



UvA-DARE (Digital Academic Repository)

Environmental and sociocultural claims within maritime boundary disputes

Garcia Chaves, M.C.; Gupta, J.

DOI

[10.1016/j.marpol.2022.105043](https://doi.org/10.1016/j.marpol.2022.105043)

Publication date

2022

Document Version

Final published version

Published in

Marine Policy

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Garcia Chaves, M. C., & Gupta, J. (2022). Environmental and sociocultural claims within maritime boundary disputes. *Marine Policy*, 139, [105043].
<https://doi.org/10.1016/j.marpol.2022.105043>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.



Environmental and sociocultural claims within maritime boundary disputes

María Catalina García Ch.^{a,*}, Joyeeta Gupta^b

^a Department of Geography, Planning and International Development Studies, University of Amsterdam, The Netherlands

^b Department of Geography, Planning and International Development Studies, Amsterdam Institute for Social Science Research, University of Amsterdam, The Netherlands

ARTICLE INFO

Keywords:

Ocean governance
Maritime boundary disputes
UNCLOS
Maritime delimitation
International arbitration
Environmental factors
Sociocultural factors

ABSTRACT

Coastal livelihoods and marine environmental protection are key ocean governance concerns. Consequently, the international legal framework addresses these needs in a holistic manner. Maritime boundary delimitation should not be the exception. Increasingly, international courts and tribunals are being asked to incorporate a wider range of issues in the resolution of maritime boundary disputes. Therefore, drawing on the full compendium of international marine boundary dispute cases from 1969 to 2021, this paper examines how litigation over maritime boundary disputes reflects broader ocean governance objectives. It concludes that, first, court cases on maritime boundaries are increasing, and second, environmental and sociocultural motives are gaining prominence in the pleas made by nations. Moreover, our analysis suggests that: a) arguments to the courts progressively emphasize holistic and ecosystem-based management and the recognition of traditional ocean-related living practices; and b) although courts and tribunals are called to weigh other types of factors, they are still more receptive to conventional arguments embodied in the UN Convention on the Law of the Sea (UNCLOS). We argue that the newer arguments should have a greater influence during conflict resolution and maritime delimitation processes, in particular, given the greater need for sustainable and equitable ocean governance.

1. Introduction

As interactions between social, ecological, economic and political practices in today's ocean space increase [11,17,45], so do conflicting claims. Marine boundaries between nations are increasingly disputed: the number of such cases submitted to international tribunals is rising annually (see Section 2). The arguments proffered for making claims, however, are changing.

The United Nations Convention on Law of the Sea (UNCLOS, 1982) provides the legal framework for defining member states' rights and responsibilities with regard to ocean space and resources. UNCLOS also delimits the processes by which maritime boundary-making is to proceed and the manner in which disputes should be addressed. Case law has also developed maritime delimitation methods. Within the area of third-party dispute settlement, the literature reveals how maritime boundary-related issues have become a bustling field for international adjudication (e.g. [8,31,68,81,83,93,96]). Mounting evidence illustrates how international litigation is used by states to acquire territory [35,50,53,94]. Other elements at stake within marine boundary disputes, such as sea migration, impacts of climate change, artificial-island building, marine resource scarcity, and more recently, pandemics, are driving

border conflicts, exacerbating geopolitical disputes and hardening former border porosity [7,23,46,60,75,99,100].

Demarcations over sea space often impact the livelihood practices of local communities, impinging on traditional fishing rights and living resources management [41,61,86,88,89,98]. Such demarcations also have implications for environmental management [39,62]. Hence, environmental and sociocultural claims are seeping into the pleas made before international courts and tribunals.

Ocean governance agencies are currently being called upon to integrate the environmental and human dimensions building on principles of equity and justice [14–16,19,27,33,72]. With regard to the marine environment, rules and practices are expected to reverse biodiversity loss, protect natural resources, achieve sustainability, or address climate change impacts [18,20,32,40,55]. From a sociocultural perspective, ocean governance is expected to secure human rights, preserve the livelihoods of coastal communities, ensure gender equality and enhance food security, to name a few [4,28,54]. Moreover, the governing system is meant to transform in line with changing power relations, and arrays of interactions, new actors and activities over the marine space [6,19,22,97].

This paper reviews the marine boundary cases that are or have been

* Corresponding author.

E-mail addresses: m.c.garciachaves@uva.nl (M.C. García Ch.), J.Gupta@uva.nl (J. Gupta).

<https://doi.org/10.1016/j.marpol.2022.105043>

Received 10 March 2021; Received in revised form 14 March 2022; Accepted 15 March 2022

Available online 30 March 2022

0308-597X/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

under the purview of international courts and tribunals, focusing on the content of the pleas made and the judgements given. It then zooms in on two new categories of factors, related to environmental and sociocultural conditions. It addresses the following two research questions:

1. To what extent and how does litigation over maritime boundary disputes reflect broader ocean governance objectives?
2. How have international courts and tribunals responded to such arguments over the past fifty years?

