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Book Review of Nengye Liu and Shirley V. Scott (eds.), *The Law of the Sea and the Planetary Crisis*

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The book under review is Nengye Liu and Shirley V. Scott (eds.), *The Law of the Sea and the Planetary Crisis*, Routledge, 2025, ISBN 9781032855325 hb, 9781032855349 pb, 9781003518570 ebk [1]. This book is a collaborative effort featuring the work of eleven scholars, emerging from an international workshop on “Developing Robust and Sustainable Ocean Regimes for Uncertain Futures” held in April 2023 at Singapore Management University’s Yong Pung How School of Law. This endeavor is of considerable interdisciplinary significance, as it explores the complex relationship between global ocean governance and the increasingly pressing planetary environmental crisis. It also demonstrates the rapid dissemination of the concept of “planetary boundary” into various policy domains [2]. A team of distinguished scholars from the fields of international law, environmental science, and ocean policy was convened to conduct a comprehensive exploration of the adaptation and reform trajectories of the existing international law of the sea framework. The following text is intended to provide a comprehensive overview of the relevant subject matter.

The book is predicated on two fundamental observations. First, it is

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imperative to take the United Nations Convention on the Law of the Sea (UNCLOS) as a foundational framework, not as a panacea. Second, it is crucial to address the existing institutional and legal gaps. It emerges from the pressing necessity to confront the intertwined environmental challenges that imperil ocean ecosystems and global sustainability. As delineated in Chapter 1, the “triple challenge”—climate change, biodiversity loss, and pollution—forms the core of the book’s inquiry (p. 3). These challenges are interconnected and exacerbate one another, posing a threat to the health and sustainability of our oceans [3,4] and creating a “polycrisis” that demands integrated legal and governance solutions. The authors argue that traditional fragmented or sectoral approaches to ocean governance are insufficient to address these interdependencies, calling for a reevaluation of UNCLOS and the development of new legal frameworks. In the context of the “triple planetary crisis” concept proposed by the United Nations Environment Programme [5], this scholarly work systematically examines the role of UNCLOS and the various mechanisms derived from it in addressing contemporary oceanic challenges.

The book is structured into three sections, each exploring a component of the aforementioned triple challenge through case studies and theoretical frameworks. The initial section of the book, which encompasses Chapters 2 through 4, is dedicated to the subject of climate change. This section provides a comprehensive examination of the legal regulations pertaining to ocean acidification, offshore wind development, and deep-sea mining. It meticulously analyzes the inherent tensions between technological innovation and climate objectives [6]. A total of three chapters address the intricate relationship between environmental sustainability and the imperative of decarbonization [7]. These chapters offer nuanced and well-considered insights into the regulatory challenges that lie ahead.

In Chapter 2, Annika Frosch offers a cogent argument for why conventional law-making processes are inadequate in their ability to respond expeditiously to the rapidly evolving issues in the marine environment [8]. As posited by the author, “oceans are changing fast” (p. 6), a well-known fact that is often overlooked during the international law-making process. In epochs characterized by agrarian production relations, international law was predominantly centered on terrestrial legal frameworks [9,10]. The advent of industrial society gave rise to the law of the sea, which emerged as a critical domain, prompting a reconfiguration of legal norms. “The laws governing the oceans must be flexible and adaptable to keep up with these changes.” (p. 7) She proposes a novel governance framework termed “Global Experimentalist Governance”, which aims to address the challenges posed by complex and uncertain environmental issues, such as ocean acidification, with greater adaptability. In Chapter 3, Gabriela Argüello posits that marine spatial planning (MSP) can serve as a conduit for harmonizing offshore wind development with fisheries and biodiversity conservation. A comprehensive analysis of the national approaches concerning MSP in China, Germany, and Scotland discloses the

multifaceted jurisdictional intricacies and the precarious equilibrium necessary for promoting renewable energy while ensuring the preservation of marine biodiversity [11]. This analysis aims to achieve the “resilient law of the sea” (p. 36). In Chapter 4, David Leary adeptly links the mounting demand for minerals to a comprehensive array of overarching climate objectives [12]. Leary has indicated that climate change and deep-sea mining represent two “wicked environmental challenges that are closely intertwined” (p. 58). An integrated approach is imperative to strike a balance between the imperative for minerals to facilitate the transition to a low-carbon economy and the imperative for the preservation of the deep-sea environment. The International Seabed Authority is responsible for regulating deep-sea mining. However, its progress in developing effective environmental regulations has been deemed to be “very much falling behind where it should be” (p. 59). The resilience of UNCLOS is being called into question.

