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Legal Solutions for Oceans in Change

Mapping Out the Way Forward

Froukje Maria Platjouw and Alla Pozdnakova

The main aim of the book is to take the further, crucial, step of identifying and critically examining areas of law that need to change or evolve in order to respond to the challenges of governing the oceans of the future. Our ambition is thus not only to explain ocean-related environmental, legal and governance problems but to propose solutions on how to deal with those problems. Throughout the book, the chapters have discussed whether legal frameworks are sufficiently effective and adequate to address (new) challenges and pressures threatening the resilience of our oceans. Several pressures and challenges have been identified as currently insufficiently addressed under existing legal frameworks and in severe need of improvement to strengthen the rule of law for oceans in those areas. These include, for example, climate change and its interaction with and impact on ocean dynamics and functioning; emissions from ships; plastic pollution; fisheries and other exploitative use of living resources affecting biodiversity; as well as novel activities and uses of oceans such as geoengineering and spaceflight activities.

Four main questions have guided the contents of this book as well as its underlying structure: (1) How should law deal with existing and novel pressures on the marine environment?; (2) How should we balance exploitation and protection of oceans to ensure long-term resilience of marine ecosystems?; (3) How could we improve implementation, compliance and enforcement?; (4) What challenges and solutions exist in regional seas and ocean areas? Overall, these perspectives provide novel insights into the adequacy of our current legal, governance and compliance mechanisms and identify solutions needed to strengthen the rule of law for oceans from a broad range of viewpoints. Specific solutions and recommendations will be summarized in the second part of this chapter.

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25.1 CROSS-CUTTING ISSUES AFFECTING THE RULE OF LAW FOR OCEANS

Despite the comprehensiveness of the book and its diversity of viewpoints, several cross-cutting rule of law challenges can be identified among chapters. The first major challenge is the tension between the need for flexibility and adaptivity in law and governance while the rule of law ideally requires predictability, coherence, legal certainty, stability and accountability. The level of scientific uncertainty related to the functioning of most marine ecosystems, the cascading effects of human-induced and natural changes, and the rapidity of change necessitate a cautious and adaptive approach in policymaking and decision-making on any marine ecosystem. This might be an argument for designing law and legislation with a certain level of generality to enable adapting and applying it to a broad variety of circumstances. However, this often entails a risk of law failing to be fit for purpose to address specific challenges and pressures. It appears that for many specific environmental problems, a fit-for-purpose and adequate legal framework is lacking. This significantly weakens the rule of law for oceans and has been identified as a key problem by several authors in this book.

Indeed, many authors emphasize that international treaties do not offer clear solutions for complex problems. The interaction between climate change and ocean dynamics is largely left unaddressed in both the United Nations Convention on the Law of the Sea (UNCLOS) and the United Nations Framework Convention on Climate Change (UNFCCC). Several authors discuss international treaties and their interaction, highlighting the need for dynamic or expanded interpretation as well as for developing new agreements as a possible solution to cover current gaps and weaknesses in law. International treaties for global problems such as plastics are important, but often need to be complemented by more specific measures, including trade regulatory measures, subsidies or tariffs, to enhance their effectiveness. On a regional level, there is also a need for regional treaties or other binding instruments to regulate certain challenges more effectively.

A second and slightly related cross-cutting issue is lack of clarity related to definitions, general provisions and principles, and how we should take decisions in the face of new scientific knowledge. Several authors have discussed UNCLOS Part XII provisions and the challenge of applying general provisions to specific activities. Legal uncertainties have been identified with respect to addressing fluctuating or changing distributions of fish stocks, and uncertainties with regard to the definition of marine genetic resources. Certain concepts and principles have also been under discussion by the authors. Application of the precautionary principle has been assessed in the context of management of living resources, and the concept of 'risks' in the context of restoration. These unclarities may lead to different interpretations by States and other users, to increased fragmentation and possibly to a weakening of the rule of law for the oceans. Of special importance is the role and

use of scientific knowledge for regulating both new as well as existing activities. Divergent perceptions may exist of risks and benefits related to new technologies for use in the marine domain. Legal unclarity and uncertainty need to be resolved with regard to how to utilize new scientific knowledge related to certain technologies and activities, and how to balance different benefits and costs.

