ Today, more than ever, the marine environment faces unprecedented threats, which include climate change,¹¹ increased demand for marine living and non-living resources, and other traditional and emerging anthropogenic activities.¹² The direct and indirect impacts of these activities,¹³ including marine pollution and waste, discharge from ships, marine debris, overfishing and bycatch, and climate change, present growing challenges to ocean law and governance.¹⁴

Proceeding without a thorough understanding of our activities in the marine environment, especially new ones, is also a cause for concern. Baseline data on the deep sea and seabed environments and knowledge about the lasting effects of activities in these areas, such as deep seabed mining, are plagued by knowledge gaps and uncertainty.¹⁵ Even in more accessible ocean areas, there is still much to learn. Marine plastics, for example, are a major pollutant of the ocean, making up roughly 80 per cent of marine debris,¹⁶ but there remain significant knowledge gaps on the specific effects of microplastics and nanoplastics.¹⁷ Issues related to data collection and

⁹ Boyle, *ibid* at 566; Catherine Redgwell, “Treaty Evolution, Adaptation and Change: Is the LOSC ‘Enough’ to Address Climate Change Impacts on the Marine Environment?” (2019) 34:3 International Journal of Marine and Coastal Law 440, DOI: <10.1163/15718085-13431096>.

¹⁰ *Supra* note 7 at 841. See also Bevis Fedder, *Marine Genetic Resources, Access, and Benefits Sharing: Legal and Biological Perspectives* (New York: Routledge 2013); Jeffrey McGee, Kerry Brent & Wil Burns, “Geoengineering the Oceans: An Emerging Frontier in International Climate Change Governance” (2018) 10:1 Australian Journal of Maritime and Ocean Affairs 67, DOI: <10.1080/18366503.2017.1400899>; Lisa Levin et al, “Defining ‘Serious Harm’ to the Marine Environment in the Context of Deep-Seabed Mining” (2016) 74 Marine Policy 245, DOI: <10.1016/j.marpol.2016.09.032>.

¹¹ Intergovernmental Panel on Climate Change (IPCC), “Special Report on the Ocean and Cryosphere in a Changing Climate” (September 2019), online: IPCC <www.ipcc.ch/srocc>.

¹² United Nations (UN), *The Second World Ocean Assessment*, vol I (New York: UN 2021).

¹³ There are also unintentional consequences to activities in the oceans, like oil spills and the release of hydrocarbons, that must be addressed, as well. See *ibid* at 324—325.

¹⁴ *Supra* note 12 at 324; Philippe Sands, *Principles and Rules Establishing Standards* (Manchester: Manchester University Press 1995) at 254.

¹⁵ Sabine Gollner *et al*, “Resilience of Benthic Deep-Sea Fauna to Mining Activities” (2017) 129 Marine Environmental Research 76; Kathryn A Miller et al, “An Overview of Seabed Mining Including the Current State of Development, Environmental Impacts, and Knowledge Gaps” (2018) 4 Frontiers in Marine Science, DOI: <10.3389/fmars.2017.00418>.

¹⁶ *Supra* note 12 at 9.

¹⁷ *Ibid*.

reporting further contribute to uncertainties surrounding the actual impacts of various activities in the oceans.¹⁸

Of particular concern are the fate of marine areas beyond national jurisdiction (ABNJ) which are not well protected under the current international legal framework.¹⁹ UNCLOS divides marine ABNJ into the high seas, which are water areas beyond the outer limits of the exclusive economic zone (EEZ) of a State,²⁰ and the Area, which includes the “seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.”²¹ The unique features of the legal regimes governing the high seas and the Area compound the challenges described above.²² Neither are subject to claims of sovereignty by any State.²³ Rather, these maritime zones and their resources form part of the global commons.²⁴ As a result, issues arising in marine ABNJ cannot be resolved on a domestic level, requiring attention from the international community as a whole. In addition, certain rights and interests of individual States in marine ABNJ are attenuated and a source of debate, especially when factoring in other issues like intergenerational and intragenerational equity.²⁵ The sheer size of, and issues of access to, marine ABNJ make regulation, enforcement, and monitoring a daunting task. In addition, existing legal and institutional frameworks for marine ABNJ tend to be fragmented, both by sector and region.²⁶

The above are only a fraction of the challenges to protecting the marine environment of ABNJ. There is a great deal of work that has been done to address these issues so far. For instance, the International Seabed Authority (ISA), who has authority over resource-related activities in the

¹⁸ See e.g. *ibid*; illegal, unreported, and unregulated (IUU) fishing; see Shih-Ming Kao, “International Actions Against IUU Fishing and the Adoption of National Plans of Action” (2015) 46:1 Ocean Development and International Law 2.

¹⁹ David Freestone, “An Unfinished Agenda: Governance of Areas Beyond National Jurisdiction” in Keyuan Zou, ed, *Global Commons and the Law of the Sea* (Leiden: Brill 2018) 209.

²⁰ *Supra* note 2, art 86.

²¹ *Ibid*, art 1(1).

²² The high seas are governed by the freedom of the high seas; *ibid*, art 87. The Area is governed by the principle of common heritage of all mankind; *ibid*, art 136.

²³ *Supra* note 2, art s89, 137(1).

²⁴ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press 1990); Philippe Sands & Jacqueline Peel, *Principles of International Environmental Law*, 4th ed (Cambridge: Cambridge University Press 2018) at 12.

²⁵ Sands, *supra* note 14 at 253; Catherine Redgwell, *Intergenerational Trust and Environmental Protection* (Manchester: Manchester University Press 1999).

²⁶ International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (2006) UN Doc A/CN.4/L.682.

Area, is currently expanding its Mining Code.²⁷ The International Maritime Organization (IMO) adopted an amendment in 2013²⁸ into the *London Convention*²⁹ and the *London Protocol*³⁰ on marine geoengineering. Now on the forefront of the mind of the international community is the conservation and sustainable use of biodiversity in ABNJ (BBNJ).³¹ These are only a few examples of the initiatives taken to evolve the law of the sea and international law for the protection of the global commons. The question now is what else can be done to address the complex set of issues presented by marine ABNJ. What other tools can be developed to support the environmental objectives under UNCLOS and other sources of international law?

Amongst the tools that should be considered for implementation in marine ABNJ is strategic environmental assessment (SEA). SEAs assess strategic decisions, or policies, programmes, and plans (PPPs), with the purpose of integrating environmental considerations into higher levels of decision-making processes.³² SEA is not new to international law, but its application at international levels, and in ABNJ especially, is attenuated due to a lack of understanding about its form and content, as well as justifications for its inclusion in international law.³³ However, given that SEA is uniquely positioned to influence decision-making processes (e.g., legislative or policy-making processes) at early points of intervention,³⁴ to assess long-term

²⁷ International Seabed Authority (ISA), *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (2013), ISBA/19/C/17 [RPEN]; ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area* (2010), ISBA/16/A/12/Rev; ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area* (2012), ISBA/18/A/11 (collectively referred to as the “Mining Code”).

²⁸ International Maritime Organization (IMO), “Resolution LP.4(8) on the Amendment to the London Protocol to Regulate the Placement of Matter for Ocean Fertilization and Other Marine Geoengineering Activities” (18 October 2013), IMO Resolution LP.4(8).

²⁹ *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 29 December 1972, 1046 UNTS 120 (entered into force 30 August 1975) [*London Convention*].

³⁰ *Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 17 November 1996, (1997) 36 ILM 1 (entered into force 24 March 2006) [*London Protocol*].

³¹ “International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2017) GA Res 72/29, UNGAOR, 72nd Sess, Agenda Item 77a, UN Doc A/Res/72/249. At the time of writing this thesis, the BBNJ negotiations have just concluded its fifth session, along with a final text; “Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2023), online: <un.org/bbnj/sites/www.un.org/bbnj/files/draft_agreement_advanced_unedited_for_posting_v1.pdf>.

³² Da Zhu & Jiang Ru, “Strategic Environmental Assessment in China: Motivations, Politics, and Effectiveness” (2008) 88 *Journal of Environmental Management* 615, DOI: <10.1016/j.jenvman.2007.03.040> at 625.

³³ In comparison to environmental impact assessments (EIA). See Monica Fundingsland Tetlow and Marie Hanusch, “Strategic Environmental Assessment: The State of the Art” (2012) 30:1 *Impact Assessment and Project Appraisal* 15, DOI: <10.1080/14615517.2012.666400>.

³⁴ Riki Therivel & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996) at 42.

and cumulative effects,³⁵ and to help States better meet their environmental obligations, its potential in marine ABNJ cannot be overlooked as a potential mechanism for improving cohesiveness and transparency.³⁶ It is especially relevant now because of its future role in the conservation and sustainable use of the BBNJ. The final text of the BBNJ Agreement identifies SEA for plans and programs, relating to activities in marine ABNJ, to assess their effects and provide alternatives.³⁷

1.2 Research Questions and Thesis Statement

This study examines how SEA can be developed for marine ABNJ. There are two main challenges that form the starting point of this discussion. First, the legal framework of marine ABNJ is complex and fragmented.³⁸ SEA can help address this by streamlining strategic decisions affecting marine ABNJ, moving away from strictly regional or sectoral approaches. Second, there are continuing concerns regarding the inclusion of SEA into the legal framework of marine ABNJ because of the lack of clear requirements in customary international law for SEA, as well as an absence of existing SEA practice for ABNJ—especially those of a mandatory nature. With these challenges in mind, the questions addressed in this study are divided as follows:

- (1) What elements of international law and the law of the sea applicable to marine ABNJ will inform the development of SEA for these areas?
- (2) What is SEA? What is its current legal status, scope, and content in international law? Is there a rationale for developing SEA for marine ABNJ?
- (3) Based on (1) and (2), what must an approach to SEA for marine ABNJ consider? Is there an approach that should be prioritized?

These questions consider the specific normative and institutional setting of marine ABNJ that SEA must consider, reflecting the more contemporary understanding of SEA that highlights the

³⁵ Riki Therivel et al, *Strategic Environmental Assessment* (London: Earthscan Publications 1992) at 18—20.

³⁶ See e.g., Deqiang Ma, Qinhua Fang & Song Guan, “Current Legal Regime for Environmental Impact Assessment in Areas Beyond National Jurisdiction and its Future Approaches (2016) 56 *Environmental Impact Assessment Review* 23.

³⁷ Draft Agreement, *supra* note 31, art 41*ter*.

³⁸ *Supra* note 26.

importance of context.³⁹ It acknowledges that the unique characteristics of individual institutions and their decision-making processes will heavily inform SEA practice.

For marine ABNJ, this includes having to factor in the varying capacities of different States and relevant decision-making institutions, as well as the different types of PPPs that are being formulated. Though not without difficulty, the role of SEA in upholding key norms of international environmental law and in reducing harm to the marine environment makes it a worthy challenge. The general conclusion of this thesis is that there is no singular approach to SEA that can be applied across the board for marine ABNJ. Instead, the contours of different SEA approaches for marine ABNJ can be elaborated upon to provide better guidance for States and practitioners. This guidance should include clear expectations about the form and content of SEA, public participation and stakeholder engagement, and how SEA practices can evolve and be improved over time.

1.3 Methodology

This study primarily adopts a doctrinal (positivist) approach by describing and critically analyzing the present state of the international legal framework governing marine ABNJ, and specifically as it relates to the application of SEA in these areas. In addition, it will outline policy suggestions for how SEA can be developed to further environmental goals in marine ABNJ.

In terms of sources, the legal framework for marine ABNJ is described with reference to international agreements, customary international law, as well as the determination of these through decisions by international courts and tribunals and the writings of highly qualified publicists. The focus is on Part VII (on the high seas), Part XI (on the Area), and Part XII (on the protection and preservation of the marine environment) of UNCLOS. The environmental obligations in UNCLOS are also closely tied to key norms of international environmental law, which are both explored in this thesis. Other agreements that are pertinent to this thesis are the *Fish Stocks Agreement*,⁴⁰ the *Convention on Biological Diversity* (CBD),⁴¹ the *Espoo*

³⁹ AL Brown & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 Impact Assessment and Project Appraisal 183 at 185—186.

⁴⁰ *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001).

⁴¹ *Convention on Biological Diversity*, 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) [CBD].

Convention,⁴² the *Kiev Protocol*,⁴³ and the regulations of the ISA's Mining Code. Key cases from courts like the Seabed Disputes Chamber (SDC), the International Court of Justice (ICJ), the Permanent Court of Arbitration (PCA), and the International Tribunal for the Law of the Sea (ITLOS) are also used to discuss the application of international environmental law. The judicial interpretation of UNCLOS in cases like the *South China Sea* case⁴⁴ and the *Seabed Advisory Opinion*⁴⁵ were vital in examining key provisions of UNCLOS.

While some print resources were accessed through the University of Calgary's Library, much of this thesis relied upon electronic resources. Agreements and UN resolutions were accessed through the United Nations Treaty System, the UN Document System and the UN iLibrary. Certain agreements, like the CBD and the *Antarctic Treaty*,⁴⁶ were accessed on their respective websites, as they contain further information on additional protocols, amendments, meetings, guidelines, etc. The International Institute for Sustainable Development provided insight into negotiations. Information for SEA practitioners were accessed through institutions like the OECD, World Bank, and the International Association of Impact Assessment. Domestic legislation and regulations were accessed on government websites, as well as research websites like ECOLEX. Decisions from international courts were available on their respective websites.

1.4 Structure and Outline

Chapter 2 begins by distinguishing between three types of resources: resources subject to exclusive and permanent sovereignty,⁴⁷ shared resources, and resources of the global commons. Principle and norms from the *Rio Declaration*,⁴⁸ *Stockholm Declaration*,⁴⁹ general international environmental law, and cases like *Trail Smelter*⁵⁰ are used to provide the legal regimes that govern

⁴² *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997) [*Espoo Convention*].

⁴³ *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, 21 May 2003, 2685 UNTS 140 (entered into force 11 July 2010) [*Kiev Protocol*].

⁴⁴ *South China Sea Arbitration (The Republic of Philippines v The People's Republic of China)* (2016), Award, ICGJ 495 [*South China Sea*].

⁴⁵ *Responsibilities and obligations of States with respect to Activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, 10 [*SDC Advisory Opinion*].

⁴⁶ *The Antarctic Treaty*, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961) [*Antarctic Treaty*].

⁴⁷ *Report of the United Nations Conference on Environment and Development*, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992) [*Rio Declaration*], Principle 2.

⁴⁸ *Ibid.*

⁴⁹ *Declaration of the United Nations Conference on the Human Environment*, UNGAOR, 1972, UN Doc A/Conf.48/14/Rev.1 (1972) [*Stockholm Declaration*].

⁵⁰ *Trail Smelter Case (United States v Canada)* (1938 and 1941) 3 RIAA 1905 [*Trail Smelter*].

these resources. A focus is placed on the global commons regime and the challenges that are created by the normative qualities of this space. ABNJ are characterized by legal fragmentation caused by different approaches to governance, including regional and sectoral. There is also the added element of the physical vastness of these spaces that amplifies the difficulties associated with their governance. The chapter then narrows down to a discussion on marine ABNJ. This section begins with a look into the history of UNCLOS and how it came to be, including the specific challenges that stood in the way of a comprehensive agreement for the law of the sea.

The second part of Chapter 2 is a doctrinal analysis of environmental obligations set out by the law of the sea and international environmental law. This discussion is divided into general obligations under Part XII of UNCLOS on the protection and preservation of the marine environment, obligations under Part VII on the high seas, and obligations under Part XI on the Area. Cases from international judiciary bodies are used to examine the application of these obligations beyond the text of UNCLOS. *South China Sea* is especially important case for understanding the content of Part XII. This discussion then progresses into a normative analysis on how issues in marine ABNJ are continuing to be addressed through initiatives under UNCLOS, the CBD, and through new agreements like the BBNJ Agreement.

Chapter 3 introduces two types of environmental assessments: environmental impact assessment (EIA), for activity-level decisions, and SEA, for strategic decisions. While SEA occurs before EIA in a decision-making process, SEA was developed as a response to gaps in EIA practice.⁵¹ Thus, the chapter begins with an introduction to EIA, and in particular, transboundary EIA in international law. Principles of international environmental law, customary international law, and international agreements are used to describe the status of transboundary EIA in international law. This is used to compare and contrast the legal status of SEA in international law in the second half of the chapter. Between the two, transboundary EIA is much more developed and elaborated upon than SEA.

The second half of chapter 3 aims to resolve two issues: what is an SEA and what is its legal status in international law? The chapter begins with a key concept for SEA practice: there is

⁵¹ Riki Therivel & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996) at 18, 42.

no singular, definitive form for SEA.⁵² Instead, it exists as a “family of tools”⁵³ who vary in their contents and scope but share a common objective of “mainstreaming and upstreaming”⁵⁴ environmental considerations into strategic decision-making processes. Unique normative, institutional, and epistemic qualities of decision-making contexts will inform the type of SEA approach taken.⁵⁵ The discussion builds upon this to describe product-oriented versus process-oriented SEA, and the pros and cons of each, as well as an exploration of what an ‘ideal’ SEA entails. On the second issue of SEA in international law, three agreements are examined: the *Kiev Protocol*, the *EU SEA Directive*, and the CBD. These applications are still limited by regional constraints (i.e., membership to the *Kiev Protocol* and *SEA Directive* are largely European countries) and normative and implementation constraints (e.g., SEA in the CBD is required under Article 14(1)(b) but the contents and scope suggested by the CBD are voluntary). Thus, the chapter closes with a discussion on how SEA can be used to support States in meeting their obligations (e.g., harm prevention), described in Chapter 2, and how the principle of integration can expand the use of a highly integrated SEA for PPP.

Chapter 4 combines the previous chapters’ discussions by asking the question of how the SEA approaches described in Chapter 3 can be used to reflect the marine ABNJ context described in Chapter 2. Chapter 4 does not prescribe specific components, but instead explores what will contribute to formulating SEA for marine ABNJ, and how both EIA-like SEA⁵⁶ and integrated SEA⁵⁷ can be employed. The BBNJ Agreement as an example of the present demand for SEA is discussed, as it is a subject affected by high degrees of generality and uncertainty regarding the scope and content of the agreement’s SEA provision. The chapter closes with an assessment of the methodological framework, both for EIA and SEA alike, to provide insight into forms of practice that could contribute to the adoption and implementation of SEA in marine ABNJ going forward.

⁵² AL Brown & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 Impact Assessment and Project Appraisal 183 at 186.

⁵³ Europa, “Strategic Environmental Assessment”, online: *Europa* <https://environment.ec.europa.eu/law-and-governance/environmental-assessments/strategic-environmental-assessment_en>.

⁵⁴ Da Zhu & Jiang Ru, “Strategic Environmental Assessment in China: Motivations, Politics, and Effectiveness” (2008) 88 *Journal of Environmental Management* 615, DOI: <10.1016/j.jenvman.2007.03.040> at 625.

⁵⁵ *Supra* note 52 at 184.

⁵⁶ Victor Lobos & Maria Partidário, “Theory Versus Practice in Strategic Environmental Assessment (SEA)” (2014) 48 *Environmental Impact Assessment Review* 34, DOI: <10.1016/j.eiar.2014.04.004> at 36.

⁵⁷ Organisation for Economic Co-operation and Development (OECD), “Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-operation” (2006) OECD DAC Guidelines and Reference Series at 30.

Chapter 4 also explores the possibilities of stepping away from regional and sectoral approaches, and the way in which SEA can help facilitate this movement.

The conclusions of this thesis are summarized in Chapter 5. First, while marine ABNJ requires improved law and governance and new methods to address fragmentation, the fundamental environmental obligations of States in marine ABNJ are clear. Second, SEA must be informed by context. There is no correct approach to SEA, and, instead, practice should be flexible and reflect the needs of the decision-making institution. Third, due diligence and principles like harm prevention, the precautionary principle, and the principle of integration provide a strong legal rationale for developing SEA for marine ABNJ. Finally, in the face of a need for SEA for marine ABNJ, concurrent SEA approaches can be applied to marine ABNJ to allow for increased experience and interest in SEA over time. Adopting SEA practices in ABNJ will take time, especially if the objective is to move towards a highly integrated SEA framework for marine ABNJ.

Chapter 2: International Legal Framework for Marine ABNJ

2.1 Introduction

This chapter focuses on a doctrinal analysis of the regimes of marine areas beyond national jurisdiction (ABNJ) as set out in the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS)¹ and other related international instruments. It also examines the normative context created by accepted international principles and norms in the high seas and the deep seabed of ABNJ, with a focus on those most salient to environmental protection and sustainable use. The purpose of this chapter is to illustrate the legal landscape of marine biodiversity of ABNJ and the types of challenges strategic environmental assessment (SEA) for marine ABNJ will need to respond to, as well as the environmental duties and obligations that it will need to uphold.

It begins with a description of ABNJ and the importance of elaborating State rights to access the global commons and common-pool resources, as well its relationship with other actors in these marine areas. This includes analysis of both binding and non-binding² sources of international law, ranging from international agreements to cases from international courts and tribunals, as well as principles of international environmental law. The purpose of this examination is to demonstrate the complex and somewhat fragmented systems already in place for the regulation of ABNJ, the approaches taken in these instruments for environmental protection, and the gaps that the ILBI for the BBNJ will need to fill as a necessary piece of the global commons puzzle.

The chapter then moves on to examine in detail Parts VI, XI, and XII of UNCLOS, with a focus on governance of ABNJ and environmental protection. The purpose of this discussion to provide the backdrop to Chapter 4 of this thesis, which deliberates potential avenues for the

¹ *Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994) [UNCLOS].

² See, however, Jutta Brunnée, “The Rule of International (Environmental) Law and Complex Problems” in Heike Kreiger, George Nolte and Andreas Zimmermann, eds, *The International Rule of Law: Rise or Decline?* (Oxford: Oxford University Press, 2019) 211 at 214 (“I argue that, in any case, the ‘hard’ vs ‘soft’ law distinction is not the most informative metric when it comes to exploring the trajectory of international rule of law. In offering an alternative framework, I build on the editors’ proposition that the international rule of law presupposes a system of distinctly legal norms that ‘conforms to a standard’. Analytic attention, I suggest is most fruitfully directed to the distinctive traits of legal norms and practices; traits that transcend conceptions of formality and informality”). This thesis nevertheless discusses the concepts raised in Alan E Boyle, “Some Reflections on the Relationship of Treaties and Soft Law” (1999) 48:4 *International and Comparative Law Quarterly* 901, DOI: <10.1017/S0020589300063739>.

inclusion and use of SEA for marine ABNJ and the BBNJ context. The chapter concludes with a look at the innovations that have taken place since the conclusion of UNCLOS that had further advanced the law of the sea and how the BBNJ negotiations fit into this scheme.

2.2 The Global Commons

Access to and the use of living and non-living resources involve competing interests that can create tension between States.³ It is therefore important that the rights and obligations associated with the use of such resources are provided for in legislative and regulatory instruments, both domestically and internationally. The application of international law varies, depending on the legal status of the resource and the area in which it is found, as “these categorizations have different impacts on the freedom of states to exploit a resource”.⁴ Resources can generally be divided into the following three categories:⁵

- (1) Resources found within the territory of a single State;
- (2) Resources beyond the territory or jurisdiction of any State (“common-pool resources” or “common resources”); and,
- (3) Resources that are neither common-pool resources nor within the jurisdiction of a single State (“shared resources”).⁶

Resources that are found within the territory of a State are subject to the exclusive and permanent sovereignty of that State, allowing it to freely explore and to exploit the resource in accordance with its national interests, subject to the harm principle.⁷ The principle of permanent

³ This is true internally as well when a State is forced to choose between conflicting values, such as economic development versus environmental protection.

⁴ Patricia Birnie et al, *International Law & the Environment*, 3rd ed (New York: Oxford University Press, 2009) at 190.

⁵ State concern with territorial resources is reflected in the negotiations that set out the legal definitions of the continental shelf in *supra* note 1, art 87.

⁶ Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law*, 4th ed (Cambridge: Cambridge University Press, 2018) at 13 (“Even apparently innocent activities in one country, such as the release of greenhouse gases or (possibly) genetically modified organisms, can have significant effects upon the environment of other states or in areas beyond national jurisdiction”). See also Nico Schrijver, “Managing the Global Commons: Common Good or Common Sink?” (2016) 37:7 Third World Quarterly 1252, DOI: <10.1080/01436597.2016.1154441> at 1253 (“To some extent such a legal categorisation does not reflect the reality of the environment and nature as a whole, intrinsically connected by air mass, soil, water cycles, geological structures, biological diversity systems and other special ecosystems such as the global climate. From that broad point of view also shared are trans-boundary resources; and even certain ‘national’ resources such as seeds can be viewed as global commons.”)

⁷ *Supra* note 4 at 191. There is no need to distinguish between the type of resource (e.g. living versus non-living), as the rules and principles governing the use of the resource are created by the State alone.

sovereignty safeguards a State's right to regulate and carry out activities in accordance with its national interests, and prevents interference from third parties that have no jurisdiction in its territory.⁸ Principle 21 of the *Stockholm Declaration*⁹ and Principle 2 of the *Rio Declaration*¹⁰ state:

*States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.*¹¹

The principle of permanent sovereignty does not immunize a State from legal accountability. While a State may carry out activities within its jurisdiction and control, it must still satisfy its international obligations, including in relation to the protection of the environment. This includes the duty to cooperate¹² and the duty to conduct an environmental impact assessment (EIA), where there is a risk of significant transboundary harm to the environment.¹³ Notably, the no-harm principle, first enunciated in the *Trail Smelter*¹⁴ case between Canada and the United States, provides that States may not use, nor allow, its territory to be used in a manner that causes significant harm or damage to the environment of another State.¹⁵ In that case, the Arbitral Tribunal recognized that though the resources were subject to the exclusive and permanent sovereignty of Canada, the effects of exploiting these resources caused transboundary harm to the United States. This violated the no-harm principle in international environmental law, which, in

⁸ See Sands *supra* note 6 at 12. The principle of permanent sovereignty, as understood in international environmental law, should not be confused with doctrine of sovereignty and equality in States in international law. Under this doctrine, States have “(1) a jurisdiction, *prima facie* exclusive, over a territory and a permanent population living there; (2) a duty of non-intervention in the area of exclusive jurisdiction of other states; and (3) the dependence of obligations arising from customary law and treaties on the consent of the obligator.” See also Ian Brownlie, *Principles of Public International Law*, 4th ed (Oxford: Clarendon Press, 1990) at 287.

⁹ *Declaration of the United Nations Conference on the Human Environment*, UNGAOR, 1972, UN Doc A/Conf.48/14/Rev.1 (1972) [*Stockholm Declaration*].

¹⁰ *Report of the United Nations Conference on Environment and Development*, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992) [*Rio Declaration*].

¹¹ *Supra* note 9, Principle 21; *ibid*, Principle 2.

¹² See *Lac Lanoux Arbitration (France v Spain)* (1957), 24 ILR 101 [*Lac Lanoux*]; *MOX Plant Case (Ireland v United Kingdom)* (2008), PCA Case No 2002-01 [*MOX Plant*]; *Southern Bluefin Tuna Cases (New Zealand v Japan, Australia v Japan)*, Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999, 280 [*Southern Bluefin Tuna*].

¹³ See *Pulp Mills on River Uruguay (Argentina v Uruguay)*, Judgement, [2010] ICJ Rep 14 at paras 203—206.

¹⁴ *Trail Smelter Case (United States v Canada)* (1938 and 1941) 3 RIAA 1905 [*Trail Smelter*].

¹⁵ *Ibid*.

general, provides that a State may not cause significant harm to another State.¹⁶ Despite its sovereignty over the resource and its right to regulate the activity as it saw fit, Canada nevertheless had the obligation to prevent transboundary harm to the environment.¹⁷

Common-pool resources,¹⁸ which are found in ABNJ, are also known as the global commons.¹⁹ Global commons areas are considered to be “open for legitimate and reasonable use by all states, and may not be appropriated to the exclusive sovereignty of any one state,”²⁰ differentiating the legal order of the global commons from areas that are subject to the principle of permanent and exclusive sovereignty. In ABNJ, States have an obligation to prevent harm to the environment, despite the lack of individual State interests in such areas. The second part of Principle 21 of the Stockholm Declaration imposes on States “the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction”,²¹ a statement that is reaffirmed in other international conventions such as Article 3 of the *Convention on Biological Diversity* (CBD).²²

Traditional examples of the global commons include the high seas, the deep seabed, the Antarctic,²³ and outer space.²⁴ The main legal issue when it comes to resources of the global commons is that, without international agreement on how things ought to operate, disagreements may arise over the competing rights and obligations of States in global commons areas to explore and exploit natural resources, and how the rights of one State operate in relation to those of other States of the international community, including rights associated with human health and the natural environment. Can States explore and exploit resources freely, without regulation or due diligence obligations? Do some States have a priority right over others to these resources? What due regard must they pay to each other when extracting from commonly held resources?

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).

¹⁹ See Sands, *supra* note 6 at 12.

²⁰ *Supra* note 4 at 195.

²¹ *Supra* note 9, Principle 21.

²² *Convention on Biological Diversity*, 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) [CBD].

²³ Schrijver, *supra* note 6 at 1253 (“The natural resources of Antarctica form a special category, now that sovereign claims to main parts of the territory of Antarctica have been ‘frozen’ for the time being, while the exploitation of its resources (on land and in adjacent seas, and living and non-living) are subject to special treaty regimes (regarding seals, fisheries, other marine resources, and mining).”)

²⁴ *Supra* note 6 at 1253.

Both the high seas and the Area are free from claims of sovereignty.²⁵ In general, resources in ABNJ are “held in common [and] no single user can have exclusive rights over them, nor the right to prevent others from joining in their exploitation.”²⁶ In the high seas, the operating principle is the freedom of the seas, which can be exercised by all States, including land-locked States.²⁷ The jural opposites of these freedoms are the duty of due regard for the interests of other States and the rights enumerated in Part XI on the Area and other parts of UNCLOS,²⁸ as well as other rules of international law,²⁹ including environmental obligations such as the duty to carry out an EIA, the no-harm principle, the duty to cooperate, etc.

The Area and its resources – defined as mineral resources *in situ*³⁰ – are the subject to the “common heritage of [human]kind”.³¹ The principle of common heritage “implies that the resources of these areas cannot be appropriated to the exclusive sovereignty of states but must be conserved and exploited for the benefit of all, without discrimination.”³² Elements of *res communis*, the predecessor to the common heritage of humankind, form the basis of the approach in UNCLOS that the Area “be set apart in common for the use of all peoples, which were not capable of being subject to claims of state sovereignty or ownership, but which were subject to certain defined rights of common use.”³³ This is reaffirmed in Article 137, which prevents any State from legally justifying a claim of sovereignty over the Area or its resources, subject to alienation permitted by UNCLOS and the International Seabed Authority (ISA).³⁴ It also distinguishes the exercise of sovereignty from sovereign rights.

²⁵ *Supra* note 1, art 89.

²⁶ *Supra* note 4 at 195. See also FT Christy and A Scott, *The Commonwealth in Ocean Fisheries* (Baltimore: Johns Hopkins Press, 1965). The ownership of marine living resources was altered by the creation of the exclusive economic zone, as defined in Part V of UNCLOS.

²⁷ *Supra* note 1, art 87.

²⁸ *Ibid*, art 87(2).

²⁹ *Ibid*, art 87(1).

³⁰ *Ibid*, art 133(1).

³¹ UNCLOS uses “common heritage of mankind”. Although the concept of common heritage of humankind is used broadly in writing on the global commons, their legal interpretation in international law is currently restricted to the definitions provided for in *supra* note 1, Part XI. See also *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984).

³² *Supra* note 4 at 197.

³³ Graham Nicholson, “The Common Heritage of Mankind and Mining: An Analysis of the Law as to the High Seas, Outer Space, the Antarctic and World Heritage” (2002) 6 *New Zealand Journal of Environmental Law* 177 at 178.

³⁴ *Supra* note 1, art 137(3). Established in article 156, the ISA is charged with the oversight and management of activities in the area, including deep seabed mining.

Comparing the two, the freedom of the high seas under Article 87 is more permissive and provides States with the right to carry out activities such as navigation, fishing, and marine scientific research in the high seas. Note, however, that such activities are nevertheless subject to the limitations, duties, and prohibitions, such as those set out in other provisions of UNCLOS, the *Fish Stocks Agreement*,³⁵ and other regional agreements, including regional fisheries management organizations (RMFOs), as well as international decisions and principles of international environmental law. Balancing the freedom of the high seas with responsibilities owed to the environment and to other States have complicated the execution of important activities, such as marine scientific research.³⁶

2.3 Challenges to Governing the Environment of ABNJ

The global commons present a unique set of challenges to effective governance. As previously discussed, traditional examples of the global commons divide areas subject to national jurisdiction from those beyond national jurisdiction. Examples of these areas include the high seas, the deep seabed, Antarctica, and outer space. Currently, there does not exist a singular, uniform approach to governing these spaces. Instead, what exists are various legal and institutional frameworks designed to govern specific domains, such as UNCLOS and its provisions on the high seas and deep seabed respectively, or the *Antarctic Treaty*³⁷ system. However, the demarcation between areas within and areas beyond national jurisdiction is not watertight. Birnie, Boyle, and Redgwell note the extension of community interest regimes to what was traditionally a State's *domaine réservé*:

³⁵ *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001) [FSA].

³⁶ With no definition to what constitutes marine scientific research in UNCLOS, there is a variance between what States believe to be allowed under Article 87(1)(f) and the implications of Part XIII of UNCLOS. This discussion entails interesting insight into the dividing line between “pure” and “applied” scientific research, and the delineation between monetary and non-monetary benefits that are subject to distribution under capacity building and technology transfer schemes.

³⁷ *The Antarctic Treaty*, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961) [*Antarctic Treaty*]; *Protocol on Environmental Protection to the Antarctic Treaty*, 4 October 1991, (1991) 30 ILM 1461 (entered into force 14 January 1998) [*Antarctic Protocol*]; *Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies*, 14 June 2005, (2006) 45 ILM 5 [*Annex VI*] (collectively referred to as the “Antarctic Treaty System”). See *supra* note 6 at 1253 (“The natural resources of Antarctica form a special category, now that sovereign claims to main parts of the territory of Antarctica have been ‘frozen’ for the time being, while the exploitation of its resources (on land and in adjacent seas, and living and non-living) are subject to special treaty regimes (regarding seals, fisheries, other marine resources, and mining)”).

*Notions of common heritage, common interest, common concern, and inter-generational equity have extended the scope of international law and the legitimate interest of other states into the management of every state's domestic environment, at least in respect of certain issues such as global climate change and conservation of biodiversity.*³⁸

Nevertheless, the way that environmental agreements address issues in marine areas varies according to the subject matter but are foundationally similar because they rely on several key principles of international environmental law.³⁹

The immensity of the global commons, and the inherent knowledge gaps in these areas makes it difficult to form a rational governance structure that is responsive to potentially unpredictable and rapid changes. For example, knowledge gaps and insufficient baseline data in the deep seabed stand in the way of effective protection of deep-sea fauna from the effects of deep seabed mining activities.⁴⁰ These gaps include a lack of knowledge on the “spatial and temporal scale and nature of mining operations”⁴¹ and of cumulative effects of mining activities in addition to a general absence of sufficient scientific data regarding fauna and biodiversity resilience. Without this information, establishing the threshold for certain activities that equates to serious environmental harm is guesswork at best and may not fully reflect the reality of the long-lasting effects of deep seabed mining activities.

There is also a complex network of interests and rights at play in the global commons, since all States have a shared interest in the commons and common-pool resources, as well as in the monetary and non-monetary benefits that can be derived from these resources. Achieving consensus on important governance decisions in the global ocean commons is inherently difficult considering the intrinsic disparity in the capacities and levels of development of States, as well as the influence of economic, political, social, and cultural differences. Addressing these realities is antecedent to effectively resolving key issues related to the implementation of international environmental law. Sands and Peel underscore that any approach to international environmental law must “take account of political, cultural, economic and scientific concerns [...] and consider a broad range of apparently unrelated factors, which interact with each other in a number of ways

³⁸ *Supra* note 4 at 41.

³⁹ Described, *above*.

⁴⁰ Sabine Gollner *et al*, “Resilience of Benthic Deep-Sea Fauna to Mining Activities” (2017) 129 *Marine Environmental Research* 76.

⁴¹ *Ibid*, Table 1.

that to do not permit them to be treated as discrete.”⁴² A framework that fails to consider disparities between States can result in an ineffective and unfair system that not only fails to achieve its goals of environmental protection but also creates further barriers to development for developing countries by placing an unjust amount of burden on these States.⁴³ International law recognizes this point by integrating the consideration of developing States through the principle of common but differentiated responsibilities,⁴⁴ as well as emphasis on other equitable measures such as capacity-building and equitable benefit sharing.⁴⁵

Judicial fora, whether through an existing court like the International Court of Justice (ICJ) or through the establishment of a decision-making body specific to the commons in an agreement (e.g., Seabed Disputes Chamber (SDC) established by Article 186 of UNCLOS), can be used to hold States accountable and provide recourse. Judiciary interpretation from prominent international courts like the ICJ have had a key role in dissecting procedural and substantive requirements of international obligations, as well as answering questions of law that can be applied across a broad spectrum of situations. Importantly, UNCLOS establishes a specialized judiciary body, the International Tribunal for the Law of the Sea (ITLOS).⁴⁶

For the high seas and the deep seabed, UNCLOS attempts to overcome the challenges created by the global commons by relying on both historical practices and legal innovation. Traditional approaches to establishing a system governing the high seas were largely formed as a response to competing claims of sovereignty put forth by countries that wanted to claim exclusivity over parts of the ocean to impede access to valuable navigation routes and resources. Access was limited to those with the knowledge and capability to build and navigate ships through the “free seas”. In comparison to today, the anthropogenic impacts on the environment of ocean exploration were negligible when considering the levels of pollution caused by modern land and ocean

⁴² Sands, *supra* note 6 at 5.

⁴³ See *supra* note 4 at 10. Sands and Peel note that international environmental law challenges traditional legal order with respect to the “legislative, administrative and adjudicative functions of international law [...] the manner in which international legal arrangements are organised (i.e. along territorial lines) [...] and] the various actors who are considered to be members of the international community and participants in the various processes and practices of the international legal order. The ability of the international legal order to address these three aspects, in the context of environmental issues, determines whether international law can truly be marshalled to promote effective environmental protection, or whether it becomes merely the ‘faithful friend of a family overtaken by time.’”