Rather than analyzing the issue from a legal standpoint, we use an international development studies perspective in analyzing the court cases. By identifying sociocultural and environmental issues as two important concerns placed before international courts and tribunals, we argue that the structures governing maritime boundary-making and dispute resolution processes are in need of revision.

The paper first briefly explains the evolution of ‘relevant circumstances’ arguments within maritime delimitation processes and presents this as a productive arena to explore the variety of issues surrounding conflict resolution and reflecting ocean management concerns within the case law. It reflects on the evolution of coastal states’ claims made under the ‘relevant circumstances’ argument. In doing so, we analyze 34 maritime delimitation cases from 1969 to 2021 (see Annex 1) falling under the jurisdiction of international courts (*i.e.*, the International Court of Justice (ICJ), the Permanent Court of Arbitration (PCA), and the International Tribunal for the Law of the Seas (ITLOS). The analysis covers thirty judgements and four ongoing court cases, and includes those concerning the delimitation of the continental shelf and/or EEZ boundaries.¹ Section three discusses those cases where environmental and sociocultural considerations have been raised by coastal states for more in-depth analysis, assessing how international courts have dealt with these considerations. The last section presents the conclusions.

2. Exploring ‘Relevant Circumstances’ in relation to ocean governance

Under the UNCLOS treaty, maritime boundaries are delineated either through a negotiation followed by an agreement between the coastal states, or as a result of an international adjudication process in which a third-party resolves a boundary dispute² [25,38,44]. There are large ongoing disputes often corresponding to areas where borders have not been defined or where one or more parties refuse to agree to accept third-party dispute settlement.³ In such cases, neighboring countries generally settle their boundaries through negotiations [66]. When states do not reach an agreement, and under the parties’ explicit consent, UNCLOS provisions provide guidance on dispute management [9,25,38,57,64,69,76]. Under its dispute resolution framework, states may choose the appropriate international dispute resolution fora (*e.g.* ICJ, ITLOS, and PCA) to submit the adjudication process.

Broadly, the literature on dispute settlement and maritime

¹ Submissions to the Commission on the Limits of the Continental Shelf (CLCS), delimitation through bilateral agreements, memorandums of understanding or other (legally binding) documents signed between one or more parties to settle their maritime boundaries were not considered.

² UNCLOS Part XV. Section 1, regarding Settlement of Disputes deals with maritime delimitation between the countries with opposite or adjacent coasts expressed on Articles 15, 74, 83.

³ Some of them are: Dispute concerning Dokdo island (The Liancourt Rocks) between Japan, South Korea and North Korea; The South China Sea maritime dispute between Brunei, China, Taiwan, Malaysia, the Philippines and Vietnam; Dispute concerning sovereignty over the Falkland Islands/Islands Malvinas between The United Kingdom and Argentina; Dispute concerning the Aegean Sea Continental Shelf between Greece and Turkey; The East China Sea dispute, involving the People’s Republic of China (PRC), Japan, and the Republic of Korea (ROK).

delimitation focuses on how these mechanisms have been used and their contribution to the development of the Law of the Sea through the resolution of boundary disputes [1,29,34,38,43,63,78,85]. Some have further demonstrated how the judicial settlement might result in unfair resource allocation [56], uneven outcomes [10], and impacts that might be caused by, *inter alia*, operational issues, such as the composition of the judicial bench, the interpretation of the law by the judges and the choice of forum [82]. Studies also point to gaps in and a lack of precision within the principles and policies UNCLOS promotes [77,81,84].

Although these considerations might deter coastal states from seeking dispute resolution on boundaries [44,52,58], maritime boundary disputes are increasingly submitted for third party dispute settlement [25,35]. Each decade since the 1970s has seen, if not the same, increasing numbers of disputes being referred to adjudication compared to those corresponding to negotiation procedures and further bilateral agreements (see Table 1 and Fig. 1).

International maritime boundary adjudication has developed within the mounting cases, particularly in regards to the judicial methodology, for which the 1982 Law of the Sea Convention provides no clear rules. In the search for an equitable solution, adjudication bodies have frequently adopted the so-called three-stage approach in settling maritime boundaries [35,38,42]. This consists of examining the legally relevant elements, tracing in the first stage a provisional equidistance line, then adjusting the latter with respect to the factors or ‘relevant circumstances’ (previously titled ‘special circumstances’⁵), and finally settling the line by applying the proportionality test [5,34,35,66,73,77,95]. As such, the three-stage method grants a large role to courts and tribunals in weighing the evidence the states submit.