A third cross-cutting issue is the need for cooperation and coordination to enhance the rule of law for oceans. Several authors have emphasized the importance, scope and legal relevance of cooperation and coordination for moving forward. As noted by Voigt, for example, there is a need 'not only in creating a global level playing field that avoids free riding, but in creating the legal structure for a coordinated response commensurate with these global challenges'.[1] Thorough discussion has been given to institutions, such as the UN Environment Program, the International Maritime Organization and regional organizations, together with their roles for facilitating coordination and interaction. Authors have also emphasized the need for inter-institutional integration at national level, for example between national bodies and international bodies. Another suggestion was to clearly define the competencies of different players, both those long established and others newly joining the field (such as the WTO), with a view to improving synergy between their actions and avoiding unnecessary overlaps and duplications. In addition, enhanced coordination between international entities and forums has been highlighted, especially in regional areas.

A fourth cross-cutting issue is the importance of including diverse actors or groups in order to foster implementation and enforcement of international, regional and local rules. In general, legitimacy has been identified as critical. Perceived fairness of decision-making has clear implications for the extent to which management is deemed legitimate. Industrial actors and other stakeholders that consider processes legitimate may increase compliance with set rules and requirements. Various authors also emphasize the role of private actors and stakeholders as crucial to ensure tackling environmental problems adequately. Pollution from fisheries and plastic pollution require everyone to come on board, including private actors. Increasingly, plans aim to include the entire life cycle engaging stakeholders, including industry, through fit-for-purpose technical standards and certificates to tackle marine plastic pollution.

25.2 MAPPING OUT THE WAY FORWARD

25.2.1 *Strengthening the Rule of Law through Improved Regulation and Governance of Existing and Novel Pressures*

The book has highlighted three pressures and concerns that are in critical need of sounder legal solutions. These are, first, climate change and the interactions

[1] Voigt, Chapter 2 in this volume.

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between climate change dynamics, greenhouse gas emissions and ocean dynamics (Voigt and Testa); second, marine plastic pollution (Jung and Telesetsky); and third, matters not (yet) adequately regulated such as marine pollution from spaceflight activities (Pozdnakova).

To better address the relationship between climate change and the ocean ecosystem, *Christina Voigt* recommends including ocean-based activities in the Nationally Determined Contributions (NDCs) of parties to the Paris Agreement. NDCs can play a critical role in supporting acceleration of renewable energy by sending clear, consistent signals to the private sector. Including this in the NDCs means that (through domestic planning and regulatory as well as enforcement measures) greater legal machinery will be set in motion. Decarbonization of ocean transport is another way by which ocean-related aspects might contribute to climate solutions. Ocean transport currently stands for about 3 per cent of global greenhouse gas emissions, with a rising trend. Increased energy efficiency, maximizing the overall operational efficiency of new and existing ships, as well as promoting or prescribing low and zero carbon fuels, could mitigate this contribution. International work through the International Maritime Organization (IMO) and regional organizations might be necessary; this should also increase possibilities for enforcement of norms. Here, too, including ocean transport in parties' NDCs could be an effective way forward. Voigt stresses that such changes would draw ocean governance under the transparency requirements of the Paris Agreement, enhancing their visibility, legitimacy and – potentially – coordination. International coordination through the IMO, or in processes related to Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ), might be beneficial in this context.

More specifically focusing on ocean transport and greenhouse gas emissions from shipping, *David Testa* recommends complementing the UNCLOS provisions by more technical fit-for-purpose rules to reduce greenhouse gas emissions from the ocean transport sector. The IMO's Initial Strategy is a welcome preliminary step towards giving meaningful content and substance to UNCLOS general provisions. Moving ahead, it is clear, however, that the Strategy will need to be followed up by substantive greenhouse gas emission reduction measures that are sufficiently ambitious in nature. In line with UNCLOS, these measures will require systemic integration with the wider international environmental law framework and will need to be informed by the relevant goals under the UN Climate Change regime. Ensuring both coherence and effectiveness through adequate rules and standards will contribute to development of an effective regime for reduction of greenhouse gas emissions from shipping.