⁴⁴ *Supra* note 10, Principle 7. See also Duncan French, “Developing States and International Environmental Law: The Importance of Differentiated Responsibilities” (2000) 49:1 International and Comparative Law Quarterly 35.

⁴⁵ For example, see *supra* note 1, arts 82 and 140.

⁴⁶ *Ibid*, Annex VI.

activities. Rising sea-levels, rising ocean temperatures, ocean acidification, climate change, marine plastics, the introduction of foreign species, oil spills, illegal dumping, and the loss of biodiversity are all growing pains stemming from an unprecedented increase in human activities and rapid developments in technology.⁴⁷ This chapter will continue by exploring how UNCLOS (as the “constitution for the oceans”),⁴⁸ the law of the sea as a whole, and international law approach environmental issues in light of the above and how its application evolves alongside developments in ocean technology.

2.4 The Negotiation History of UNCLOS

UNCLOS divides the global commons of the oceans into two spatial regimes or maritime zones: Part VII on the high seas and Part XI on the Area.⁴⁹ Article 86 defines the high seas as areas outside of internal waters, the territorial sea, archipelagic waters, and the exclusive economic zone (EEZ).⁵⁰ Article 1(1) defines the Area as “the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction” (also referred to collectively as the “deep seabed”).⁵¹ This section reviews the negotiation history of UNCLOS, with a focus on the high seas and the Area, to provide historical context for marine ABNJ governance.

2.4.1 The 1958 Geneva Conventions

The International Law Commission’s (ILC) work on drafting a singular, comprehensive treaty on the regime of the territorial waters and of the high seas for codification began in 1949. In approaching this task, the ILC had two primary mandates under the *Statute of the International Law Commission*.⁵² The first was to ensure a “more precise formulation and systematization of rules of international law in fields where there has already been extensive State practice, precedent

⁴⁷ See e.g. “The Second World Ocean Assessment: World Ocean Assessment II” (22 September 2021), online: [UN <www.un.org/regularprocess/woa2launch>](http://www.un.org/regularprocess/woa2launch); Intergovernmental Panel on Climate Change (IPCC), “The Ocean and Cryosphere in a Changing Climate: A Special Report of the Intergovernmental Panel on Climate Change” (2019), online: [IPCC <www.ipcc.ch/srocc>](http://ipcc.ch/srocc).

⁴⁸ “A Constitution for the Oceans”, Remarks by Tommy TB Koh of Singapore, President of the Third United Nations Conference on the Law of the Sea, online: www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf.

⁴⁹ *Supra* note 1, art 1(1).

⁵⁰ *Ibid*, art 86.

⁵¹ *Ibid*, art 1(1).

⁵² *Statute of the International Law Commission*, GA Res 485(V), UNGAOR, UN Doc A/Res/174 (1947), amended by GA Res 485(V), UNGAOR, UN Doc A/Res/485 (1950); GA Res 984(X), UNGAOR, UN Doc A/Res/98 (1955); GA Res 985(X), UNGAOR, UN Doc A/Res/985 (1955); and UNGAOR, UN Doc A/36/39 (1981).

and doctrine”.⁵³ Where there was insufficient practice, precedent, or doctrine to rely upon, the ILC’s prerogative was to make “progressive development”⁵⁴ to international law on such matters. However, as the sessions on the law of the sea continued, the ILC found it more and more difficult to distinguish when one mandate was more applicable over another with the variance in practices and precedent.

These were amongst several major issues encountered when trying to codify the law of the sea. With States taking a firm stance on central issues such as the breadth of the territorial sea, the ILC eventually found itself unable to conclude a convention for the law of the sea within the framework of its mandates. Further disagreements arose between States as to which matters were “sufficiently developed in practice”⁵⁵ and which required further development, eventually pushing the ILC to restructure its initial approach. Thus, in its 1956 Final Report,⁵⁶ the ILC called for the UN General Assembly to convene an international conference for the law of the sea, with the hope that this conference could produce an international agreement on the law of the sea. The ILC included in its Final Report a set of adopted articles on the high seas, territorial seas, continental shelf, contiguous zone, and marine living resources, with the intention that these articles be used as the central negotiating text for the conference. The ILC strongly believe that a future convention on the law of the sea must include all of these components because “the various sections of the law of the sea hold together, and are so closely interdependent that it would be extremely difficult to deal with only one part and leave the others aside.”⁵⁷

Two years later, in 1958, the first UN Conference on the Law of the Sea (UNCLOS I) convened to further the work of the ILC. Using the adopted articles in the ILC’s Final Report, UNCLOS I produced four conventions, collectively referred to as the *1958 Geneva Conventions on the Law of the Sea (1958 Geneva Conventions)*, which were:

- (1) *The Convention on the Territorial Sea and the Contiguous Zone*,
- (2) *The Convention on the High Seas*,

⁵³ *Ibid*, art 15.

⁵⁴ *Ibid*.

⁵⁵ “Report of the International Law Commission on the work of its eighth Session” (UN Doc A/3159) in *Yearbook of the International Law Commission 1956*, vol 2, (New York: UN, 1956) at para 26.

⁵⁶ *Ibid*.

⁵⁷ *Ibid*, para 29.

- (3) The *Convention on Fishing and Conservation of the Living Resources of the High Seas* (CFCLR), and
- (4) The *Convention on the Continental Shelf*.⁵⁸

These conventions came into force along with the *Optional Protocol of Signature Concerning the Compulsory Settlement of Disputes*⁵⁹ and nine other resolutions. Further codification work continued at a second conference, UNCLOS II, with the topics of the breadth of the territorial sea and fishery limits. UNCLOS II concluded without any substantial progress to further codifying the law of the sea.⁶⁰

2.4.2 The Third Conference on the Law of the Sea

While the conclusion of the *1958 Geneva Conventions* represented the end to a long process of drafting and negotiating, the rules set out in the four agreements were arguably far from copacetic. There remained several key issues that needed to be reconsidered, including the inequitable approach to defining the limits of the continental shelf and the controversial provisions of the CFCLR, which received particularly low rates of ratification by States.⁶¹ The low acceptance rate of the CFCLR in comparison to the other agreements was also indicative of a second problem with the *1958 Geneva Conventions*. The conclusion of several separate agreements allowed for States to pick and choose which rules they wanted to adopt. Thus, there remained a great deal of work to be done before a comprehensive framework for the law of the sea could be instituted. As Judge Treves describes, the *1958 Geneva Conventions* were an “expression of the ‘traditional law of the sea’, namely, the law prevailing before the transformations in the international community and in its assessment of the uses of the seas that brought about” the third conference on the law of the sea (UNCLOS III).⁶² It was not, however, the ideal form for governing the oceans.

⁵⁸ *Convention on the Territorial Sea and the Contiguous Zone*, 28 April 1958, 516 UNTS 205 (entered into force 10 September 1964); *Convention on the High Seas*, 29 April 1958, 450 UNTS 11 (entered into force 30 September 1962); *Convention on Fishing and Conservation of the Living Resources of the High Seas*, 29 April 1958, 559 UNTS 285 (entered into force 26 March 1966) [CFCLR]; *Convention on the Continental Shelf*, 29 April 1958, 499 UNTS 311 (entered into force 10 June 1964) (collectively referred to as the “1958 Geneva Conventions”).

⁵⁹ *Optional Protocol of Signature Concerning the Compulsory Settlement of Disputes*, 29 April 1958, 450 UNTS 169 (entered into force 30 September 1962).

⁶⁰ Tullio Treves, “United Nations Convention on the Law of the Sea” (2008), online: <legal.un.org/avl/pdf/ha/uncls/uncls_ph_e.pdf>.

⁶¹ Tullio Treves, “1958 Geneva Conventions on the Law of the Sea” (2008), online: <legal.un.org/avl/pdf/ha/gclos/gclos_e.pdf>.

⁶² *Ibid.*

The period between the *1958 Geneva Conventions* and UNCLOS III brought about a series of these transformations for the international community in its understanding of the law of sea. Several significant developments were made on the topics of the high seas and the seabed. While common heritage was not a novel concept at the time, it was Maltese Ambassador Arvid Pardo's famous address to the UN General Assembly in 1967 that emphasized the importance of the common heritage principle and its applicability to the deep seabed. Citing the speed of development of seabed mining technology, and the potential for international conflicts given the correlation between resources and a State's political and economic strength,⁶³ Pardo proposed that the seabed and subsoil of marine ABNJ, as well as the resources of these areas, form part of the common heritage of humankind and that these areas be reserved for peaceful purposes.⁶⁴

These concepts formed the basis of the work of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction (Ad Hoc Committee) and the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction (Seabed Committee), convened by the UN General Assembly in 1967⁶⁵ and 1968, respectively.⁶⁶ Given the lack of rules for the limits of the seabed of ABNJ and for the exploration and exploitation of resources in the seabed under the *1958 Geneva Conventions*, the Seabed Committee was tasked with examining this issue, with an emphasis on cooperation,⁶⁷ and making recommendations to the General Assembly thereon.⁶⁸ The work of the Seabed Committee led to the 1970 *Declaration of Principles Governing the Sea-bed and the Ocean Floor* (1970 Declaration of Principles).⁶⁹ These Principles were key to the development of Part XI of UNCLOS during UNCLOS III, including on the reservation of the seabed in ABNJ for peaceful purposes and for the benefit of all humankind.⁷⁰

⁶³ *Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-bed and the Ocean Floor, and the Subsoil thereof*, UNGAOR, 22nd Sess, Agenda Item 92, UN Doc A/6695; A/C.1/952 (1967).

⁶⁴ *Ibid.*

⁶⁵ *Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-bed and the Ocean Floor, and the Subsoil thereof*, GA Res 2340 (XXII), UNGAOR, 22nd Sess, UN Doc A/Res/2340 (1967) 14.

⁶⁶ *Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-bed and the Ocean Floor, and the Subsoil thereof*, GA Res 2467 (XXIII), UNGAOR, 23rd Sess, UN Doc A/Res/2467 (1968) 15.

⁶⁷ *Ibid* at para 2.

⁶⁸ *Ibid* at para 4(b).

⁶⁹ *Declaration of Principles Governing the Sea-bed and the Ocean Floor, and the Subsoil thereof, Beyond the Limits of National Jurisdiction*, GA Res 2749 (XXV), UNGAOR, 25th Sess, UN Doc A/Res/2749 (1971) 24.

⁷⁰ *Ibid* at paras 7—8.

Going into UNCLOS III, there was both a need to clarify key components of ocean governance (i.e., the limits of the continental shelf) and a need for a different approach to negotiations. Recalling the ILC's affirmation that topics in the law of the sea were so interconnected that they could not be separated, it was decided that negotiations at UNCLOS III were to be consensus-led, looking at the issues as a "package deal".⁷¹ The package deal approach was meant to ensure that each provision was accepted without reservation by States and that the final agreement would be "comprehensive in scope and universal in participation".⁷² This not only reflects the conclusions of the ILC in 1956 but also the work of the Seabed Committee. The component issues of the package deal were split amongst three main committees. The First Committee was assigned the regime of the seabed and ocean floor of ABNJ. The regime of the high seas, along with other marine zones, was the subject matter of the Second Committee. Finally, although the First and Second Committees were still to consider environmental concerns, the general issue of the preservation of the marine environment was assigned to the Third Committee.

Unlike UNCLOS I, which centered around the further development of the articles in the ILC's 1956 Final Report, UNCLOS III did not start with a central negotiating text. This was the case until the second session of UNCLOS III, when the Second Committee presented its 1975 Working Paper (the Main Trends paper).⁷³ The Main Trends paper combined topics from the Seabed Committee with those raised by proposals made at the previous law of the sea conferences to generate an extensive set of provisions for negotiation at UNCLOS III. The provisions on marine ABNJ were divided into that of the "international sea-bed area beyond national jurisdiction"⁷⁴ and the high seas. The various formulations of the provisions governing the Area suggested in the Main Trends paper reflected a need to sort out the legal principles and rules for resource-related activities, given the fact that technological advancements were making seabed activities a reality for many States. States would soon be able to access seabed resources, opening new doors to economic and political developments and a new set of competing interests that could in turn result in international conflicts. Amongst the issues that would need to be dealt with at an early stage of UNCLOS III

⁷¹ See Hugo Caminos and Michael R Molitor, "Progressive Development of International Law and the Package Deal" (1985) 79:4 American Journal of International Law 871, DOI: <10.2307/2201830>.

⁷² Alan Boyle, "Further Development of the Law of the Sea Convention: Mechanisms for Change" (2005) 54 International Comparative Law Quarterly 563, DOI: <10.1093/iclq/lei018 > at 563.

⁷³ Second Committee, "Working Paper of the Second Committee: Main Trends", UN Doc A/CONF.62/C.2/WP.1 (1974) [Main Trends paper].

⁷⁴ *Ibid*, provision 192.

were questions related to the outer limits of the juridical continental shelf (and conversely, the start of Area) and the legal status of the Area and its resources, including the rights and interests of landlocked States.

The reason why rights and obligations in the high seas and the Area needed to be dealt with separately was because the freedom of the seas could not be expanded to address the second question of the legal status of the seabed of ABNJ and its resources.⁷⁵ Instead, the Area would be subject to the common heritage principle – Article 136 of UNCLOS – a principle that was already widely accepted and popularized prior to UNCLOS III and underwent a great deal of development in the 60s and 70s with Pardo’s speech in 1967 and the ensuing work of organizations like the Ad Hoc Committee and the Seabed Committee. The principles raised by Pardo are found in Section 2 of Part XI of UNCLOS. The corollary to this was the establishment of an international authority to oversee activities in these areas (i.e., the ISA).

In addition to choosing an approach to deep seabed governance, the limits of the Area itself needed to be defined more clearly. This required an examination of the existing approach to the continental shelf going into UNCLOS III. Article 1 of the *1958 Convention on the Continental Shelf* defined the outer limits of the continental shelf using two criteria. The first was to a depth of 200 meters (the 200m isobath criterion). Alternatively, the second approach allowed a continental shelf to extend beyond the 200m isobath to a limit where “the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas” (the exploitability criterion).⁷⁶ As States were free to choose which criterion they wanted to apply, this created a possible scenario where a State’s continental shelf could, arguably, be proportional to the state of its mining technology. This proved to be a concern for many States, as the further a State could extend its national jurisdiction over the deep seabed, the more it could exercise its rights over areas and resources that would have otherwise been part of the global commons. Land-locked States and other geographically disadvantaged States were especially opposed to an open-ended definition of the outer limits, because this directly infringed upon their rights over access to the seabed and common-pool resources in the international seabed area.⁷⁷ As the draft text evolved over the course

⁷⁵ *Supra* note 69.

⁷⁶ *Convention on the Continental Shelf*, *supra* note 58, art 1.

⁷⁷ UNCLOS III, “Summary Records of Plenary Meetings – 20th Meeting”, UN Doc A/Conf.62/C.2/SR.20 (1974) at para 74.

of UNCLOS III, the final text resolved this through the complex formula in Article 76, as well as through the addition of Article 82 (on equitable benefit sharing in the deep seabed), which is often described as being *quid pro quo* for the acceptance of the limits provided for under Article 76.⁷⁸

On the matter of the high seas, the ILC's 1956 Final Report⁷⁹ sections its articles on the regime of the high seas into the general regime of the high seas, the contiguous zone, and the continental shelf. The regime draws from traditional approaches to high seas governance, including the central principle that the high seas are open to all nations, thus precluding the high seas from any claims of sovereignty.⁸⁰ Components of the freedom of the high seas are listed in Article 27 of the Final Report, which the ILC describes as being a non-restrictive list of freedoms.⁸¹ Of these freedoms, the freedom of fishing is further elaborated upon in Article 49, under which all States have the right to fish in the high seas, subject to any treaties they become party to and the covenants under Articles 50 to 60 on the conservation of living resources of the high seas.⁸² The provisions on conservation stem from the ILC's work on the regime of the high seas.⁸³ It is these early iterations of conservation provisions that established optimum sustainable yield as the primary objective of conservation, with international cooperation being the main conduit to achieving this objective.⁸⁴

The approach to the regime of the high seas in the 1956 Final Report was carried through to the 1958 *Convention on Fishing and Conservation of Living Resources of the High Seas* and the *Convention on the High Seas*. Article 2 of the *Convention on the High Seas* recognizes the freedom of the seas in waters beyond internal and territorial waters of a littoral State,⁸⁵ including the freedom of navigation, fishing, laying of submarine cables and pipelines, and flight, as general principles of international law that could be "exercised by all States with reasonable regard to the interests of other States in their exercise".⁸⁶ The rest of the Convention reads similar to Part VII of

⁷⁸ See Aldo Chircop, "Implementation of Article 82 of the United Nations Convention on the Law of the Sea: The Challenge for Canada" in Catherine Banet, ed, *The Law of the Seabed: Access, Uses, and Protection of Seabed Resources* (Leiden: Brill Publishers, 2020) 371.

⁷⁹ *Supra* note 55.

⁸⁰ *Ibid* at 278.

⁸¹ *Ibid*.

⁸² *Ibid*, art 49.

⁸³ See e.g. International Law Commission (ILC), "Report of the International Law Commission on its Third Session" UN Doc A/CN.4/48 and Corr 1&2 (1951).

⁸⁴ *Ibid* at 287 and art 50.

⁸⁵ *Convention on the High Seas*, *supra* note 58, art 1.

⁸⁶ *Ibid*, art 2.

UNCLOS, setting out the rules regarding flag States, piracy, hot pursuit, etc. Articles 24 and 25 place a positive duty on States to draft domestic regulations “to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil”⁸⁷ and to take measures to prevent pollution from the dumping of radioactive waste,⁸⁸ which was noted by the ILC in its 1956 Final Report as an increasing source of pollution in the ocean.

Recognizing the potential for over-exploitation and the need for the conservation of living resources, the preamble of the CFCLR emphasises the need for international cooperation to resolve issues in the high seas. In exercising the freedom of fishing in the high seas, States are nevertheless limited by other obligations under the Convention and other treaties that they may enter (e.g., regional agreements), and the rights and interests of other coastal States as described by the Convention.⁸⁹ Similar to the ILC’s approach through its sessions on the high seas, Article 2 defines conservation of living resources of ABNJ as “the aggregate of the measures rendering possible the optimum sustainable yield from those resources so as to secure a maximum supply of food and other marine products”,⁹⁰ with a priority on securing a safe food supply for humans. From this perspective, the main purpose of the CFCLR was to achieve equity between States and to prevent and resolve conflicts over fisheries in the high seas. This includes the establishment of a special commission to resolve dispute resolution under Article 13. However, there is no mention of the environment, sustainable use, biological diversity, or any other form environmental protection was made in the Convention.

The approaches in place prior to UNCLOS III left a wide discrepancy for how to conduct activities in the high seas, including fishing, and a need for more precise definitions regarding conservation. Similar to the issue of defining the limits of the extended continental shelf, there was also a need for UNCLOS III to better define the limitations to freedoms in the high seas. With advancements in technology allowing for fishers to increase their catch year after year, resulting in a strain on biodiversity and fish populations, the traditional concepts of the law of the capture and the species approach needed to be replaced with something that better resolved environmental

⁸⁷ *Ibid*, art 24.

⁸⁸ *Ibid*, art 25.

⁸⁹ CFLRC, *supra* note 58, art 1.

⁹⁰ *Ibid*, art 2.

concerns, as well as disparity and competition between States in the fishing industry. The reason for this, as described by Friedheim, was two-fold. The first was that the species approach to conservation, which focused conservation programmes on specific species or groups of species, failed to deal with overexploitation.⁹¹ The second reason was that States in Asia, Africa, and Latin America were already doubtful of the conservation provisions in the 1958 Conventions, as these Conventions “merely provided a cover for the depredations of developed state fishing efforts off of their coasts.”⁹² In Friedheim’s perspective, changes to the traditional framework were inevitable.

At the onset of UNCLOS III, it was clear that a novel approach to resolving fishery issues would need to be formulated. The response at UNCLOS III was the adoption of the EEZ into the new convention, a concept that was explored in detail at the Seabed Committee meetings that occurred prior to the convening of UNCLOS III. At these meetings, Australia and New Zealand presented a joint paper on the creation of a “coastal fishery resources zone”⁹³ where States could exercise exclusive jurisdiction over resources in the zone in exchange for certain responsibilities over the area regarding the management of these resources. The introduction of the EEZ allowed aspects of territoriality and national jurisdiction to permeate the high seas and reduce the application of certain elements of the freedom of the seas. The main pushback to radical changes to fisheries was that “traditional fishing interests hoped to place a species approach in the new convention”.⁹⁴ This was the stance taken by the United States during the Seabed Committee meetings in its draft fisheries articles, which provided coastal States with a large role in managing and supervising fishery activities.⁹⁵ Eventually, questions of conservation from the perspective of sustainable yield were addressed in Article 61 of UNCLOS.

The 1958 *Convention on the High Seas* addressed environmental concerns in a limited manner. It contained two provisions on the prevention of oil pollution and pollution from

⁹¹ Robert L Friedheim, “Fishing Negotiations at the Third United Nations Conference on the Law of the Sea” (1991) 22:3 *Ocean Development and International Law* 209, DOI: <10.1080/00908329109545957> at 218.

⁹² *Ibid.*

⁹³ “Report of the Committee on the Peaceful Uses of the Sea-bed and the Ocean Floor Beyond the Limits of National Jurisdiction”, UNGAOR, 27th Sess, UN Doc A/8721(Supp) (1972) at 183—187.

⁹⁴ *Ibid.*

⁹⁵ “Draft Articles on the Breadth of the Territorial Sea, Straits, and Fisheries Submitted to Sub-committee II by the United States of America”, UNGAOR, 26th Sess, UN Doc A/8421 (1971) at 241—245. While the trusteeship system that was proposed by the United States received little support, many principles from its draft articles carried through to the final draft of UNCLOS. For example, the concept of allowable catch and maximum sustainable yield are reflected in Article 61 – conservation of the living resources – in Part V of UNCLOS on the EEZ.

radioactive substances, both of which lacked any specific requirements as to how States should address these issues. Birnie *et al* note that “in practice, the 1958 Conventions seemed to suggest that states enjoyed substantial freedom to pollute the oceans, moderated only by the principle that high-seas freedoms must be exercised with reasonable regard for the rights of others.”⁹⁶ It was not until the negotiations at UNCLOS III where States sought for a balance between freedom of the high seas and environmental responsibilities through “a global framework for the rational exploitation and conservation of the sea’s resources and the protection of the environment, while also recognizing the continued importance of freedom of navigation.”⁹⁷ UNCLOS III negotiations drew from a strong collection of principles in customary international law and *opinion juris* that recognized the importance of environmental protection and pollution prevention. Birnie *et al* note that there was “nothing essentially novel in the proposition first articulated in Article 192”⁹⁸ and that “this obligation is more strongly expressed than in Principle 21 of the Stockholm Declaration, insofar as Article 193 reaffirms the sovereign right of states to exploit their natural resources”.⁹⁹ Environmental obligations under UNCLOS are further affirmed by subsequent instruments, such as regional seas agreements.

Unlike other environmental conventions, UNCLOS is not a framework convention and, generally, “makes no formal provision for the adoption of further protocols and annexes as a means of developing the legal regime to meet new priorities and problems”.¹⁰⁰ Like other sections in UNCLOS, the environmental provisions are relatively general, and specific procedural and substantive requirements are not described in detail. To resolve this, one approach is to treat them as reflective of the principles adopted by UNCLOS that should be upheld to achieve the Convention’s environmental goals.¹⁰¹ At UNCLOS III, in its preliminary proposal to the First Committee at the Second Session, the United States identified the protection of the marine environment as a “basic policy objective”.¹⁰² With regard to the deep seabed in particular, Argentina was of the opinion that advancements to mining technology must be made in the

⁹⁶ *Supra* note 4 at 386.

⁹⁷ *Ibid* at 383.

⁹⁸ *Ibid* at 387.

⁹⁹ *Ibid*.

¹⁰⁰ *Supra* note 72 at 564; however, see discussions, *below*.

¹⁰¹ *Supra* note 1, art 237.

¹⁰² UNCLOS III, “Summary Records of Meetings of the First Committee – 14th Meeting”, UNGAOR, UN Doc A/Conf.62/C.1/SR.14 (1974) at para 51.

direction of preserving the environment.¹⁰³ The inclusion of provisions addressing the immense effects of mining activities on the seabed environment evolved, merging through the various drafts at UNCLOS III until its final formulation in Article 145 of UNCLOS. Article 145 is an environmental protection provision specific to the Area and additional to the other articles in UNCLOS on the environment.

This section provided context on the values and norms that needed to be adopted into UNCLOS to accomplish what previous iterations of the law of the sea, like the *1958 Geneva Conventions*, could not. The use of the package deal provided cohesiveness to the law of the sea “protected from derogation by compulsory third-party settlement of disputes, a prohibition on reservations, and a ban on incompatible *inter se* agreements”.¹⁰⁴ This section also provided insight into how Part VII on the high seas and Part XI on the Area came together, especially regarding the contentious issue of defining the outer limits of the continental, as well as how UNCLOS treated the marine environment at UNCLOS III. These parts play an important role into how UNCLOS is applied today. The next section of this chapter will review the environmental obligations of UNCLOS in light of their interpretation and application by international courts.

2.5 Environmental Obligations in UNCLOS

2.5.1 General Obligations in Part XII on the Protection and Preservation of the Marine Environment

Part XII contains the provisions of UNCLOS for the protection and preservation of the marine environment and takes a broad strokes approach to environmental governance. The obligations enumerated in Part XII are not apportioned based on the maritime zones established under UNCLOS but instead apply to all States “in all maritime areas, both inside the national jurisdiction of States and beyond it.”¹⁰⁵

Similarly, while the term “marine environment” is not expressly defined in UNCLOS, the broader text of the Convention points to an approach that treats the environment as being

¹⁰³ UNCLOS III, “Summary Records of Meetings of the First Committee – 13th Meeting”, UNGAOR, UN Doc A/Conf.62/C.1/SR.13 (1974) at para 23.

¹⁰⁴ *Supra* note 72 at 563.

¹⁰⁵ *South China Sea Arbitration (The Republic of Philippines v The People’s Republic of China)* (2016), Award, ICGJ 495 [South China Sea] at para 940; see also para 927.

indivisible and including both living and non-living elements. An argument could even be made that the marine environment includes its derivatives, such as benefits for human health and activities in the oceans.¹⁰⁶ Related instruments also provide some insight into the boundaries of this term.¹⁰⁷ For example, the Mining Code defines ‘marine environment’ as:¹⁰⁸

*The physical, chemical, geological and biological components, conditions and factors which interact and determine the productivity, state, condition and quality of the marine ecosystem, the waters of the seas and oceans and the airspace above those waters, as well as the seabed and ocean floor and subsoil thereof.*¹⁰⁹

‘Ecosystem’ is not defined in UNCLOS nor the Mining Code itself. However, the CBD references both living and non-living elements of the environment in its definition of “ecosystem”, describing it as “a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.” The above set out the parameters for the wide application of the obligations enumerated in Part XII. The broad scope of these obligations is one of the central strengths of UNCLOS.

Part XII begins with Article 192, which prescribes the general obligation for States to “protect and preserve the marine environment”.¹¹⁰ According to the Tribunal in the *South China Sea* arbitration,¹¹¹ protection looks into preventing future harm to the environment, whereas preservation speaks to “maintaining or improving its present condition.”¹¹² The Tribunal also held that Article 192 includes both a positive duty to protect and preserve the marine environment and the “negative obligation not to degrade the environment”.¹¹³ The content of the Article 192 obligation is further informed by other sources of international environmental law,¹¹⁴ including

¹⁰⁶ See *supra* note 1, art 1(4) (definition for pollution of the marine environment). This article provides for an argument that the marine environment can include living resources and marine life, as well as uses of the oceans and subsequent derivatives thereof.

¹⁰⁷ *Supra* note 105, citing other bodies of international law as sources for informing the application of UNCLOS.

¹⁰⁸ International Seabed Authority (ISA), *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (2013), ISBA/19/C/17 [RPEN]; ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area* (2010), ISBA/16/A/12/Rev; ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area* (2012), ISBA/18/A/11 (collectively referred to as the “Mining Code”).

¹⁰⁹ RPEN, *supra* note 108, reg 1(3)(c).

¹¹⁰ *Supra* note 1, art 192.

¹¹¹ *Ibid.*

¹¹² *Ibid.*

¹¹³ *Supra* note 105 at para 941.

¹¹⁴ *Ibid.*

the requirement to prevent transboundary harm¹¹⁵ and to mitigate significant harm from large-scale construction activities.¹¹⁶

The legal framework for the protection and preservation of the marine environment in Part XII of UNCLOS is partly a product of its time, a period during which environmental concerns primarily related to marine pollution. As such, many of the provisions of Part XII focus on the prevention, reduction, and control of pollution of the marine environment,¹¹⁷ as exhibited by Sections 1, 2, and 5 of Part XII.¹¹⁸ The general obligation for States to prevent, reduce, and control pollution is found in Article 194(1), which reads:

*States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.*¹¹⁹

Article 194(2) builds on this, stating:

*States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.*¹²⁰

The Arbitral Tribunal in *South China Sea* interpreted Articles 192 and 194 as constituting obligations of due diligence, drawing from both the SDC's *Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the Area* advisory opinion (SDC Advisory Opinion)¹²¹ and ITLOS in the *Fisheries Advisory Opinion*¹²² in the analysis of the requirement 'to ensure'.¹²³ ITLOS held that "the obligation to 'ensure' is an obligation of

¹¹⁵ *Ibid*, citing the *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, [1996] ICJ Rep 226.

¹¹⁶ *Ibid*, citing *Indus Waters Kishenganga Arbitration (Pakistan v India)*, Final Award of 20 December 2013, ICGJ 478 (PCA 2013).

¹¹⁷ *Supra* note 1, art 1(1)(4) (definition for 'pollution of the marine environment').

¹¹⁸ The focus has since widened from pollution to a broader set of environmental goals. See discussion *above*.

¹¹⁹ *Supra* note 1, art 194(1).

¹²⁰ *Ibid*, art 194(2).

¹²¹ *Responsibilities and obligations of States with respect to Activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, 10 [SDC Advisory Opinion].

¹²² *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, ITLOS Reports 2015, 4 at para 131.

¹²³ *Supra* note 105 at para 944.

conduct.”¹²⁴ Thus, not only are States required to adopt measures necessary to prevent, reduce, and control pollution, there is also a requirement to take action – whether through enforcement, investigation, and remedying situations – by the State in implementing these measures.¹²⁵ More specific obligations relating to marine pollution are found in Section 5 of Part XII, where provisions are organized by the types of sources of pollution. These categories are land-based sources,¹²⁶ seabed activities within national jurisdictions¹²⁷ and the Area,¹²⁸ dumping,¹²⁹ vessels,¹³⁰ and the atmosphere.¹³¹ The stringency of these provisions and the degree of regulation vary greatly. For instance, comparing Article 207 (for land-based sources of pollution) and Article 211 (pollution from vessels), the requirements for applying Article 211 are far more detailed than Article 207.

However, though the text of Part XII does pay special attention to pollution, it would be inaccurate to limit its application to this issue alone.¹³² For example, Article 194(5) states:

*The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.*¹³³

On the interpretation of this provision, the Arbitral Tribunal in *South China Sea* cites the Tribunal in *Chagos Marine Protected Area* arbitration,¹³⁴ which held that “while the control of pollution is certainly an important aspect of environmental protection, it is by no means the only one.”¹³⁵

The duty to cooperate is also central to Part XII. Article 197 requires that States cooperate – whether at a global or regional level, and either directly or through an organization – in adopting approaches to upholding UNCLOS’ environmental mandates, “taking into account characteristic

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*

¹²⁶ *Supra* note 1, art 207.

¹²⁷ *Ibid.*, art 208

¹²⁸ *Ibid.*, art 209.

¹²⁹ *Ibid.*, art 210.

¹³⁰ *Ibid.*, art 211.

¹³¹ *Ibid.*, art 212.

¹³² *Chagos Marine Protected Area (Mauritius v United Kingdom)* (2015), ICGJ 486 at paras 320 and 538 [*Chagos*].

¹³³ *Supra* note 1, art 194(5).

¹³⁴ *Supra* note 132.

¹³⁵ *Ibid* at para 320.

regional features.”¹³⁶ In the *MOX Plant* case,¹³⁷ Judge Wolfrum underscores the importance of international cooperation for the protection of the marine environment, describing the duty to cooperate as “a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law”.¹³⁸ The elements of cooperation that were required of Ireland and the United Kingdom in their dispute included that the two were required to consult with each other to facilitate the exchange of information on the environmental impacts of the MOX plant project, monitor the risks and effects, and come up with appropriate measures of pollution prevention.¹³⁹

The obligation to cooperate, and more specifically, to exchange information, also forms a part of the requirement for States to consider the impacts of their activities under Article 206:¹⁴⁰

*When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.*¹⁴¹

Article 206 is equated as being the EIA provision in UNCLOS. The obligation to conduct an EIA is standalone under Article 206, but also forms a part of a State’s broader set of due diligence obligations to prevent harm in customary international law.¹⁴² Thus, while Article 206 reads as a procedural requirement, it also contains a substantive element because due diligence obligations are compound in nature and form a part of a larger scheme for harm prevention and general

¹³⁶ *Supra* note 1, art 197.

¹³⁷ *MOX Plant (Ireland v United Kingdom)*, Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, 95.

¹³⁸ *Ibid* at para 82.

¹³⁹ *Ibid* at para 1; *supra* note 1, Part XII. The duty to cooperate is well-established in international environmental law. It is commonly described as being comprised of two elements: the duty to notify and the duty to consult. The duty to notify is owed by a State (i.e., a source State) to other States (i.e., affected State(s)) that may suffer significant transboundary harm due to the activities of the source State. Corollary is the duty to consult (i.e., exchange information) between the source State and affected State. Note, however, that the duty to consult does not equate with a duty to adhere to the recommendations made after consultation, as the final decision on a project or activity still lies with the source State.

¹⁴⁰ *Supra* note 105 at para 944 (“the obligation to communicate reports of the results of the assessments is absolute”).

¹⁴¹ *Supra* note 1, art 206.

¹⁴² This includes *ibid*, art 194(2). See also *supra* note 121 at para 145 (“It should be stressed that the obligation to conduct an environmental impact assessment is a direct obligation under the Convention and a general obligation under customary international law.”)

principles of international environmental law and sustainable development.¹⁴³ To this end, the Tribunal in *South China Sea* describes Article 206 as a method to “[ensure] that planned activities with potentially damaging effects may be effectively controlled and that other States are kept informed of their potential risks.”¹⁴⁴

The obligation to conduct an EIA was affirmed in *Pulp Mills*¹⁴⁵ as part of customary international law and in Principle 17 of the *Rio Declaration*.¹⁴⁶ The ICJ in *Pulp Mills* goes further to say that the failure to conduct an EIA would also result in a failure to meet due diligence obligations and “the duty of vigilance and prevention which it implies”.¹⁴⁷ States also have the general obligation to endeavour to “observe, measure, evaluate and analyse, by recognized scientific methods, the risks or effects of pollution of the marine environment”,¹⁴⁸ as well as “keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.”¹⁴⁹ Monitoring and reporting requirements are central components to EIA procedures under the majority of domestic and international EIA systems.¹⁵⁰

International cooperation is also essential for developing States to meet their international obligations regarding the protection of the marine environment under Part XII and reflected in specific duties regarding intragenerational equity such as capacity building and technology transfer. Article 202 requires States to cooperate, either with one another or through an international organization, on a number of matters related to scientific and technical assistance, including the provision of “appropriate assistance, especially to developing States, concerning the preparation of environmental assessments.”¹⁵¹ The incorporation and consideration of the special interests of developing States ties together with the principle of common but differentiated responsibilities and respective capabilities. This principle recognizes that the burden of environmental protection is

¹⁴³ Most of Part XII is comprised of due diligence obligations, which is a “variable concept” according to *supra* note 121 at para 117.

¹⁴⁴ *Supra* note 105 at para 948.

¹⁴⁵ *Supra* note 13, para 204.

¹⁴⁶ *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997) [*Espoo Convention*].

¹⁴⁷ *Ibid.*

¹⁴⁸ *Ibid.*, art 204(1).

¹⁴⁹ *Ibid.*, art 204(2).

¹⁵⁰ Discussed in Chapter 3 of this thesis.

¹⁵¹ *Supra* note 1, art 202(c).

not shared equally between all States, as well as the varying capabilities of States in addressing environmental harm.¹⁵² In the normative context of international environmental law, distinctions are made between the resources and capacities of developed versus developing States. Although it is not explicitly mentioned in UNCLOS, it is nevertheless recognized in practice. Throughout Part XII, several references are made to States taking measures consistent with Part XII “in accordance with their capabilities”.¹⁵³

Lastly, while UNCLOS deals mainly with the relationship between States, public participation is nevertheless a central consideration for marine environmental protection, especially with regard to Section 4 of Part XII (“monitoring and environmental assessment”). While Article 206 does not elaborate on the specifics of any procedural requirements for conducting an environmental assessment, both Articles 235 and 237 allow obligations established under other environmental agreements to form part of the requirements in Part XII of UNCLOS. Article 235 provides the broad requirement for States to fulfil “their international obligations concerning the protection and preservation of the marine environment.”¹⁵⁴ The failure to do so opens the State to liability under international law. Thus, public participation is nevertheless an inherent element, and legal requirement, of decision-making processes in relation to the marine environment. Looking to Principle 10 of the *Rio Declaration*,

*Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.*¹⁵⁵

It also forms part of the overarching obligation for public participation in international law, with the 1998 *Convention on Access to Information, Public Participation in Decision-Making and*

¹⁵² Christopher D Stone, “Common but Differentiated Responsibilities in International Law” (2004) 98:2 American Journal of International Law 276, DOI: <10.2307/3176729>.

¹⁵³ *Supra* note 1, arts 194(1) and 199. See also art 266(1).

¹⁵⁴ *Ibid*, art 235(1).

¹⁵⁵ *Supra* note 10, Principle 10.