The second part of the book, which encompasses Chapters 5-7, is devoted to the theme of biodiversity and regime interaction. In Chapter 5, Kristine Elfrida Dalaker employs Ostrom’s theoretical framework to analyze the implementation of international agreements aimed at marine biodiversity protection, which features polycentric governance [13]. The author convincingly argues that “Ostrom’s studies on open access common-pool resources are particularly relevant” (p. 86) when discussing the implementation of the 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 (BBNJ Agreement). In Chapter 6, Ethan Beringen conducts a critical examination of the exclusion of high seas fisheries from the negotiations for and the final text of the BBNJ instrument. Utilising the theoretical framework of regime interaction theory and the metaphor of the “whale in the room” (p. 108), the author conducts a meticulous analysis of the divergent narratives between international fisheries law and international biodiversity law, underscoring the significant yet conspicuously absent issue of high seas fisheries during the BBNJ negotiations [14]. It concludes that points of commonality and overlap between regimes should be acknowledged and clarified, rather than precluded. In Chapter 7, Carina Costa de Oliveira, Harvey Mpoto Bombaka, and Ana Flávia Barros-Platiau present a thorough historical and legal examination of the principle of the common heritage of mankind (CHM) [15]. In order to comprehend the contemporary debates surrounding deep seabed mining and marine biodiversity conservation, it is essential to trace the principle’s evolution from its origins in 1967 (p. 145) to its present-day legal standing. The authors advance the argument that the CHM principle has the capacity to play a pivotal role in achieving a balance between commercial mining interests and biodiversity conservation, thereby facilitating sustainable development.

The third part of the book is dedicated to the theme of Pollution and Compliance Mechanisms (Chapters 8-9). In Chapter 8, Ethan Beringen and

Nengye Liu examine the adequacy of the existing international legal framework, particularly through the International Maritime Organization (IMO), to address vessel-source pollution and accelerate the green shipping transition [16]. The authors of this study emphasise the interaction between the IMO conventions and UNCLOS, highlighting the respective mandates of each and the manner in which they collaborate to regulate shipping activities. Furthermore, the discussion encompasses the legal obligations of states under UNCLOS and IMO conventions, with particular reference to the recent *Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law* [17,18]. In Chapter 9, Rebecca Prentiss Pskowski conducts an analysis of the evolution of institutional mechanisms within the IMO to address challenges in enforcing its treaties, with a particular focus on the implications of climate change and marine pollution. The text introduces the concept of regime building through compliance mechanisms to explain how the IMO maintains its relevance in the face of global crises. The author puts forward the proposition that there should be integration of compliance mechanisms with broader environmental objectives and that the IMO should adopt more binding, technology-neutral rules.

In the conclusion chapter, Shirley V. Scott and Nengye Liu synthesize key themes from the book, focusing on the challenges of designing “robust, effective, flexible and sufficiently resilient” (p. 215) ocean regimes to address the triple crisis of climate change, biodiversity loss, and pollution. The chapter under scrutiny places significant emphasis on the tension between two concepts: robustness, which is defined as institutional strength, and effectiveness, which is defined as the achievement of environmental goals.

This collaborative effort has yielded notable highlights and insights. Firstly, it serves to confirm the “living instrument” character of UNCLOS [19]. Secondly, it emphasises the dialectic of conflict and synergy. The recurrence of “user-environment” and “user-user” conflicts (for example, fisheries vs. wind energy, mining vs. ecology) highlights the need for the law to construct flexible rules in the midst of multiple interests. Thirdly, it calls for a re-evaluation of the ethical considerations inherent in the governance of technology. With regard to technologies such as deep-sea mining and marine geoengineering, the authors argue for legal frameworks that take into account the inherent scientific uncertainty, thus avoiding a “pollute first, treat later” approach that would lead to a state of dependency. Nevertheless, there are still some limitations and room for growth [20]. Despite the coverage of multi-country cases, the perspective on the southern hemisphere and small island states is still insufficient, e.g., the direct impacts of climate change on the Pacific island countries are not sufficiently elaborated, and the issue of climate justice has not been taken into consideration. Secondly, it’s theoretical integration challenges. Some chapters are slightly rigid in their methodological articulation, and the interdisciplinary framework needs to be further integrated. Thirdly, it’s the ambiguity of the practical path. Despite the thorough analysis of the

problem, specific policy recommendations still need to be refined, especially at the level of power distribution and implementation supervision.

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