Additionally, marine plastic pollution has been thoroughly discussed as a pressure that remains sorely in need of better regulation. *Dawoon Jung* stresses that although the 2019 amendment to the annexes of the Basel Convention amounts to notable progress in regulating plastic waste, the current legal framework for marine plastics pollution is still criticized as a patchwork of instruments that are fragmented and

ineffective in tackling the marine plastics issue. To strengthen the rule of law, including legal certainty and implementation, she recommends improved cooperation and coordination between sector-specific instruments and between the multiple layers of regulations at global, regional and national levels in order to promote coherent regulations and implementation. Simultaneously, existing weaknesses within the legal framework need to be remedied. Jung emphasizes the importance of applying a holistic approach governing all the lifecycle phases of plastics. For that reason, a possible new global treaty should also incorporate this concept, ensuring that all phases of plastics are effectively regulated. To foster implementation, multistakeholder partnerships should be promoted to facilitate the emergence of initiative solutions throughout the entire lifecycle of plastics from design to recyclability.

Anastasia Telesetsky takes this idea one step further and proposes concrete measures to ensure the operationalization of such a lifecycle approach to plastics. She argues that the main challenge to the rule of law in the context of plastics is the role of powerful industry, such as corporations, and emphasizes the importance of 'thick' laws that contain sufficient substantive contents and tools for implementation to ensure a fundamental change in the current packaging industry. To realise such a change, Telesetsky proposes introducing effective and global multilateral tax measures that would reflect the costs of the environmental externalities of the industry. Economic instruments such as tariffs offer additional choices of tools beyond direct regulation and voluntary instruments.

While truly international tariffs have not been negotiated, they would provide an efficient means of pricing externalities that States are forced to absorb either in the form of additional investment in waste management or in damage to marine resources. Adopting an international tariff would be politically challenging but would address the gap in the existing rule of law where there is no real accountability in terms of addressing single-use plastics as a growing source of carbon emissions or as a global environmental health and public health threat. Additionally, a truly global carbon tax could change the calculus of operation for major energy-intensive industries such as the chemicals and plastics sectors. In the interim – before a global carbon tax catalyses system-wide changes across all industries – States should respond to citizens' demands for a first step towards implementing the circular economy in both the packaging industry and the fishing industry by placing tariffs on specific non-essential plastic products contributing to marine pollution. This will remedy the current accountability gap and enhance the rule of law for oceans.

A relatively unregulated pressure on the marine environment is pollution from spaceflight activities. In the absence of fit-for-purpose rules that regulate this pressure, the rule of law for oceans is under threat. *Alla Pozdnakova* points out that an effective environmental legal regime in the space sector needs to be developed through active cooperation between States. Such cooperation should first be aimed at gathering scientific knowledge about the marine environmental impact of spaceflights and strengthening the international institutional framework before any

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substantive provisions on prevention of pollution can feasibly be developed. She also highlights the importance of an internationally coordinated approach through an institution responsible for international legal development in the space sector, such as the Committee on the Peaceful Uses of Outer Space (COPUOS), supplemented by inter-institutional cooperation with other competent international organizations. This is indispensable to paving the way for prospective harmonization steps.

She recommends continuation of the work initiated by the IMO and UN COPUOS to evaluate expansion of the London Convention to the spaceflight sector and accordingly to amend the 1996 Protocol in order to include disposal of jettisoned space objects into the maritime environment.

25.2.2 *Strengthening the Rule of Law through a Better Balance between Exploitation and Protection of Our Oceans*

The book addresses the question how to ensure a proper balance between exploitation and protection of oceans, including preservation of marine biodiversity and marine living resources. The authors have identified several challenges, including novel types of balancing in the context of marine restoration (Roland Holst); the effects of climate change on fish stock redistribution, which requires adaptation (Lennan); unclear, vague or silent international legal frameworks, definitions, concepts or environmental principles (Bohman and Ringbom, Shams); the BBNJ process and its potential for regulating marine living resources (Wollensak) and its potential to foster an ecological sustainability path (Cloutier de Repentigny).

To deal with the existing level of marine plastic pollution, marine restoration activities have received increased interest. *Rozemarijn Roland Holst* sheds light on the legal challenges raised by the use of new technologies for marine environmental restoration purposes, using as a case study The Ocean Cleanup's (TOC) plastic cleanup activities in areas beyond national jurisdiction. This initiative entails a novel type of balancing where complex 'risk trade-offs' need to be taken in balancing the impacts of plastic debris with the risks of technology-driven clean-up of plastics. Perhaps the biggest challenge for the rule of law in governing restoration activities like TOC lies in dealing with uncertainty and knowledge gaps regarding both the benefits and risks involved in employing a new technology in a complex environment, and how to approach environmental risk/risk trade-offs when perceptions of these risks diverge. To fill this gap, she stresses the importance of relying on extra-legal knowledge, such as scientific data, to add content to legal standards. Scientific knowledge and understanding of the technology and its consequences are crucial to ensuring that legal rules, tools and principles such as best available technology, best available science and best practices are not devoid of meaningful content.