Access to Justice in Environmental Matters being the central authority for public participation requirements.

For ABNJ, public participation and stakeholder engagement are cross-cutting issues that remain underdeveloped and lacking State practice, shared objectives, and clear procedures.¹⁵⁶ For the Area, this is especially an issue, where “enhanced disclosure of environmental data and information alone does not suffice”.¹⁵⁷ Improved transparency is not only important given the importance of the Area and the unknown implications of deep seabed mining, but also in the operation of other provisions like equitable benefit sharing in accordance with the common heritage principle and Articles 140(2) and 160(2)(f)(i).

2.5.2 Part VII on the High Seas

A cornerstone of the high seas regime is the freedom of the high seas, described in Article 87 as including the freedom of navigation, of overflight, to lay submarine cables and pipelines, to construct artificial islands and other installations, of fishing, and of scientific research.¹⁵⁸ These freedoms are, however, constrained by the application of other provisions in UNCLOS and international law to the high seas.¹⁵⁹ For example, conditions for a State in exercising its freedom of fishing are further elaborated upon in Section 2 of Part VII. Section 2 deals with the conservation and management of living resources. Article 117 contains the central duty for States to take necessary measures for the conservation of living resources, which forms a foundation for the negotiations on BBNJ. Article 119 provides a better idea of what is meant by conservation of living resources, describing the concepts of allowable catch and maximum sustainable yield. It further requires the use of best available scientific knowledge and baseline data, and the precautionary principle and no-harm principle, in the determination of allowable catch, as it mandates States to consider “effects on species associated with or dependent on harvested species with a view of maintaining or restoring populations [...] above levels at which their reproduction may become seriously threatened.”¹⁶⁰

¹⁵⁶ Archon Fung, “Putting the Public Back into Governance: The Challenges of Citizen Participation and its Future” (2015) 75:4 Public Administration Review 513, DOI: <10.1111/puar.12361>.

¹⁵⁷ Klaas Willaert, “Transparency in the Field of Deep Sea Mining: Filtering the Murky Waters” (2022) 135 Marine Policy 104840, DOI: <10.1016/j.marpol.2021.104840> at 9.

¹⁵⁸ *Supra* note 1, art 87(1)(a)—(f).

¹⁵⁹ *Ibid.*

¹⁶⁰ *Ibid.*, art 119(1)(b).

Regarding the implementation of Article 119, Gollner *et al* point out that knowledge gaps are a major barrier to effective environmental protection in ABNJ. Article 119 was one of the key issues raised in *Southern Bluefin Tuna*.¹⁶¹ New Zealand alleged that Japan breached its obligations under Article 119, specifically by failing to adopt necessary conservation measures and to uphold the precautionary principle and the duty to cooperate (under Article 64).¹⁶² ITLOS suggested that Parties should “intensify their efforts”¹⁶³ under the duty to cooperate. *Southern Bluefin Tuna* also ties together UNCLOS’ conservation measures with the precautionary principle, stating that “parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken to prevent serious harm”.¹⁶⁴

The principles developed in Section 2 of Part VII are further elaborated upon in the *UN Fish Stocks Agreement* (FSA).¹⁶⁵ The FSA, as an implementing agreement to UNCLOS, contains principles for the conservation and management of straddling fish stocks and highly migratory fish stocks. It builds upon Article 118 (requiring States to cooperate) and Article 119 (allowable catch and maximum sustainable yield). Additionally, Article 87(2) contains an obligation for States in exercising their freedoms in the high seas, requiring “due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in the Area.”¹⁶⁶

This institutional frameworks of marine ABNJ are also distinct from that of ABNJ, “involving a number of different international organizations and bodies, both regional and global, along with flag State responsibilities for their vessels and industries.”¹⁶⁷ The jurisdictional framework of the high seas is structured upon the principle of exclusive flag State jurisdiction. Ships on the high seas must sail under the flag of one State.¹⁶⁸ States are permitted to grant their nationalities to ships in accordance with rules set out in domestic legislation, given that there is a

¹⁶¹ *Southern Bluefin Tuna*, *supra* note 12.

¹⁶² *Ibid* at para 28.

¹⁶³ *Ibid* at para 78.

¹⁶⁴ *Ibid* at para 77. Boyle refers to this a modification of UNCLOS by the precautionary principle; see *supra* note 72 at 573.

¹⁶⁵ *Supra* note 35. The discussion on the FSA is continued, *below*.

¹⁶⁶ *Supra* note 1, art 87(2).

¹⁶⁷ CBD, “Report of the Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction” (2009), UNEP/CBD/EW-EIAMA/2.

¹⁶⁸ *Supra* note 1, art 92(1).

“genuine link between the State and the ship.”¹⁶⁹ Once granted, the flag State is required to “effectively exercise its jurisdiction and control in administrative, technical and social matters”.¹⁷⁰ Article 94 provides the details of this control, requiring States to take measures to ensure safety¹⁷¹ and allowing a State to apply its domestic laws to the ship.¹⁷² Article 94(4)(c) places a duty on a flag State – and in particular, the “master, officers and [...] the crew”¹⁷³ – to have measures in place to ensure that applicable international regulations on marine pollution prevention, reduction, and control are followed. Article 94(5) further affirms that it is the flag State’s responsibility to follow international procedures and practices. Article 94(7) subjects a flag State to an inquiry in the case of serious damage caused to the marine environment.

However, in reality, several issues arise in the high seas regarding the enforcement of flag State jurisdiction, the most significant being the use of a “flag of convenience”.¹⁷⁴ Because States are allowed to create their own requirements in conferring their nationalities to ships, some are more advantageous to use than others.¹⁷⁵ This causes “jurisdiction shopping”¹⁷⁶ for benefits that are largely financial, whether because of more attractive domestic tax frameworks or looser regulatory requirements.¹⁷⁷ There may also be economic drivers for a State in having an “open registry”,¹⁷⁸ but some ships are simply taking advantage of States that lack the resources required to enforce their jurisdictions on ships.¹⁷⁹ One of the end results of ships using flags of convenience

¹⁶⁹ *Ibid*, art 91(1).

¹⁷⁰ *Ibid*, art 94(1).

¹⁷¹ *Ibid*, art 94(3).

¹⁷² *Ibid*, art 94(2)(b).

¹⁷³ *Ibid*, art 94(4)(c). One of the few instances in UNCLOS where an individual, and not a State, is specifically mentioned.

¹⁷⁴ See Ciarán McCarthy and Bénédicte Sage-Fuller, “Sustainable Shipping” in Markus Salomon and Till Markus, eds, *Handbook on Marine Environment Protection: Science, Impacts and Sustainable Management*, vol 1 and 2 (Cham: Springer, 2018) 695 at 700.

¹⁷⁵ Ships may also be attempting to fly more than one flag, switching them out depending on the situation.

¹⁷⁶ Darren S Calley, *Market Denial and International Fisheries Regulation: The Targeted and Effective Use of Trade Measures Against the Flag of Convenience Fishing Industry* (New York: Brill, 2011) at 16. Interestingly, Calley notes that there are economic downsides to the loss of flags of convenience, as it would greatly slow down development for developed and developing countries alike.

¹⁷⁷ See *ibid*; Ademun Odeke, “An Examination of Bareboat Charter Registries and Flag of Convenience Registries in International Law” (2005) 34 *Ocean Development International Law* 339, DOI: <10.1080/00908320500308726>.

¹⁷⁸ *Supra* note 176 at 16.

¹⁷⁹ *Supra* note 174 at 700. See also Kristina Gjerde, “Challenges to Protecting the Marine Environment Beyond National Jurisdiction” (2012) 27 *Marine and Coastal Law* 839, DOI: <10.1163/15718085-12341255> at 846 (“And finally, the reliance in the LOSC on the flag state as primary enforcer of marine environmental laws on the high seas did not envisage the rise of countries that offer their flag but lack capacity or will to enforce international minimum standards. The International Maritime Organization is now addressing this through a mandatory flag state audit scheme, but this scheme does not apply to high seas fishing, dumping, or other activities.”)

is that, with the lack of oversight and enforcement, these ships are more likely to be ignoring environmental rules and engaging in illegal activities like illegal, unreported, and unregulated fishing (IUU).¹⁸⁰ Part of this problem may be dealt with using port State control, whereby a ship may be inspected for compliance under Article 218 of UNCLOS. However, this control is “a secondary enforcement system and is subordinate to the Flag State’s duty as the primary enforcer of international standards”.¹⁸¹ In either case, this reflects the broader issue of enforcement of obligations in the high seas, as well as the drivers hindering the effective implementation of environmental obligations.

2.5.3 Part XI on the Area

The provisions of Part XI are applicable to all activities in the Area.¹⁸² The Area is defined at the start of UNCLOS in Article 1(1) and includes the “seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction”.¹⁸³ According to Article 135, this does not include the air space or the water column above it.¹⁸⁴ Resources are defined in Article 133(1) as “all solid, liquid or gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules”.¹⁸⁵ Article 136 declares that the “Area and its resources are the common heritage of mankind”,¹⁸⁶ meaning that rights in these resources “are vested in mankind as a whole, on whose behalf the Authority shall act.”¹⁸⁷ On the matter of the “benefit of all [hu]mankind”, Article 140(1) describes the term “[hu]mankind” as encompassing “[hu]mankind as a whole, irrespective of the geographical location of States, whether coastal or land-locked, and taking into

¹⁸⁰ *Supra* note 176 at 10.

¹⁸¹ *Supra* note 174 at 701, citing J Vorbach, “The Vital Role of Non-Flag State Actors in the Pursuit of Safer Shipping” (2001) 32 Ocean Development International Law 27.

¹⁸² *Supra* note 1, art 134(2).

¹⁸³ *Ibid*, art 1(1).

¹⁸⁴ This distinction is important because activities in the Area (e.g., drilling and construction) will involve tangential activities involving the waters above the Area (e.g., navigation and transportation), see *SDC Advisory Opinion*, *supra* note 121 at para 84. However, the SDC also cites *supra* note 1, Annex III, art 17(2)(f), which states that “ship-board processing immediately above a mine site of minerals derived from that mine site” as part of activities in the Area. See also para 92, where the SDC notes that “the scope of “exploration” and “exploitation” as defined in the Regulations seems broader than the “activities in the Area” envisaged in Annex IV, article 1, paragraph 1, and in article 145 and Annex III, article 17, paragraph 2 (f), of the Convention. Processing and transportation are included in the notion of exploration and exploitation of the Regulations, but not in that of “activities in the Area” in the provision of Annex IV of the Convention, which has just been cited.”

¹⁸⁵ *Supra* note 1, art 133(1).

¹⁸⁶ *Ibid*, art 136.

¹⁸⁷ *Ibid*, art 137(2).

particular consideration the interests and needs of developing States and of peoples who have not attained full independence or other self-governing status”.¹⁸⁸

As for how the common heritage principle colours the relationship between environmental protection and seabed mining activities, there are varying interpretations regarding the limits to activities in the Area imposed by the principle. Although the trend is to associate the common heritage principle with environmental protection, there is no explicit reference that ties the two provisions together within UNCLOS. Some hold the opinion that the common heritage principle primarily seeks to maximize exploitation,¹⁸⁹ contrary to the popular use of the common heritage principle as a component of the rationale behind environmental protection and conservation frameworks. In Pardo’s address to the General Assembly, he frames the use of the common heritage principle in the Area within the reasoning of the latter—i.e., as a principle for the preservation of the Area’s resources and environment. This was also the approach taken by the Seabed Committee and in the 1970 Declaration of Principles, which carried through to UNCLOS III and the conclusion of Part XI. The application of the common heritage principle is still limited, as it has only been referenced in the regime of the deep seabed and outer space, to date.

Part XI is unique to UNCLOS because it establishes the ISA as an autonomous authority charged with regulation and oversight duties associated with the deep seabed regime. As the governing body for activities in the Area, the jurisdictional competency of the ISA, according to Article 145 and expanded upon in Section 4 of Part XI, includes ensuring effective environmental governance. The main conduit to upholding this mandate is the ISA’s Mining Code to approving, implementing, and monitoring deep seabed mining activities, mainly through the contractual relationship between the ISA and Contractors. This relationship is divided into two main phases of mining: exploration contracts, for a fixed term of 15 years,¹⁹⁰ and exploitation contracts, for a

¹⁸⁸ *Ibid*, art 140(1). This paragraph merged with an equitable benefit sharing provision following revisions to the 1979 Informal Central Negotiating Text. Around the same time came the addition to the latter part of Paragraph (1) to include States and peoples who have not attained full independence or self-governing status, which was made after a push by the Arab group and the Group of 77 following the release of the *Declaration on the Granting of Independence to Colonial Countries and People*, GA Res 1514(XV), UNGAOR, 15th Sess, UN Doc A/Res/1514 (1961).

¹⁸⁹ See Karin Mickelson, “Common Heritage of Mankind as a Limit to Exploitation of the Global Commons” (2019) 30:2 *European Journal of International Law* 635, DOI: <10.1093/ejil/chz023> at 636, citing Lakshman Guruswamy, “International Environmental Law: Boundaries, Landmarks, and Realities” (1995) 10 *Natural Resources and Environment* 43.

¹⁹⁰ RPEN, *supra* note 108, reg 26(1).

fixed term of 30 years.¹⁹¹ Contractors are defined as including States, State enterprises, or other State-sponsored private enterprises. Exploration and exploitation are not defined in UNCLOS, but they are defined in the ISA's Mining Code as:

“Exploration” means searching for deposits of polymetallic nodules in the Area with exclusive rights, the analysis of such deposits, the testing of collecting systems and equipment, processing facilities and transportation systems, and the carrying out of studies of the environmental, technical, economic, commercial and other appropriate factors that must be taken into account in exploitation.

*“Exploitation” means the recovery for commercial purposes of polymetallic nodules in the Area and the extraction of minerals therefrom, including the construction and operation of mining, processing and transportation systems for the production and marketing of metals.*¹⁹²

These definitions appear to be broader than the definition of “activities in the Area” in UNCLOS.¹⁹³ According to the SDC, activities “directly connected”¹⁹⁴ to the exploration and exploitation of the seabed are covered by the term “activities in the area”.

To conduct such activities, an applicant must be sponsored by a State (or States).¹⁹⁵ A central rationale for requiring a sponsoring State is the principle of common heritage. Directly bound by the rules of UNCLOS, State Parties should be in a better position, and more incentivized, to comply with the requirements of Part XI than a third-party entity.¹⁹⁶ According to the *SDC Advisory Opinion*, the obligations of a sponsoring State are found in Articles 139 and 154, as well as Article 4(4) of Annex III.¹⁹⁷ Article 139 contains an obligation for sponsoring States “to ensure that activities in the Area, whether carried out by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this Part.”¹⁹⁸ State Parties are required to assist the Authority in ensuring compliance to UNCLOS and the Mining Code (Article 153(4)).

¹⁹¹ ISA, “Draft Regulations on Exploitation of Mineral Resources in the Area” (2019) ISBA/25/C/WP.1 [Exploitation Draft Regulations], reg 20(1). Both contract terms may be extended.

¹⁹² RPEN, *supra* note 108, reg 1(3)(a)—(b).

¹⁹³ *SDC Advisory Opinion*, *supra* note 184 at para 92.

¹⁹⁴ *Ibid* at para 95.

¹⁹⁵ *Supra* note 1, Annex III, art 4(3).

¹⁹⁶ *SDC Advisory Opinion*, *supra* note 184 at para 76. See also *supra* note 1, art 153(4).

¹⁹⁷ *SDC Advisory Opinion*, *supra* note 184 at para 99.

¹⁹⁸ *Supra* note 1, art 139(1).

However, while a sponsoring State has the responsibility of ensuring that a Contractor conforms to the law and to the Plan of Work, it is not liable for damage caused by the failure to comply if the State has adopted regulations and taken measures “reasonably appropriate for securing compliance”.¹⁹⁹ Taking “reasonably appropriate” action is described by the SDC as one of conduct and due diligence, and not result. These include actions “to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result.”²⁰⁰ What happens if a State does not meet the requirements of Article 139(2)? The SDC in its advisory opinion writes:

*The failure of a sponsoring State to carry out its responsibilities, referred to in article 139, paragraph 2, of the Convention, may consist in an act or an omission that is contrary to that State’s responsibilities under the deep seabed mining regime. Whether a sponsoring State has carried out its responsibilities depends primarily on the requirements of the obligation which the sponsoring State is said to have breached. As stated above in the reply to Question 1 (see paragraph 121), sponsoring States have both direct obligations of their own and obligations in relation to the activities carried out by sponsored contractors. The nature of these obligations also determines the scope of liability. Whereas the liability of the sponsoring State for failure to meet its direct obligations is governed exclusively by the first sentence of article 139, paragraph 2, of the Convention, its liability for failure to meet its obligations in relation to damage caused by a sponsored contractor is covered by both the first and second sentences of the same paragraph.*²⁰¹

The main legislative organ of the ISA is the Assembly, to which all State Parties of the ISA, and in turn, UNCLOS, are members.²⁰² As the “supreme organ of the Authority”,²⁰³ the other organs of the ISA report to the Assembly. The Assembly meets annually²⁰⁴ and has the general function of adopting resolutions and policies, monitoring the other organs of the ISA, and ensuring the overall operationalization of Part XI. The Council, made up of elected State Parties,²⁰⁵ is the “executive organ of the Authority”.²⁰⁶ Amongst its functions is the approval of deep seabed mining activities.²⁰⁷ This approval process is centered around a review of the Contractor’s Plan of Work

¹⁹⁹ *Ibid*, Annex III, art 4(4).

²⁰⁰ *SDC Advisory Opinion*, *supra* note 184 at paras 110—112 and 117—120 (on due diligence).

²⁰¹ *Ibid* at para 177.

²⁰² *Supra* note 1, art 159(1).

²⁰³ *Ibid*, art 160(1).

²⁰⁴ *Ibid*, art 159(2).

²⁰⁵ *Ibid*, art 161(1).

²⁰⁶ *Ibid*, art 162(1).

²⁰⁷ *Ibid*, art 162(2)(j)—(k).

and the recommendations of the Legal and Technical Commission (LTC).²⁰⁸ The final decision on a Contractor's Plan of Work is made through a vote of the Council on whether to follow or overturn the LTC's recommendations,²⁰⁹ emphasizing the weight and importance of these recommendations. The reason for this is the composition of the LTC, as Article 163 requires that members have the "appropriate qualifications in the area of competence"²¹⁰ of the LTC – "such as those relevant to exploration for and exploitation and processing of mineral resources, oceanology, protection of the marine environment, or economic or legal matters relating to ocean mining and related fields of expertise" –²¹¹ and that candidates with the relevant qualifications are of the "highest standards of competence and integrity".²¹² As part of this, a nominated candidate cannot have any financial interest in any exploration or exploitation activities.²¹³

The LTC's functions include assessment, review, and monitoring activities associated with deep seabed mining activities.²¹⁴ The use of best available scientific knowledge and baseline data, and marine scientific research, is essential to the work of the LTC, whose recommendations²¹⁵ on the need to centralize this information culminated in the creation of the ISA's Deep Seabed and Ocean Database (DeepData).²¹⁶ Another key tool for environmental protection of the deep seabed environment is the use of EIAs. They are required by UNCLOS, as well as the 1994 *Implementation Agreement on Part XI*,²¹⁷ which introduced the additional requirement that a Plan of Work must include an "assessment of the potential environmental impacts of the proposed activities"²¹⁸ and a "programme for oceanographic and baseline environmental studies".²¹⁹ A Plan of Work for an exploration contract consists of a preliminary review of potential impacts on the marine environment.²²⁰ Once this Plan of Work is approved, a more thorough EIA is required before the Contractor can actually begin exploration activities. An additional EIA is required as

²⁰⁸ *Ibid.*

²⁰⁹ *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea*, 28 July 1994, 1836 UNTS 3 (entered into force 16 November 1994) [1994 *Implementing Agreement*], Annex, s 3(11)(a).

²¹⁰ *Supra* note 1, art 163(3).

²¹¹ *Ibid.*, art 165(1).

²¹² *Ibid.*

²¹³ *Ibid.*, art 163(8).

²¹⁴ *Ibid.*, art 165(2)(d)–(h).

²¹⁵ ISA, "Assembly Council Report", ISBA/8/C/6 at para 12.

²¹⁶ ISA, "DeepData Database", online: <isa.org.jm/deepdata-database>.

²¹⁷ *Supra* note 209.

²¹⁸ *Ibid.*, Annex, s 1(7).

²¹⁹ *Ibid.* The process for conducting an EIA is explained in Chapter 3 of this thesis.

²²⁰ RPEN, *supra* note 108, reg 18(c).

part of a Plan of Work submitted for an exploitation contract. EIAs for deep seabed mining activities incorporate both elements of the duty of cooperation between States and the ISA, and the precautionary approach. Guidance on EIAs is found in Part XI of the LTC's technical guidance²²¹ on impact assessments for exploration activities, as well as recommendations related to baseline data collection and environmental monitoring and reporting. While not explicitly required in UNCLOS, in practice, the Assembly and other ISA organs are key vehicles for public participation and stakeholder engagement through the engagement and notification, including at the EIA stage of the activity approval process.²²²

With the above provisions in mind, Article 145 contains the central environmental obligations for activities in the Area, reading:

Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for inter alia:

(a) the prevention, reduction and control of pollution and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities;

*(b) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.*²²³

Similar to Part XII, Article 145 focuses on the prevention, reduction, and control of pollution, but the use of the term “other hazards” in paragraph (a) indicates that its application can be expanded. Article 145 also makes references to specific elements of the marine environment, including ecological balance, the protection and conservation of natural resources, and the prevention of damage to living resources in the marine environment.

²²¹ ISA, “Recommendations for the Guidance of Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Marine Minerals in the Area” (2020) ISBA/25/LTC/6/Rev.1.

²²² See e.g. *ibid*, para 7.

²²³ *Supra* note 1, art 145 [emphasis added].

The Mining Code also speaks on environmental protection beyond that of the general precautionary approach cited for the Area. Regulation 33(2) of the *Sulphides Regulation* requires a sponsoring State to apply “best environmental practices”.²²⁴ The SDC views that best environmental practices “may be seen to have become enshrined in the sponsoring States’ obligation of due diligence.”²²⁵ There is also a requirement for conducting an EIA as part of a Plan of Work,²²⁶ and a requirement for sponsoring States to ensure that a Contractor carries out the assessment.²²⁷ The *SDC Advisory Opinion* cites both UNCLOS Article 206 and customary international law, with the implication that transboundary EIA laws can be transposed to the ABNJ context and “shared resources” concepts to resources that are part of the common heritage of mankind.²²⁸ This point is especially important for the BBNJ negotiations because it can be seen as an analogous interpretation that allows for the application of EIA law to the BBNJ.

2.6 Advancing the Legal Regime for Marine Protection

This section queries what has been done under the law of the sea to maintain relevancy to issues that were not necessarily present at UNCLOS III. It reviews these initiatives with the purpose of highlighting there is a continued need for advancing the law of the sea, including the adoption new approaches to protecting marine ABNJ. As a comprehensive framework for the law of the sea, UNCLOS concluded with narrow provisions for amendment²²⁹ and no provisions for the adoption of any corollary protocols or annexes—a reflection of the package deal approach taken at UNCLOS III. As the “constitution for the oceans”,²³⁰ UNCLOS encompasses a broad set of normative rules and accepted values for the oceans that do not shift over time.

Yet, the uses of the oceans have evolved since the conclusion of UNCLOS III, as well as the technology that allows us to access the oceans’ resources. These changes create a demand for UNCLOS to also adopt a degree of responsiveness to changing ocean activities without compromising its core principles. As mentioned at the start of this chapter, the ability for UNCLOS

²²⁴ This is not included in RPEN, most likely due to the scientific advancements made between the two, see *SDC Advisory Opinion*, *supra* note 121 at paras 136—137. Here the SDC allows for the interpretation of RPEN as to include these developments, thus reading in the same obligation for RPEN.

²²⁵ *SDC Advisory Opinion*, *supra* note 121 at para 136.

²²⁶ *Supra* note 209, Annex I, s 1(7); see also *SDC Advisory Opinion*, *supra* note 121 at para 150.

²²⁷ *SDC Advisory Opinion*, *supra* note 121 at 142.

²²⁸ *Ibid* at para 148.

²²⁹ *Supra* note 1, arts 312—316.

²³⁰ *Supra* note 48.

to evolve is also built into the agreement itself. This “maintenance” of UNCLOS has occurred to date through an evolutionary approach to both interpretation (in a manner consistent with the *Vienna Convention on the Law of Treaties*)²³¹ and application. Advancements are also made through cases brought to international courts like the ICJ and ITLOS, the modification of procedural provisions at the Meeting of the Parties, the adoption of implementing agreements, and the work of international bodies like the ISA, IMO, and Regional Fisheries Management Organizations (RFMOs) on developing new rules for sectoral and regional issues.

UNCLOS is firm but not rigid, and the continued development of international environmental law as a whole is also central to maintaining UNCLOS’ effectiveness. Examining UNCLOS’ position in relation to other sources of international law, Boyle’s observes that “UNCLOS is not a separate or self-contained legal regime”²³² and that it instead “functions within a larger legal system”.²³³ Progressing UNCLOS as an effective tool for ocean governance, especially in ABNJ, is an ongoing commitment. Having discussed the relationship between UNCLOS and existing sources of international law, this section explores the relationship between UNCLOS and current and future advancements in law. More specifically, this section will study issues related to marine ABNJ, especially that of BBNJ, due to its pertinence to the topic of this thesis. Three additional topics will be discussed, which will further inform the perspectives developed in later chapters of this thesis, on Agenda 21, fragmentation and RFMOs, and recent resolutions adopted by the CBD Conference of the Parties (COP).

2.6.1 The Relationship Between UNCLOS and Other Agreements

The two key provisions for ‘maintaining’ UNCLOS are Articles 237 and 311. Starting with the broader provision, Article 311 addresses the relationship of UNCLOS to other conventions and agreements. It begins in paragraph (1) by expressly overturning the *1958 Geneva Conventions* with UNCLOS.²³⁴ Paragraphs (2) and (3) read:

2. This Convention shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which

²³¹ *Vienna Convention on the Law of Treaties*, 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980), art 31(3)(c).

²³² *Supra* note 72 at 565.

²³³ *Ibid* at 566.

²³⁴ *Supra* note 1, art 311(1).

do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

3. Two or more States Parties may conclude agreements modifying or suspending the operation of provisions of this Convention, applicable solely to the relations between them, provided that such agreements do not relate to a provision derogation from which is incompatible with the effective execution of the object and purpose of this Convention, and provided further that such agreements shall not affect the application of the basic principles embodied herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

Paragraph (4) requires Parties to notify other States of their intentions to conclude an agreement. Paragraph (5) exempts agreements “permitted or preserved”²³⁵ by other provisions in UNCLOS from Article 311.²³⁶ Finally, paragraph (6) expressly prohibits States from signing agreements that infringe upon the principle of common heritage.

Compared to Article 311, Article 237 specifically speaks to the nexus between obligations under Part XII of UNCLOS and other conventions on the marine environment:

1. The provisions of this Part are without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously which relate to the protection and preservation of the marine environment and to agreements which may be concluded in furtherance of the general principles set forth in this Convention.

*2. Specific obligations assumed by States under special conventions, with respect to the protection and preservation of the marine environment, should be carried out in a manner consistent with the general principles and objectives of this Convention.*²³⁷

Article 237(1) recognizes UNCLOS’ place in time, “without prejudice” to existing and future agreements. The language paragraph (2) requires consistency between UNCLOS and other agreements, providing States with “more leeway to negotiate special rules on the marine environment, an interpretation which is backed up by significant state practice”.²³⁸ This has

²³⁵ *Ibid*, art 311(5).

²³⁶ This is important for the BBNJ, as it has closer ties to Article 237 (discussed, *below*).

²³⁷ *Supra* note 1, art 237.

²³⁸ Anna-Maria Hubert and Neil Craik, “Towards Normative Coherence in International Law of the Sea for the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2018), online: < <https://site.uit.no/nclos/2018/02/01/towards-normative-coherence-in-the-international-law-of-the-sea-for-the-conservation-and-sustainable-use-of-marine-biological-diversity-of-areas-beyond-national-jurisdiction>>, citing

allowed for international organizations like the IMO to draft and adopt more elaborate instruments that better describe context-appropriate environmental obligations (e.g., under the *London Convention*²³⁹ and *London Protocol*²⁴⁰ (LC/LP) on dumping of waste and other matters at sea, the adoption of the 2013 amendment on marine geoengineering).²⁴¹ The FSA is also an example of Article 237 in action, where the conclusion of the FSA effectively changed the environmental framework for fisheries by injecting the precautionary and ecosystem approaches to the regime.²⁴²

2.6.2 Responding to Fragmentation in the High Seas

Many of the initiatives taken to advance marine governance in ABNJ occur at regional and sectoral levels, largely driven by the regional and international institutions alike. UNCLOS contemplates the creation of these institutions throughout Part VII, XI, and XII. For example, Article 118 in Part VII requires States to cooperate in the conservation and management of living resources in ABNJ, including through the establishment of subregional or regional fisheries organizations (i.e., RFMOs). These responsibilities are reiterated in the FSA and *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*.²⁴³ These organizations oversee the determination of allowable catch and other conservation measures.²⁴⁴ The duty to cooperate in Article 118 also requires States that either exploit the same resource or the same area of the high seas to enter negotiations to establish conservation measures for living resources.²⁴⁵ For the Area, the ISA, whose membership includes all States party to UNCLOS,²⁴⁶ is an autonomous body that governs all mineral resource activities in the Area under the common heritage principle.

supra note 165, arts 4ff. This point is also confirmed in *supra* note 105 at para 942, where the Tribunal points to Article 237 as a forward-looking provision that allows for the future development of marine environmental protection laws.

²³⁹ *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 29 December 1972, 1046 UNTS 120 (entered into force 30 August 1975) [*London Convention*].

²⁴⁰ *Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 17 November 1996, (1997) 36 ILM 1 (entered into force 24 March 2006) [*London Protocol*].

²⁴¹ International Maritime Organization (IMO), “Resolution LP.4(8) on the Amendment to the London Protocol to Regulate the Placement of Matter for Ocean Fertilization and Other Marine Geoengineering Activities” (18 October 2013), IMO Resolution LP.4(8).

²⁴² *Supra* note 165, arts 4ff.

²⁴³ *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*, 24 November 1993, 2221 UNTS 91 (entered into force 24 April 2003), art 2.

²⁴⁴ *Supra* note 1, art 119.

²⁴⁵ *Ibid*, art 118.

²⁴⁶ *Ibid*, art 156(2).

Dividing the high seas and Area into regional and sectoral approaches to governance can be seen as a double-edged sword. On one hand, they better allow for the development and application of relevant expertise and knowledge. Institutions can also act as a hub for the exchange of information; for example, the intent of the ISA’s DeepData initiative is to act as a central data management system for an environment where scientific knowledge is still very limited.²⁴⁷ A major drawback, however, is the fragmentation of ocean governance in spite of the linkages between different marine ecosystems and impacts from marine activities. This phenomenon is not limited to marine ABNJ but is relevant to international law as a whole. On this, the ILC notes that fragmentation can occur as different “networks”²⁴⁸ develop independent of one another. To an extent this can be addressed through coordination and harmonization,²⁴⁹ but the reality is “the emergence of regimes of international law that have their basis in multilateral treaties and acts of international organizations, specialized treaties and customary patterns that are tailored to the needs and interests of each network but rarely take account of the outside world.”²⁵⁰ This is especially the case for more specialized networks, like RFMOs and the ISA, whose recent advancements are discussed in this section.

Even within existing RFMO networks, fragmentation is exemplified by the varying, and sometimes lack of, responses to the UN General Assembly Resolutions (UNGA Res) 61/105²⁵¹ and 64/72²⁵² on sustainable fisheries. The 2007 UNGA Res 61/105 called upon RFMOs to adopt conservation measures for bottom fishing activities with significant adverse impacts (SAI) on vulnerable marine ecosystems (VMEs) before December 31, 2008, in accordance with the precautionary principle and the ecosystem approach.²⁵³ Principle amongst these measures was the requirement for RFMOs to adopt EIA processes for bottom fishing activities. The 2010 UNGA Res 64/72 then further required RFMOs to adopt conservation measures in line with the FAO’s

²⁴⁷ Lisa Levin, Diva Amon and Hannah Lily, “Challenges to the Sustainability of Deep-Seabed Mining” (2020) 3 *Nature Sustainability* 784, DOI: <10.1038/s41893-020-0558-x>.

²⁴⁸ International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (2006) UN Doc A/CN.4/L.682 at para 482.

²⁴⁹ *Ibid.*

²⁵⁰ *Ibid.*

²⁵¹ “Sustainable Fisheries, Including Through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea”, GA Res 61/105, UNGAOR, 61st Sess, Agenda Item 71b, UN Doc A/Res/61/105 (2006).

²⁵² “Sustainable Fisheries, Including Through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea”, GA Res 64/72, UNGAOR, 64th Sess, Agenda Item 76b, UN Doc A/Res/64/72.

²⁵³ *Supra* note 251 at para 83(a)—(d).

“International Guidelines for the Management of Deep-sea Fisheries in the High Seas”.²⁵⁴ On EIAs, the Guidelines make suggestions as to the contents of an EIA but do not detail any specific procedure,²⁵⁵ nor does it differentiate between EIAs for existing and new or exploratory deep-sea fisheries. Beyond the general requirement to adopt conservation measures on EIAs, both UN resolutions left the details of these EIAs to the discretion of each RFMO.

To date, only a handful of RFMOs have adopted conservation measures with EIA provisions. The general approach to approving bottom fishing activities has been to require EIAs for new and exploratory activities with the potential for SAI in VMEs.²⁵⁶ The North Pacific Fisheries Commission (NPFC) takes a unique approach insofar as it converts certain bottom fishing activities in new or prohibited areas after January 1, 2009 into exploratory fisheries, thus requiring EIAs.²⁵⁷ For existing bottom fisheries, NPFC member States must also ensure that an impact assessment was conducted with a determination on the SAI on VMEs and application of mitigation measures. Reporting procedures shared a similar process whereby contracting parties are responsible for gathering data and carrying out the assessment. Assessments are subject to a review by an RFMO’s scientific committee, who then provides recommendations to the final decision-maker. In most cases, this is the RFMO commission that makes the determination based on the SAI. The Northwest Atlantic Fisheries Organization (NAFO) provides for a two-step review process of the assessment, first by the Scientific Council and then by the Joint Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management, who reviews the Council's advice and makes the final recommendations to the Commission.²⁵⁸ In terms of specific procedure standards and guidelines, some conservation measures referred to the FAO Deep-sea Guidelines or to the future conclusion of guidelines.

²⁵⁴ *Supra* note 252 at para 113; FAO, “International Guidelines for the Management of Deep-sea Fisheries in the High Seas of the Food and Agriculture Organization of the United Nations” (2009).

²⁵⁵ FAO *supra* note 254 at para 47.

²⁵⁶ See e.g. *Convention on the Conservation of Antarctic Marine Living Resources*, “Conservation Measure 22-06” (2019).

²⁵⁷ North Pacific Fisheries Commission (NPFC), “Conservation and Management Measure for Bottom Fisheries and Protection of VMEs in the NE Pacific Ocean” (2019) CMM 2019-06, Annex I at para 1; NPFC, “Conservation and Management Measure for Bottom Fisheries and Protection of VMEs in the NW Pacific Ocean” (2019) CMM 2019-05, Annex I at para 1.

²⁵⁸ Northwest Atlantic Fisheries Organization, “Conservation and Enforcement Measures” (2021) NAFO/COM Doc 21-01, art 19(4).

As for deep seabed mining, the ISA is currently working to expand its Mining Code to include new regulations and guidance for exploitation activities in the Area. With the ISA as the central agency for decisions on resource-related activities in the Area, the approach taken here allows for a wider jurisdiction of the ISA in comparison to RFMOs, whose work is more regionally oriented. This is, in part, a reflection of Pardo's concerns regarding fragmentation that the "plurality of jurisdiction, fragmentation of competence, a general lack of urgency, have unfortunately not resulted in effective international action to contain the massive problem of marine pollution".²⁵⁹ For Pardo, an international regime over the Area was the only alternative. However, while an international regime does centralize decisions regarding the Area, there is still a need to consider the widespread impacts of deep seabed activities on the marine environment as a whole, due to the connections between different ecosystem structures. This is considered by the environmental provisions in the draft exploitation regulations, as States are required to prevent harm to the marine environment as a whole, including biodiversity, and to "integrate best available scientific evidence in environmental decision-making".²⁶⁰

Another sector marine governance has had to respond to is ocean fertilization and marine geoengineering. Growing concerns in the 1990s and 2000s in marine geoengineering activities engaged a range of regulatory bodies, including the IMO and RFMOs, and several international instruments, such as UNCLOS, the FSA, the LC/LP, and regional seas agreements like the *Antarctic Treaty*. Considered a form of ocean dumping, this issue came before the IMO under the scope of the LC/LP in the late 1990s, with actual proposals for geoengineering activities coming up in the early 2000s. The examination of the legal issues associated with ocean fertilization and the application of the LC/LP went through a number of working groups and scientific bodies, concluding in 2008 with Resolution LC-LP.1.²⁶¹ Given the limited knowledge on marine geoengineering effects, the consensus was one of precaution. All ocean fertilization activities were prohibited unless they constituted legitimate scientific research, which would be decided on a case-by-case basis using an Assessment Framework.²⁶² The Assessment Framework was adopted in

²⁵⁹ "Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-bed and the Ocean Floor, and the Subsoil thereof" (1 November 1967) UNGAOR, 22nd Sess, Agenda Item 92, *UN* online: <un.org/Depts/los/convention_agreements/texts/pardo_ga1967.pdf>.

²⁶⁰ *Supra* note 191, art 44(c).

²⁶¹ *Supra* note 241.

²⁶² IMO, "Resolution LC-LP.1 on the Assessment Framework for Scientific Research Involving Ocean Fertilization" (2010), IMO Resolution LC-LP.1, Annex 5.

Resolution LC-LP.2 in 2010²⁶³ and into the LP in 2013 through Resolution LP.4(8).²⁶⁴ It is comparatively more prescriptive than other existing international EIA procedures.

The amendments in LP.4(8), which are not yet in force, adds a definition for “marine geoengineering” to Article 1 of the LP²⁶⁵ and prohibits all marine geoengineering activities unless approved as legitimate scientific research. The new Annex 4 lists marine geoengineering activities, which is expected to expand beyond just ocean fertilization. Activities described in Annex 4 may trigger the assessment process in the new Annex 5, which is divided into the general stages of screening, scoping, consultation, reporting, approval, and monitoring. Annex 5 requires States to engage all relevant stakeholders, both national and international, in consultations. States are also encouraged to seek consent from other relevant States, as well as consider expert input and peer reviews on the data provided by a project proponent. The assessment report must look at the activity, its location, economic factors, and the predicted impacts on the environment, including transboundary impacts. Finally, there must be a determination that “pollution of the marine environment from the proposed activity is, as far as practicable, prevented or reduced to a minimum, therefore not contrary to the aims of the Protocol.”²⁶⁶ Thus, while not yet in force, LP.4(8) is a major development for EIA practice.

2.6.3 Agenda 21

Agenda 21²⁶⁷ is a non-binding action plan that sets out to introduce elements of environmental protection, some which are not found in Part XII of UNCLOS, with the intention of modernizing the implementation of – not amending – the environmental aspects of agreements like UNCLOS. One way in which it does this is to expand the focus of Part XII for pollution of the marine environment to a broader set of environmental objectives that better reflects the needs of the marine environment.²⁶⁸ It divides the elements of achieving its overall goal of achieving global sustainable development into four sections with four distinct focuses: (1) social and economic dimensions; (2) conservation and management of resources for development; (3)

²⁶³ *Ibid.*

²⁶⁴ *Supra* note 241.

²⁶⁵ *Ibid.*, Annex, art 1(5bis).

²⁶⁶ *Ibid.*

²⁶⁷ “Agenda 21”, *UN* online: <sustainabledevelopment.un.org/content/documents/Agenda21.pdf>.

²⁶⁸ Alexander Yankov, “The Law of the Sea Convention and Agenda 21: Marine Environmental Implications” in Alan Boyle and David Freestone, *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford: Oxford University Press, 2001) 271 at 272.

strengthening the role of major groups; and (4) means of implementation. Various principles of international environmental law, such as cooperation and impact assessments, are constants throughout each section of Agenda 21.

It is widely agreed upon that Agenda 21 advances and elevates the goals described in Part XII of UNCLOS, especially in Chapter 17, which introduces a wider set of objectives for oceans management. Chapter 17 of Agenda 21 on the protection of the oceans and sustainable use of ocean resources recognizes the need for “new approaches to marine and coastal area management and development, at the national, subregional, regional and global levels,”²⁶⁹ making Chapter 17 a building block for both regional agreements and international agreements that focus on the sustainable use and conservation of marine living resources. This is especially the case for the establishment of RFMOs, which fall into the category of management-related activities that “ensure that high seas fisheries are managed in accordance with the provisions of [UNCLOS]”.²⁷⁰ Much of this work relies on the shared use of scientific data and the strengthening of information on fish stocks, which Agenda 21 highlights as part of effective cooperation.²⁷¹ Much like the rest of Agenda 21, Chapter 17 also calls for integrative, precautionary, and anticipatory approaches to ocean governance,²⁷² and places an emphasis on stronger cooperation and coordination at all levels of governance,²⁷³ capacity building and technology transfer, and the improved incorporation of public participation in decision-making processes.

One central mode for achieving the above is the use of impact assessments as a planning tool for informed decision-making processes. References to impact assessments in Agenda 21 can be used to better understand the qualities of effective impact assessments for marine spaces. For instance, Agenda 21 holds that the development of EIA methodology requires cooperation between different international bodies, both public and private,²⁷⁴ even in the case of national EIA systems. Similar to current approaches to EIA practice, Agenda 21 highlights the importance of prior assessment, follow-up, and monitoring activities as part of the EIA procedure. Beyond EIAs, Agenda 21 can also be used to support the use of strategic environmental assessments (SEAs),

²⁶⁹ *Supra* note 267 at para 17.1.

²⁷⁰ *Ibid* at para 17.49.

²⁷¹ *Ibid* at para 17.59.

²⁷² *Ibid*.

²⁷³ See *ibid* at paras 17.115—17.122.

²⁷⁴ *Ibid* at paras 6.43 and 9.8.

which are not explicitly mentioned in UNCLOS, as part of decision-making processes, especially in the case of integrated oceans management (IOM) systems. As part of IOM, Agenda 21 calls for States to “provide for an integrated policy and decision-making process”²⁷⁵ and to in place national assessment frameworks that occur not only prior to a decision but also follow-up on that decision and monitor its effects. SEAs are also paramount to “link[ing] scientific and technical knowledge with strategic policy and programmed formulation”,²⁷⁶ and can be used to present policymakers with suitable alternatives and to more robustly incorporate environmental concerns and elements of sustainable development into policy-creation processes. The use of both EIAs and SEAs, and the widened collection and use of marine data, is especially important for marine areas because “the high degree of uncertainty in present information inhibits effective management and limits the ability to make predictions and assess environmental change.”²⁷⁷

Agenda 21 also expands upon the conservation of biological diversity in Chapter 15. The topic of biodiversity is not covered in UNCLOS, other than a mention on marine biology as part of training and education in Article 277 on the function of regional centres. The issue of conservation and biodiversity is better covered in the CBD, which was concluded in the same year as Agenda 21 and the *Rio Declaration*. The provisions of the CBD are largely related to activities under a member State’s jurisdiction.²⁷⁸ However, it does affirm that biodiversity is a common concern of humankind and that elements of the CBD, such as cooperation and extraterritorial harm, extend to ABNJ. Agenda 21 requires States to cooperate on issues related to biodiversity, including the development of national strategies, information and data gathering activities, equitable benefit sharing, reporting, and the integration of local and indigenous knowledge.²⁷⁹ Once again on the topic of environmental assessments, Agenda 21 asks States to “develop new or strengthen existing strategies, plans or programmes of action for the conservation of biological diversity and the suitable use of biological resources”²⁸⁰ and to assess and monitor the environmental impacts of activities. Agenda 21’s emphasis of the importance of impact assessments at all levels of decision-making processes and the use and exchange of scientific information is a central element of

²⁷⁵ *Ibid* at para 17.5(a).

²⁷⁶ *Ibid* at para 35.3.

²⁷⁷ *Ibid* at para 17.96.

²⁷⁸ *Supra* note 22, art 4. The use of jurisdiction is important, as this would extend to flagged vessels that are subject to a State’s jurisdiction.

²⁷⁹ *Supra* note 267 at para 15.4.

²⁸⁰ *Ibid* at para 15.5(a).

Chapter 15, further affirming the importance of these systems in effective environmental governance, including in marine ABNJ.

2.6.4 Convention on Biological Diversity

As discussed in previous sections of this thesis, there is a close connection between the environmental provisions of UNCLOS and the CBD, even though UNCLOS does not specifically refer to biodiversity.²⁸¹ This is not only in the case of the BBNJ but also other areas of law, such as the deep seabed. The 2004 CBD Study highlights how “the two instruments are mutually supportive in encouraging an ecosystem approach requiring the protection of marine habitats and marine resources.”²⁸² The study cites Article 311 of UNCLOS and Article 22 of the CBD in defining the relationship between the two agreements. Article 22 of the CBD reads:

1. The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.

2. Contracting Parties shall implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the law of the sea.

Recalling Article 311 of UNCLOS, the study concludes that these two articles read together requires that actions taken under the CBD “must be compatible”²⁸³ with UNCLOS.²⁸⁴ It is, therefore, pertinent to discuss the implications of the CBD on the evolution of the law of the sea.

Since entering into force in 1993, the CBD has adopted several key decisions on the marine environment into its governance framework, helping to shape the normative context of ocean governance. The CBD COP has been the main institutional engine behind the work to further its three main objectives: (1) conservation of biodiversity; (2) sustainable use of components of biological diversity; and (3) fair and equitable benefit-sharing.²⁸⁵ The CBD is supplemented by the

²⁸¹ CBD, “Study of the Relationship Between the CBD and UNCLOS with Regard to the Deep Seabed” (2004), UNEP/CBD/SBT/TA/8/INF at para 10. Notably, the CBD does make reference to the law of the sea, *supra* note 22, art 4(2).

²⁸² *Supra* note 281 at para 16.

²⁸³ *Ibid* at para 18.

²⁸⁴ *Ibid*, noting that this is not difficult because the CBD was concluded after UNCLOS and references and progresses UNCLOS mandates within its own text.

²⁸⁵ “Convention on Biological Diversity (CBD)”, European Environment Agency, online: <www.eea.europa.eu/themes/biodiversity/links/Link1148908556>.

2000 *Cartagena Protocol*²⁸⁶ and the 2010 *Nagoya Protocol*.²⁸⁷ The *Cartagena Protocol* addresses concerns arising from advancements in biotechnology, underscoring the importance of the precautionary principle to prevent harm to biodiversity caused by these technologies. The *Nagoya Protocol* contributes to the third objective, described above, by establishing the Access and Benefit-sharing Clearing House mechanism to improve transparency and information sharing.

Another approach taken by the CBD in addressing challenges to environmental protection is the implementation of frameworks for achieving strategic goals and targets. The 2010 Aichi Biodiversity Targets²⁸⁸ contained strategic goals for 2011 to 2020, which were further delineated by decisions like Decision XI/18²⁸⁹ (addressing the issues of biodiversity, fisheries, human activities, environmental assessments,²⁹⁰ and marine spatial planning). 2020 came and went, and the Aichi Targets were largely unmet. The UN reported that only six of the targets were met in part, with none being achieved in full.²⁹¹ The international community now looks forward on its path towards environmental reform at the 2022 Kunming-Montreal Global Diversity Framework.²⁹² The Framework is comprised of four goals and 23 targets to be achieved by 2030 and 2050. One of the central goals for the marine environment is the protection of:

*... at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures...*²⁹³

²⁸⁶ *Cartagena Protocol on Biosafety to the Convention on Biological Diversity*, 29 January 2000, 2226 UNTS 208 (entered into force 11 September 2003).

²⁸⁷ *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*, 29 October 2010, 3008 UNTS 3 (entered into force 12 October 2014).

²⁸⁸ CBD, “The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets”, CBD COP, 10th Meeting, Agenda Item 4.4, UNEP/CBD/COP/DEC/X/2 (2010), Annex at 8—9 [*Aichi Targets*].

²⁸⁹ CBD, “Marine and Coastal Biodiversity: Sustainable Fisheries and Addressing Adverse Impacts of Human Activities, Voluntary Guidelines for Environmental Assessment, and Marine Spatial Planning”, CBD COP, 11th Meeting, UNEP/CBD/COP/DEC/XI/18 (2012).

²⁹⁰ *Ibid* references the Voluntary Guidelines for EIAs and SEAs in Marine Coastal Areas, which is discussed in Chapter 3 of this thesis; see CBD, “Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas”, CBD COP, 8th Meeting, UNEP/CBD/COP/8/27/Add.2 (2006) [*CBD Voluntary Guidelines*].

²⁹¹ UNEP, “The State of Biodiversity in the Caribbean Community: A Review of the Progress Towards the Aichi Biodiversity Targets” (2018).

²⁹² CBD, “Kunming-Montreal Global Diversity Framework”, CBD COP, UNEP/CBD/COP/15/L.25 (2022).

²⁹³ *Ibid*, Target 3.

Commonly referred to as “30 by 30”, this conservation target often overshadows other targets like Target 8, which addresses the reduction of the effects of climate change through increased resilience and ecosystem-based approaches, such as the one described in the current BBNJ negotiations.

2.6.5 Intergovernmental Conference on Marine Biodiversity

With increasing interest in benefit sharing related to marine genetic resources (MGR) and concern over the conservation of biodiversity in marine ABNJ, the UN General Assembly convened an Intergovernmental Conference (IGC) in 2017,²⁹⁴ with the purpose of drafting an ILBI on the conservation and sustainable use of marine BBNJ.²⁹⁵ At the time of writing this thesis, the IGC has just concluded its fifth substantive meeting and finalized text for the BBNJ agreement.²⁹⁶ The BBNJ agreement will regulate activities related to biodiversity of the high seas within the existing framework provided for by UNCLOS. How does the BBNJ agreement align with UNCLOS, specifically Article 194(5)? Moreover, the issues that the BBNJ agreement will address will overlap with other areas of law, so what will be its relationship to other agreements like the CBD?

The Preparatory Committee (PrepCom) for the IGC underscores the importance of clarifying “how to articulate the relationship between a new instrument and the arrangements established thereunder with relevant legal instruments and frameworks and relevant global, regional and sectoral bodies” in its work leading up to the start of the IGC.²⁹⁷ The UN General Assembly in convening the IGC adds another layer to Article 237(2), requiring that the ILBI be “fully consistent”²⁹⁸ with UNCLOS and “not undermine”²⁹⁹ other existing and relevant

²⁹⁴ “International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2017) GA Res 72/29, UNGAOR, 72nd Sess, Agenda Item 77a, UN Doc A/Res/72/249.

²⁹⁵ The negotiation history and future outlook on the BBNJ agreement is discussed in further detail in Chapter 4. This section will instead discuss the relationship between the BBNJ agreement and other agreements, including UNCLOS.

²⁹⁶ “Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2023), online: <un.org/bbnj/sites/www.un.org.bbnj/files/draft_agreement_advanced_unedited_for_posting_v1.pdf>.

²⁹⁷ “Chair’s Overview of the Third Session of the Preparatory Committee”, Preparatory Committee established by UNGA Res 69/292, 3rd Session, online: <un.org/depts/los/biodiversity/prepcom_files/Chair_Overview.pdf>.

²⁹⁸ “International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction: Draft Resolution”, UNGAOR, UN Doc A/72/L.7 (2017) at para 6.

²⁹⁹ *Ibid* at para 7.

agreements.³⁰⁰ The language of both the PrepCom and the General Assembly implies that, even if the BBNJ agreement does not end up being an implementing agreement for UNCLOS, it still falls under the framework established by UNCLOS. Hubert identifies three reasons for why this is important, writing that:

*First, this conception will partly influence the normative status and scope of the new instrument vis-à-vis other treaties. [...] Second, this relationship will be important post-negotiation in addressing the interpretation of any new agreement, whose meaning would be influenced by how it is positioned in relation to existing relevant agreements. [...] The legal relationship to other relevant instruments would have a bearing on whether new rules on benefit sharing could be read narrowly. Finally, the issue is important for the dynamic evolution of the law of the sea and public international law more generally.*³⁰¹

Boyle observes that the relationship between UNCLOS and the CBD “shows how successive treaties on rather different topics can contribute to the development of an integrated legal regime.”³⁰² In a similar manner, the new ILBI on the BBNJ will have an important role in both filling gaps in the current framework for ocean governance, but also in supplying further clarification for environmental provisions provided for under UNCLOS and the CBD in a manner similar to the FSA. Conversely, UNCLOS, the CBD, and other agreements can serve to inform the IGC in developing the final text of the BBNJ agreement. Concerns that the IGC may have to prioritize the objectives of one agreement over another may arise. The overlapping jurisdiction of UNCLOS and the CBD, for example, provides a complex backdrop for the IGC negotiations; however, Druel and Gjerde notes that, however, these options are not necessarily “mutually exclusive”.³⁰³ Looking at the CBD itself, its application to ABNJ applies to “processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control”.³⁰⁴ Meanwhile, UNCLOS does not provide definitions for “marine genetic resources” and “biological diversity”, whereas the CBD does in Article 2. In considering a similar issue for the deep seabed, a 2004 CBD “Study of the Relationship Between the CBD and UNCLOS with Regard to the Deep

³⁰⁰ Relevant agreements include the CBD.

³⁰¹ *Supra* note 238.

³⁰² *Supra* note 72 at 578.

³⁰³ Elisabeth Druel and Kristina Gjerde, “Sustaining Marine Life Beyond Boundaries: Options for an Implementing Agreement for Marine Biodiversity Beyond National Jurisdiction under the United Nations Convention on the Law of the Sea” (2014) 49 *Marine Policy* 90 at 93.

³⁰⁴ *Supra* note 22, art 4(2).

Seabed” (2004 CBD Study)³⁰⁵ ultimately concluded that cooperation and a “coordinated approach”³⁰⁶ were necessary to effectively respond to issues.

2.7 Conclusion

This chapter explored the topics of the law of the sea, international environmental law, and UNCLOS from a top-down approach. It began by exploring the overarching issues that arise in ABNJ, where legal regimes are nebulous by nature and involve varying elements, from different actors and interests to international agreements that can overlap in their regional and sectoral approaches. An account of the negotiation history of UNCLOS and analysis of three key Parts of UNCLOS on marine ABNJ and the environment introduced the norms, principles, and approaches present in the law of the sea. With these elements in mind, a look at the evolution of UNCLOS was discussed, with a focus on how changes to international environmental law relates to UNCLOS as a constitution for the oceans. The purpose of this chapter was to introduce the legal regime for marine ABNJ and the marine environment of ABNJ. This chapter purposefully focused on the obligations set up in Parts VII, XI, and XII to provide a backdrop for Chapters 3 and 4. Due diligence obligations permeate the discussion of SEAs in Chapter 3 and then the potential uses of SEA for marine ABNJ in Chapter 4.

As the world continues its progression deeper into the high seas and the Area, science and law must properly inform policymakers in developing programmes and actions that preserve and protect the marine environment in accordance with the obligations set out by UNCLOS and international law. Provisions like Articles 61 and 206 create obligations that are further developed in agreements like the FSA and the upcoming BBNJ Agreement, in line with Articles 237 and 311. The BBNJ, whether or not it characterized as an implementing agreement for UNCLOS, must align with UNCLOS’ environmental mandates to preserve and protect the environment under Article 192. Due diligence obligations which incorporate the requirement to conduct EIAs will help to meet these goals. The law of the sea of ABNJ is complex—a balancing act of shared interests in its resources with a concern for how resource-related activities can affect the environment.

³⁰⁵ *Supra* note 281 at para 72.

³⁰⁶ *Ibid.*

Chapter 3: Strategic Environmental Assessment

3.1 Introduction

One assumption often made about decision-making, whether at an individual or group level, is that the ability to make a sound decision corresponds to the amount of information available about the decision, its effects, and any alternatives to it.¹ When a decision requires the prioritization of one goal over another (e.g., conservation versus economic growth), even more information is required for comparison.² Decision-making structures are an interdisciplinary and institutional challenge and calls for input from a broad network of experts, institutions, and stakeholders, as well as the public and other stakeholders.

Environmental assessments are planning tools used to inform decision-making processes on a decision's potential environmental effects. This chapter examines two types of environmental assessments: environmental impact assessment (EIA) and strategic environmental assessment (SEA), with a focus on the latter. Theories supporting the use of EIA and SEA share common objectives regarding environmental protection and the integration of environmental concerns into decision-making processes. They also share a similar goal in supporting “process values, such as transparency, access to information and broad public participation”.³ The key difference between the two is the stage at which they occur in decision-making processes: EIA assesses projects and activities, and SEA assesses strategic-level decisions, or policies, plans, and programs (PPPs).⁴ While EIA and SEA are linked both by their history and in their current uses, the “practical significance”⁵ of the two distinct contexts in which the assessments occur requires distinct approaches, both in scope and content.⁶

¹ This assumption is based on the concept of rational decision making. See the argument in Susan Owens, Tim Rayner & Olivia Bina, “New Agenda for Appraisal: Reflections on Theory, Practice, and Research” (2004) 36:11 *Environmental & Planning A* 1943.

² See Neil Craik, *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge: Cambridge University Press 2008) at 10 (“environmental decision-making inevitably requires choices to be made between competing values, often pitting economic goals against environmental considerations”).

³ *Ibid* at 12.

⁴ AL Brown & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 *Impact Assessment and Project Appraisal* 183 at 184.

⁵ See e.g. N Lee & F Walsh, “Strategic Environmental Assessment: An Overview” (1992) 7:3 *Project Appraisal* 126 at 133.

⁶ *Ibid* at 133—135.

The purpose of this chapter is to underscore two key points about SEA. Firstly, there is no singular definition or approach to SEA, especially at an international level. Instead, SEA is often described as an “overarching concept rather than a unitary technique, housing within it a family of tools, with different members being appropriate for different types and different stages, of PPP planning, development and review.”⁷ Therefore, the content and form of an ‘effective’ SEA framework will be heavily informed by the normative, institutional, and epistemic contexts in which it operates.⁸ There are different ways to classify members of the SEA ‘family’, but the approach taken in this thesis is to distinguish between product-oriented and process-oriented SEA.⁹ Second, while there is no explicit SEA obligation in customary law,¹⁰ existing international agreements, principles of international environmental law, and due diligence obligations provide a strong legal justification for developing SEA for marine ABNJ.

This chapter starts with an overview of transboundary EIA, as background, before proceeding into the discussion on SEA. While SEA occurs before EIA in decision-making processes, their evolutionary relationship is flipped, as SEA gained traction as a response to gaps in EIA practice.¹¹ It is useful to first understand what an EIA is in order to begin a discussion on the evolution of SEA theory and practice. The chapter then examines SEA in detail, beginning with SEA theory and the various forms of SEA that have been brought up in literature. It then moves into an examination of SEA in international contexts, especially that of ABNJ. This includes a study of the relationship between SEA and principles of international law and the environmental obligations that were raised in Chapter 2 of this thesis. The chapter concludes with an exploration of using the principle of integration in tandem with due diligence obligations to further strengthen the rationale for developing an SEA obligation for marine ABNJ.

3.2 Transboundary Environmental Impact Assessment in International Law

As discussed in Chapter 2, transboundary EIA under international environmental law is directly tied to due diligence obligations associated with harm prevention.¹² EIA is a widely used tool, as it is the “only environmental policy that [is] required by most countries around the world

⁷ *Supra* note 4 at 186.

⁸ *Ibid* at 184.

⁹ See section 3.3.1, *below*.

¹⁰ See section 3.4, *below*.

¹¹ See section 3.3, *below*.

¹² See Chapter 2.

and whose results are regularly publicly acknowledged and available.”¹³ The purpose of EIA processes in practice is to “ensure that decision-makers understand and consider the environmental consequences of their planned activities”.¹⁴ UNEP’s 2018 report, “Assessing Environmental Impacts – A Global Review of Legislation”,¹⁵ notes that EIA “does not primarily aim at compliance with a specific environmental standard, but at making sure that all critical information to predict the future impact on the environment is supplied and considered in the decision-making process.”¹⁶ Corollary to this process is its role in increasing transparency and accountability¹⁷ and in ensuring participatory elements are incorporated throughout the decision-making process.¹⁸ While certain features of EIA practice may vary between systems (e.g., the extent to which the public is engaged), most share common characteristics regarding scope, content, and procedures.¹⁹ The most familiar form of EIA practice is the “methodological framework”,²⁰ which breaks EIA practice into “screening, scoping, impact identification, prediction, monitoring, evaluation and review”.²¹

In international environmental law, EIA is a way for States to address extraterritorial environmental harms and to uphold environmental norms, objectives, and several principles of international environmental law.²² As discussed in Chapter 2 of this thesis,²³ these general principles, which Sander describes as being “legal sources with low specificity,”²⁴ include the no-harm principle, the duty to cooperate, public participation, the precautionary principle, and due

¹³ United Nations Environment Programme [UNEP], *Assessing Environmental Impacts: A Global Review of Legislation* (Nairobi, Kenya: UN Environment, 2018) at 6.

¹⁴ *Ibid* at 38.

¹⁵ *Ibid*.

¹⁶ *Ibid* at 3.

¹⁷ For example, see the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001) [FSA], art 12.

¹⁸ Alex G Oude Elferink, “Environmental Impact Assessment in Areas Beyond National Jurisdiction” (2012) 27 *Marine and Coastal Law* 449, DOI: <10.1016/j.eiar.2015.08.009> at 465.

¹⁹ Neil Craik and Kristine Gu, “Implementing Environmental Impact Assessment for Deep Sea Mining” (30 January 2020) Pew Charitable Trusts White Paper, online (pdf): *Pew* <www.pewtrusts.org/-/media/assets/2021/06/craik--gu-implementing-environmental-impact-assessment-for-deep-sea-mining.pdf>.

²⁰ Richard K Morgan, *Environmental Impact Assessment: A Methodological Perspective* (Norwell, Massachusetts: Kluwer Academic Publishers, 2002) at 91.

²¹ Discussed in Chapter 4.

²² See Neil Craik, “The Duty to Cooperate in the Customary Law of Environmental Impact Assessment” (2020) 69:1 *International and Comparative Law Quarterly* 239, DOI: <10.1017/S0020589319000459>.

²³ See Chapter 2.

²⁴ Gunnar Sander, “International Legal Obligations for Environmental Impact Assessment and Strategic Environmental Assessment in the Arctic Ocean” (2016) 31:1 *International Journal of Marine and Coastal Law* 88, DOI: <10.1163/15718085-12341385> at 96.

diligence.²⁵ At the heart of transboundary EIA is the “obligation on states to act with due diligence by introducing policies and legislation that prevent or reduce the risk of significant transboundary harm to other states and ABNJ.”²⁶ EIA itself is a principle of international environmental law codified in international and regional agreements²⁷ and applied in international judicial decisions.²⁸ EIA as a due diligence obligation “entails an evolving standard of regulations, often referred to as ‘best practical means’ or ‘best environmental practices’.”²⁹ These practices include public participation and stakeholder identification, especially in light of the *Aarhus Convention*,³⁰ and the requirement to notify and consult potentially affected States. It does not, however, create the requirement for a State proposing the activity, the source State, to adhere to the results of negotiations or an EIA.

Transboundary EIA a requirement under customary international law, as affirmed by the International Court of Justice’s (ICJ) in its 2010 *Pulp Mills* decision.³¹ In 2006, Argentina alleged Uruguay breached its treaty obligations by constructing pulp mills on the River Uruguay without notifying or consulting Argentina. In the 2010 decision, the ICJ stated:

In this sense, the obligation to protect and preserve, under Article 41(a) of the Statute, has to be interpreted in accordance with a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ Principle 17 of the *Report of the United Nations Conference on Environment and Development*, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992) [*Rio Declaration*] also requires that an EIA, “as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.” While the *Rio Declaration* is a non-binding document, it nevertheless has an immense effect on international law, forming the basis of negotiations for environmental treaties, as it contains several principles of international environmental law. Note, while the *Declaration of the United Nations Conference on the Human Environment*, UNGAOR, 1972, UN Doc A/Conf.48/14/Rev.1 (1972) [*Stockholm Declaration*] does not explicitly contain obligations on conducting EIA, it does recognize planning as tools “for reconciling any conflict between the needs of development and the need to protect and improve the environment” (Principle 14) and “avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all” (Principle 15).

²⁸ See e.g. *Responsibilities and Obligations of States with respect to Activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, 10 [*SDC Advisory Opinion*] at para 148. See also *Rio Declaration*, *supra* note 27, Principles 2, 17.

²⁹ *Supra* note 24 at 96.

³⁰ *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, 25 June 1998, 2161 UNTS 447 (entered into force 30 October 2001) [*Aarhus Convention*].

³¹ *Pulp Mills on River Uruguay (Argentina v Uruguay)*, Judgement, [2010] ICJ Rep 14 [*Pulp Mills*].

*context, in particular, on a shared resource. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works.*³²

Pulp Mills also “suggested that the content of the obligation may evolve over time, and will reflect the capabilities of the party concerned and the particular circumstances of the case.”³³ Thus, when available, comprehensive international agreements, such as the *Convention on the Environmental Impact Assessment in a Transboundary Setting (Espoo Convention)*,³⁴ fill in gaps by prescribing specific requirements, but for international contexts that lie beyond the scope of application of these agreements, States must continue to rely on customary law.³⁵ As a result, States have asymmetrical approaches to transboundary EIA, which may seem less than ideal. However, by allowing this flexibility, the ICJ recognized that a singular approach to EIA would not reflect other factors that contribute to the scope and contents of an EIA. States have different capacities and varying levels of available resources that can be dedicated to an EIA. Moreover, not all activities are created equally. A smaller activity with a low likelihood of causing environmental harms may not require the same level of analysis and study as a large-scale project with a high potential for significant environmental damage.³⁶

The duty to cooperate helps facilitate transboundary EIA with relation to notification, consultation, and the timing of cooperation.³⁷ Some agreements, like the UN *Watercourses Convention*,³⁸ require “timely” exchanges, but many still leave out specific timing requirements.

³² *Ibid* at para 204 (emphasis added).

³³ Alan Boyle, “Developments in the International Law of Environmental Impact Assessments and their Relation to the Espoo Convention” (2011) 20:3 *Reciel* 227, DOI: <10.1111/j.1467-9388.2011.00726.x> at 227.

³⁴ *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997) [*Espoo Convention*].

³⁵ This is further complicated by the lack of a precise definition as to what constitutes “transboundary harm” and “significant harm”. Although seemingly straightforward, the ambiguity in the application of these key terms creates a gray area regarding when an EIA becomes an obligation owed by one State to another; *supra* note 22.

³⁶ See e.g. the simplified EIA process under *The Antarctic Treaty*, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961) [*Antarctic Treaty*]; *Protocol on Environmental Protection to the Antarctic Treaty*, 4 October 1991, (1991) 30 ILM 1461 (entered into force 14 January 1998) [*Antarctic Protocol*]; *Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies*, 14 June 2005, (2006) 45 ILM 5 [*Annex VI*] (collectively referred to as the “Antarctic Treaty System”).

³⁷ Nicolas Bremer, “Post-environmental Impact Assessment Monitoring of Measures or Activities with Significant Transboundary Impact: An Assessment of Customary International Law” (2017) 26:1 *RECIEL* 80, DOI: <10.1111/reel.12194> at 83.

³⁸ *Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, 17 March 1992, 1936 UNTS 269 (entered into force 6 October 1996), art 6.

Bremer discusses the meaning of “regular” exchanges, noting that it may vary depending on the context of the environment and the type of activity.³⁹ More dynamic situations will require more frequent exchanges, and therefore, the “applicable standard appears to be that States are generally only obligated to exchange ‘readily available’ information, thus information that they collect on their own volition or have received from third parties, such as other States, international organizations or private parties.”⁴⁰ On the content of these exchanges, Bremer’s argument is that, “considering the purpose of the obligation to exchange information, it could be argued that the information exchanged has to be extensive and detailed enough to enable possibly affected States to adjust and react to artificial and natural changes in the concerned environment.”⁴¹

There are numerous examples of multilateral agreements that expressly include a requirement to conduct a transboundary EIA, including the *Espoo Convention*, whose membership is mainly comprised of EU countries, and the Antarctic Treaty System, which includes the *Antarctic Treaty* and *Antarctic Protocol*.⁴² Article 2 of the *Espoo Convention* requires States to prevent, reduce, and control significant adverse transboundary harm from proposed activities.⁴³ The general procedure set out by the *Espoo Convention* follows the methodological framework for EIA practice.⁴⁴ The contents of the EIA report are set out in Appendix II and include a description of the activity, the environment, potential effects, mitigation measures, knowledge gaps, and post-project monitoring plans.⁴⁵ The *Antarctic Protocol* operates similarly, with its EIA procedure described in Annex I of the Protocol. The International Seabed Authority’s (ISA) Mining Code⁴⁶ requires a preliminary EIA for applications for mining activities, with specific requirements on its contents and reporting process.⁴⁷ The *Aarhus Convention* does set out specific timing requirements for responding to requests for environmental information. In these cases, public authorities must

³⁹ *Supra* note 37 at 84.

⁴⁰ *Ibid*; see also “Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen M Schwebel, Special Rapporteur”, UN Doc A/CN.4/348 (1982).

⁴¹ *Supra* note 37.

⁴² *Antarctic Protocol*, *supra* note 36.

⁴³ *Supra* note 34, art 2(1).

⁴⁴ See Chapter 4.

⁴⁵ *Supra* note 34, Appendix II.

⁴⁶ International Seabed Authority (ISA), *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (2013), ISBA/19/C/17 [RPEN]; ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area* (2010), ISBA/16/A/12/Rev; ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area* (2012), ISBA/18/A/11 (collectively referred to as the “Mining Code”).

⁴⁷ RPEN, *ibid*, reg 18.

provide information “as soon as possible,”⁴⁸ with a month being the maximum time allowed for the response.⁴⁹ However, in general, few international EIA agreements impose a strict process for public review and consultation.

Importantly, for the purposes of this study, EIA is also a specific requirement in the law of the sea. As discussed in Chapter 2,⁵⁰ while the term “EIA” is not used in UNCLOS, Article 206 has been applied as such. Article 206 reads:

When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.⁵¹

Recalling the *Pulp Mills* decision, in which the ICJ states that the scope and content of EIA practice is not specified under customary international law,⁵² Article 206 also does not narrowly define EIA for the marine environment in any specific terms. Unlike other parts of the agreement where State powers and rights are allocated by maritime zone, UNCLOS is consistent in treating the marine environment as a whole.⁵³ The application of Article 206 is not limited to any type of activity or type of damage caused to the marine environment, nor does the provision provide any distinction between where the damage is caused.

Though Part XII of UNCLOS, and Article 206 specifically, contemplates any activity with the potential to cause environmental harm to the marine environment, regardless of the maritime zones in which the activity is taking place, understanding EIA for the marine environment requires drawing a distinction between different ‘realms’ of governance.⁵⁴ There is a distinction between

⁴⁸ *Supra* note 30, art 4(2).

⁴⁹ *Ibid.*

⁵⁰ As environmental assessment, and general environmental obligations, under UNCLOS have been discussed in detail in Chapter 2 of this paper, this section will address this issue in brief.

⁵¹ *Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994) [UNCLOS], art 206.

⁵² *Supra* note 31 at para 205.

⁵³ *South China Sea Arbitration (The Republic of Philippines v The People’s Republic of China)* (2016), Award, ICGJ 495 [*South China Sea*] at para 940; see also para 927.

⁵⁴ The definitions of “substantial pollution”, “significant or harmful changes”, and “as far as practicable” are important in assessing whether or not a State has met its obligations under Article 206; however, these terms are not defined in UNCLOS itself. Instead, it is arguably subject to contextual interpretations by bodies like ITLOS. See generally Ved Nanda & Georg Pring, *International Environmental Law and Policy for the 21st Century*, 2nd ed, (Leiden: Brill 2012) at 432. Meanwhile, the definition for the “pollution of the marine environment” is found in Article 1(1)(4) of UNCLOS

activities with the potential to cause transboundary harms to another State and activities that can cause harm to the marine environment of ABNJ (i.e., the high seas in Part VII and the Area⁵⁵ in Part XI).⁵⁶ One way in which they are distinct is that the rights owed by a source State to an affected State are defined under international environmental law. These rights relate to issues like notification and consultation,⁵⁷ information exchange, EIA, and due diligence obligations. Obligations owed by a State in ABNJ are more attenuated and the scope of international duties are unclear. For example, given that all States have a common interest in ABNJ, how can the duty to cooperate be facilitated? If a State causes harm to the marine environment of ABNJ, who can bring forth a case against the State and to whom are damages owed?

On this, Warner notes that “while some essential principles of marine environmental protection extend to marine [ABNJ] under the provisions of Part XII, the UNCLOS does not provide the necessary jurisdictional infrastructure to realise that protection in practical terms.”⁵⁸ Other sources of law may provide some guidance on how, following the concept of *erga omnes* obligations in ABNJ, some elements of transboundary harm can be transferred to ABNJ. For instance, the International Tribunal for the Law of the Sea (ITLOS) Seabed Disputes Chamber (SDC) cites *Pulp Mills* in the *Responsibilities and Obligations of States with respect to Activities in the Area* advisory opinion (*SDC Advisory Opinion*)⁵⁹ to underscore the use of EIA “where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.”⁶⁰ The SDC held that the ICJ’s “reasoning in a transboundary context may also apply to activities with an impact on the

(“‘pollution of the marine environment’ means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”)

⁵⁵ *Supra* note 50, art 1(1).

⁵⁶ A further distinction is also drawn by treaties outside of the law of the sea that create obligations for States in protecting the marine environment and its components. For instance, Article 14 of the CBD on “impact assessment and minimizing adverse impacts” creates obligations for member State. While the jurisdictional scope of the CBD includes both “components of biological diversity, in areas within the limits of its national jurisdiction” and “processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control within the area of its national jurisdiction or beyond the limits of national jurisdiction”, according to art 4, EIA practice still requires a distinction between the two.

⁵⁷ *Supra* note 53 at paras 984—986.

⁵⁸ Robin Warner, *Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Law Framework* (Leiden: Brill 2009) at 51—52.

⁵⁹ *Supra* note 28.

⁶⁰ *Ibid* at para 147 citing *supra* note 31 at para 204.

environment in an area beyond the limits of national jurisdiction; and the Court's references to 'shared resources' may also apply to resources that are the common heritage of mankind."⁶¹

3.3 Strategic Environmental Assessment

A singular, concise definition for SEA, beyond being an assessment for strategic decisions, is both difficult and, arguably, unnecessary. As Brown and Therivel observe, "attempting to define SEA through prescriptive answers [...] is not particularly useful."⁶² Building on the discussion from the introduction of this chapter, SEA can be more accurately and effectively described as a "family of approaches" to assessing strategic-level decisions for their environmental effects.⁶³ The wide range of approaches reflects the "wide range of contexts in which these strategic actions might be formulated and determined."⁶⁴ Brown and Therivel explain that the different scales at which decisions are made (e.g., international versus regional), the different types of decisions (e.g., policies versus plans, sectoral versus regional), and inherently unique qualities of certain PPPs and decision-making institutions, contribute to creating distinct SEA approaches.⁶⁵ There is "no single SEA methodology [that] will be able to [be] applied uniformly to these different tasks."⁶⁶ Consequentially, there is no 'absolute' way to conduct an SEA.

However, as a general introduction to SEA, an early and widely accepted definition is provided by Therivel *et al*: SEA is a "formalised, systematic and comprehensive process of evaluating the environmental effects of policies, plans and programmes, and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making."⁶⁷ This definition reflects the early stages of

⁶¹ *Supra* note 28 at para 148.

⁶² *Supra* note 4 at 184.