The balancing required in policymaking and decision-making increasingly involves different environmental concerns. *Brita Bohman and Henrik Ringbom* discuss this challenge, but in the context of sea-based measures (marine geo-

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engineering) to abate eutrophication. Sea-based measures refer to different technological innovations that may be implemented at sea to target pollution that has already been released. These have a purely environmental objective, which complicates balancing between the interests concerned. The risk of further escalating eutrophication with all its consequences, and to continue only with land-based measures, has to be balanced against the risks that sea-based measures may exert on the ecosystem. Yet due to their novelty and because they have not been sufficiently tested in relation to environmental risks, the measures are not subject to any specific regulation, while environmental principles, such as the precautionary principle, do not provide sufficient legal guidance. Bohman and Ringbom conclude that it is both important and appropriate to focus on developing a new framework or guidelines, inspired by the Assessment Framework developed under the London dumping regime, to learn more about sea-based measures and to coordinate policies among the Baltic Sea States, thereby helping permit authorities in their tasks. With the recent adoption of the (voluntary) HELCOM Guidelines, this process appears to be well under way.

Another gap in law has been discussed by *Aref Shams* in the context of utilizing icebergs as an alternative source of fresh water, which may be an emerging demand on oceans and therefore in need of adequate rule of law. Neither UNCLOS nor the Antarctic Treaty System (ATS) indicate a prohibition against the use of icebergs. Although the ATS represents more stringent environmental standards, it also presents a vague and unclear general structure in terms of dealing with the question of utilizing icebergs as this was not foreseen as a demand on Antarctic resources. Therefore, Shams stresses that a gap exists in the regulatory capacities of international law, which could become problematic for the rule of law if/when the use of icebergs for fresh water were to proliferate, leading to an imbalance between the need to exploit this potential new resource with the need to preserve the marine environment.

Shams discusses some of the ways in which international law could be adapted to fill the gaps identified and ensure it is fit for purpose, particularly in the context of the BBNJ negotiations. Three key requirements of importance for utilizing icebergs would be: benefit sharing as a better solution to the high seas regime; limiting the quantity taken and on location through area-based management tools provisions; and a requirement to conduct Environmental Impact Assessments.

The rule of law for oceans is strengthened by clear and coherent rules. Currently, however, marine governance – indeed, environmental governance in general – is to a large extent also steered by environmental principles that should guide authorities and actors on sustainable pathways. These environmental principles could provide additional guidance to the overall legal framework and as such strengthen the rule of law in that field. *Maurus Wollensak* studies management of living resources under the UNCLOS, with particular focus on the precautionary principle/approach. Stocks fished at a 'biologically unsustainable level' have increased over the years,

and it appears that UNCLOS has limited impact on protecting living resources against exploitation. One way to counter such developments is to apply the precautionary principle/approach, which UNCLOS does not demand *expressis verbis*. Wollensak explores two decades of developments and jurisprudence, arguing that the principle now appears to inform the normative content of UNCLOS. For that reason, it should be more effectively respected in the context of protecting preservation of the marine environment and managing marine living resources.

Another chapter discussing marine living resources is provided by *Mitchell Lennan*, who discusses whether the international legal framework adequately obliges States to adapt to complexities caused by marine living resources shifting their location, that is, redistribution of fish stocks due to climate change. He reasons that shifting fish stocks threaten the certainty, predictability and stability of the international fisheries legal framework, as well as undermining conservation and management measures by coastal States and regional fisheries management organizations. Since the legal framework does not directly account for species shifts, it has been argued as constituting a 'governance gap' requiring urgent attention. Lennan proposes several solutions, including using the Convention on Biological Diversity as a crucial interpretive tool to be read consistently with UNCLOS. In situ conservation objectives should be applied in a way that accounts for climate change consequences to the environment. Obligations to adapt also follow from the Convention on Migratory Stocks and the UNFCCC and Paris Agreement, which also apply to the oceans. He further recommends exploring the potential of the precautionary principle and Ecosystem Approach to Fisheries in implementing obligations, in combination with the obligation to cooperate. Bodies such as Regional Fisheries Management Organizations or Arrangements and the Food and Agriculture Organization must enable adaptive management through inter-institutional cooperation, and engagement with research.