⁶³ Bram Noble & Kelechi Nwanekezie, "Conceptualizing Strategic Environmental Assessment: Principles, Approaches and Research Directions" (2017) 62 Environmental Impact Assessment Review 165 at 170 citing Dalal-Clayton and Sadler; see also Europa, "Strategic Environmental Assessment", online: *Europa* <https://environment.ec.europa.eu/law-and-governance/environmental-assessments/strategic-environmental-assessment_en>.

⁶⁴ *Supra* note 4 at 185.

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ Riki Therivel et al, *Strategic Environmental Assessment* (London: Earthscan Publications 1992) at 20. For a compilation of SEA definitions from popular literature, see Barry Dalal-Clayton & Barry Sadler, *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience* (London: Earthscan 2005) at 9—11. Sadler defines policy as "a general course of action or proposed overall direction that a government is, or will be, pursuing and which guides ongoing decision making"; plans as "purposeful, forward-looking strategy or design, often with coordinated priorities, options and measures, that elaborates and implements policy"; and

SEA use, where the focus was on filling in gaps left behind by EIA.⁶⁸ The first is its reactionary nature, whereby EIA “cannot steer developments towards environmentally resilient locations or away from sensitive areas; it only allows for proposals to be accepted or rejected.”⁶⁹ The timing of EIA also limits its ability to evaluate mitigation techniques or alternatives that would have been available early on but are now no longer viable.⁷⁰ As Lee and Walsh observe, “by the project assessment stage, a number of options, which have potentially different environmental consequences from the chosen one, have been eliminated by decisions taken at earlier stages in the planning process, at which no satisfactory environmental assessment may have taken place.”⁷¹ Second, EIA studies localized effects (both temporally and spatially), whereas SEA is better suited to contemplate the cumulative effects of multiple activities or activities over a longer period of time.⁷²

Over time, SEA moved away from being a “formalized, systematic and comprehensive” tool to support EIA. It developed into an independent tool for environmental protection, with a “goal of integrated decision-making by requiring consideration of environmental impacts at an earlier stage in the development process and across broader spatial and temporal horizons, capturing inter-sector and cumulative impacts.”⁷³ This is the current mindset towards SEA practice. Though SEA form has become harder to pin down, there is a better understanding that the central

programmes as “coherent, organized agenda or schedule of commitments, proposals, instruments, and/or activities that elaborates and implements policy”.

⁶⁸ See discussion Riki Therivel & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996) at 18, 42.

⁶⁹ Therivel, *supra* note 67 at 19—20 (“Although EC Directive 85/337 and other similar legislation requires cumulative impacts to be considered in an EIA, in practice this is very rarely done”). See also *supra* note 5 at

⁷⁰ *Supra* note 68 at 42 (“Mitigation measures at the PPP level can generally be more strategic, more proactive and more varied than those available at the project level”).

⁷¹ *Supra* note 5 at 129—130.

⁷² Therivel, *supra* note 67 at 18—20. Therivel identifies several types of cumulative effects: “additive impacts of developments that do not require EIA [...]; synergistic impacts where several projects’ total impacts exceed the sum of their individual impacts [...]; threshold/saturation impacts where the environment may be resilient up to a certain level and then becomes rapidly degraded [...]; inducted and indirect impacts where one development project can stimulate secondary developments and infrastructure [...]; and time-crowded or space-crowded impacts, where the environment does not have the time or space to recover from one impact before it is subject to the next one.” See also Riki Therivel, “Systems of Strategic Environmental Assessment” (1993) 13 *Environmental Impact Assessment Review* 145, DOI: <10.1016/0195-9255(93)90029-B>; Dennis Victor and P Agamuthu, “Policy Trends of Strategic Environmental Assessment in Asia” (2014) 41 *Environmental Science and Policy* 63, DOI: <10.1016/j.envsci.2014.03.005> at 64 (EIA cannot “address environmental policy integration at strategic levels especially during the policy and plan-making process [...] and to] account for the strategic impacts of cumulative effects of multiple and successive projects in a particular area.”)

⁷³ *Supra* note 2 at 78.

objective of SEA practice is to evaluate the potential environmental impacts of strategic-level decisions. In other words, while SEA is amorphous, it is widely accepted that its main purpose is to “mainstream and upstream environmental considerations in policy and planning processes”.⁷⁴ The hope is that, by incorporating environmental objectives and considerations into strategic decisions, the benefits derived from an SEA will “trickle down”⁷⁵ to activities and projects.⁷⁶

SEA as a family of tools is a result of the “diverse circumstances in which [SEA] is applied and by the demands it addresses”.⁷⁷ The realities of institutional, normative, and epistemic contexts all have an impact on SEA practice. On the institutional dimension, strategic decision-making arrangements are difficult to pinpoint and describe in definitive terms. No two systems are alike, even within the same government or organization. Normative and epistemic contexts also influence the ability of SEA to ‘effectively’ impact decisions regarding PPPs because of the varied practices and limited information on how well they accomplish their goals.

3.3.1 Product-Oriented versus Process-Oriented SEAs

Compared to EIA, SEA application is much more attenuated. SEA is a “family of approaches”⁷⁸ built upon similar principles and objectives across the board. On one side of the spectrum is a more ‘formal’ SEA assessment, which largely resembles an EIA-like approach. On the other side is a less formal and more conceptual assessment practice that, in place of a formal report, aims to shape and influence a decision-making process through “analytical and participatory approaches that aim to integrate environmental considerations into [PPPs] and evaluate the inter linkages with economic and social considerations”.⁷⁹ This form has become increasingly popular because it is less prescriptive and is characterized by operating principles and objectives rather than by a formalized method or report.

⁷⁴ Da Zhu & Jiang Ru, “Strategic Environmental Assessment in China: Motivations, Politics, and Effectiveness” (2008) 88 *Journal of Environmental Management* 615, DOI: < 10.1016/j.jenvman.2007.03.040> at 625.

⁷⁵ Therivel, *supra* note 67 at 22. This ties into the concept of tiering.

⁷⁶ As separate assessment processes that can exist along the same chain of decision-making, strengthening the nexus between SEA, and its outputs, with EIA should arguably lead to an increased cost- and time-efficiency for conducting the EIA of the resulting activity.

⁷⁷ Organisation for Economic Co-operation and Development (OECD), “Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-operation” (2006) OECD DAC Guidelines and Reference Series at 30.

⁷⁸ Dalal-Clayton, *supra* note 67.

⁷⁹ *Supra* note 77 at 30.

It is generally agreed upon that treating SEA solely as a tool to support EIA limits its effectiveness as a distinct planning tool. Many fundamental elements of EIA-like SEA and SEA overlap in a way that contradicts their roles as two unique environmental assessments. Instead of reflecting the inherently more abstract and slow-working nature of strategic decisions, early EIA-like SEA behaves as a “technical instrument”⁸⁰ with procedural elements similar to EIA.⁸¹ These similarities resulted in early SEA frameworks being “product-oriented.”⁸² SEA suffered from the phenomenon described by Lobos and Partidário as the “influence of the technical-rational paradigm [which is] led by a strong focus on identifying and setting objectives, and then developing and implementing appropriate means to achieve them.”⁸³ This approach does not align with strategic decisions because it requires a static and predictable decision and streamlined decision-making process. The product-oriented approach also makes it difficult to ascertain whether or not an SEA was effective in achieving its technical goals because the effects of strategic decisions are widespread and are often felt much further down the road.⁸⁴

What then should be the role of SEA in strategic decision-making? Ultimately, the decision-making context will inform how the assessment framework will operate. Additionally, the role of SEA will also be determined by the chosen objectives of the institution. Here, beyond the general objectives of mainstreaming environmental considerations and providing recommendations on how to reduce a decision’s impact on the environment, the institution must decide on what specific environmental obligations its SEA framework will uphold. Will it be only environmental conservation or all three pillars of sustainable development? Is the intention to merely meet the minimum procedural requirements of due diligence obligations or to ensure, through more substantive requirements, that environmental considerations are integrated into a new PPP?

⁸⁰ Victor Lobos & Maria Partidário, “Theory Versus Practice in Strategic Environmental Assessment (SEA)” (2014) 48 *Environmental Impact Assessment Review* 34, DOI: <10.1016/j.eiar.2014.04.004> at 36.

⁸¹ See Dalal-Clayton, *supra* note 67 at 41. This is more so the case for plans and programs, whereas at a “policy-level application of SEA, EIA procedures are still recognizable but often in minimum form, although not all SEA systems conform unambiguously with this model”.

⁸² See generally Maria Rosário Partidário, “Strategic Environmental Assessment: Key Issues Emerging from Recent Practice” (1996) 16:1 *Environmental Impact Assessment Review* 31, DOI: <10.1016/0195-9255(95)00106-9>.

⁸³ *Ibid.* See also Owens, *supra* note 1.

⁸⁴ See *supra* note 13 at 107 (“(1) Generally there is a long time period for a strategic planning instrument to materialize; (2) It is difficult to attribute environmental changes to a specific strategic planning instrument”).

Kørnøv and Thissen write that, in a fashion similar to EIA, “earlier work in SEA is based on the assumption that the provision of better information on the environmental impacts of plans or policies will result in decision-makers taking environmental aspects more seriously than without SEA, and that this will lead to decision that will turn out to be better for the environment.”⁸⁵ This type of approach may narrow an SEA into pushing for environmental protection, and thus some decision-makers will perceive SEA as having an “advocative role”.⁸⁶ Strategic decision-making is a multidimensional exercise that consists of a series of simultaneously occurring exchanges of information and perspectives. It is fluid, layered, and rarely described in detail by the institution, with only major stages of policy-creation being legally formalized. For SEA to merely have an advocative role makes it difficult to insert into this intricate process and dilutes the benefits of this assessment.

Kørnøv and Thissen argue that there is a “need for SEA to keep fundamentally apart two missions [...]: its advocative mission as an instrument to enhance the preservation of the natural environment, and the ambition to support balanced decision-making which requires a neutral position towards the stakes in the process.”⁸⁷ At a surface-level, these two roles are naturally contradictory, but they can in fact align. The difficulty of balancing these two roles is evident in current SEA practices, with most leaning toward a more neutral position. There is, however, also a third mission, which may be considered distinct though tied to its advocative role: SEA “must be able to successfully communicate environmental values in order to reach the core of decisions.”⁸⁸ This requires an understanding of the SEA’s intended audience, including their biases, environmental expertise and experience, and other mandates that will influence their decisions. If the assessment is not tailored to its audience and the context it operates in, it undermines its communicative purpose.

More contemporary SEA thus pushes for a process-oriented approach. Lobos and Partidário identify four drivers of change:

⁸⁵ Lone Kørnøv & Wil AH Thissen, “Rationality in Decision- and Policy-Making: Implications for Strategic Environmental Assessment” (2000) 18:3 Impact Assessment and Project Appraisal 191, DOI: <10.3152/147154600781767402> at 197.

⁸⁶ *Ibid.*

⁸⁷ *Ibid* at 199.

⁸⁸ Gustavo Vicente & Maria R Partidário, “SEA – Enhancing Communication for Better Environmental Decisions” (2006) 26 Environmental Impact Assessment Review 696, DOI: <10.1016/j.eiar.2006.06.005> at 697.

- *The need for further flexibility and adaptability to deal with complex decision arenas*
- *The importance of implementing a process-oriented assessment rather than product-oriented assessment*
- *The potential to strengthen the institutional and governmental capacities that support PPP processes*
- *The contribution to the collaborative and constructive dialogue in planning processes*⁸⁹

These factors have allowed SEA to evolve “from a largely EIA-based and responsive mechanism to a far more proactive process of developing sustainable solutions as an integral part of strategic planning activities.”⁹⁰

Partidário describes more recent SEA as being about understanding the decision-making process, “evaluating alternative visions and development intentions,”⁹¹ and “facilitating strategic transformation by influencing selected ‘strategic decisions’.”⁹² The need to understand and integrate SEA into strategic decision-making is a fundamental element in Partidário’s “strategic thinking model”⁹³ for SEA. The intent of this model is for SEA to “help understand a development context, to appropriately identify and address problems and to help find environmental and sustainable viable options to achieve strategic objectives”.⁹⁴ Similarly, Dalkmann *et al.*’s “Analytical Strategic Environmental Assessment”⁹⁵ (ANSEA) also revolves around unraveling key points in the decision-making process where the use of an SEA is most relevant and beneficial. This method could address issues created by complex decision-making contexts, whereby the identification of decision “windows.”⁹⁶

⁸⁹ *Supra* note 80 at 38 (emphasis added).

⁹⁰ Monica Fundingsland Tetlow & Marie Hanusch, “Strategic Environmental Assessment: The State of the Art” (2012) 30:1 Impact Assessment and Project Appraisal 15, DOI: <10.1080/14615517.2012.666400> at 16.

⁹¹ Maria do Rosário Partidário, “Strategic Environmental Assessment Better Practice Guide: Methodological Guidance for Strategic Thinking in SEA” (2012), online (pdf): *International Association for Impact Assessment* <www.iaia.org/pdf/special-publications/SEA%20Guidance%20Portugal.pdf>.

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ *Ibid* at 28.

⁹⁵ Holger Dalkmann, Rodrigo Jiliberto Herrera & Daniel Bongardt, “Analytical Strategic Environmental Assessment (ANSEA) Developing a New Approach to SEA” (2004) 24 Environmental Impact Assessment 385, DOI: <10.1016/j.eiar.2003.10.021>.

⁹⁶ *Ibid.*

The above discussions on product- versus process-oriented SEA is not intended to prioritize one over another. They are two ends of a sliding scale that should be adjusted according to individual decision-making context. However, process-oriented SEA better aligns with the goals of SEA. According to Tetlow and Hanusch's "holy grail situation,"⁹⁷ the fallacies of an EIA-like SEA may be remedied through a flexible and reactive SEA process that focuses less on predicting environmental outcomes and more on integration into the decision-making process itself. Through this lens, SEA practice is stronger when it "is more closely integrated into the planning process – possibly to the point where there is no longer a differentiation between SEA and planning, where sustainability issues are effectively considered and where SEA ultimately leads to political change."⁹⁸ Although "full integration may risk making SEA, or planning, dominant in relation to each other [... and it] is important to separation functions and responsibilities,"⁹⁹ the recent trend in SEA theory has been how to bring planning processes and environmental assessments closer together.¹⁰⁰

3.3.2 Distinguishing Between Strategic Decisions

SEA should also clearly identify what is meant by a "PPP". How one system defines a PPP, if it defines them at all, may vary from another. SEA scholarship largely follows the accepted usage and definitions of PPPs and treats them as distinct types of strategic decisions, but this is not so much the case for actual application. Many decision-making systems use these terms interchangeably or use completely different terminology to describe strategic decisions.¹⁰¹ For instance, while the European Commission's (EC) *SEA Directive*¹⁰² limits the Directive's application to plans and programs resulting from legislative processes, keeping private institution strategic decisions outside of its scope,¹⁰³ it does not specifically provide a definition to distinguish

⁹⁷ *Supra* note 90 at 17.

⁹⁸ *Ibid.*

⁹⁹ *Ibid* at 19.

¹⁰⁰ *Ibid* ("The interconnectedness of the SEA and planning processes is crucial for their overall success").

¹⁰¹ Dalal-Clayton, *supra* note 67 at 18.

¹⁰² EC, *Council Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment*, [2001] 2001/42/EC [EU SEA Directive].

¹⁰³ *Ibid*, art 2(a).

plans and programs. This can be confusing at an international level when trying to implement a multilateral SEA agreement intended to be applied across a range of different political systems.¹⁰⁴

Separating policy decisions from plans and programs is vital. SEA theory converges on the position that assessment approaches for policies will differ from that of plans and programs.¹⁰⁵ Policies and policy creation processes are often more abstract, whereas by the time a plan or program is proposed, more details will have materialized on potential environmental effects, alternatives, etc. Legislative structures for plan and program creation are also often more formalized than policy creation. As a result, the conditions that define the scope of an assessment will vary between policy SEA and plan and program SEA. For policy SEA, Therivel *et al* write that “the boundaries will be jurisdictional, and will involve the lead agency deciding how much and what level of influence the related government departments should be given.”¹⁰⁶ Comparatively, SEA for plans and programs will be constrained by geography and “administrative boundaries, such as local planning authority boundaries.”¹⁰⁷

3.4 SEA in International Environmental Law

Sander identifies three types of assessment provisions:

- (1) Explicit provisions of EIA or SEA: These can either contain elaborate requirements for assessment procedures and content or be less elaborate, although still explicitly designating EIA or SEA.*
- (2) Assessment obligations: There is a requirement to “assess” or similar wording, but the tool is open towards EIA, SEA or other approaches.*
- (3) Implicit or indirect assessment obligations: The obligation cannot be met without some sort of prior examination, although this is not explicitly required.*

This section reviews key examples of these three types of provisions, focusing on international agreements. Though SEA is recognized as an important environmental tool for decision-making processes, its legal foundations and procedure remain two largely unresolved issues under both national and international law. SEA approaches in existing texts vary from being more prescriptive

¹⁰⁴ See e.g. *supra* note 13; John B Acharibasam & Bram Noble, “Assessing the Impact of Strategic Environmental Assessment” (2014) 32:3 Impact Assessment and Project Appraisal 177; *supra* note 80.

¹⁰⁵ Therivel, *supra* note 67 at 148.

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*

(e.g., the *Kiev Protocol*¹⁰⁸ to the *Espoo Convention* and the EU's *SEA Directive*) to open-textured (e.g., the CBD).

3.4.1 The Kiev Protocol

Article 2(7) of the *Espoo Convention* requires States to conduct EIAs and to endeavour to apply EIA principles to PPPs “to the extent appropriate.”¹⁰⁹ Under the Convention, this would include notification and consultation, harm prevention, and public participation. The accompanying *Kiev Protocol* is specific to SEAs, citing Principles 4 and 10 of the *Rio Declaration* in its preamble.¹¹⁰ The preamble recognizes that SEA has an important role in the “adoption of plans, programmes, and to the extent appropriate, policies and legislation,”¹¹¹ separating policies and legislation from plans and programmes. In fact, the procedure in the Protocol is for plans and programs, with a separate article near the end of the Protocol, Article 13, requiring States to “endeavour to ensure”¹¹² that environmental considerations are “integrated”¹¹³ into policies and legislations with likely significant environmental effects. As such, the *Kiev Protocol* reflects a more EIA-like SEA. Therefore, there remains the underlying question as to whether the Protocol optimizes SEA.

Article 4 of the *Kiev Protocol* sets out the screening procedures using a hybrid approach. Plans and programs related to certain industries or projects listed in Annex I and II are subject to an SEA.¹¹⁴ For plans and programs not listed, Article 5 uses criteria described in Annex III for a case-by-case screening process to identify plans and programs with “significant environmental, including health, effects.”¹¹⁵ Elements related to scoping and the report itself are generally left to the discretion of the State.¹¹⁶ The involvement of the public and experts, as well as transboundary consultations, are required in Articles 8 to 10. Public participation is also subject to the *Aarhus Convention*, “with its three-pillar structure for access to information, public participation in

¹⁰⁸ *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, 21 May 2003, 2685 UNTS 140 (entered into force 11 July 2010) [*Kiev Protocol*].

¹⁰⁹ *Supra* note 34, art 2(7).

¹¹⁰ *Supra* note 27.

¹¹¹ *Supra* note 108, preamble; see also art 2(5).

¹¹² *Ibid.*, art 13(1).

¹¹³ *Ibid.*

¹¹⁴ *Ibid.*, arts 4(2), 4(5).

¹¹⁵ *Ibid.*, art 5(1).

¹¹⁶ *Ibid.*, arts 6—7.

decision-making and access to justice in environmental matters.”¹¹⁷ The final decision requires consideration of the report’s conclusions but does not require the rejection of a plan or program based on it.¹¹⁸ The proponent State also bears the burden of establishing monitoring and follow-up procedures.¹¹⁹

3.4.2 The EU SEA Directive

The EU *SEA Directive* marked a major shift in strategic-level environmental planning for a key region of the world. It was a step toward a unified SEA system for European countries that already had SEA arrangements and changes to decision-making processes for countries without any SEA in place. It has not, however, conclusively unified SEA practice in Europe. There is still a diverse range of practices between States, as well as a disparity between domestic practices and the procedure set out in the *SEA Directive*. The *SEA Directive* sets out the minimum requirements for an SEA, but it does not prescribe procedures to meeting these requirements. This is left to the discretion of States, whose ensuing SEA framework is deemed to be in compliance with the Directive so long as minimum requirements are met.

Fashioned after the *EIA Directive*, the *SEA Directive* “applies similar requirements for certain plans and programmes, particularly those which set the framework for future development consent of projects.”¹²⁰ The negotiations for the *SEA Directive* revealed a need for a draft text that was broad and mainly procedural in nature in order for it to be accepted. Opinions varied on whether there was even a need for SEA in the first place, as well as what the minimum requirements for SEA should be.¹²¹ Given this range of stances on what direction the final arrangements should take, some consider the final proposal to “represent the lowest common denominator of acceptance.”¹²²

3.4.3 The Convention on Biological Diversity

¹¹⁷ Simon Marsden, “The Espoo Convention and Strategic Environmental Assessment Protocol in the European Union: Implementation, Compliance, Enforcement and Reform” (2011) 20:3 RECIEL 267 at 268.

¹¹⁸ *Supra* note 108, art 11(1).

¹¹⁹ *Ibid*, art 12.

¹²⁰ Barry Sadler & Ausra Jurkeviciute, “SEA in the European Union” in Barry Sadler et al, eds, *Handbook of Strategic Environmental Assessment* (New York: Earthscan 2011) 121 at 122.

¹²¹ *Ibid* at 121—123.

¹²² *Ibid* at 122.

Article 14(1)(b) of the CBD requires member States to:

Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity on biological diversity are duly taken into account.

Although it does refer to SEA by name, it can be characterized as an explicit SEA provision (in accordance with Sander's categories). Article 14(1)(b) is directly linked to SEA in the CBD's "Voluntary Guidelines on Biodiversity Impact Assessment,"¹²³ encouraging member States and other governments and organizations to incorporate the guidelines in implementing the article. Although not mandatory, it offers important insight into the CBD's position on SEA implementation, in accordance with the ecosystem-based approach.¹²⁴

Annex II of the Guidelines is not prescriptive on SEA form and procedure. It begins with an acknowledgement that the guidelines are generic and defers to the State to expand on the recommendations of the guidelines in order to best reflect the "ecological, social-economic, cultural and institutional conditions"¹²⁵ of each decision-making system:¹²⁶

*This guidance is not structured according to a given procedure. The principal reason is that good practice SEA should ideally be fully integrated into a planning (or policy development) process. Since planning processes differ widely, there is, by definition, no typical sequence of procedural steps in SEA. Moreover, there is no general agreement on what a typical SEA procedure might be. It is intended to provide guidance on how to integrate biodiversity issues into the SEA, which in turn should be integrated into a planning process. Because the planning process may vary between countries, the SEA is not described as separate process but as an integral component of the applicable planning process.*¹²⁷

¹²³ "Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas", CBD COP, 8th Meeting, UNEP/CBD/COP/8/27/Add.2 (2006) [CBD Voluntary Guidelines] at 3.

¹²⁴ *Ibid*, Annex II at para 5.

¹²⁵ *Ibid*, Annex II at para 2.

¹²⁶ *Ibid*, Annex II at para 4.

¹²⁷ *Ibid*, Annex II at para 3.

It is apparent that the CBD Voluntary Guidelines favours the process-oriented approach. This is further evidenced by a discussion on parallel versus integration SEAs, where the Guidelines characterizes integrated SEA as being the “most effective form.”¹²⁸

The CBD does provide a general sequence of steps for integrated SEA. It divides the assessment process into four phases. Phase 1 is to “create transparency,”¹²⁹ through making relevant stakeholders aware of the assessment, facilitating work with these stakeholders to identify issues and goals, and comparing how these goals align with existing policies through a “consistency analysis.”¹³⁰ Phase 2 is the “technical assessment,”¹³¹ where the terms of reference are established using the information gathered during Phase 1. The study is then carried out before Phase 3, where the decision on the PPP is made. Stakeholders should be engaged to discuss the results of the study and to form recommendations to decision-makers.¹³² The final decision must be made in writing.¹³³ Phase 4 is the post-decision monitoring and follow-up process.¹³⁴

3.5 The Rationale for SEA for Marine ABNJ

How can further developments be made in international law for the use of SEA in ABNJ? Given the interest in adopting SEA for ABNJ, is there enough to support a *mandatory* SEA for marine ABNJ? This section evaluates the strength of the rationale behind SEA for ABNJ through a discussion on how it fits into, and supports, international law objectives related to the protection of the marine environment. While there is no explicit equivalent requirement under customary international law for SEA for ABNJ as there is for transboundary EIA,¹³⁵ there is nevertheless a strong foundation that can be built using international custom and general principles of international environmental law. Much of this mirrors the basis on which the ICJ recognized

¹²⁸ *Ibid.*, Annex II at para 11.

¹²⁹ *Ibid.*, Annex II at para 14.

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² *Ibid.*

¹³³ *Ibid.*

¹³⁴ *Ibid.*

¹³⁵ *Supra* note 24 at 97.

transboundary EIA as part of customary international law in *Pulp Mills*.¹³⁶ EIA-like SEA especially can benefit a strategic decision that has ‘proximity’ to an activity or project.¹³⁷

There are two central rules of international environmental law that “enjoy significant support in state practice, judicial decisions, multilateral environmental agreements, and the work of the International Law Commission” (ILC):¹³⁸

(1) *States have a duty to prevent, reduce, and control transboundary pollution and environmental harm resulting from activities within their jurisdiction or control.*

(2) *States also have a duty to cooperate in mitigating transboundary environmental risks and emergencies, [through] notification, consultation, negotiation, and in appropriate cases, environmental impact assessment.*¹³⁹

These central rules are mirrored in various express obligations set out in Part XII of UNCLOS, including Articles 194 and 206. Although these rules specifically refer to “activities” and EIA, neither preclude SEA, as both require States to protect the environment through informed decision-making.¹⁴⁰ SEA is in a stronger position than EIA to reduce and mitigate environmental effects through early intervention. For instance, the timing of SEA allows for the consideration of alternatives that may not exist anymore at an activity-level.¹⁴¹

The no-harm principle,¹⁴² as expressed in Rio Principle 2 requires that States to ensure that activities within their jurisdiction or control do not cause damage to other States or ABNJ,¹⁴³ requires that States “act with due diligence by introducing policies and legislation that prevent or reduce the risk of significant transboundary harm to other states and ABNJ.”¹⁴⁴ Sander adds that these “instruments must have the ability to anticipate and evaluate harm at an early stage.”¹⁴⁵ In a

¹³⁶ *Supra* note 30.

¹³⁷ This underscores that importance of differentiating between different strategic decisions, especially policies, as discussed, *above*.

¹³⁸ Patricia Birnie, Alan Boyle & Catherine Redgwell, *International Law & the Environment*, 3rd ed (New York: Oxford University Press 2009) at 137.

¹³⁹ *Ibid.*

¹⁴⁰ *Ibid.*

¹⁴¹ *Supra* note 5 at 129—130.

¹⁴² See discussion Chapter 2. There is disagreement as whether the no-harm principle is equal to the principle of harm prevention; see Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge University Press: Cambridge, 2018) at 10.

¹⁴³ See *Rio Declaration*, *supra* note 27, Principle 2.

¹⁴⁴ *Supra* note 24 at 96.

¹⁴⁵ *Ibid.*

similar vein, for example, Article 194 of UNCLOS constitutes a due diligence obligation to prevent, reduce and control pollution of the marine environment.¹⁴⁶ As such, Article 194 would also require that States adopt “policies, legislation, and administrative controls applicable to public and private conduct which are capable of preventing or minimizing the risk of transboundary harm”.¹⁴⁷ Due diligence also leaves room for the creation of SEA frameworks that reflect unique decision-making contexts. The standard to which States are held varies based on what means are available to the State.¹⁴⁸ For instance, Article 194(1) contemplates the common but differentiated responsibilities of States with different capacities, thus allowing for a “flexible model of due diligence”.¹⁴⁹

Issues arise with grounding SEA in due diligence, however. The standard for assessing whether a State has met its due diligence requirements is that of reasonable care.¹⁵⁰ Since SEA is not a stand-alone obligation for marine ABNJ, some States may argue that it goes above and beyond what is reasonable. A counterargument is that the standard of care may “change over time.”¹⁵¹ Due diligence, as part of the larger duty of harm prevention, is both compound, variable, and evolving through changing best practices.¹⁵² This evolution should include the development of SEA for marine ABNJ. Given that SEA has continuously gained traction in domestic practices, it might be argued that carrying out an activity in ABNJ that are directly downstream from a PPP that did not undergo an SEA would fail to meet due diligence requirements.¹⁵³ Another issue is that due diligence is relatively general and does not prescribe a definitive answer for States in meeting their obligations. International law has attempted to address this through the creation of minimum standards and conventions that leave room for future development.¹⁵⁴ This is approach taken in the CBD Voluntary Guidelines. Even UNCLOS does this, to some extent, looking at Articles 210 and 211.¹⁵⁵

¹⁴⁶ *Ibid*; *supra* note 53 at 944. As discussed in Chapter 2, the provisions on pollution in Part XII of UNCLOS go beyond just pollution as a concern for the environment.

¹⁴⁷ *Supra* note 138 at 147.

¹⁴⁸ *Ibid* at 149.

¹⁴⁹ *Ibid*. These two principles cannot be interchanged. There is certainly a limit to which States can apply common but differentiated responsibility.

¹⁵⁰ *Ibid* at 148.

¹⁵¹ *Supra* note 28 at para 117; *ibid*.

¹⁵² *Supra* note 28 at para 117.

¹⁵³ *Ibid*.

¹⁵⁴ *Supra* note 138 at 149—150.

¹⁵⁵ *Ibid* at 150.

On the precautionary principle, Principle 15 of the *Rio Declaration* requires the principle to be:

*[...] widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*¹⁵⁶

The *SDC Advisory Opinion* stated that, although the relevant regulations expressly required that sponsoring States apply a precautionary approach, it was “appropriate to point out that the precautionary approach is also an integral part of the general obligation of due diligence of sponsoring States, which is applicable even outside the scope of the Regulations.”¹⁵⁷ In other words, “in situations where scientific evidence concerning the scope and potential negative impact of an activity in question is insufficient but where there are plausible indications of potential risks” a precautionary approach is mandated as part of a State’s wider due diligence obligation to prevent harm to the marine environment.¹⁵⁸ This interpretation by the SDC reflects the modern view that the principles of harm prevention and precaution are closely related, and occur along a spectrum: prevention applies where the risk of harm is known and supported by strong scientific evidence (e.g., regarding the identification of risks, establishment of cause and effect relationships, and in quantifying risks), whereas precaution “runs in advance” of prevention by calling for action to prevent harm to the environment before sufficient scientific evidence of harm can be fully furnished.¹⁵⁹

SEA is “clearly devoted to the precautionary principle.”¹⁶⁰ An example of this link is first preambular recital of the EU’s *SEA Directive*. Along with the principle of sustainable development, these two principles are fundamental to the *SEA Directive*.¹⁶¹ SEA contributes to them through an evaluation of the risks associated with following through with a PPP where there is insufficient

¹⁵⁶ *Ibid*, Principle 15.

¹⁵⁷ *Supra* note 28 at para 131.

¹⁵⁸ *Ibid*.

¹⁵⁹ David Freestone, “Satya Nandan’s Contribution to the Development of the Precautionary Approach in International Law” in Michael W Lodge & Myron H Nordquist, eds, *Peaceful Order in the World’s Oceans: Essays in Honour of Satya N Nandan* (Leiden: Brill 2014) 313.

¹⁶⁰ Michael Schmidt, Elsa João and Eike Albrecht, eds, *Implementing Strategic Environmental Assessment* (Berlin: Springer, 2005) at 540.

¹⁶¹ *Ibid* at 21.

information.¹⁶² One sector of marine ABNJ that would, in particular, benefit from the use of SEA is the Area. The deep seabed is characterized by deep uncertainty,¹⁶³ where much of the long-term effects of deep seabed mining are still unknown, and the ISA is required to adopt the precautionary principle by the Mining Code.¹⁶⁴ Strategic approaches to decision-making would support the use of “precautionary buffers [in] environmental planning and ensuring that environmental measures are not overlooked in the rush to enable commercial-scale mineral exploitation”.¹⁶⁵ It would also support planning under the Mining Code by requiring a better look into cumulative and long-term effects of mining.¹⁶⁶

3.5.1 Adding the Principle of Integration and Interrelationship

The increased demand for SEA in ABNJ gives rise to a need for a stronger rationale for SEA obligations in marine environmental protection instruments. One response is the general principle of integration and interrelationship, which “reflects the interdependence of social, economic, financial, environmental and human rights aspects of principles and rules of international law relating to sustainable development as well as of the interdependence of the needs of current and future generations of humankind.”¹⁶⁷ Principle 4 of the Rio Declaration states that “in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.”¹⁶⁸ Principle 4 ties integration directly to sustainable development and is reinforced in agreements like the CBD and the *United Nations Framework Convention for Climate Change* (UNFCCC).¹⁶⁹ Principle 13 of the *Stockholm Declaration*¹⁷⁰ requires States to take an “integrated and coordinated approach to their

¹⁶² *Ibid.*

¹⁶³ See e.g. Sabine Gollner *et al*, “Resilience of Benthic Deep-Sea Fauna to Mining Activities” (2017) 129 *Marine Environmental Research* 76.

¹⁶⁴ RPEN, *supra* note 46, reg 2.

¹⁶⁵ Aline Jaeckel, “Strategic Environmental Planning for Deep Seabed Mining in the Area” (2020) 114 *Marine Policy* 103423 at 2.

¹⁶⁶ This would also align with current trends in scientific research that show that while areas are linked in the deep seabed, they are also distinct in terms of their biodiversity composition. See e.g., Yadong Zhou *et al*, “Delineating Biogeographic Regions in Indian Ocean Deep-sea Vents and Implications for Conservation” (2022) 28:12 *Diversity and Distributions* 2858.

¹⁶⁷ International Law Association (ILA), “New Delhi Declaration of Principles of International Law Relating to Sustainable Development”, UN Doc A/Conf.199/8 (6 April 2002), Principle 7; *supra* note 24 at 97.

¹⁶⁸ *Rio Declaration*, *supra* note 27, Principle 4.

¹⁶⁹ *United Nations Framework Convention on Climate Change*, 9 May 1992, 1771 UNTS 107 (entered into force 21 March 1994).

¹⁷⁰ *Stockholm Declaration*, *supra* note 27.

development planning so as to ensure that their development is compatible with the need to protect and improve the human environment”.¹⁷¹ The principle of integration is a recurring component of sustainable development¹⁷² and reflects “the need to ensure that environmental considerations are integrated into economic and other development plans, programmes and projects, and that development needs are taken into account in applying environmental objectives”.¹⁷³

The principle of integration and interrelationship aligns with moving from the use of SEA as a tool for supplementing EIA practice – product-oriented SEA that focuses on the output of SEA as part of due diligence obligations – to a process-oriented SEA, whose primary purpose is to integrate the consideration of the environment into all stages of strategic decision-making processes.¹⁷⁴

Framing SEA within the principle of integration and interrelationship, in addition to harm prevention, has several important consequences. Integration requires the consideration of environmental concerns and objectives for a broader range of PPPs. This provides increased opportunities for the use of SEA, even when a PPP is not explicitly tied to the environment. The principle of integration would support an argument for assessing PPPs that may be, for example, principally focused on economic development. This is especially important for environmental protection, which has been “addressed on the margin of international economic concerns, and it only since UNCED that the relationship between environmental protection and economic development has been more fully recognized”.¹⁷⁵ Integration is procedural because it informs how decisions should be considered by States instead of the impacts and outcome of the decision itself.¹⁷⁶ The *Gabcikovo-Nagymaros* case¹⁷⁷ identifies the principle of integration as being the “collection and dissemination of environmental information, and the conduct of environmental impact assessments.”¹⁷⁸ In the *Iron Rhine*¹⁷⁹ arbitration, the Arbitral Tribunal wrote:

¹⁷¹ *Ibid*, Principle 13.

¹⁷² Philippe Sands, *Principles and Rules Establishing Standards* (Manchester: Manchester University Press 1995) at 199.

¹⁷³ *Ibid*.

¹⁷⁴ This also fits into the contemporary perspective of EIA as a family of approaches.

¹⁷⁵ *Supra* note 172 at 264.

¹⁷⁶ *Supra* note 24.

¹⁷⁷ *Gabcikovo-Nagymaros Project (Hungary v Slovakia)*, Judgement, [1997] ICJ Rep 7.

¹⁷⁸ *Supra* note 24 at 97.

¹⁷⁹ *Iron Rhine Arbitration (Belgium v Netherlands)* (2005), Award, ICGJ 373 [*Iron Rhine*].

*Importantly, these emerging principles now integrate environmental protection into the development process. Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm (see paragraph 222). This duty, in the opinion of the Tribunal, has now become a principle of general international law.*¹⁸⁰

On the principle of integration, Sands argues that the principle of integration and interrelationship can also be used to address the fragmentation of international environmental law¹⁸¹ and the “divergence of approaches”¹⁸² taken by different international texts and in different international fora.¹⁸³ This argument provides a tie between the principle of integration and the principle of systemic integration as an interpretive technique for overcoming the issue of the fragmentation of international law.¹⁸⁴ International law is non-hierarchical and horizontal in structure, rather than vertical, and this contributes to fragmentation and the development of international law in a siloed approach.¹⁸⁵ The principle of systemic integration refers to the need to harmonize across this structure and different areas of international law.¹⁸⁶

In a 2006 report, the International Law Commission (ILC) identifies systemic integration as a way to address the fragmented normative decision-making context of ABNJ¹⁸⁷ and as “the process whereby international treaty obligations are interpreted by reference to their normative environment, so that, as a consequence, treaties function as parts of a coherent and meaningful whole.”¹⁸⁸ The ILC’s perspective is that the use of systemic integration in “process[es] of legal reasoning”,¹⁸⁹ including treaty interpretation and court decisions, can create a better “sense of

¹⁸⁰ *Ibid* at para 59.

¹⁸¹ See discussion in Chapter 2.

¹⁸² *Supra* note 172 at 264.

¹⁸³ *Ibid.*

¹⁸⁴ Also sometimes referred to as the principle of interrelationship.