Currently, diverse pressures and challenges exert a significant impact on the oceans. Is law as an instrument actually adequate to protect marine biodiversity? *Pierre Cloutier de Repentigny* analyses the UNCLOS through the lens of green legal theory to demonstrate the entanglement of the UNCLOS marine conservation framework with economic growth. He points out the importance of addressing the causes rather than the symptoms of regime failure. If we are to use ocean law as a means of engendering or participating in the re-formation of constitutive processes beyond economic growth and towards ecological sustainability, it is time to think more strategically about how to strengthen the 'rule of law'. He examines BBNJ and points out that the draft provisions conceptualize marine biodiversity as a source of genetic resources, indicating economic benefits, which is a narrative of economic growth. The provisions on Area-Based Protection and Management Measures (ABPMM) could, however, offer more re-formative potential. The BBNJ Agreement would create a mechanism to establish ABPMM in areas beyond national jurisdiction. State parties will be able to propose ABPMM to be adopted

by the conference of parties. ABPMM are to be identified based, for example, on the ecosystem approach, and best available science and – potentially – Indigenous peoples' traditional knowledge. Once an ABPMM is adopted, State parties must conform to it but are allowed to adopt more stringent measures. Unilateral and multilateral action through the BBNJ Agreement could, step by step, create a new paradigm for the law of the sea, a new rule of law for the oceans detached from the demands of economic growth.

A final area for improvement discussed in this part of the book is related to marine genetic resources. *Jakub Ciesielczuk* explains that recent technological advances have provided scientists with more opportunities to explore the richness of marine life and in particular marine genetic resources. International law and literature, however, lack a universal definition of marine genetic resources. To strengthen the rule of law in this field, and in particular legal clarity and legal certainty, a clear working definition of marine genetic resources will help with a universal understanding of these resources across existing and future marine genetic resources-related regimes and relationships between the rules included in those regimes. Ciesielczuk develops and proposes a working definition that relies on the text of Article 2 of the Convention on Biological Diversity but adjusts it to reflect current scientific reality and to address identified genetic utilization challenges. The proposed working definition will ensure coherence between the Convention on Biological Diversity and other regimes regulating genetic resources. Looking ahead, he further recommends that ensuring conservation and sustainable use of marine genetic resources would clearly require adoption of a clear definition of marine genetic resources in the future BBNJ treaty, based on his proposed working definition.

25.2.3 *Strengthening the Rule of Law through Improved Implementation, Compliance and Enforcement*

The book explores various tools and mechanisms – and the lack thereof – that are important for effective governance, compliance and enforcement. This part of the book provides perspectives on the role of legitimacy in law (Langlet); criminalization of maritime environmental crimes (Becker-Weinberg); dynamic interpretations of UNCLOS to regulate and enforce prohibitions of Illegal, unreported and unregulated (IUU) fishing against fishing operators or owners of vessels (Van Welzen); the potential for using litigation to increase compliance with existing fisheries norms (Guggisberg); the potential of an advisory jurisdiction of the plenary of the International Tribunal for the Law of the Sea (Cruz Carrillo); and the role of the World Trade Organization, which is trying to establish new, sustainability-driven rules limiting certain forms of state support at sea under the auspices of the WTO Fisheries Subsidies Agreement (Guglya).

David Langlet explains that recent years have seen increasing calls to pay more attention to the political dimensions and societal implications of marine policy and management in addition to the predominately natural science perspectives traditionally applied. He reasons that the legitimacy and fairness of EU marine law and governance is a fundamental element of an effective and rule of law-based legal regime for the marine realm. Aspects of legitimacy, such as participation, representation, effective delivery of policies and laws, openness, accountability, transparency and efficacy of decision-making processes, can enhance the implementation or operationalization of legal requirements, thereby strengthening the rule of law for oceans. Langlet assesses the degree of legitimacy and fairness in the context of three EU framework directives important for the European seas: the Water Framework Directive, the Marine Strategy Framework Directive and the Maritime Spatial Planning Directive. All three directives largely rely on participation for dealing with core legitimacy dimensions. Several challenges need to be resolved, though, including defining who has a legitimate say in decision-making, ensuring that participation can be genuine, with stakeholders understanding what can and cannot be changed through a participatory process as well as seeing that their participation is meaningful and can affect the outcome. Sufficient time must also be allowed for deliberations and integration of diverse interests and knowledge.