¹⁸⁵ In terms of areas of law. See Gernot Biehler, *Procedures in International Law* (Berlin: Springer 2008) at 35—36. See however Jure Vidmar, “Norm Conflicts and Hierarchy in International Law: Towards a Vertical International Legal System?” in Erika De Wet & Jure Vidmar, eds, *Hierarchy in International Law: The Place of Human Rights* (Oxford: Oxford University Press 2012) 13.

¹⁸⁶ *Vienna Convention on the Law of Treaties*, 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980) [VCLT], art 31(3)(c).

¹⁸⁷ International Law Commission (ILC), “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law”, UN Doc A/CN.4/L.682 (2006) at para 419.

¹⁸⁸ Adamantia Rachovitsa, “The Principle of Systemic Integration in Human Rights Law” (2017) 66 *International Law and Comparative Quarterly* 557, DOI: <10.1017/S0020589317000185> at 559.

¹⁸⁹ *Ibid.*

coherence and meaningfulness”.¹⁹⁰ The ILC states that this aligns with Article 31(3)(c) of the *Vienna Convention on the Law of Treaties* (VCLT),¹⁹¹ which requires treaty interpretation to “see the rules in view of some comprehensible and coherent objective, to prioritize concerns that are more important at the cost of less important objectives.”¹⁹² The issue with systemic integration is that of overreach. Caution must be exercised with the principle, especially to prevent international judiciary bodies from “exercising undue interpretive authority over treaties other than those under their jurisdiction, as well as raising the possibility of the emergence of new, perhaps unwarranted, informal jurisdictional powers in international courts.”¹⁹³ SEA can support the principle of interrelationship by requiring consistency in strategic decision-making through integrating the environment into different PPPs.¹⁹⁴

3.6 Conclusion

SEA arose as a method to fill in the gaps that EIA left behind, causing early approaches to SEA practice to resemble that of EIA. The key distinction between SEA and EIA is the time at which they occur in the decision-making process. Strategic-level decisions are more amorphous in comparison to activity-level decisions. Legislative processes for developing different PPPs varies between States, giving rise to a wide range of issues in pinning down a universal framework for SEA practice. While treating SEA like an EIA is not in and of itself incorrect, this approach does not unlock the full potential of SEA practice. Thus, practitioners and scholars alike agree that there is no singular approach to SEA. On one hand, product-oriented SEA is easier to structure and can draw lessons from EIA practice. On the other hand, process-oriented SEA better reflects the central purpose of mainstreaming and integrating environmental considerations into PPP decisions. SEA can be, therefore, be better thought of as a “family of approaches”. The chosen form of SEA should be responsive to the system in which it is applied, and should factor social-economic, cultural, and

¹⁹⁰ *Ibid.*

¹⁹¹ *Supra* note 186.

¹⁹² Dirk Pulkowski, *The Law and Politics of International Regime Conflict* (Oxford: Oxford University Press 2014) at 292.

¹⁹³ *Supra* note 188 at 561.

¹⁹⁴ Neil Craik & Kristine Gu, “Strategic Environmental Assessment in Marine Areas beyond National Jurisdiction: Implementing Integration” (2022) 37 *International Journal of Marine and Coastal Law* 189; Walaa SE Ismaeel & Marwa Adel Elsayed, “The Interplay of Environmental Assessment Methods; Characterising the Institutional Background in Egypt” (2018) 20:1 *Journal of Environmental Assessment Policy and Management* 1850003.

political dimensions. The CBD Voluntary Guidelines is an excellent example of instituting process-oriented SEAs.

While SEA does not have the same footing in customary international law as transboundary EIA does, there is still a strong argument in favour of developing SEA for marine ABNJ. SEA can uphold the harm prevention principle in ways different from EIA because of its anticipatory nature and opportunities for earlier intervention. New arguments on whether the principle of integration and interrelationship can further support SEA have arisen. This principle relates most strongly to process-oriented SEA by providing an additional nexus between sustainable development and SEA. Proceeding on the basis of these arguments, the question now is what an SEA for marine ABNJ may look like given the unique characteristics, both normatively and institutionally, in governing the oceans.

Chapter 4: An SEA Framework for Marine ABNJ

4.1 Introduction

This chapter builds on previous analysis to further develop the concept of strategic environmental assessment (SEA) for marine areas beyond national jurisdiction (ABNJ). A key conclusion from Chapter 3 is that SEA exists as a “family of approaches”.¹ The common denominator for SEA is how it can “mainstream and upstream environmental considerations in policy and planning processes”.² The lack of a singular, universal approach to SEA reflects how context influences its application and how SEA should in fact respond to the unique characteristics of each decision-making process.³

What are the characteristics of current governance for marine ABNJ? Chapter 2 discusses the fragmentation of international law, which is especially apparent in marine ABNJ.⁴ Existing environmental frameworks for marine ABNJ are generally separated by region or sector under the law of the sea (including in *United Nations Convention on the Law of the Sea* (UNCLOS)).⁵ This has allowed for the better organization and specialisation of regulatory frameworks by subject area,⁶ but does not account for the interconnectedness of the marine environment,⁷ which was identified by the International Legal Commission (ILC) as a key feature of the oceans and ocean issues.⁸ Marine ABNJ are also comparatively less well-governed in comparison to other maritime zones due to the highly sectoral approach to governance.⁹ This approach leaves behind a “*lacunae* in

¹ Bram Noble & Kelechi Nwanekezie, “Conceptualizing Strategic Environmental Assessment” (2017) 72 *Environmental Impact Assessment Review* 165 at 171 citing Dalal-Clayton & Sadler.

² Da Zhu & Jiang Ru, “Strategic Environmental Assessment in China: Motivations, Politics, and Effectiveness” (2008) 88 *Journal of Environmental Management* 615, DOI: <10.1016/j.jenvman.2007.03.040> at 625.

³ AL Brown & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 *Impact Assessment and Project Appraisal* 183 at 185.

⁴ See International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (2006) UN Doc A/CN.4/L.682.

⁵ See Chapter 2.

⁶ *Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994) [UNCLOS], art 1(1).

⁷ Natalie C Ban et al, “Better Integration of Sectoral Planning and Management Approaches for the Interlinked Ecology of the Open Oceans” (2014) 49 *Marine Policy* 127 at 131.

⁸ “Report of the International Law Commission on the work of its eighth Session” (UN Doc A/3159) in *Yearbook of the International Law Commission 1956*, vol 2, (New York: UN, 1956) at para 29; see also Hugo Caminos & Michael R Molitor, “Progressive Development of International Law and the Package Deal” (1985) 79:4 *American Journal of International Law* 871, DOI: <10.2307/2201830>.

⁹ David Freestone, “An Unfinished Agenda: Governance of Areas Beyond National Jurisdiction” in Keyuan Zou, ed, *Global Commons and the Law of the Sea* (Leiden: Brill 2018) 209; see also Kristina Gjerde, “Challenges to Protecting

implementation” for UNCLOS, “both functional as well as geographic.”¹⁰ How can SEA contribute to upholding legal obligations to protect and preserve marine ABNJ set out by the law of the sea and international environmental law?

The chapter begins exploring this issue by first presenting a real-life example of why the time is now to consider SEA for marine ABNJ. The final version of an agreement on the conservation and sustainable use of marine biodiversity of ABNJ (BBNJ) was concluded in March 2023.¹¹ The new BBNJ agreement contains a voluntary SEA provision for plans and programs that affect activities in marine ABNJ.¹² The chapter then discusses how SEA can be responsive for marine ABNJ generally, and BBNJ specifically, through concurrent approaches to assessment practices. Though many argue that an SEA that is fully integrated into a decision-making process is the ‘ideal’ type of SEA, there is much that stands in the way of jumping headfirst into a fully process-oriented SEA for marine ABNJ.¹³ The fragmentation of international law, under the current regional and sectoral approaches, and the disparity between different decision-making contexts all contribute to a need for reforming SEA so that it is fit for purpose for the current context. The chapter concludes with a detailed breakdown of a “methodological framework”¹⁴ approach to SEA, borrowing from the common stages of an EIA process to provide insight into experiences from current EIA-like approaches to SEA. The aim in describing this methodological framework is to show the degree of detail it provides for practitioners in executing EIA and SEA.

4.2 The Intergovernmental Conference on Marine Biodiversity of ABNJ

4.2.1 History of Negotiations

the Marine Environment Beyond National Jurisdiction” (2012) 27 Marine and Coastal Law 839, DOI: <10.1163/15718085-12341255>.

¹⁰ *Ibid* at 212.

¹¹ “Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2023), online: <un.org/bbnj/sites/www.un.org.bbnj/files/draft_agreement_advanced_unedited_for_posting_v1.pdf>.

¹² *Ibid*, art 41*ter*.

¹³ See Chapter 2, section 3.3.1.

¹⁴ Richard K Morgan, *Environmental Impact Assessment: A Methodological Perspective* (Norwell, Massachusetts: Kluwer Academic Publishers, 2002) at 91; see also Neil Craik, *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge: Cambridge University Press 2008).

Briefly introduced in Chapter 2, the Intergovernmental Conference (IGC) to draft the BBNJ Agreement convened in 2018,¹⁵ but work on the agreement began much before that. An Ad-Hoc Open-ended Informal Working Group (Working Group) was established in 2004¹⁶ to study issues related to the conservation and sustainable use of BBNJ. The four main objectives of the Working Group defined by the 2004 Resolution were:

- (a) To survey the past and present activities of the United Nations and other relevant international organizations with regard to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction;*
- (b) To examine the scientific, technical, economic, legal, environmental, socio-economic and other aspects of these issues;*
- (c) To identify key issues and questions where more detailed background studies would facilitate consideration by States of these issues;*
- (d) To indicate, where appropriate, possible options and approaches to promote international cooperation and coordination for the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction.¹⁷*

In its first report the following year, the Working Group noted a connection between conservation and sustainable use with socioeconomic development necessary “to ensure that the variety of services it provides will be available to support human needs in the long term.”¹⁸ It also differentiated between biodiversity and biological resources,¹⁹ which are not defined in *UN Convention on the Law of the Sea (UNCLOS)*,²⁰ but which are set out in the *Convention on*

¹⁵ “International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction”, GA Res 72/429, UNGAOR, 72nd Sess, Agenda Item 77, UN Doc A/Res/72/429 (2018) (convening the IGC); “Development of an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction”, GA Res 69/292, UNGAOR, 68th Sess, Agenda Item 74(a), UN Doc A/Res/69/292 (2015) (to develop an agreement for the BBNJ).

¹⁶ “Oceans and the Law of the Sea”, GA Res 59/24, UNGAOR, 49th Sess, Agenda Item 49(a), UN Doc A/Res/59/24 (2005) at para 89.

¹⁷ *Ibid.*

¹⁸ “Oceans and the Law of the Sea: Report of the Secretary General – Addendum”, UNGAOR, 60th Sess, Agenda Item 76(a), UN Doc A/60/63/Add.1 (2005) at para 2.

¹⁹ *Ibid* at para 3.

²⁰ *Supra* note 6.

Biological Diversity (CBD).²¹ Using Article 2 of the CBD, the Working Group drew a conclusion that biodiversity “refers to the variability of life in all forms, levels and combinations”²² and includes “ecosystem diversity, species diversity and genetic diversity.”²³ Additionally, biological resources described in the CBD as “tangible biotic components of ecosystems and species.”²⁴ This distinction was important for the Working Group because the “value”²⁵ of these different components are not interchangeable—“biodiversity can be diminished either if the diversity itself is reduced, such as through the extinction of a species, or if the potential of the components of diversity to provide a particular service is diminished, such as through unsustainable harvesting.”²⁶

The Working Group also affirmed that UNCLOS was the legal framework best suited to dealing with issues in marine ABNJ. While UNCLOS does not address biodiversity as much as the CBD, its “jurisdictional framework and general principles also apply to the conservation and sustainable use of biodiversity, including in areas beyond national jurisdiction.”²⁷ As a “constitution for the oceans,”²⁸ the comprehensive legal order established under UNCLOS, including in Articles 237 and 311,²⁹ allowed for better coordination and cooperation in implementing a BBNJ Agreement.

The Working Group closed with its final recommendations in 2015.³⁰ These included that countries should convene an IGC as well as the parameters of the negotiations, which included the prior-considered four “package” elements:³¹

- (1) Marine genetic resources;
- (2) Area-based management tools (ABMT), including marine protected areas (MPA);
- (3) Environmental impact assessment (EIA); and

²¹ *Convention on Biological Diversity*, 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) [CBD], art 2.

²² *Supra* note 18 at para 4.

²³ *Ibid.*

²⁴ *Ibid* at para 5.

²⁵ *Ibid* at para 7.

²⁶ *Ibid* at para 8.

²⁷ Tomas H Heidar, “Introductory Remarks” in Myron H Nordquist et al, eds, *Law, Science & Ocean Management* (Leiden: Martinus Nijhoff Publishers 2007) 619 at 620.

²⁸ “A Constitution for the Oceans”, Remarks by Tommy TB Koh of Singapore, President of the Third United Nations Conference on the Law of the Sea, online: <www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf>.

²⁹ See discussion in Chapter 2, section 2.6.1.

³⁰ “Letter dated 13 February 2015 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly”, UNGAOR, 69th Sess, Agenda Item 74(a), UN Doc A/69/780 (2015).

³¹ *Supra* note 30 at para 1(e)(ii).

(4) Capacity building and transfer of marine technology (CB&TT).³²

A Preparatory Committee was then convened to further study these four issues,³³ with recommendations made in the Preparatory Committee's final report in 2017.³⁴ Membership to the Committee was open to all State members of the UN General Assembly (UNGA), UNCLOS, and other relevant agencies and invited observers. In keeping with normal procedures, the Committee was to strive for consensus in its decision-making.³⁵ However, the diversity of membership of the Preparatory Committee ultimately provided a challenge for consensus-based decision-making. As a result, the Preparatory Committee divided its final report into two sections: Section A covered "non-exclusive elements that generated convergence among most delegations"³⁶ and Section B covered the topics that caused disagreement. SEA is mentioned at the end of Section A, despite the fact that it ultimately proved to be a Section B issue at the IGC.³⁷ For EIA, the question was not about its inclusion but the degree to which it should be "internationalized".³⁸

With the Preparatory Committee's recommendations in hand, the UNGA convened the IGC.³⁹ Negotiations were to aim for consensus on all substantive matters,⁴⁰ but if every effort to do so was exhausted, decisions on contentious matters were to be made with a two-thirds majority of those present and voting.⁴¹ The IGC strived for widespread and effective participation,⁴² and as such, it was to be open to "all States Members of the United Nations, members of the specialized agencies and parties to [UNCLOS]",⁴³ with invitations extended to other relevant international bodies and interested organizations.

³² *Ibid* at para 1(e)(ii).

³³ *Ibid* at para 1(e)(i).

³⁴ "Report of the Preparatory Committee Established by General Assembly Resolution 69/292", UNGAOR, 4th Sess, UN Doc A/AC.287/2017/PC.4/2 (2017).

³⁵ *Ibid* at para 3.

³⁶ *Ibid* at para 38(a); however, the European Union (EU) contested whether part II.4 (on the relationship between the BBNJ Agreement and UNCLOS and other instrument) should have been include in Section A. For this reason, the division of this report should be considered as a general overview rather than a detailed summary of all of the issues raised at the Preparatory Committee meetings.

³⁷ *Ibid* at 17.

³⁸ *Ibid* at 13, 17.

³⁹ *Supra* note 15 at para 3.

⁴⁰ *Ibid* at para 17.

⁴¹ *Ibid* at para 19.

⁴² *Ibid* at para 9.

⁴³ *Ibid* at para 8.

4.2.2 The Evolution of SEA at the IGC

The central negotiating text at IGC-1 was the President's Aid to Discussions,⁴⁴ which broke down the issues in a manner similar to the 2011 package discussed above. Working groups were organized around the four main topics of the 2011 package. SEA was grouped under the topic of EIA. The Aid to Discussions raised questions on the inclusion of SEA, its scope and procedure, and whether it should occur at a regional or international level.⁴⁵ One issue not raised in the negotiating text was the relationship between EIA and SEA for the BBNJ. For those who wanted to exclude SEA, which included Russia and the United States, as well as for those who wanted clarifications on SEA,⁴⁶ uncertainties remained regarding the need for SEA in international law generally. The President's closing statement pointed to the dissenting opinions on SEA. It noted an option for SEA to be "considered a form of [EIA] to be conducted at an early stage of planning."⁴⁷

Following IGC-1, a Zero Draft⁴⁸ was prepared containing option text for the Agreement's provisions. Three versions of an SEA provision were drafted. The first required Parties to conduct an SEA for "plans and programmes under their jurisdiction or control, affecting [ABNJ]"⁴⁹ that met requirements set out in other parts of the Agreement. The second treated SEA as a type of EIA, which was described in much greater detail in the Zero Draft. The option text for EIA referenced principles and approaches to EIA practice, including the common heritage principle, precautionary principle, ecosystem-based approaches, due diligence, and the polluter-pays principle.⁵⁰ The third option in the Zero Draft was the exclusion of any SEA provisions.

Positions on SEA continued to be divided at IGC-2. Those opposed to SEA remained concerned by the attenuated nature of SEA in international law and the ambiguity surrounding its

⁴⁴ "Intergovernmental Conference on an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction", Intergovernmental Conference (IGC) on the BBNJ, 1st Sess, UN Doc A/Conf.232/2018/3 (2018).

⁴⁵ *Ibid* at 12.

⁴⁶ Including China.

⁴⁷ Including Canada, the EU, CARICOM, and Iran; see IISD, "Summary of the First Session of the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 4–17 September 2018" (20 September 2018), online (pdf): *Earth Negotiations Bulletin* <<http://enb.iisd.org/oceans/bbnj/igc1/pdf>>.

⁴⁸ "President's Aid to Negotiations", IGC on the BBNJ, 2nd Sess, UN Doc A/Conf.232/2019/1 (2018) [Zero Draft].

⁴⁹ *Ibid*, s 5.7.

⁵⁰ *Ibid*, s 1(4).

execution for BBNJ. What liabilities would arise from an obligation to conduct SEA? Who would be responsible for the assessment? Most importantly, what would an SEA for the BBNJ look like given the lack of experience for implementing SEA in marine ABNJ?

These questions carried through to IGC-3, where support for SEA was stronger but still characterized by uncertainty and disagreement. A potential definition was provided for in the negotiating text for IGC-3:⁵¹

*[“Strategic environmental assessment” means the evaluation of the likely environmental, including health, effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations, and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme.]*⁵²

Notably, this definition excluded the application of SEA to policy decisions.

Draft Article 28 on SEA read:

[1. States Parties, individually or in cooperation with other States Parties, shall ensure that a strategic environmental assessment is carried out for plans and programmes relating to activities [under their jurisdiction or control,] [conducted] [with impacts] in areas beyond national jurisdiction, which meet the threshold/criteria established in article 24.]

*[2. As one type of environmental assessment, strategic environmental assessments shall follow mutatis mutandis the process set out in this Part.]*⁵³

This version of an SEA article for the BBNJ took bold steps in making SEA a legally binding obligation rather than voluntary. Its use of “shall ensure” points to the use of SEA as a due diligence obligation of conduct.⁵⁴

A revised draft text was prepared for IGC-4 in 2019,⁵⁵ with no substantial changes to the articles on SEA. States were allowed to submit textual proposals for consideration in lieu of a

⁵¹ “Draft Text of an Agreement under United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction”, IGC on the BBNJ, 3rd Sess, UN Doc A/Conf.232/2019/6 (2019).

⁵² *Ibid*, art 1(13).

⁵³ *Ibid*, art 28.

⁵⁴ See *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, ITLOS Reports 2015, 4 at para 131.

⁵⁵ “Revised Draft Text”, IGC on the BBNJ, 4th Sess, UN Doc A/Conf.232/2020/3 (2019).

meeting in 2020.⁵⁶ The European Union (EU) opposed the notion that SEA should follow *mutatis mutandis* EIA procedure. Instead, it suggested lowering the threshold for SEA and that SEAs be required for all activities that “are likely to have significant environmental [and socioeconomic] effects”⁵⁷ on ABNJ.⁵⁸ The Philippines suggested that SEA should be optional.⁵⁹ In this case, States were likely to continue operating on whatever SEA legislation they had in place, if any. South Korea and the United States struck out all references to SEA in its proposal.⁶⁰ In this vein, States remained largely divided on SEA at the end of IGC-4.⁶¹

A further revised draft text was prepared in advance of IGC-5.⁶² Draft Article 41 on SEA stated:

1. **Option A:** *Parties, individually or in cooperation with other Parties, and acting through the Conference of the Parties, shall ensure that strategic environmental assessments are carried out for areas beyond national jurisdiction.*
Option B: *Parties, individually or in cooperation with other Parties, may undertake a strategic environmental assessment for plans and programmes relating to activities under their jurisdiction or control, [conducted] in areas beyond national jurisdiction, which meet the threshold established under article 24.*
2. *When undertaking environmental impact assessments pursuant to this Part, Parties shall take into account the results of relevant strategic environmental assessments carried out under paragraph 1, where available.*⁶³

Compared to the previous draft, this version provided added a choice between mandatory and voluntary SEA. Paragraph (2) incorporates the concept of tiering assessments.⁶⁴ The same issues that permeated IGC-1 to IGC-4 were present going into IGC-5 on whether SEAs would be

⁵⁶ IGC, “Textual Proposals Submitted by Delegations by 20 February 2020” (15 April 2020), online (pdf): IGC <www.un.org/bbnj/sites/www.un.org/bbnj/files/textual_proposals_compilation_-_15_april_2020.pdf>.

⁵⁷ *Ibid* at 30.

⁵⁸ “Significant environmental effects” is the same wording used to determine whether an EIA is required in *The Antarctic Treaty*, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961) [*Antarctic Treaty*]; *Protocol on Environmental Protection to the Antarctic Treaty*, 4 October 1991, (1991) 30 ILM 1461 (entered into force 14 January 1998) [*Antarctic Protocol*]; *Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies*, 14 June 2005, (2006) 45 ILM 5 [*Annex VI*] (collectively referred to as the “Antarctic Treaty System”).

⁵⁹ *Supra* note 56 at 184.

⁶⁰ *Ibid* at 213.

⁶¹ “Report of the IGC”, IGC on the BBNJ, 4th Sess, UN Doc A/Conf.232/2022/4 (2022) at 15.

⁶² “Further Revised Draft Text”, IGC on the BBNJ, 5th Sess, UN Doc A/Conf.232/2022/5 (2022).

⁶³ *Ibid*, art 41.

⁶⁴ Craik, *supra* note 14 at 156.

mandatory and what the scope, contents, and procedure would be. It was expected that a general provision would make it through to the final draft, but details for the framework would be left to a Scientific and Technical Body and the BBNJ Conference of the Parties (COP).

4.2.3 SEA in the Final Draft of the BBNJ Agreement

The second resumed session of IGC-5 concluded in March 2023 with a draft of the final text sent to a working group for technical edits and translation.⁶⁵ A third resumed session will conclude IGC-5 through a final review of the edited text and its consideration for adoption.⁶⁶

Article 22 of the current draft requires States to conduct an assessment of the potential impacts of activities under their control or jurisdiction that place in ABNJ.⁶⁷ The provision adopts the same threshold for conducting an environmental assessment as set out in Article 206 of UNCLOS. Activities that may cause “substantial pollution of or significant and harmful changes to the marine environment” of ABNJ must undergo an EIA, either in accordance with the process set out in the BBNJ Agreement or in national legislation.⁶⁸ The Agreement’s Scientific and Technical Body will facilitate the EIA process,⁶⁹ and will also develop standards or guidelines regarding the details of an EIA process,⁷⁰ including for the conduct of SEA.⁷¹

The SEA provision is set out in Article 41^{ter} of the draft of the final text. It states:

1. Parties, individually or in cooperation with other Parties, shall consider conducting strategic environmental assessments for plans and programmes relating to activities under their jurisdiction or control, to be conducted in areas beyond national jurisdiction, to assess the potential effects of that plan or programme, as well as alternatives, on the marine environment.

2. The Conference of the Parties may conduct a strategic environmental assessment of an area or region to collate and synthesize the best available

⁶⁵ *Supra* note 11.

⁶⁶ IISD, “Summary of the Resumed Fifth Session of the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 20 February – 4 March 2023” (7 March 2023), online (pdf): *Earth Negotiations Bulletin* <<https://enb.iisd.org/sites/default/files/2023-03/enb25250e.pdf>>.

⁶⁷ *Supra* note 11, art 22(1).

⁶⁸ *Ibid*, art 22(2).

⁶⁹ *Ibid*, art 41.

⁷⁰ *Ibid*, art 41bis(1).

⁷¹ *Ibid*, art 41bis(1)(g).

information about the area or region, assess current and potential future impacts and identify data gaps and research priorities.

3. When undertaking environmental impact assessments pursuant to this Part, Parties shall take into account the results of relevant strategic environmental assessments carried out under paragraphs 1 and 2, where available.

4. The Conference of the Parties shall develop guidance on the conduct of each category of strategic environmental assessment described in this article.⁷²

Paragraph (1) moves away from “shall ensure” and instead requires States to consider conducting an SEA for plans and programs, with policies left out of the article entirely. The nuances of the application of “shall consider” will, arguably, depend on its consideration as a due diligence obligation as part of harm prevention. This discussion would require further discussions and analysis outside of the scope of this chapter. Article 41*ter* also narrows the application of SEA to those related to activities conducted in ABNJ, and not to activities with effects in ABNJ. An international-level SEA is proposed in Paragraph (2), which allows for the BBNJ COP to choose to conduct its own SEA. Paragraph (3) maintains the concept of tiering from previous versions. Finally, Paragraph (4) does as what many predicted: the further development of SEA is left to a future COP.

4.3 Considerations for an SEA Approach in Marine ABNJ

To review, SEA as a due diligence obligation pushes States to adopt “policies, legislation, and administrative controls applicable to public and private conduct which are capable of preventing or minimizing the risk of transboundary harm”.⁷³ The principle of integration suggests SEA has a role in supporting sustainable development goals by requiring the contemplation of all three pillars of sustainable development.⁷⁴ The ability of SEA to have a high level perspective on decision-making, indiscriminate of regions or sectors, points to its role in improving the cohesiveness of international governance under the principle of interrelationship.⁷⁵ Hassanali and Mahon observe that any SEA must be “underpinned by a clear process that meets international

⁷² *Ibid*, art 41*ter*.

⁷³ Patricia Birnie, Alan Boyle & Catherine Redgwell, *International Law & the Environment*, 3rd ed (New York: Oxford University Press 2009) at 147.

⁷⁴ Philippe Sands, *Principles and Rules Establishing Standards* (Manchester: Manchester University Press 1995) at 199.

⁷⁵ Walaa SE Ismaeel & Marwa Adel Elsayed, “The Interplay of Environmental Assessment Methods; Characterising the Institutional Background in Egypt” (2018) 20:1 *Journal of Environmental Assessment Policy and Management* 1850003.

governance standards.”⁷⁶ What would a “clear process” for marine ABNJ look like?⁷⁷ Is there an opportunity to apply SEA across the board for marine ABNJ as a whole, or will there need to be some division between approaches, perhaps by region or sector?

There will most likely need to be some kind of division, as taking on the entirety of marine ABNJ is unrealistic and would not be conducive to prescribing a “clear process”. Legal and institutional contexts vary between regions and sectors in marine ABNJ.⁷⁸ It is unlikely that any one institution is equipped to deal with all the potential PPPs that may arise in relation to marine ABNJ. In sorting out an institutional arrangement for SEA, the actual impacts of the chosen institution may not be as apparent as in other arrangements. One way to resolve this would be through clearing house mechanisms between institutions. Kent, citing the dynamic set of epistemic and normative qualities that exist within international agreements and institutions arrangements, proposes that the principle of integration be implemented using “bridges”⁷⁹ to “[promote] cross-disciplinary thinking and facilitating interdisciplinary dialogue.”⁸⁰ As Kent explains:

*Unlike other models of institutional interplay, the effectiveness of the ideational/cognitive interplay should not be measured according to the existence of a noticeable impact on the target institution’s outcomes. As the focus of this interplay is on the learning process and the flow of information, the lack of noticeable impacts (such as the amendment of treaties) in itself should not necessarily reflect a failure. For example, it could well be that the learning process actually did occur, and the parties were well informed, but yet chose to reject the trade-offs embedded in accepting the new knowledge. ‘Effectiveness’ in this context should be evaluated in the light of the creation of an effective dialogue and the successful flow of information between the different ‘worlds’.*⁸¹

⁷⁶ Kahlil Hassanali and Robin Mahon, “Encouraging Proactive Governance of Marine Biological Diversity of Areas Beyond National Jurisdiction through Strategic Environmental Assessment” (2022) 136 Marine Policy 104932.

⁷⁷ Marine ABNJ encompasses various moving parts and components, one of which is the BBNJ. The way in which the BBNJ Agreement may one day apply SEA may also affect the use of SEA for marine ABNJ as a whole, depending on the role of the BBNJ Agreement in coordinating work in marine ABNJ. See discussion, *below*.

⁷⁸ The CBD Voluntary Guidelines note that there has been a trend away from sectoral approaches because the environment is indivisible.

⁷⁹ See discussion in Chapter 2, section 2.6.4.

⁸⁰ Avidan Kent, “Implementing the Principle of Policy Integration: Institutional Interplay and the Role of International Organizations” (2014) 14 International Environmental Agreements 203, DOI: <10.1007/s10784-013-9224-3> at 105.

⁸¹ *Ibid.*

⁸¹ *Ibid.*

The *Convention on Biological Diversity*⁸² (CBD) Voluntary Guidelines on Biodiversity Impact Assessment (CBD Voluntary Guidelines)⁸³ also identify the importance of institutions in developing and implementing SEA.⁸⁴ Some institutions are already in a position to facilitate SEA for their region or sector. For instance, while there is no SEA-specific provision in the Antarctic Treaty System, Article 2 of the *Antarctic Protocol* calls for “comprehensive protection of the Antarctic Environment”.⁸⁵ Article 8(2) of the Protocol requires that the EIA procedure in Annex I is applied to “planning processes leading to decisions about any activities undertaken in the Antarctic Treaty area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities [...]”.⁸⁶ This forms the basis of Marsden’s argument for adopting SEA for the Antarctic region. Marsden points to the Antarctic Treaty System’s Committee for Environmental Protection (CEP) as an institution positioned for SEA oversight and management.⁸⁷ Similarly, RFMOs and the ISA could act as regional and sectoral solutions for implementing formal SEA processes. They are equipped to carry out oversight roles and to promote accountability and transparency, public participation, and capacity-building.⁸⁸ Within the BBNJ Agreement, there are coordinative mechanisms that could help implement SEA across different sectors and regions.⁸⁹

Environmental, socio-economic, cultural, and political elements will also affect SEA for marine ABNJ. The CBD Voluntary Guidelines notes that “the generic nature of this guidance implies that further elaboration of its practical application is needed to reflect the ecological, social-economic, cultural and institutional conditions for which the SEA system is designed.”⁹⁰ The Guidelines provide a strong starting point for how to structure SEA for marine ABNJ, as it sets out the key principles and objectives that should guide biodiversity-inclusive SEA. However, it leaves out details on *how* this can be accomplished.⁹¹ Though the Voluntary Guidelines

⁸² *Supra* note 21.

⁸³ “Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas”, CBD COP, 8th Meeting, UNEP/CBD/COP/8/27/Add.2 (2006) [CBD Voluntary Guidelines].

⁸⁴ *Ibid* at 28.

⁸⁵ *Antarctic Protocol*, *supra* note 58, art 2.

⁸⁶ *Ibid*, art 8(2).

⁸⁷ Simon Marsden, “Introducing Strategic Environmental Assessment to the Madrid Protocol: Lessons from International Experience” (2011) 1:1 *Polar Journal* 36 at 45.

⁸⁸ For example, the ISA’s Legal and Technical Commission.

⁸⁹ *Supra* note 11, arts 4(2), 19(1)(b), 19(3), 19(4), 48(5)(c), 50(2)(d).

⁹⁰ *Supra* note 83.

⁹¹ *Ibid* at 23.

prioritizes the integration of SEA into decision-making processes,⁹² it recognizes that SEA cannot be pigeonholed into a singular definition or format. The CBD Voluntary Guidelines aim to understand specific decision-making processes and prioritizes responsiveness and flexibility.

It is not, however, enough to directly transpose the Guidelines into the marine ABNJ context for a number of reasons. First, although SEA is required under Article 14(1)(b) of the CBD, the application of the Guidelines is on a voluntary basis. The Guidelines themselves recognize that they are “generic”,⁹³ placing a focus instead on how to “guarantee a biodiversity-inclusive SEA process.”⁹⁴ Moreover, the Guidelines are not a technical document⁹⁵ and do not prescribe procedural elements,⁹⁶ recognizing that it is not conducive to structuring one type of SEA for the entirety of the CBD’s scope.

Thus, isomorphic approaches to SEA should not be regarded as competing methods. Rather, variance is a result of the unique qualities of complex decision-making environments and accommodates different environmental, social, economic, and political conditions. Distributed SEA also promotes experimentation which “in the face of the limits of international law in dealing with uncertainty, multilevel distribution of power and regulatory disconnection ...[can] catalyze adaptability, iterative learning, participation and cooperation.”⁹⁷ Armeni discusses its use as a response to climate change, as “existing international law instruments and institutions appear ill-equipped to effectively regulate all geoengineering methods, or all aspects of the most controversial methods, as they generally lack the flexibility needed to cope with strategic uncertainty, multilevel distribution of power, and the pace of technological development.”⁹⁸ The widespread nature of climate change and the uncertainties of marine geoengineering⁹⁹ share similar dimensions to the marine environment and activities like deep seabed mining. An experimentalist approach can be taken at various levels of institutions, including local and “lower-

⁹² *Ibid* at 25.

⁹³ *Ibid* at 23.

⁹⁴ *Ibid*.

⁹⁵ *Ibid*.

⁹⁶ *Ibid*.

⁹⁷ Chiara Armeni, “Global Experimentalist Governance, International Law and Climate Change Technologies” (2015) 64:4 *International and Comparative Law Quarterly* 875, DOI: <10.1017/S0020589315000408> at 877.

⁹⁸ *Ibid* at 877.

⁹⁹ *Ibid* at 885.

level units”¹⁰⁰ to encourage knowledge-building and better decision-making processes.¹⁰¹ Having a variety of approaches that share overarching elements, such as public participation and consultation, and are responsive to decision-making contexts is more desirable than a rigid, centralized approach.¹⁰²

Another consideration is that the development of SEA experience particularised to marine ABNJ will require time. The combination of EIA-like SEA procedural requirements with long-term goals for highly integrated SEA may allow for the evolution of SEA over time. In Scotland, the experience gained from SEA in planning decisions led to its eventual widespread acceptance for other types of PPPs.¹⁰³ In their examination of Scottish SEA, Jackson and Dixon describe four main types of SEAs. The first is the incremental model,¹⁰⁴ where assessments are conducted on a “rolling basis.”¹⁰⁵ The second is the stapled model,¹⁰⁶ where assessments attach to certain stages of a decision-making process. The third is the concurrent model,¹⁰⁷ where assessments are iterative and parallel to the decision-making process, and its findings are injected into the process as it occurs. Finally, the holistic model¹⁰⁸ removes the concept of a separate and distinct SEA process and instead firmly embeds it into the decision-making process itself.¹⁰⁹

At first glance, the holistic approach resembles the “holy grail situation”¹¹⁰ described in Chapter 3. The holistic approach, however, cannot be achieved immediately.¹¹¹ When New Zealand overhauled its approach to the environment, one of the changes they made was “a shift from prescriptive zoning of activities to an effects-based planning regime that places primary

¹⁰⁰ *Ibid* at 880.

¹⁰¹ *Ibid*.

¹⁰² See generally Riki Therivel et al, *Strategic Environmental Assessment* (London: Earthscan Publications 1992)

¹⁰³ Tony Jackson & Jennifer Dixon, “Applying Strategic Environmental Assessment to Land-use and Resource-management Plans in Scotland and New Zealand: A Comparison” (2006) 24:2 *Impact Assessment and Project Appraisal* 89, DOI: <10.3152/147154606781765255> at 100.

¹⁰⁴ *Ibid* at 92.

¹⁰⁵ *Ibid*.

¹⁰⁶ *Ibid*.

¹⁰⁷ *Ibid*.

¹⁰⁸ *Ibid*.

¹⁰⁹ These four types of SEA could be used to describe four levels of integration, from least (the incremental model) to most integrated (the holistic model).

¹¹⁰ Monica Fundingsland Tetlow & Marie Hanusch, “Strategic Environmental Assessment: The State of the Art” (2012) 30:1 *Impact Assessment and Project Appraisal* 15, DOI: <10.1080/14615517.2012.666400> at 17.

¹¹¹ Gunnar Sander, “International Legal Obligations for Environmental Impact Assessment and Strategic Environmental Assessment in the Arctic Ocean” (2016) 31:1 *International Journal of Marine and Coastal Law* 88, DOI: <10.1163/15718085-12341385> at 118.

emphasis on the biophysical environment, with limited consideration of social and economic effects.”¹¹² This took time, and the “first generation of [...] policy statements and plans have adopted a mixed approach.”¹¹³ SEA for marine ABNJ will have similarly have a steep learning curve.

While higher level principles for SEA practice, like the ones in the CBD Voluntary Guidelines, are considered best practice for SEA, EIA-like SEA is a good way to start because of its clarity and highly defined stages. Through its use, more integrated SEA can occur over time. EIA-like SEA makes the assessment process easier to comprehend and implement than a holistic model approach, which would require a thorough understanding of the decision-making process. Progressing from more EIA-like SEA to more integrated SEA can be viewed as steppingstones toward the “holy grail” SEA model.¹¹⁴ By breaking down the objectives of an SEA regime into both product-oriented and process-oriented outcomes for marine ABNJ, States may be more open to adopting a compulsory SEA that morphs over time as they accumulate assessment experience.