In addition to enhancing the legitimacy and fairness of laws and policies to foster their implementation, other tools and solutions may also be sought to ensure an ecologically sustainable pathway. *Vasco Becker-Weinberg* emphasizes the strong need for criminalization of maritime environmental crimes, such as ship-source pollution through accidental and wilful oil discharges, which are currently one of the main causes of destruction of marine ecosystems and devastation of marine life. Maritime environmental crimes are committed in order to avoid compliance with international rules and regulations, thus obtaining substantial financial gain from avoiding procedures established under national and/or international law that are time-consuming and entail significant costs. He stresses the urgency of adopting an international, global approach to marine environmental crime so that criminalization would no longer depend on domestic laws only. International cooperation and joint law enforcement operations can be highly effective in reducing maritime crimes. However, this requires addressing the current jurisdictional limitations under the law of the sea and flag State jurisdiction that affect the fitness of existing laws and their enforcement. Proposals for a new international crime such as 'ecocide' could potentially lead the way for further development of international law and of the legal tools necessary to ensure a collective and effective legal response to maritime environmental crimes.

Pieter van Welzen addresses another challenge that needs improved compliance and enforcement. In examining the issue of illegal fishing, he argues that persons who organize these illegal fishing operations, such as the operators and owners of vessels, often use flags of convenience and take advantage of the weak legal systems

of flag States and coastal States. He proposes that, in addition to coastal, port and flag States, the States of which such owners and operators are nationals also have a role to fulfil in the fight against illegal fishing. Although the focus under UNCLOS for challenging IUU fishing in a State's exclusive economic zone has been on coastal States and flag States, arguably UNCLOS also obliges States whose nationals are directly or indirectly involved in the fisheries sector to ensure that those nationals do not engage in or support IUU fishing. Such obligations could be based on the International Tribunal for the Law of the Sea (ITLOS) Advisory Opinion, that is, a due diligence obligation to ensure that its nationals refrain from being involved in activities, including as operator or owner of a vessel engaged in fishing in the exclusive economic zone of another State, to comply with conservation measures applying to that exclusive economic zone. Van Welzen thus points out that an international ruling and advisory opinion by ITLOS interprets UNCLOS provisions as imposing responsibility on States to exercise effective control over their nationals, which arguably includes responsibility to exercise control over beneficial owners and operators of vessels.

Carlos Cruz Carrillo discusses the potential of the advisory jurisdiction of the plenary of the International Tribunal for the Law of the Sea to strengthen ocean governance. The advisory function prevails as a tool to enhance the rule of law for oceans, as its legal effects entail opportunities for stakeholders to reach concrete solutions following the law. Advisory opinions can also provide guidance on how to interpret and use the law of the sea to tackle new challenges, such as climate change, ocean acidification and other complex issues that have emerged through technological advances and the quest for natural resources and maritime power. To strengthen the rule of law for oceans in this context, Cruz Carillo recommends revising the configuration of this judicial function and underscores the potential use of ad hoc jurisdictional agreements to request advisory opinions. At the same time, he advises that jurisdiction to give advisory opinions should be exercised only after careful evaluation of compelling reasons announced for such an opinion, also in light of protecting the principle to consent to adjudication.

Leonila Guglya explores the role of new rules reducing or eliminating subsidies to certain forms of fishing and fishing-related activities at sea, currently under elaboration by the World Trade Organization (WTO), as a possible accessory tool capable of helping exhausted fish stocks recover. If adopted, the new multilateral agreement integrated into the legal framework of the WTO would restrict financial inflows into enhancement of the fishing effort, which is damaging for stocks. The new disciplines would be divided into three streams, shaped as prohibitions of: (a) subsidies contributing to overcapacity and overfishing; (b) subsidies for fishing on overfished stocks; and (c) subsidies to vessels and/or operators involved in IUU fishing and fishing-related activities. Nevertheless, fisheries subsidies negotiations have been ongoing already for over two decades and face considerable challenges. The fisheries mandate is atypical for an organization mostly dealing with concerns directly

related to trade, while its interaction with players implicated in fisheries management remains limited. Reduction in the usual state support might have a significant impact on fishers and their communities, while banning investment in fleets could interfere with the industrialization strategies of developing countries and least developed countries, most of which, nowadays, are responsible for only an insignificant share of subsidization due to restricted budgets. In spite of numerous impediments, Guglya sees a potential for a win-win outcome. While new and ambitious sustainability-driven subsidies rules, if adopted, could help oceans recover, progress in and eventual successful conclusion of fisheries subsidies negotiations could also affirm that the WTO remains relevant by, for example, addressing acute beyond-trade concerns.