Finally, is there an opportunity to move away from regional and sectoral approaches all together? This was a point raised in the CBD Voluntary Guidelines for a few reasons. First, the effects of strategic decisions cannot easily be categorized into one sector or another.¹¹⁵ Second, the marine environment and “biodiversity components, provides goods and services that cannot be assigned to a sector (biodiversity provides multiple goods and services simultaneously) or a geographically defined area (goods and services are not limited to protected areas only).”¹¹⁶ Third, a biodiversity inclusive SEA “spatial and temporal scales are of particular importance,”¹¹⁷ whereby the biophysical effects of a strategic decision “operate on far longer time scales and are rarely taken into account in conventional SEAs.”¹¹⁸ In response to these reasons, the CBD Voluntary Guidelines offers a different route: the use of “biodiversity triggers.”¹¹⁹ These include whether a

¹¹² *Supra* note 103 at 91.

¹¹³ *Ibid.*

¹¹⁴ *Ibid.* This seems to be the direction Jackson and Dixon saw Scottish SEA heading.

¹¹⁵ *Supra* note 83 at 29.

¹¹⁶ *Ibid* at 30.

¹¹⁷ *Ibid.*

¹¹⁸ *Ibid.*

¹¹⁹ *Ibid* at 35—38.

PPP affects an area with environmental importance, produces “direct drivers of change,”¹²⁰ or produces “indirect drivers of change.”¹²¹

The above makes a clear argument that an umbrella SEA for all marine ABNJ would not be effective or easy to implement. Instead, some type of systematic approach to applying certain SEAs to certain PPPs needs to be developed. But would the duplication of SEA for different contexts not further contribute to fragmentation? The question is especially relevant for the BBNJ context. What is the scope of BBNJ issues in comparison to that of marine ABNJ as a whole? If adopted as is at the end of the third resumed session,¹²² the Agreement’s application would potentially expand beyond its predicted scope (the conservation and sustainable use of BBNJ) to marine ABNJ as a whole. This is because almost all marine-related activities will, arguably, have an impact on marine biodiversity and on marine ABNJ. The Agreement appears to contemplate this in provisions like Article 6 on international cooperation, which requires Parties to cooperate and promote cooperation between “relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies in the achievement of the objective of this Agreement.”¹²³ This includes when Parties are involved in other decision-making processes “under other relevant legal instruments, frameworks, or global, regional, subregional or sectoral bodies.”¹²⁴ This provides a strong linkage between Article 6 and SEA, as it is one vehicle to achieve cooperation under the Agreement. Taking a further step back, a potential benefit of the broad nature of the BBNJ Agreement is its role in combating systemic integration, which SEA can also help address.

4.4 The Methodological Framework

As discussed in Chapter 3,¹²⁵ the most common procedure for EIA is the “methodological framework.”¹²⁶ This framework divides stages of an EIA into “screening, scoping, impact identification, prediction, monitoring, evaluation and review”.¹²⁷ This type of SEA is the most EIA-like, but as noted above, it is a good starting place because it prescribes specific elements to

¹²⁰ *Ibid* at 36.

¹²¹ *Ibid* at 37.

¹²² *Supra* note 11, art 22(1).

¹²³ *Ibid*, art 6(1).

¹²⁴ *Ibid*, art 6(2).

¹²⁵ See Chapter 3, section 3.2.

¹²⁶ Richard K Morgan, *Environmental Impact Assessment: A Methodological Perspective* (Norwell, Massachusetts: Kluwer Academic Publishers, 2002) at 91.

¹²⁷ Craik, *supra* note 14 at 106.

the assessment process. It is a viable option for one type of SEA for marine BBNJ because of its clarity and precision. This section reviews these steps, first for EIA and then for an EIA-like SEA. The reason for this order is the methodological framework was first developed for EIA practice. Then, with the rise of SEA as a response to the gaps in EIA,¹²⁸ many existing forms of SEA borrowed directly from the methodological approach. The purpose of this review is to show how the defined stages of a methodological framework help move SEA from a concept to a practice.

4.4.1 Environmental Impact Assessment

Screening is when an activity undergoes a preliminary assessment to determine whether it will trigger an EIA process.¹²⁹ Common approaches to screening are categorical approaches and case-by-case approaches. Categorical approaches use positive-based or negative-based lists to describe activities, locations, or conditions that require, or are excluded from, EIAs. Case-by-case approaches look at individual activities to determine the necessity of an EIA. Some systems use a hybrid of these two. This is the case in the *Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)*.¹³⁰ Article 2(3) requires Parties to conduct an EIA for activities listed in Appendix I that are likely to cause a significant adverse transboundary impact.¹³¹ For activities not listed in Appendix I that are likely to cause significant adverse transboundary impacts, Parties are required to enter discussions to decide whether an EIA is required.¹³² This allows for flexibility within the procedure, accounting for activities not considered at the inception of Appendix I.¹³³

Scoping defines the terms of reference and parameters of an assessment by looking at the proposed activity and its environmental impacts.¹³⁴ Scoping can determine who will be involved in the assessment. Public participation is a central facet of EIA that should be integrated into every

¹²⁸ See discussion Riki Therivel & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996) at 18, 42.

¹²⁹ See e.g., *Antarctic Protocol*, *supra* note 58.

¹³⁰ *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997) [*Espoo Convention*].

¹³¹ *Ibid*, art 2(3).

¹³² *Ibid*, art 2(5). General guidance for identifying the need for an EIA on a case-by-case basis are found in Appendix III.

¹³³ The takes a similar hybrid approach in its SEA Voluntary Guidelines. See also *supra* note 83 at 30—31.

¹³⁴ *Supra* note 102 at 13. In some cases, social, economic, political, and cultural elements are also considered. The involvement of a diverse collection of actors in the process of creating this report makes EIA “multidisciplinary and predictive”.

stage, especially in international contexts,¹³⁵ but this is not always the case. The degree to which the public is explicitly considered in an EIA varies. For instance, the *Protocol on Environmental Protection to the Antarctic Treaty (Antarctic Protocol)*¹³⁶ sets out a public review period of 90 days for a draft EIA report to be circulated and receive comments from the public.¹³⁷ In comparison, public participation is only mentioned in the CBD Voluntary Guidelines as a prerequisite for all stages of the process, without specific obligations for receiving and considering comments in the actual Convention.¹³⁸

The report is often completed by the project proponent, sometimes in tandem with the State or its agency through collaboration or supervision mechanisms. Most international EIA, including in the *Espoo Convention*, provide discretion to the State in determining the details of its reporting requirements. In most cases, the report must consider elements beyond just environmental impacts, such as post-project monitoring and reporting, mitigation methods, and alternatives to the project. The *Antarctic Protocol* and the *Espoo Convention* also require a no-action alternative to assess the need for the project and the benefits of not carrying out the project at all.¹³⁹

Once the report is submitted and accepted by the decision-maker, a final decision should be accompanied by written reasons. These reasons should factor in any public comments that were received, but most EIA systems do not impose an obligation to integrate the EIA's recommendations or public comments into a final decision.¹⁴⁰ In most cases, "even where an EIA discloses that a proposed activity is likely to have a significant adverse impact on the natural environment, the proponent of that activity is not necessarily required to abandon the activity or to mitigate its adverse environmental effects."¹⁴¹ The European Commission has attempted to

¹³⁵ See *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, 25 June 1998, 2161 UNTS 447 (entered into force 30 October 2001) [*Aarhus Convention*], art 4; *Report of the United Nations Conference on Environment and Development*, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992) [*Rio Declaration*], Principle 10.

¹³⁶ *Antarctic Protocol*, *supra* note 58.

¹³⁷ *Ibid*, Annex I, art 3(3).

¹³⁸ *Supra* note 83 at 38.

¹³⁹ Anne Steinemann, "Improving Alternatives for Environmental Impact Assessment" (2000) 21:1 *Environmental Impact Assessment Review* 3, DOI: <10.1016/S0195-9255(00)00075-5> at 6.

¹⁴⁰ See United Nations Environment Programme [UNEP], *Assessing Environmental Impacts: A Global Review of Legislation* (Nairobi, Kenya: UN Environment, 2018) at 69 ("most countries are self-regulatory in that the responsible authority retains the discretion to move ahead with projects notwithstanding the results of the EIA and public participation").

¹⁴¹ Craik, *supra* note 14 at 4.

move away from this in its *EIA Directive*,¹⁴² where recent amendments require approved decisions to “incorporate a reasoned conclusion on the significant effects on the environment, taking into account the EIA and consultation with the public and relevant authorities”.¹⁴³

If a project is approved, follow-up programs should be in place to monitor the actual effects of an activity and to adjust the project as necessary.¹⁴⁴ Any conditions that were set out in the final decision for the project approval can also be monitored. Feedback from a completed EIA should be used to improve future EIAs in a reiterative and tiered assessment process, especially in ABNJ or environmental contexts where knowledge is still limited.¹⁴⁵ Reflecting upon the initial objectives of the EIA also provides a “valuable feedback mechanism whereby predictive methods and proposed mitigation measures can be continually refined in light of information respective past activities.”¹⁴⁶

4.4.2 Strategic Environmental Assessment

Just as for an EIA, screening determines whether a decision will trigger an SEA.¹⁴⁷ The method for doing so includes the options described for EIA: by the “categorical approach”,¹⁴⁸ case-by-case, or a hybrid of the two. SEA application is often limited to plans and programs only. The use of lists to determine whether an SEA is required is regarded as being a more uniform and objective approach to screening, especially in comparison to a “case-by-case approach”.¹⁴⁹ The positive categorical approach is often organized by region or sector that will *prima facie* trigger an obligation for SEA.¹⁵⁰ Conversely, a negative categorical list provides what decisions are exempt

¹⁴² EC, *Council Directive 2011/92/EU of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment*, [2011] 2011/92/EU (with 2014 amendments) [EU *EIA Directive*].

¹⁴³ *Supra* note 140 at 69. See also *ibid*, art 8.

¹⁴⁴ *Supra* note 140.

¹⁴⁵ *Ibid* at 153—155.

¹⁴⁶ *Ibid* at 153.

¹⁴⁷ Screening is considered to be outside of the actual SEA procedure because it proceeds the actual assessment process. See UNECE, *Practical Guidance on Reforming Legal and Institutional Structures with Regard to the Application of the Protocol on Strategic Environmental Assessment* (2017) at 13 (“Thus, while screening is important part of the legal scheme for the SEA, the definition of SEA cannot include screening”).

¹⁴⁸ *Ibid* at para 92.

¹⁴⁹ *Ibid* at para 92. This approach would require the assessment of each PPP on an individual basis.

¹⁵⁰ For e.g., the Netherlands EIA procedure uses a positive-list for screening activities that will be subject to an environmental assessment.

to an umbrella obligation for SEA. Of these two, the UNECE notes that the “negative approach to screening seems to be more popular because it implements better the precautionary principle.”¹⁵¹

Some States take a more discretionary approach in a case-by-case analysis, deferring to an independent, competent authority to make designations and exceptions to assessment obligations. Here, the screening party examines the strategic decision and its potential impacts on other decisions further down the road and on the natural environment through a preliminary assessment.¹⁵² This approach on its own is “less effective and even troublesome”¹⁵³ because it leaves a great deal of discretion to the assessor. Without properly defining the confines to making this decision, a case-by-case screening process might lead to subjective, ill-informed determinations on the need for an SEA and an inconsistent application of SEA obligations, or even abuse by the assessor if there are competing or vested interests.¹⁵⁴ On the other hand, if it is too rigid, the benefits of the case-by-case method (e.g., allowing an assessor to use common sense) can be undermined.¹⁵⁵ Subjective decisions, which can lead to arbitrary screening, can be partially remedied by providing the assessor with a set of threshold conditions. In EIA practice, these are described as “inclusive, indicative [or] exclusive.”¹⁵⁶ Inclusive and indicative thresholds are akin to the positive approach to categorical screening, providing criteria that would give rise to a need for an EIA. Exclusive thresholds do the opposite and provide criteria to identify decisions that are exempt from assessment.¹⁵⁷

Similar to EIA procedures, many choose a “hybrid approach”¹⁵⁸ that combines the categorical approach with case-by-case assessments in a two-step screening process.¹⁵⁹ This

¹⁵¹ *Supra* note 147 at para 101.

¹⁵² Thomas B Fischer, *The Theory and Practice of Strategic Environmental Assessment: Towards a More Systematic Approach* (New York: Earthscan 2007) at 65—66.

¹⁵³ *Supra* note 147 at 92.

¹⁵⁴ See John Glasson, Riki Therivel & Andrew Chadwick, *Introduction to Environmental Impact Assessment*, 3rd ed (London, UK: Routledge, 2013), table 4.1.

¹⁵⁵ *Ibid.*

¹⁵⁶ Michael Schmidt, Elsa João and Eike Albrecht, eds, *Implementing Strategic Environmental Assessment* (Berlin: Springer, 2005) at 11. These thresholds can also be used in combination, as in the case in the EU *EIA Directive*, which combines indicative thresholds in Annex I and II with a flexible, discretionary approach in Annex III. The EU *EIA Directive* and its screening methods, however, have been criticized as being ambiguous, with member States taking different approaches. This has left critics with “reasonable doubts about the effectiveness of the existing system [...] to provide the right trigger to cover all major projects with likely significant effects on the environment.”

¹⁵⁷ *Ibid.*

¹⁵⁸ *Supra* note 147 at 92.

¹⁵⁹ There are different uses of the term “hybrid approach”, with some describing the use of different positive and negative case-by-case approaches.

method heavily relies on the correct parameters for case-by-case evaluations to be in place, which should also be supplemented by a public report as to why an SEA was not required for a decision to increase accountability (a “screening report”).¹⁶⁰

A comprehensive screening procedure has additional roles in the assessment process. The public and other stakeholders should be made aware of a screening decision, especially one to not conduct an SEA, to “avoid later accusations that the plan or programme was prepared without the full range of necessary information.”¹⁶¹ Screening can also be used as a preliminary assessment of the type of SEA that will be carried out. Decisions with limited environmental effects may be subject to a partial SEA, whereas a decision with more significant environmental impacts may require a “full-scale SEA.”¹⁶² A rigorous screening procedure – one that requires the screening party to contemplate a wide range of direct and indirect environmental effects – can help a State better uphold due diligence obligations to prevent significant harm to the environment. The pitfall here is that it may strain decision-making institutions by diverting resources for carrying out an assessment and slowing down decision-making processes.¹⁶³ If the screening process is too rigid (i.e., requires a full assessment for all decisions), resources may be inefficiently used, and timely decisions may be delayed.¹⁶⁴ On the other hand, screening processes that lack clarity and precision, where either the threshold to trigger an assessment is too ambiguous or too high, allows for decisions with large downstream environmental impacts to proceed without an investigation of early intervention alternatives and mitigation methods.

The chosen approach to screening will affect the frequency of assessments, as well as the coverage of an assessment framework’s scope. Ideally, “an appropriate environmental assessment is carried out for all strategic decisions with potentially significant (positive or negative)

¹⁶⁰ *Supra* note 147 at 35; see e.g. *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, 21 May 2003, 2685 UNTS 140 (entered into force 11 July 2010) [*Kiev Protocol*] art 5(4).

¹⁶¹ UNECE, *Good Practice Recommendations on Public Participation in Strategic Environmental Assessment*” (2015) at 14.

¹⁶² Hauke von Seht, “Requirements of a Comprehensive Strategic Environmental Assessment System” (1999) 45 *Landscape and Urban Planning* 1, DOI: <10.1016/S0169-2046(99)00026-2> at 4. A similar approach is taken in the Antarctic Treaty System.

¹⁶³ See e.g. World Bank, “Strategic Environmental Assessment for Policies: An Instrument for Good Governance” (2008) at 16. During its initial adoption of SEA, the Czech Republic’s “Ministry for Regional Development had reservations about preparing the SEAs, fearing that bureaucratic hurdles would slow a process it viewed as nearly complete.”

¹⁶⁴ See *supra* note 102 at 4.

environmental consequences by the agencies initiating these decisions.”¹⁶⁵ However, this is complicated by the amorphous and imprecise nature of strategic decisions, especially policy ones.¹⁶⁶ Screening also requires information about what may occur much further down the line that may be difficult to attribute to the strategic decision at its inception or arise incidentally, including socioeconomic factors.¹⁶⁷

Once an SEA is triggered, the assessment begins with scoping.¹⁶⁸ Therivel *et al* describe scoping as “a crucial preliminary review of all the environmental components of impact categories and how the PPP might affect them, as well as the amount of attention to be given to the analysis of potential impacts.”¹⁶⁹ Scoping is informed by environmental objectives and principles, as well as the characteristics of the decision itself. This includes whether the SEA will consider elements outside of environmental impacts, such as the economy or public health.¹⁷⁰ Scoping should not only contemplate the environmental dimensions of a strategic decision but the full context of the PPP. It should adopt a “pragmatic view”¹⁷¹ on the capacity of the institution, the availability of capital and resources, the potential actors involved, and how quickly a decision must be made.¹⁷² These determinations will affect the degree to which the pivotal elements of public participation, transparency and accountability, and due diligence are incorporated into the SEA.

In practice, scoping is not as well-defined as theory requires it to be. Even if a State has formal SEA legislation, scoping is not always described as a distinct element of the process and,

¹⁶⁵ R Verheem & J Tonk, “Strategic Environmental Assessment: One Concept, Multiple Forms” (2000) 18:3 Impact Assessment and Project Appraisal 177, DOI: <10.3152/147154600781767411> at 179. See also RJ Cerny & WR Sheate, “Strategic Environmental Assessment: Amending the EA Directive” (1992) 22:3 Environmental Policy and Law 154.

¹⁶⁶ Hens Runhaar & Peter PJ Driessen, “What Makes Strategic Environmental Assessment Successful Environmental Assessment? The Role of Context in the Contribution of SEA to Decision-Making” (2007) 25:1 Impact Assessment and Project Appraisal 2, DOI: <10.3152/146155107X190613> at 5—6.

¹⁶⁷ Barry Dalal-Clayton & Barry Sadler, *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience* (London: Earthscan 2005), Box 2.4.

¹⁶⁸ It is important to note here that the entire SEA procedure is generally carried out by the government institution or agency that proposes the PPP; however, in some limited cases, such as in Tanzania, there can be a third-party agency or organization designated to oversee the SEA. See *The Environmental Management Act of Tanzania*, 2004, art 104(4); *supra* note 147 at 92.

¹⁶⁹ *Supra* note 102 at 148.

¹⁷⁰ There is a general lack of guidance and clarity when it comes to formalizing how to resolve competing values.

¹⁷¹ Organisation for Economic Co-operation and Development (OECD), “Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-operation” (2006) OECD DAC Guidelines and Reference Series at 56.

¹⁷² *Ibid.*

therefore, is subject to the discretion of the proponent.¹⁷³ In situations where scoping procedures are implied, “it is assumed that the [PPP] initiating institution, determines the scope of the SEA, guided by the content requirements stipulated in national legislation and potentially additional non-binding guidelines.”¹⁷⁴ As a result, important elements of scoping, such as public participation and transparency,¹⁷⁵ are upheld to varying degrees, with political climates and unlike legislative processes cited as some causes of this disparity.¹⁷⁶ Poor scoping has a practical effect. Loosely defined objectives affected Ireland’s “Docklands Master Plan SEA”.¹⁷⁷ One of the initial objectives was to “to ensure adequate good quality water supply”.¹⁷⁸ This failed to incorporate the fact that the city’s water supply was subject to municipal powers and not that of the Dockland Authority. When the Authority returned and changed the wording to “water supply network,” the scope of the assessment became much clearer.¹⁷⁹

In response to scoping challenges, some States have turned to technical analysis tools like matrices and checklists to guide their scoping processes and to ensure that certain issues are considered during preliminary review stages. Scoping meetings have also become part of SEA practice, bringing together the public and other stakeholders, including affected Indigenous communities, to establish an initial understanding of environmental issues and potential alternatives that may be pursued.¹⁸⁰ The Organisation for Economic and Co-operative Development (OECD) argues that scoping meetings “should result in a revision of the scope or focus of the SEA and improvements (as needed) to the draft engagement plan developed during screening.”¹⁸¹ Scoping decisions should also be replicated in a report that doubles as guidelines for the rest of the assessment procedure. It becomes one of the benchmarks against which later stages of the SEA process can be measured and verified, including whether any specified environmental aspects or alternatives were adequately examined in the final SEA report.

¹⁷³ Examples of countries with separate scoping procedures are China and Denmark. See *ibid* at 94.

¹⁷⁴ *Ibid* at 95.

¹⁷⁵ Public participation and access to information are applied to varying degrees in current practices; see e.g. Victor Lobos & Maria Partidário, “Theory Versus Practice in Strategic Environmental Assessment (SEA)” (2014) 48 Environmental Impact Assessment Review 34, DOI: <10.1016/j.eiar.2014.04.004>.

¹⁷⁶ See *ibid*.

¹⁷⁷ *Supra* note 167.

¹⁷⁸ *Ibid*.

¹⁷⁹ *Ibid*.

¹⁸⁰ *Supra* note 147 at 41.

¹⁸¹ *Supra* note 171 at 56.

By the reporting stage, a substantial amount of work will already have gone into describing the PPP and its potential effects, but it is still the main SEA report that is regarded as the main conduit to mainstreaming environmental objectives in strategic decision-making processes.¹⁸² The approach of many formalized SEA regimes is to require the following in the final report:¹⁸³

- (1) Description of the strategic decision and any related PPP;
- (2) Clear and detailed outline of the goals and objectives of the assessment;¹⁸⁴
- (3) Study of the current state of the environment that is likely to be affected by the PPP;¹⁸⁵
- (4) Study of the potential impacts of the PPP on the environment;
- (5) Examination of potential alternatives and mitigation methods, and a prediction of their impact on the environment if they are pursued;
- (6) Monitoring and follow-up techniques;
- (7) Identification of information gaps, including technology and skill gaps;
- (8) A non-technical summary for policymakers; and,
- (9) Methods for public participation, expert consultation, and stakeholder engagement, and the outcomes of these consultations and meetings.

This approach derives many elements from EIA reporting, and leans toward being more rationalist and product oriented. Recalling earlier discussions in this chapter, this in turn means that the assessment will rely heavily on scientific evidence of potential effects on the environment. As Bodansky explains for EIA, the use of analogous examples for PPPs with limited scientific knowledge, is important in establishing a decision-making threshold.¹⁸⁶ This report will inform the final decision on a PPP.

Post-approval avenues for monitoring and improving SEAs are tiering and adaptive management. On the former, the United Nations Environmental Programme (UNEP) identifies

¹⁸² Although screening and scoping reports feed into an SEA report.

¹⁸³ See e.g. list adapted from Wood and Djeddour in Therivel, *supra* note 102 at 157.

¹⁸⁴ This information can be reused from the scoping report.

¹⁸⁵ See e.g. *Antarctic Protocol*, *supra* note 58, annex I, art 3(2). The *Antarctic Protocol* goes a step further to require a prediction of what the environment would look like if a no action alternative is pursued.

¹⁸⁶ Daniel Bodansky, “Scientific Uncertainty and the Precautionary Principle” (1991) 33:7 *Environment* 4, DOI: <10.1080/00139157.1991.9929978>; see also Thomas L Frölicher et al, “Sources of Uncertainties in 21st Century Projections of Potential Ocean Ecosystem Stressors” (2016) 30:8 *Global Biogeochemical Cycles* 1224, DOI: <10.1002/2015GB005338>.

“the provision of guidance to EIAs through direct tiering with EIA processes and cross-sectoral cooperation are key elements of an effective SEA system”.¹⁸⁷ Tiering environmental assessments allows for the outputs of each stage of assessment to trickle down to later decision-making points.¹⁸⁸ Information can be reused, thus reducing the time and cost of subsequent assessments. Tiering can feed upwards to “link up with and influence top tiers in terms of future decisions and planning.”¹⁸⁹ This ‘feedback loop’ arguably increases the effectiveness of a system of environmental assessments as a whole. However, this is a term that should be used with caution, as ascertaining what constitutes effectiveness is “notoriously difficult, since it is unlikely that a control is available against which to compare the implementation of the tool, it is not possible to judge what would have happened in absence of the tool.”¹⁹⁰ Tiering also allows for better timing of assessments.

Tiering has an added role of an introspective review and assessment of a government agency’s entire decision-making process. Therivel writes that “the idea of a tiered or nested sequence of assessment of the different levels of government action has been linked also with broader concerns about opportunities given to Parliament, its committees, or to the public, to review the wider consequences of a government policy.”¹⁹¹ Tiering acknowledges that decision-making processes are distinct but also “nest within one another,”¹⁹² and through tiering, the components of a decision-making process can be unveiled. This can be extremely useful, as understanding a decision-making process and all its moving elements, including the rotation of individuals that can influence a decision, is fundamental to successful environmental planning.

In comparison to tiering, adaptive management is similar in that it is a reiterative process meant to improve the decision-making process as it goes through its cycles. However, it is more so geared towards dealing with scientific uncertainty and is more closely tied to the precautionary principle. In situations where the decision-making context is characterized by a high degree of scientific uncertainty, environmental decisions require a decision-maker to assess what level of

¹⁸⁷ *Supra* note 147 at 91.

¹⁸⁸ *Ibid* at 85.

¹⁸⁹ *Supra* note 156 at 5.

¹⁹⁰ William R Sheate, “SEA and Environmental Planning and Management Tools” in Barry Sadler et al, eds, *Handbook of Strategic Environmental Assessment* (New York: Earthscan 2011) 243 at 248—249.

¹⁹¹ *Supra* note 102 at 33.

¹⁹² *Ibid*.

risk it is willing to accept.¹⁹³ Adaptive management acknowledges that in these contexts, while scientific uncertainty is always present, the knowledge environment is always changing and improving. The constant improvement and availability of scientific data means that the ability of decision-makers to account for potential impacts is also improving. Thus, decision-makers must be attuned to these changes to remain responsive to the dynamic knowledge environment.¹⁹⁴ Adaptive management requires decisions to be revisited and adjusted in the face of new information. On this, the University of Ottawa's Institute of the Environment likens decision-making to testing hypotheses, which should be "tested and reevaluated as additional information becomes available."¹⁹⁵ This aligns with the role of SEA in supporting decision-makers where there is limited available data. The reiterative nature of adaptive management resembles the use of a process-oriented SEA, where an environmental decision-making tool is inserted into complex decision-making systems.

One of the biggest questions after the approval of a PPP is how to measure the success of an SEA. Wang *et al* note that, "with the chain of cause and effect unclear or attenuated, and complexity of SEA, neither science nor practitioners have provided major support by developing reliable as well as practical and operative methods for indicator assessment, which has been one of the key factors limiting empirical and systematic SEA research."¹⁹⁶ SEA effectiveness is often described as being either outcome-based or process-based examined by, largely, non-physical aspects of SEA application.¹⁹⁷ The process-based perspective is more reflective of both SEAs and decision-making contexts, but it may be less informative for the purposes of developing SEA expertise and justification. The questions for process-based assessment would be how SEA was integrated into a decision-making process and how it was influenced by the SEA, but these are generally qualitative observations. A solely outcome-based assessment of SEA may not reflect the true nature of SEA and its intentions. SEA is heavily informed by its context and, at the same time,

¹⁹³ The University of Ottawa's Institute of the Environment identifies six types of descriptive uncertainty: "(1) conceptual, (2) measurement, (3) sampling, (4) modeling, (5) causal, and (6) epistemic." See Jamie Benidickson et al, "Practicing Precaution and Adaptive Management: Legal, Institutional and Procedural Dimensions of Scientific Uncertainty" (2006) Institute of the Environment, University of Ottawa at A-1.

¹⁹⁴ Kent R Gustavson, "Applying the Precautionary Principle in Environmental Assessment: The Case of Reviews in British Columbia" (2003) 46:3 *Journal of Environmental Planning and Management* 365, DOI: <10.1080/0964056032000096884> at 369.

¹⁹⁵ *Supra* note 193 at A-8.

¹⁹⁶ Huizhi Wang et al, "Measurement Indicators and an Evaluative Approach for Assessing Strategic Environmental Assessment Effectiveness" (2012) 23 *Ecological Indicators* 413 at 413.

¹⁹⁷ *Ibid.*

often loosely defined in terms of form and structure. Paired with the nebulous nature of strategic decision-making, it seems nearly impossible to trace the correlation between SEA and its effectiveness in enforcing harm prevention when so many inputs go into a strategic decision.¹⁹⁸

4.5 Conclusion

Using the arguments developed in previous chapters, Chapter 4 explored how the legal and normative framework of marine ABNJ will affect the development of an SEA approach that captures principles and norms like harm prevention, integration, due diligence, and environmental protection through a high-level perspective on decision-making processes. This is not only pertinent because of the value that SEA can provide, but because of the need to clarify SEA under a new framework for the BBNJ.¹⁹⁹ The recently completed draft of the Agreement provides for a voluntary SEA process,²⁰⁰ the details of which will be fleshed out at a later date by the BBNJ COP. The COP could pursue the same route as the CBD Voluntary Guidelines, but it should take this opportunity to further develop SEA for marine BBNJ.

Arguably, attempting to tackle marine ABNJ as a whole is impractical if the goal is to develop defined SEA practice. This is the trade-off the CBD Voluntary Guidelines had to make, choosing to highlight key principles and concepts for biodiversity-inclusive SEA instead of prescribing a detailed procedure for SEA. But what other options are there? A regional or sectoral approach would be more obtainable because of the existing frameworks, including institutional ones, that are already in place. The risk for this approach, however, is that it risks contributing to the ongoing issue of fragmentation. This is something that will need to be resolved before other developments can take place.

Outside of scope, another facet that will require attention is what type of SEA should take priority in marine ABNJ. Chapter 3 refers to EIA-like SEA and highly integrated, or process-driven SEA, as two ends of a sliding scale that responds to the decision-making context. This chapter added another dimension to this discussion—time. While the goal remains to encourage

¹⁹⁸ This could be partially addressed through the formal identification of decision-making windows, as suggested by the ANSEA method in Holger Dalkmann, Rodrigo Jiliberto Herrera & Daniel Bongardt, “Analytical Strategic Environmental Assessment (ANSEA) Developing a New Approach to SEA” (2004) 24 *Environmental Impact Assessment* 385, DOI: <10.1016/j.eiar.2003.10.021>.

¹⁹⁹ If adopted at the next meeting.

²⁰⁰ Although a voluntary SEA does not have as much ‘bite’ as a mandatory SEA, this is a major opportunity for the development of SEA in ABNJ.

the uptake of process-driven SEA, current uses of EIA-like SEA provide insight into why it is currently the most popular form for SEA in international practice. It is easy to pin down, reiterative, and clearly defined what needs to be done at each stage of the process. This chapter argues that marine ABNJ should take advantage of the existing experience with EIA-like SEA, allowing it to spearhead the adoption of SEA. Over time, as confidence in SEA grows alongside expertise, more integrated approaches can evolve.

Chapter 5: Conclusion

Three sets of research questions were posed in Chapter 1 that provided the road map for this thesis:

- (1) What elements of international law and the law of the sea applicable to marine areas beyond national jurisdiction (ABNJ) will inform the development of SEA for these areas?
- (2) What is strategic environmental assessment (SEA)? What is its current legal status, scope, and content in international law? Is there a rationale for developing SEA for marine ABNJ?
- (3) Based on (1) and (2), what must an approach to SEA for marine ABNJ consider? Is there an approach that should be prioritized?

The first set of questions were addressed in Chapter 2, which took a doctrinal approach to the analysis of the legal framework governing marine ABNJ. Governance of the global commons is distinct from that of areas within national jurisdictions. For instance, States have exclusive and permanent sovereignty to explore and exploit resources within their jurisdiction in accordance with their national interests¹ (Principle 2 of the *Rio Declaration*).² In comparison, the global commons are free from claims of sovereignty.³ In particular, under the 1982 *UN Convention on the Law of the Sea* (UNCLOS),⁴ designates two marine ABNJ: the high seas, subject to the freedom of the seas in Part VII,⁵ and the Area,⁶ subject to the principle of common heritage.⁷

¹ Patricia Birnie et al, *International Law & the Environment*, 3rd ed (New York: Oxford University Press, 2009) at 190. The right to exclusive and permanent sovereignty in areas within national jurisdiction is constrained by a duty to prevent significant harm to other States and ABNJ.

² *Report of the United Nations Conference on Environment and Development*, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992) [*Rio Declaration*]. See also *Declaration of the United Nations Conference on the Human Environment*, UNGAOR, 1972, UN Doc A/Conf.48/14/Rev.1 (1972) [*Stockholm Declaration*], Principle 21.

³ See e.g., *Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994) [UNCLOS], arts 89, 137.

⁴ *Ibid.*

⁵ *Ibid.*, art 89.

⁶ *Ibid.*, art 1(1).

⁷ *Ibid.*, art 137; “Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-bed and the Ocean Floor, and the Subsoil thereof” (1 November 1967) UNGAOR, 22nd Sess, Agenda Item 92, *UN* online: <un.org/Depts/los/convention_agreements/texts/pardo_ga1967.pdf>.

States have a “responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction”—⁸ the principle of transboundary harm prevention. This principle is also recognized in various provisions of UNCLOS, including Article 194(2). The *South China Sea* case⁹ characterizes both Articles 192, which sets out the general obligation to protect and preserve the marine environment, and Article 194 as obligations of due diligence.¹⁰ Due diligence obligations are compound and form part of a bigger picture of harm prevention and sustainable development.¹¹ In addition to being a stand-alone procedural obligation under customary international law,¹² transboundary environmental impact assessment (EIA) is part of this web of due diligence obligations. Environmental impact assessment generally is also a recognized principle in the *Rio Declaration*,¹³ and reflected in Article 206 of UNCLOS. The duty to cooperate ties into transboundary EIA obligations, as well as public participation and stakeholder engagement.¹⁴

Part XII of UNCLOS sets out the overarching environmental obligations for the protection and preservation of the marine environment. Other obligations specific to the high seas and the Area are set out in Parts VII and XI, respectively. Additional sources of environmental obligations include the *Fish Stocks Agreement*,¹⁵ the *Antarctic Treaty* and its related agreements,¹⁶ as well as the *Convention on Biological Diversity* (CBD).¹⁷ These agreements work in tandem with UNCLOS, in accordance with Articles 237 and 311 of UNCLOS. This network of international

⁸ *Supra* note 2, Principle 2.

⁹ *South China Sea Arbitration (The Republic of Philippines v The People’s Republic of China)* (2016), Award, ICGJ 495 [*South China Sea*].

¹⁰ *Ibid* at 944.

¹¹ *Responsibilities and obligations of States with respect to Activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, 10 [*SDC Advisory Opinion*] at 117.

¹² See *Pulp Mills on River Uruguay (Argentina v Uruguay)*, Judgement, [2010] ICJ Rep 14 at para 204.

¹³ *Supra* note 2, Principle 17.

¹⁴ These are cross-cutting issues and also exist outside of the EIA obligations.

¹⁵ *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001) [FSA].

¹⁶ *The Antarctic Treaty*, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961) [*Antarctic Treaty*]; *Protocol on Environmental Protection to the Antarctic Treaty*, 4 October 1991, (1991) 30 ILM 1461 (entered into force 14 January 1998) [*Antarctic Protocol*]; *Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies*, 14 June 2005, (2006) 45 ILM 5 [*Annex VI*] (collectively referred to as the “Antarctic Treaty System”). See *supra* note 6 at 1253 (“The natural resources of Antarctica form a special category, now that sovereign claims to main parts of the territory of Antarctica have been ‘frozen’ for the time being, while the exploitation of its resources (on land and in adjacent seas, and living and non-living) are subject to special treaty regimes (regarding seals, fisheries, other marine resources, and mining)”).

¹⁷ *Convention on Biological Diversity*, 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) [CBD].

law points to an issue prevalent in ABNJ: fragmentation.¹⁸ While the marine environment is an indivisible and interconnected system of living and non-living components, the same cannot be said of the laws governing this area. The need for the harmonization of international law and improved coordination amongst international institutions is one of the many issues arising from governing marine ABNJ.

Chapter 2 concluded with key takeaways on the characteristics of the marine ABNJ governance context. Why is this important for SEA? The answer is fleshed out in Chapter 3, which began with an introduction to EIA and SEA as two types of tools for environmental assessment. Their distinguishing feature is the time at which they occur: SEA assesses strategic-level decisions¹⁹ and EIA assesses activity-level decisions. SEA arose as a response to perceived gaps in EIA practice.²⁰ In comparison to EIA, SEA is anticipatory and better positioned to assess cumulative effects of decisions.²¹

More contemporary understandings of SEA have moved past SEA as a tool to support EIA. SEA theory and practice has branched out, but there are certain themes that underpin most approaches to SEA. First, SEA is often considered as a “family of approaches”;²² an umbrella term to describe SEA as an “overarching technique rather than a unitary technique”.²³ The approach will vary, depending on the context in which it operates.²⁴ There are many ways to classify SEA practice, but the one introduced in Chapter 3 looked at two ends of a sliding scale. On one end was a product-oriented SEA that took on EIA-like qualities in terms of scope and content. This approach is more rigid and does not fully represent the nebulous nature of strategic decision-

¹⁸ International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (2006) UN Doc A/CN.4/L.682.

¹⁹ AL Brown & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 Impact Assessment and Project Appraisal 183 at 184.

²⁰ Riki Therivel & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996) at 18, 42. Consequentially, EIA is often introduced first in literature, as was the case in Chapter 3.

²¹ Both spatially and temporally.

²² Barry Dalal-Clayton & Barry Sadler, *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience* (London: Earthscan 2005).

²³ *Supra* note 20 at 186.

²⁴ *Ibid* at 184.

making processes.²⁵ On the opposite end was a fully process-oriented SEA, focused on integrating in the decision-making process and flexibility.²⁶

Chapter 3 concluded with a look into whether there was enough of a legal rationale for SEA in international law and the law of the sea. How does it fit into the framework of marine ABNJ, and how does it support environmental mandates? On this, the conversation returned to elements of Chapter 2. These included harm prevention, due diligence, and the precautionary principle.²⁷ Certainly, EIA-like SEA can be argued to support States in meeting due diligence obligations, but where do process-oriented SEA fit? This is where the principles of integration and interrelationship came into play. The principle of integration goes to the heart of SEA: the mainstreaming of environmental considerations into policies, plans, and programs (PPPs). As part of sustainable development,²⁸ the principle of integration requires the contemplation of the environment alongside social and economic considerations. This is a job SEA is well-equipped to do. As for the principle of interrelationship, SEA can be used to apply this principle in bringing cohesive across different subject-matters, key to addressing fragmentation.