Again related to fisheries, *Solène Guggisberg* addresses the challenge that the traditional regime regulating international fisheries appears inadequate at ensuring the rule of law, since many States are unwilling or unable to respect their relevant obligations, prolonging the long-standing issue of non-compliance in the fisheries field and the resulting unsustainable management of stocks. She stresses and examines the potential of using litigation to increase compliance with existing fisheries norms, in particular to address issues with flag States, coastal States and States involved in the fishing of shared stocks. Despite several limitations, litigation can play an important role in strengthening the rule of law for oceans in that it could bring an end to specific violations, hence tackling the most egregious cases of non-compliance. She notes that it is important, though, to supplement litigation with regular compliance procedures under global or regional frameworks that ensure comprehensive, in-depth and regular review of States' compliance with their obligations. This adds much-needed objectivity, impartiality and comprehensiveness to the pursuit of accountability.

25.2.4 *Strengthening the Rule of Law in the Regional Seas and Oceans*

In this final part of the book, the authors shed light on the rule of law for regional seas and oceans by providing a variety of perspectives on the challenges and solutions to strengthening the rule of law for the Eastern Pacific (Enright), the Baltic Sea (White), the Arctic Ocean (Todorov), Japan (Yiallourides) and the South China Sea (Chong). Their perspectives can be divided into two categories. The three authors in the first category emphasize the role of cooperation and coordination and provide solutions anchored in efforts to integrate environmental governance at the regional level. The two authors in the second category address unilateral conduct and decisions by States that result from disagreements and difficulties that have emerged during cooperation efforts and processes. Both categories are closely interrelated, and both have an impact on the rule of law and the effectiveness of environmental governance in regional seas and oceans.

Sarah Ryan Enright analyses State-led regional cooperation efforts in the Eastern Tropical Pacific Ocean (ETPO) to create a transboundary marine corridor linking five Marine Protected Areas across four jurisdictions. She stresses that regional ocean governance efforts have shown promise by enabling cooperation and coordination across territorial and sectoral boundaries, which in turn could help to link disconnected areas of regulation arising from fragmentation. The Eastern Tropical Pacific Marine Corridor is currently regarded as a leading example of regional cooperation for creation of a network of marine protected areas. Specific rule of law challenges faced by this initiative, however, include lack of a legally binding cooperation agreement, limited sectoral participation, the vast scale of the project and lack of a cohesive overarching regional ocean governance framework. A key challenge from a rule of law perspective stems from overlaps and gaps in the mandates of the applicable governance arrangements in the Eastern Tropical Pacific. She highlights that the new BBNJ instrument has the potential to help address some of the governance gaps in the Eastern Tropical Pacific by introducing a legal mechanism at the global level for Marine Protected Areas (MPAs). This could potentially provide a legal basis for the designation of MPAs in areas beyond national jurisdiction and a set of overarching governance principles to guide oversight and coordination of a global network of MPAs. Additionally, regional institutions, such as the Permanent Commission for the South Pacific, could play an important integrating role in the region, and their engagement should be further encouraged.

Again addressing the importance of cooperation and coordination, *Kirsi White* emphasizes that the development of institutional interlinkages between polycentric governance arrangements may facilitate common policy objectives, decision-making and implementation of sectoral measures. She argues that while soft modes of governance may weaken the rule of law, use of these modes is of specific importance in a polycentric governance system as a tool for steering policy implementation by introducing innovative practices, learning and coordination. More specifically, she highlights as key the role of non-governmental organizations and port authorities in regulating oil pollution in the Baltic Sea, as well as stakeholder-inclusive collaborative learning platforms at the regional (or sub-basin) level, with a clear mandate and the aim of spatially relevant dynamics. She addresses implementation of the ecosystem approach in overlapping legislative measures regulating ship source oil pollution in the Baltic Sea and recommends stronger interaction within the regional multi-layered regulatory system as well as among regional institutions to strengthen the rule of law in the area.