Having established a firm understanding of SEA and its place in the international law framework, Chapter 4 proceeded to explore the development of SEA for marine ABNJ. The intention of Chapter 4 was not to prescribe a solution but to investigate areas for future research. More specifically, Chapter 4 highlighted key points that would need to be considered before diving into the specifics of an SEA for marine ABNJ. Chapter 4 also pointed to the need for developing an SEA for marine ABNJ using the recently concluded negotiations on an agreement for the conservation and sustainable use of marine biodiversity of ABNJ (BBNJ). The BBNJ Agreement, if adopted, will implement a system for voluntary SEA for activities in marine ABNJ.²⁹ However, beyond the basic provision that identified a voluntary SEA, no further details were provided on its

²⁵ See generally Maria Rosário Partidário, “Strategic Environmental Assessment: Key Issues Emerging from Recent Practice” (1996) 16:1 Environmental Impact Assessment Review 31, DOI: <10.1016/0195-9255(95)00106-9>; Victor Lobos & Maria Partidário, “Theory Versus Practice in Strategic Environmental Assessment (SEA)” (2014) 48 Environmental Impact Assessment Review 34, DOI: <10.1016/j.eiar.2014.04.004>; *supra* note 23 at 41.

²⁶ Lobos, *ibid* at 38.

²⁷ These are all closely related; see David Freestone, “Satya Nandan’s Contribution to the Development of the Precautionary Approach in International Law” in Michael W Lodge & Myron H Nordquist, eds, *Peaceful Order in the World’s Oceans: Essays in Honour of Satya N Nandan* (Leiden: Brill 2014) 313. See also *supra* note 9.

²⁸ *Supra* note 2, Principle 4.

²⁹ “Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2023), online: <un.org/bbnj/sites/www.un.org.bbnj/files/draft_agreement_advanced_unedited_for_posting_v1.pdf>, art 41*ter*.

scope and content. Note, however, that the BBNJ SEA is not the route suggested in Chapter 4 as the solution.

Instead, beyond being an example for the demand for SEA, the BBNJ Agreement was used to explore options for marine ABNJ. Institutions like the BBNJ Conference of the Parties, the *Antarctic Treaty* Committee for Environmental Protection, the International Seabed Authority, and Regional Fisheries Management Organizations were presented as potential oversight bodies for facilitating SEA. This raised concerns, however, on whether the continued division between regional and sectoral approaches would contribute to fragmentation.

Chapter 4 explored other considerations for SEA practice. While process-oriented SEA is seen as the most effective form of SEA, maximizing the benefits derived from the assessment, the conclusion in Chapter 3 was that neither can be prioritized. Instead, just as theory proposes, the usefulness of each will be determined by the context in which it operates. The perspective of the CBD Voluntary Guidelines on Biodiversity Impact Assessment (CBD Voluntary Guidelines)³⁰ was examined. The CBD Voluntary Guidelines stem from Article 14(1)(b) of the CBD, which requires States to “introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity on biological diversity are duly taken into account.”³¹ The CBD Voluntary Guidelines adopt an ecosystem-based approach to biodiversity-inclusive environmental assessments. It contains guidance that should be adopted to marine ABNJ; however, it cannot be considered the answer to the question of an SEA for marine ABNJ for two key reasons. First, while the CBD requires assessments of programs and policies, the guidelines itself is only voluntary. Second, the Voluntary Guidelines clearly state that its guidance is “generic” and not meant to be applied to achieve the full scope of the CBD.³² It was never its intention to be considered a technical document or provide procedure.³³

³⁰ “Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas”, CBD COP, 8th Meeting, UNEP/CBD/COP/8/27/Add.2 (2006) [CBD Voluntary Guidelines].

³¹ *Supra* note 17, art 14(1)(b).

³² *Supra* note 30 at 23.

³³ *Ibid.*

The conclusion in Chapter 4 was that experience and time would be key to achieving integrated SEAs. Citing Scotland's SEA experience,³⁴ it suggests that concurrent types of SEA be introduced for marine ABNJ. EIA-like SEA would encourage confidence and the building of expertise, and act as steppingstones to the eventual use of highly process-driven SEA. The latter would take a great deal more time to implement, as it requires a thorough understanding of all the moving pieces of a strategic decision-making process. Chapter 4 concluded with an examination of the "methodological framework"³⁵ for both EIA and SEA using actual examples from existing international practices.

In conclusion, this thesis explored the various facets that go into developing SEA for marine ABNJ. In answering the three sets questions introduced in Chapter 1, the intention was to highlight the strengths and weaknesses of marine ABNJ and how they will shape SEA practice for these areas. SEA is still in its formative stages for international use, especially that of a highly integrated approach that is tied into almost every stage of a decision-making process. It will take a combination of both existing approaches and new, creative, adaptive approaches to achieving successful SEA. However, in the face of the today's threats to the oceans, SEA is a valuable tool for the protection of the marine environment. It has strong ties to the same components of the law of the sea and international law that EIA does, and in some ways, is in a better position to uphold them, as well.

³⁴ Tony Jackson & Jennifer Dixon, "Applying Strategic Environmental Assessment to Land-use and Resource-management Plans in Scotland and New Zealand: A Comparison" (2006) 24:2 Impact Assessment and Project Appraisal 89, DOI: <10.3152/147154606781765255>.

³⁵ Richard K Morgan, *Environmental Impact Assessment: A Methodological Perspective* (Norwell, Massachusetts: Kluwer Academic Publishers, 2002) at 91; see also Neil Craik, *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge: Cambridge University Press 2008).

Bibliography

TREATIES AND AGREEMENTS

Convention on the Law of the Sea, 10 December 1982, 1833 UNTS 397 (entered into force 1 November 1994).

Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001).

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984).

Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, 24 November 1993, 2221 UNTS 91 (entered into force 24 April 2003).

Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising from Environmental Emergencies, 14 June 2005, (2006) 45 ILM 5.

Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 29 January 2000, 2226 UNTS 208 (entered into force 11 September 2003).

Convention for the Conservation of Southern Bluefin Tuna, 10 May 1993, 1819 UNTS 359 (entered into force 20 May 1994).

Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 25 June 1998, 2161 UNTS 447 (entered into force 30 October 2001).

Convention on Biological Diversity, 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993).

Convention on Environmental Impact Assessment in a Transboundary Context, 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997).

Convention on Fishing and Conservation of the Living Resources of the High Seas, 29 April 1958, 559 UNTS 285 (entered into force 20 March 1966).

Convention on the Conservation of Antarctic Marine Living Resources, “Conservation Measure 22-06” (2019).

Convention on the Continental Shelf, 29 April 1958, 499 UNTS 311 (entered into force 10 June 1964).

Convention on the High Seas, 29 April 1958, 450 UNTS 11 (entered into force 30 September 1962).

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 29 December 1972, 1046 UNTS 120 (entered into force 30 August 1975).

Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 17 March 1992, 1936 UNTS 269 (entered into force 6 October 1996).

Convention on the Territorial Sea and the Contiguous Zone, 28 April 1958, 516 UNTS 205 (entered into force 10 September 1964).

European Council , *Council Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment*, [2001] 2001/42/EC.

International Maritime Organization, “Resolution LP.4(8) on the Amendment to the London Protocol to Regulate the Placement of Matter for Ocean Fertilization and Other Marine Geoengineering Activities” (18 October 2013), IMO Resolution LP.4(8).

International Seabed Authority, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area* (2012), ISBA/18/A/11.

International Seabed Authority, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area* (2010), ISBA/16/A/12/Rev.

Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 29 October 2010, 3008 UNTS 3 (entered into force 12 October 2014).

North Pacific Fisheries Commission, “Conservation and Management Measure for Bottom Fisheries and Protection of VMEs in the NE Pacific Ocean” (2019) CMM 2019-06.

North Pacific Fisheries Commission, “Conservation and Management Measure for Bottom Fisheries and Protection of VMEs in the NW Pacific Ocean” (2019) CMM 2019-05.

Northwest Atlantic Fisheries Organization, “Conservation and Enforcement Measures” (2021) NAFO/COM Doc 21-01.

Optional Protocol of Signature Concerning the Compulsory Settlement of Disputes, 29 April 1958, 450 UNTS 169 (entered into force 30 September 1962).

Protocol on Environmental Protection to the Antarctic Treaty, 4 October 1991, (1991) 30 ILM 1461 (entered into force 14 January 1998).

Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, 21 May 2003, 2685 UNTS 140 (entered into force 11 July 2010).

Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 17 November 1996, (1997) 36 ILM 1 (entered into force 24 March 2006).

The Antarctic Treaty, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961).

United Nations Framework Convention on Climate Change, 9 May 1992, 1771 UNTS 107 (entered into force 21 March 1994).

Vienna Convention on the Law of Treaties, 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980).

DOCUMENTS

Convention on Biological Diversity, “Study of the Relationship Between the CBD and UNCLOS with Regard to the Deep Seabed” (2004), UNEP/CBD/SBT/TA/8/INF.

Convention on Biological Diversity, “Report of the Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction” (2009), UNEP/CBD/EW-EIAMA/2.

Convention on Biological Diversity, “The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets”, CBD COP, 10th Meeting, Agenda Item 4.4, UNEP/CBD/COP/DEC/X/2 (2010).

Convention on Biological Diversity, “Kunming-Montreal Global Diversity Framework”, CBD COP, UNEP/CBD/COP/15/L.25 (2022).

Declaration of Principles Governing the Sea-bed and the Ocean Floor, and the Subsoil thereof, Beyond the Limits of National Jurisdiction, GA Res 2749 (XXV), UNGAOR, 25th Sess, UN Doc A/Res/2749 (1971) 24.

Declaration of the United Nations Conference on the Human Environment, UNGAOR, 1972, UN Doc A/Conf.48/14/Rev.1 (1972).

Declaration on the Granting of Independence to Colonial Countries and People, GA Res 1514(XV), UNGAOR, 15th Sess, UN Doc A/Res/1514 (1961).

Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Seabed and the Ocean Floor, and the Subsoil thereof, UNGAOR, 22nd Sess, Agenda Item 92, UN Doc A/6695; A/C.1/952 (1967).

Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Seabed and the Ocean Floor, and the Subsoil thereof, GA Res 2340 (XXII), UNGAOR, 22nd Sess, UN Doc A/Res/2340 (1967) 14.

Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Seabed and the Ocean Floor, and the Subsoil thereof, GA Res 2467 (XXIII), UNGAOR, 23rd Sess, UN Doc A/Res/2467 (1968) 15.

International Law Commission, “Report of the International Law Commission on its Third Session” UN Doc A/CN.4/48 and Corr 1&2 (1951)

International Law Association, “New Delhi Declaration of Principles of International Law Relating to Sustainable Development”, UN Doc A/Conf.199/8 (6 April 2002).

International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (2006) UN Doc A/CN.4/L.682.

Report of the United Nations Conference on Environment and Development, UNGAOR, 1992, Annex I, UN Doc A/Conf.151/26/Rev.1 (1992).

Second Committee, “Working Paper of the Second Committee: Main Trends”, UN Doc A/CONF.62/C.2/WP.1 (1974).

Statute of the International Law Commission, GA Res 485(V), UNGAOR, UN Doc A/Res/174 (1947), amended by GA Res 485(V), UNGAOR, UN Doc A/Res/485 (1950); GA Res 984(X), UNGAOR, UN Doc A/Res/98 (1955); GA Res 985(X), UNGAOR, UN Doc A/Res/985 (1955); and UNGAOR, UN Doc A/36/39 (1981).

UNCLOS III, “Summary Records of Meetings of the First Committee – 13th Meeting”, UNGAOR, UN Doc A/Conf.62/C.1/SR.13 (1974).

UNCLOS III, “Summary Records of Meetings of the First Committee – 14th Meeting”, UNGAOR, UN Doc A/Conf.62/C.1/SR.14 (1974).

UNCLOS III, “Summary Records of Plenary Meetings – 20th Meeting”, UN Doc A/Conf.62/C.2/SR.20 (1974).

“International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2017) GA Res 72/29, UNGAOR, 72nd Sess, Agenda Item 77a, UN Doc A/Res/72/249.

“International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2017) GA Res 72/29, UNGAOR, 72nd Sess, Agenda Item 77a, UN Doc A/Res/72/249.

“Letter dated 13 February 2015 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly”, UNGAOR, 69th Sess, Agenda Item 74(a), UN Doc A/69/780 (2015).

“Oceans and the Law of the Sea: Report of the Secretary General – Addendum”, UNGAOR, 60th Sess, Agenda Item 76(a), UN Doc A/60/63/Add.1 (2005).

“Oceans and the Law of the Sea”, GA Res 59/24, UNGAOR, 49th Sess, Agenda Item 49(a), UN Doc A/Res/59/24 (2005).

“Report of the Preparatory Committee Established by General Assembly Resolution 69/292”, UNGAOR, 4th Sess, UN Doc A/AC.287/2017/PC.4/2 (2017).

"Draft Articles on the Breadth of the Territorial Sea, Straits, and Fisheries Submitted to Subcommittee II by the United States of America", UNGAOR, 26th Sess, UN Doc A/8421 (1971).

“A Constitution for the Oceans”, Remarks by Tommy TB Koh of Singapore, President of the Third United Nations Conference on the Law of the Sea, online: <www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf>.

“Chair’s Overview of the Third Session of the Preparatory Committee”, Preparatory Committee established by UNGA Res 69/292, 3rd Session, online: <un.org/depts/los/biodiversity/prepcom_files/Chair_Overview.pdf>.

“Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2023), online: <un.org/bbnj/sites/www.un.org.bbnj/files/draft_agreement_advanced_unedited_for_posting_v1.pdf>.

- “Draft Text of an Agreement under United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction”, IGC on the BBNJ, 3rd Sess, UN Doc A/Conf.232/2019/6 (2019).
- “Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Seabed and the Ocean Floor, and the Subsoil thereof” (1 November 1967) UNGAOR, 22nd Sess, Agenda Item 92, UN online: un.org/Depts/los/convention_agreements/texts/pardo_ga1967.pdf.
- “Intergovernmental Conference on an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction”, Intergovernmental Conference (IGC) on the BBNJ, 1st Sess, UN Doc A/Conf.232/2018/3 (2018).
- “International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction: Draft Resolution”, UNGAOR, UN Doc A/72/L.7 (2017).
- “President’s Aid to Negotiations”, IGC on the BBNJ, 2nd Sess, UN Doc A/Conf.232/2019/1 (2018).
- “Report of the Committee on the Peaceful Uses of the Seabed and the Ocean Floor Beyond the Limits of National Jurisdiction”, UNGAOR, 27th Sess, UN Doc A/8721(Supp) (1972).
- “Report of the International Law Commission on the work of its eighth Session” (UN Doc A/3159) in Yearbook of the International Law Commission 1956, vol 2, (New York: UN, 1956).
- “Sustainable Fisheries, Including Through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea”, GA Res 61/105, UNGAOR, 61st Sess, Agenda Item 71b, UN Doc A/Res/61/105 (2006).
- “Sustainable Fisheries, Including Through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea”, GA Res 64/72, UNGAOR, 64th Sess, Agenda Item 76b, UN Doc A/Res/64/72.
- “Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen M Schwebel, Special Rapporteur”, UN Doc A/CN.4/348 (1982).

INTERNATIONAL JURISPRUDENCE

Chagos Marine Protected Area (Mauritius v United Kingdom) (2015), ICGJ 486.

Gabcikovo-Nagymaros Project (Hungary v Slovakia), Judgement, [1997] ICJ Rep 7.

Indus Waters Kishenganga Arbitration (Pakistan v India), Final Award of 20 December 2013, ICGJ 478 (PCA 2013).

Iron Rhine Arbitration (Belgium v Netherlands) (2005), Award, ICGJ 373.

Lac Lanoux Arbitration (France v Spain) (1957), 24 ILR 101.

Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, [1996] ICJ Rep 226.

MOX Plant Case (Ireland v United Kingdom) (2008), PCA Case No 2002-01.

Pulp Mills on River Uruguay (Argentina v Uruguay), Judgement, [2010] ICJ Rep 14.

Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC), Advisory Opinion of 2 April 2015, ITLOS Reports 2015, 4.

Responsibilities and Obligations of States with respect to Activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, 10.

South China Sea Arbitration (The Republic of Philippines v The People's Republic of China) (2016), Award, ICGJ 495.

Southern Bluefin Tuna Cases (New Zealand v Japan, Australia v Japan), Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999, 280.

Trail Smelter Case (United States v Canada) (1938 and 1941) 3 RIAA 1905.

SECONDARY LITERATURE

Acharibasam, John B & Bram Noble, "Assessing the Impact of Strategic Environmental Assessment" (2014) 32:3 Impact Assessment and Project Appraisal 177.

Armeni, Chiara, "Global Experimentalist Governance, International Law and Climate Change Technologies" (2015) 64:4 International and Comparative Law Quarterly 875, DOI: <10.1017/S0020589315000408>.

Ban, Natalie C et al, "Better Integration of Sectoral Planning and Management Approaches for the Interlinked Ecology of the Open Oceans" (2014) 49 Marine Policy 127.

Biehler, Gernot, *Procedures in International Law* (Berlin: Springer 2008).

- Birnie, Patricia et al, *International Law & the Environment*, 3rd ed (New York: Oxford University Press, 2009).
- Bodansky, Daniel, “Scientific Uncertainty and the Precautionary Principle” (1991) 33:7 *Environment* 4, DOI: <10.1080/00139157.1991.9929978>.
- Boyle, Alan E, “Some Reflections on the Relationship of Treaties and Soft Law” (1999) 48:4 *International and Comparative Law Quarterly* 901, DOI: <10.1017/S0020589300063739>.
- Boyle, Alan “Further Development of the Law of the Sea Convention: Mechanisms for Change” (2005) 54 *International Comparative Law Quarterly* 563, DOI: <10.1093/iclq/lei018 >.
- Boyle, Alan, “Developments in the International Law of Environmental Impact Assessments and their Relation to the Espoo Convention” (2011) 20:3 *Reciel* 227, DOI: <10.1111/j.1467-9388.2011.00726.x>.
- Bremer, Nicolas “Post-environmental Impact Assessment Monitoring of Measures or Activities with Significant Transboundary Impact: As Assessment of Customary International Law” (2017) 26:1 *RECIEL* 80, DOI: <10.1111/reel.12194>.
- Brown, AL & Riki Therivel, “Principles to Guide the Development of Strategic Environmental Assessment Methodology” (2000) 18:3 *Impact Assessment and Project Appraisal* 183.
- Brownlie, Ian, *Principles of Public International Law*, 4th ed (Oxford: Clarendon Press, 1990).
- Brunnée, Jutta “The Rule of International (Environmental) Law and Complex Problems” in Heike Kreiger, George Nolte and Andreas Zimmermann, eds, *The International Rule of Law: Rise or Decline?* (Oxford: Oxford University Press, 2019) 211.
- Calley, Darren S, *Market Denial and International Fisheries Regulation: The Targeted and Effective Use of Trade Measures Against the Flag of Convenience Fishing Industry* (New York: Brill, 2011)
- Camino, Hugo & Michael R Molitor, “Progressive Development of International Law and the Package Deal” (1985) 79:4 *American Journal of International Law* 871, DOI: <10.2307/2201830>.
- Cerny, RJ & WR Sheate, “Strategic Environmental Assessment: Amending the EA Directive” (1992) 22:3 *Environmental Policy and Law* 154.
- Chircop, Aldo, “Implementation of Article 82 of the United Nations Convention on the Law of the Sea: The Challenge for Canada” in Catherine Banet, ed, *The Law of the Seabed: Access, Uses, and Protection of Seabed Resources* (Leiden: Brill Publishers, 2020) 371.

- Christy, FT and A Scott, *The Commonwealth in Ocean Fisheries* (Baltimore: Johns Hopkins Press, 1965).
- Craik, Neil *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge: Cambridge University Press 2008).
- Craik, Neil, “The Duty to Cooperate in the Customary Law of Environmental Impact Assessment” (2020) 69:1 International and Comparative Law Quarterly 239, DOI: <10.1017/S0020589319000459>.
- Craik, Neil & Kristine Gu, “Strategic Environmental Assessment in Marine Areas beyond National Jurisdiction: Implementing Integration” (2022) 37 International Journal of Marine and Coastal Law 189.
- Craik, Neil and Kristine Gu, “Implementing Environmental Impact Assessment for Deep Sea Mining” (30 January 2020) Pew Charitable Trusts White Paper, online (pdf): *Pew* <www.pewtrusts.org/-/media/assets/2021/06/craik--gu--implementing-environmental-impact-assessment-for-deep-sea-mining.pdf>.
- Dalal-Clayton, Barry & Barry Sadler, *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience* (London: Earthscan 2005).
- Dalkmann, Holger, Rodrigo Jiliberto Herrera & Daniel Bongardt, “Analytical Strategic Environmental Assessment (ANSEA) Developing a New Approach to SEA” (2004) 24 Environmental Impact Assessment 385, DOI: <10.1016/j.eiar.2003.10.021>.
- Druel, Elisabeth and Kristina Gjerde, “Sustaining Marine Life Beyond Boundaries: Options for an Implementing Agreement for Marine Biodiversity Beyond National Jurisdiction under the United Nations Convention on the Law of the Sea” (2014) 49 Marine Policy 90.
- Duncan French, Duncan, “Developing States and International Environmental Law: The Importance of Differentiated Responsibilities” (2000) 49:1 International and Comparative Law Quarterly 35.
- Europa, “Strategic Environmental Assessment”, online: *Europa* <https://environment.ec.europa.eu/law-and-governance/environmental-assessments/strategic-environmental-assessment_en>.
- Fedder, Bevis, *Marine Genetic Resources, Access, and Benefits Sharing: Legal and Biological Perspectives* (New York: Routledge 2013).
- Fischer, Thomas B, *The Theory and Practice of Strategic Environmental Assessment: Towards a More Systematic Approach* (New York: Earthscan 2007).

- Freestone, David, “Satya Nandan’s Contribution to the Development of the Precautionary Approach in International Law” in Michael W Lodge & Myron H Nordquist, eds, *Peaceful Order in the World’s Oceans: Essays in Honour of Satya N Nandan* (Leiden: Brill 2014) 313.
- Freestone, David, “An Unfinished Agenda: Governance of Areas Beyond National Jurisdiction” in Keyuan Zou, ed, *Global Commons and the Law of the Sea* (Leiden: Brill 2018) 209.
- Friedheim, Robert L “Fishing Negotiations at the Third United Nations Conference on the Law of the Sea” (1991) 22:3 *Ocean Development and International Law* 209, DOI: <10.1080/00908329109545957>.
- Frölicher, Thomas L et al, “Sources of Uncertainties in 21st Century Projections of Potential Ocean Ecosystem Stressors” (2016) 30:8 *Global Biogeochemical Cycles* 1224, DOI: <10.1002/2015GB005338>.
- Fundingsland Tetlow, Monica and Marie Hanusch, “Strategic Environmental Assessment: The State of the Art” (2012) 30:1 *Impact Assessment and Project Appraisal* 15, DOI: <10.1080/14615517.2012.666400>.
- Fung, Archon, “Putting the Public Back into Governance: The Challenges of Citizen Participation and its Future” (2015) 75:4 *Public Administration Review* 513, DOI: <10.1111/puar.12361>.
- Gjerde, Kristina, “Challenges to Protecting the Marine Environment Beyond National Jurisdiction” (2012) 27 *Marine and Coastal Law* 839, DOI: <10.1163/15718085-12341255>.
- Glasson, John, Riki Therivel & Andrew Chadwick, *Introduction to Environmental Impact Assessment*, 3rd ed (London, UK: Routledge, 2013).
- Gollner, Sabine et al, “Resilience of Benthic Deep-Sea Fauna to Mining Activities” (2017) 129 *Marine Environmental Research* 76.
- Gustavo Vicente, Gustavo & Maria R Partidário, “SEA – Enhancing Communication for Better Environmental Decisions” (2006) 26 *Environmental Impact Assessment Review* 696, DOI: <10.1016/j.eiar.2006.06.005>.
- Gustavson, Kent R, “Applying the Precautionary Principle in Environmental Assessment: The Case of Reviews in British Columbia” (2003) 46:3 *Journal of Environmental Planning and Management* 365, DOI: <10.1080/0964056032000096884>.
- Hassanali, Kahlil & Robin Mahon, “Encouraging Proactive Governance of Marine Biological Diversity of Areas Beyond National Jurisdiction through Strategic Environmental Assessment” (2022) 136 *Marine Policy* 104932.

- Heidar, Tomas H, “Introductory Remarks” in Myron H Nordquist et al, eds, *Law, Science & Ocean Management* (Leiden: Martinus Nijhoff Publishers 2007) 619.
- Hubert, Anna-Maria and Neil Craik, “Towards Normative Coherence in International Law of the Sea for the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction” (2018), online: <<https://site.uit.no/nclos/2018/02/01/towards-normative-coherence-in-the-international-law-of-the-sea-for-the-conservation-and-sustainable-use-of-marine-biological-diversity-of-areas-beyond-national-jurisdiction>>.
- IISD, “Summary of the First Session of the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 4—17 September 2018” (20 September 2018), online (pdf): *Earth Negotiations Bulletin* <<http://enb.iisd.org/oceans/bbnj/igc1/pdf>>.
- IISD, “Summary of the Resumed Fifth Session of the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 20 February – 4 March 2023” (7 March 2023), online (pdf): *Earth Negotiations Bulletin* <<https://enb.iisd.org/sites/default/files/2023-03/enb25250e.pdf>>.
- Intergovernmental Panel on Climate Change, “Special Report on the Ocean and Cryosphere in a Changing Climate” (September 2019), online: *IPCC* <www.ipcc.ch/srocc>.
- Intergovernmental Panel on Climate Change, “The Ocean and Cryosphere in a Changing Climate: A Special Report of the Intergovernmental Panel on Climate Change” (2019), online: *IPCC* <www.ipcc.ch/srocc>.
- International Seabed Authority, “Recommendations for the Guidance of Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Marine Minerals in the Area” (2020) ISBA/25/LTC/6/Rev.1.
- Ismaeel, Walaa SE & Marwa Adel Elsayed, “The Interplay of Environmental Assessment Methods; Characterising the Institutional Background in Egypt” (2018) 20:1 Journal of Environmental Assessment Policy and Management 1850003.
- Jackson, Tony & Jennifer Dixon, “Applying Strategic Environmental Assessment to Land-use and Resource-management Plans in Scotland and New Zealand: A Comparison” (2006) 24:2 Impact Assessment and Project Appraisal 89, DOI: <10.3152/147154606781765255>.
- Jaeckel, Aline, “Strategic Environmental Planning for Deep Seabed Mining in the Area” (2020) 114 Marine Policy 103423.

- Kao, Shih-Ming, “International Actions Against IUU Fishing and the Adoption of National Plans of Action” (2015) 46:1 *Ocean Development and International Law* 2.
- Kent, Avidan, “Implementing the Principle of Policy Integration: Institutional Interplay and the Role of International Organizations” (2014) 14 *International Environmental Agreements* 203, DOI: <10.1007/s10784-013-9224-3>.
- Kørnøv, Lone & Wil AH Thissen, “Rationality in Decision- and Policy-Making: Implications for Strategic Environmental Assessment” (2000) 18:3 *Impact Assessment and Project Appraisal* 191, DOI: <10.3152/147154600781767402>.
- Lee, N & F Walsh, “Strategic Environmental Assessment: An Overview” (1992) 7:3 *Project Appraisal* 126.
- Levin, Levin et al, “Defining ‘Serious Harm’ to the Marine Environment in the Context of Deep-Seabed Mining” (2016) 74 *Marine Policy* 245, DOI: <10.1016/j.marpol.2016.09.032>.
- Levin, Lisa, Diva Amon and Hannah Lily, “Challenges to the Sustainability of Deep-Seabed Mining” (2020) 3 *Nature Sustainability* 784, DOI: <10.1038/s41893-020-0558-x>.
- Lobos, Victor & Maria Partidário, “Theory Versus Practice in Strategic Environmental Assessment (SEA)” (2014) 48 *Environmental Impact Assessment Review* 34, DOI: <10.1016/j.eiar.2014.04.004>.
- Ma, Deqiang, Qinhua Fang & Song Guan, “Current Legal Regime for Environmental Impact Assessment in Areas Beyond National Jurisdiction and its Future Approaches (2016) 56 *Environmental Impact Assessment Review* 23.
- Marsden, Simon, “Introducing Strategic Environmental Assessment to the Madrid Protocol: Lessons from International Experience” (2011) 1:1 *Polar Journal* 36 at 45.
- Marsden, Simon, “The Espoo Convention and Strategic Environmental Assessment Protocol in the European Union: Implementation, Compliance, Enforcement and Reform” (2011) 20:3 *RECIEL* 267.
- McCarthy, Ciarán and Bénédicte Sage-Fuller, “Sustainable Shipping” in Markus Salomon and Till Markus, eds, *Handbook on Marine Environment Protection: Science, Impacts and Sustainable Management*, vol 1 and 2 (Cham: Springer, 2018) 695.
- McGee, Jeffrey, Kerry Brent & Wil Burns, “Geoengineering the Oceans: An Emerging Frontier in International Climate Change Governance” (2018) 10:1 *Australian Journal of Maritime and Ocean Affairs* 67, DOI: <10.1080/18366503.2017.1400899>.

- Mickelson, Karin, "Common Heritage of Mankind as a Limit to Exploitation of the Global Commons" (2019) 30:2 *European Journal of International Law* 635, DOI: <10.1093/ejil/chz023>.
- Miller, Kathryn A et al, "An Overview of Seabed Mining Including the Current State of Development, Environmental Impacts, and Knowledge Gaps" (2018) 4 *Frontiers in Marine Science*, DOI: <10.3389/fmars.2017.00418>.
- Morgan, Richard K, *Environmental Impact Assessment: A Methodological Perspective* (Norwell, Massachusetts: Kluwer Academic Publishers, 2002).
- Nanda, Ved & Georg Pring, *International Environmental Law and Policy for the 21st Century*, 2nd ed, (Leiden: Brill 2012).
- Nicholson, Graham, "The Common Heritage of Mankind and Mining: An Analysis of the Law as to the High Seas, Outer Space, the Antarctic and World Heritage" (2002) 6 *New Zealand Journal of Environmental Law* 177.
- Noble, Bram & Kelechi Nwanekezie, "Conceptualizing Strategic Environmental Assessment: Principles, Approaches and Research Directions" (2017) 62 *Environmental Impact Assessment Review* 165.
- Odeke, Ademun "An Examination of Bareboat Charter Registries and Flag of Convenience Registries in International Law" (2005) 34 *Ocean Development International Law* 339, DOI: <10.1080/00908320500308726>.
- Organisation for Economic Co-operation and Development, "Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-operation" (2006) OECD DAC Guidelines and Reference Series.
- Ostrom, Elinor, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press 1990).
- Oude Elferink, Alex G "Environmental Impact Assessment in Areas Beyond National Jurisdiction" (2012) 27 *Marine and Coastal Law* 449, DOI: <10.1016/j.eiar.2015.08.009>.
- Owens, Susan Tim Rayner & Olivia Bina, "New Agenda for Appraisal: Reflections on Theory, Practice, and Research" (2004) 36:11 *Environmental & Planning A* 1943.
- Partidário, Maria R, "Strategic Environmental Assessment: Key Issues Emerging from Recent Practice" (1996) 16:1 *Environmental Impact Assessment Review* 31, DOI: <10.1016/0195-9255(95)00106-9>.
- Partidário, Maria R, "Strategic Environmental Assessment Better Practice Guide: Methodological Guidance for Strategic Thinking in SEA" (2012), online (pdf): *International*

Association for Impact Assessment <www.iaia.org/pdf/special-publications/SEA%20Guidance%20Portugal.pdf>.

Pulkowski, Dirk, *The Law and Politics of International Regime Conflict* (Oxford: Oxford University Press 2014).

Rachovitsa, Adamantia, “The Principle of Systemic Integration in Human Rights Law” (2017) 66 *International Law and Comparative Quarterly* 557, DOI: <10.1017/S0020589317000185>.

Redgwell, Catherine, *Intergenerational Trust and Environmental Protection* (Manchester: Manchester University Press 1999).

Redgwell, Catherine, “Treaty Evolution, Adaptation and Change: Is the LOSC 'Enough' to Address Climate Change Impacts on the Marine Environment?” (2019) 34:3 *International Journal of Marine and Coastal Law* 440, DOI: <10.1163/15718085-13431096>.

Runhaar, Hens, & Peter PJ Driessen, “What Makes Strategic Environmental Assessment Successful Environmental Assessment? The Role of Context in the Contribution of SEA to Decision-Making” (2007) 25:1 *Impact Assessment and Project Appraisal* 2, DOI: <10.3152/146155107X190613>.

Sadler, Barry & Ausra Jurkeviciute, “SEA in the European Union” in Barry Sadler et al, eds, *Handbook of Strategic Environmental Assessment* (New York: Earthscan 2011) 121.

Sander, Gunnar, “International Legal Obligations for Environmental Impact Assessment and Strategic Environmental Assessment in the Arctic Ocean” (2016) 31:1 *International Journal of Marine and Coastal Law* 88, DOI: <10.1163/15718085-12341385>.

Sands, Philippe, *Principles and Rules Establishing Standards* (Manchester: Manchester University Press 1995).

Sands, Philippe & Jacqueline Peel, *Principles of International Environmental Law*, 4th ed (Cambridge: Cambridge University Press 2018).

Schmidt, Michael, Elsa João and Eike Albrecht, eds, *Implementing Strategic Environmental Assessment* (Berlin: Springer, 2005).

Schrijver, Nico, “Managing the Global Commons: Common Good or Common Sink?” (2016) 37:7 *Third World Quarterly* 1252, DOI: <10.1080/01436597.2016.1154441>.

Sheate, William R, “SEA and Environmental Planning and Management Tools” in Barry Sadler et al, eds, *Handbook of Strategic Environmental Assessment* (New York: Earthscan 2011) 243.

- Steinemann, Anne, “Improving Alternatives for Environmental Impact Assessment” (2000) 21:1 Environmental Impact Assessment Review 3, DOI: <10.1016/S0195-9255(00)00075-5>.
- Stone, Christopher D “Common but Differentiated Responsibilities in International Law” (2004) 98:2 American Journal of International Law 276, DOI: <10.2307/3176729>.
- Therivel, Riki, “Systems of Strategic Environmental Assessment” (1993) 13 Environmental Impact Assessment Review 145, DOI: <10.1016/0195-9255(93)90029-B>.
- Therivel, Riki et al, *Strategic Environmental Assessment* (London: Earthscan Publications 1992) at 18—20.
- Therivel, Riki & Maria Rosario Partidario, *The Practice of Strategic Environmental Assessment* (New York: Earthscan 1996).
- Treves, Tullio, “1958 Geneva Conventions on the Law of the Sea” (2008), online: <legal.un.org/avl/pdf/ha/gclos/gclos_e.pdf>.
- Treves, Tullio, “United Nations Convention on the Law of the Sea” (2008), online: <legal.un.org/avl/pdf/ha/uncls/uncls_ph_e.pdf>.
- UNECE, *Practical Guidance on Reforming Legal and Institutional Structures with Regard to the Application of the Protocol on Strategic Environmental Assessment* (2017).
- United Nations Environment Programme, *Assessing Environmental Impacts: A Global Review of Legislation* (Nairobi, Kenya: UN Environment, 2018).
- United Nations Environmental Programme, “The State of Biodiversity in the Caribbean Community: A Review of the Progress Towards the Aichi Biodiversity Targets” (2018).
- United Nations, *The Second World Ocean Assessment*, vol I (New York: UN 2021).
- Verheem R, & J Tonk, “Strategic Environmental Assessment: One Concept, Multiple Forms” (2000) 18:3 Impact Assessment and Project Appraisal 177, DOI: <10.3152/147154600781767411>.
- Victor, Dennis & P Agamuthu, “Policy Trends of Strategic Environmental Assessment in Asia” (2014) 41 Environmental Science and Policy 63, DOI: <10.1016/j.envsci.2014.03.005>.
- Vidmar, Jure, “Norm Conflicts and Hierarchy in International Law: Towards a Vertical International Legal System?” in Erika De Wet & Jure Vidmar, eds, *Hierarchy in International Law: The Place of Human Rights* (Oxford: Oxford University Press 2012) 13.

- von Seht, Hauke, “Requirements of a Comprehensive Strategic Environmental Assessment System” (1999) 45 *Landscape and Urban Planning* 1, DOI: <10.1016/S0169-2046(99)00026-2>.
- Vorbach, J, “The Vital Role of Non-Flag State Actors in the Pursuit of Safer Shipping” (2001) 32 *Ocean Development International Law* 27.
- Wang, Huizhi et al, “Measurement Indicators and an Evaluative Approach for Assessing Strategic Environmental Assessment Effectiveness” (2012) 23 *Ecological Indicators* 413.
- Warner, Robin, *Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Law Framework* (Leiden: Brill 2009).
- Willaert, Klaas, “Transparency in the Field of Deep Sea Mining: Filtering the Murky Waters” (2022) 135 *Marine Policy* 104840, DOI: <10.1016/j.marpol.2021.104840>.
- Winter, Gerd, “International Principles of Marine Environmental Protection” in Markus Salomon and Till Markus, eds, *Handbook on Marine Environment Protection: Science, Impacts and Sustainable Management*, vol 1 and 2 (Cham: Springer, 2018) 585.
- World Bank, “Strategic Environmental Assessment for Policies: An Instrument for Good Governance” (2008).
- Yankov, Alexander, “The Law of the Sea Convention and Agenda 21: Marine Environmental Implications” in Alan Boyle and David Freestone, *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford: Oxford University Press, 2001) 271.
- Zhou, Yadong et al, “Delineating Biogeographic Regions in Indian Ocean Deep-sea Vents and Implications for Conservation” (2022) 28:12 *Diversity and Distributions* 2858.
- Zhu, Da & Jiang Ru, “Strategic Environmental Assessment in China: Motivations, Politics, and Effectiveness” (2008) 88 *Journal of Environmental Management* 615, DOI: <10.1016/j.jenvman.2007.03.040>.