In the Arctic, *Andrey Todorov* also highlights the importance of integration and coordination. He stresses that it is feasible to work towards a comprehensive integrated regional programme within the Arctic Council for the purpose of adopting scientific-based decisions related to spatial planning in the Arctic Ocean. Legal and organizational challenges arise from the need to implement integrated ecosystem-based marine management in the Arctic. Todorov argues that solutions to the

challenges uncovered lie in unfolding the potential of the Arctic Council and significantly building it up. His suggestions include moving towards endowing the Arctic Council with international legal personality, transforming the Arctic Council Secretariat into an authoritative Commission with relevant functions similar to that of the OSPAR Commission. In addition to these, the Arctic Council could also play the central role in coordinating Integrated Ecosystem-Based Marine Management tools (such as applying marine spatial planning or creation of marine protected areas) with global and regional sectoral organizations active in the Arctic. This includes: the International Maritime Organization in relation to shipping; the North East Atlantic Fisheries Commission and possible future mechanisms under the 2018 Agreement on fisheries in the central part of the Arctic Ocean; and the International Seabed Authority in relation to exploration and exploitation of the resources of the Area (long-term perspective).

The final two chapters (Chapters 23 and 24) provide another perspective on the issue of regional coordination and integration. These chapters shed light on the impacts of unilateral conduct and decisions of States resulting from disagreements and difficulties faced during the process of cooperation. The chapters show that this may have a significant impact on the rule of law in regional seas and oceans.

Constantinos Yiallourides is critical of the duty to cooperate, as it lacks clarity and insufficiently guides cooperation between States when there are divergent, or even opposite, views among States, on how to reconcile the commercial objectives of conserving and managing living resources (in this case, whale stocks) with environmental protection. Yiallourides explains the importance of whaling for Japan as a cultural and traditional activity and in terms of the economic survival of Japanese coastal communities. He explains that several perspectives and interests, such as those related to ethics and animal rights but also traditional ways of living and cultural diversity, are also relevant in the international debate. Japan recognizes the importance of regional cooperation and the duty to cooperate, but it has chosen to withdraw from the ICRW, arguably as a result of these divergences and inability to achieve a compromise. Yiallourides recommends allowing limited – but internationally monitored – whaling in specific locations, while stopping whaling altogether in other locations. This approach could be adjusted based on independent and politically uncompromised scientific evidence. That said, however, as scientific knowledge advances and whale stock management theories become more complex, scientific advice may not necessarily produce clear-cut answers. In situations of scientific uncertainty, the precautionary principle can inform rational decisions.

In the context of the South China Sea, *Agnes Chong* highlights that overlapping claims in the South China Sea are at fundamental odds with States complying with their obligations to cooperate to protect the environment and to have due regard for rights and interests in the South China Sea. This weakens both the rule of law and protection of the marine environment in this regional sea area. Possible solutions encompass strategies of cooperation amidst overlapping maritime claims.

One strategy is to establish a network of marine protected areas in the South China Sea that may support different ecosystems as well as preserve areas from human impact to allow natural resources to recover from stress. This strategy requires cooperation and political will to suspend maritime claims. A less ambitious suggestion is for China and Vietnam to establish an MPA in the same location in the Paracel Islands under their respective national laws. Another recommendation is to resolve uncertainties over the parties' overlapping EEZ claims, following which joint development areas could be established. She underlines that a binding ASEAN Code of Conduct is also a possible avenue to enforce a moratorium over claims and drive urgent cooperation based on Part XII UNCLOS to reverse the fast-deteriorating maritime environment of the South China Sea.

25.3 FUTURE OUTLOOK FOR THE RULE OF LAW FOR OCEANS

Currently, many seas and oceans are under threat due to the cumulative impacts of maritime activities, climate change, biodiversity loss and more. This book has shed light on the various environmental, governance and legal challenges that exist in different parts of the world. Despite the complexity of certain challenges and difficulties, this book has also demonstrated that many opportunities and solutions can be devised to strengthen the environmental rule of law in order to ensure better protection of our seas and oceans. The authors have provided future-oriented perspectives on how law should evolve to better protect the oceans against increasing pressures and demands. All chapters incorporate novel insights and ideas for legal solutions that might inspire scholars, actors, authorities, citizens and communities around the globe. Further research might be needed, but we hope this book encourages the further exploration and realization of suggested legal solutions, as well as initiation of similar projects that critically examine the rule of law for a better protection of our seas and oceans.