The presence and use of ‘relevant circumstances’ have been developed within the case law particularly since the North Sea Continental Shelf judgement, where the implementation of *equitable principles* came together with the recognition of all *relevant circumstances*. As such, the delimitation method acquired a connotation linked to an equitable approach, a long-lasting perspective which can be seen in today’s cases. ‘Relevant circumstances’ have thus been addressed both conceptually and in its application for the delimitation of the EEZ and continental shelf between states with opposite or adjacent coasts according to Articles 83 and 74 of the LOSC. As Evans (p. 243) [36] observes, although the ‘relevant circumstances’ role and functions within the delimitation process have varied over time, they “appear to be as open-textured and as decisive – yet as nebulous – as ever and continue to operate at all stages of the delimitation process as a means of influencing its outcome, however described or addressed”. Hence, its impact for the maritime delimitation process has been controversial. While some scholars consider the potentially relevant factors very limited in number and nature to affect the result, others claim the evolution of the concept itself has contributed to enrich the delimitation framework [5,13,35,36,38,59,73,95]. However debatable, court cases demonstrate that ‘relevant circumstances’ are used frequently as an argument within maritime

Table 1

An overview of International Maritime Boundaries.⁴¹

Estimated number of International Maritime Boundaries worldwide	417
Maritime Boundaries settled by bilateral or multilateral agreements	256
Maritime Boundaries settled by International Courts and Tribunals	30
Pending cases at International Courts and Tribunals	4
Estimated number of unsettled International Maritime Boundaries (potential or ongoing maritime boundary disputes)	127

⁵ The term ‘special circumstances’ was initially mentioned, but not further elaborated upon, in Article 15 of UNCLOS as part of the delimitation process for the territorial sea. See Evans [35,36] for an overview of the ‘special’-‘relevant’ circumstances discussion

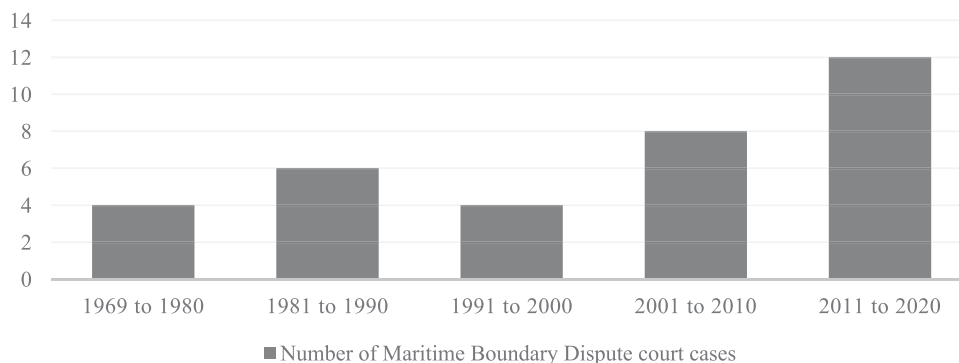


Fig. 1. Maritime boundary disputes court cases from 1969 to 2020 (including ongoing cases)

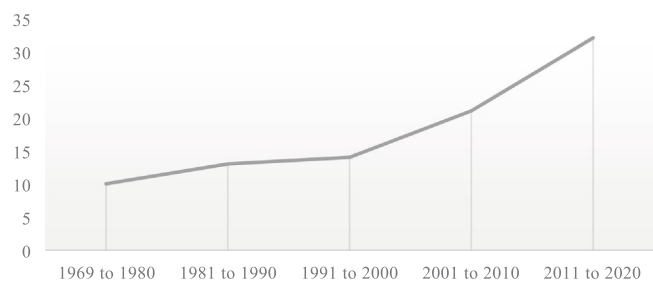


Fig. 2. Number of times 'relevant circumstances' were evoked in court cases
Source: The authors.

boundary disputes and courts and tribunals need to increasingly consider these arguments (see Fig. 2).

As the notion of 'relevant circumstances' develops, so does the scope of arguments states submit to courts and tribunals. These are generally five in nature, namely: geographical, economic, historical, navigational and security-related aspects [36–38,49,66,95]. Given the shifting role of the 'relevant circumstances' over time and therefore the possible overlaps between claims and the nuances of each type of factor, we build on previous studies and outline a categorization which also considers: a) How they are recognized, either in the pleadings or the judgments, and b) the underlying nature of the argument against the backdrop of the ocean governance elements and objectives [18]. Hence, we have clustered the 'relevant circumstances' into the following six categories:

1. **Geographical factors:** This category groups coastal geography elements and includes *inter alia* the possible disproportion or disparity in coastal lengths; the enclosed nature of the area; the presence of

islands or insular features in the area of delimitation; the potential 'cut-off' or 'non-encroachment'; the concavity of the coast; as well as the geology and geomorphology of the seabed area.

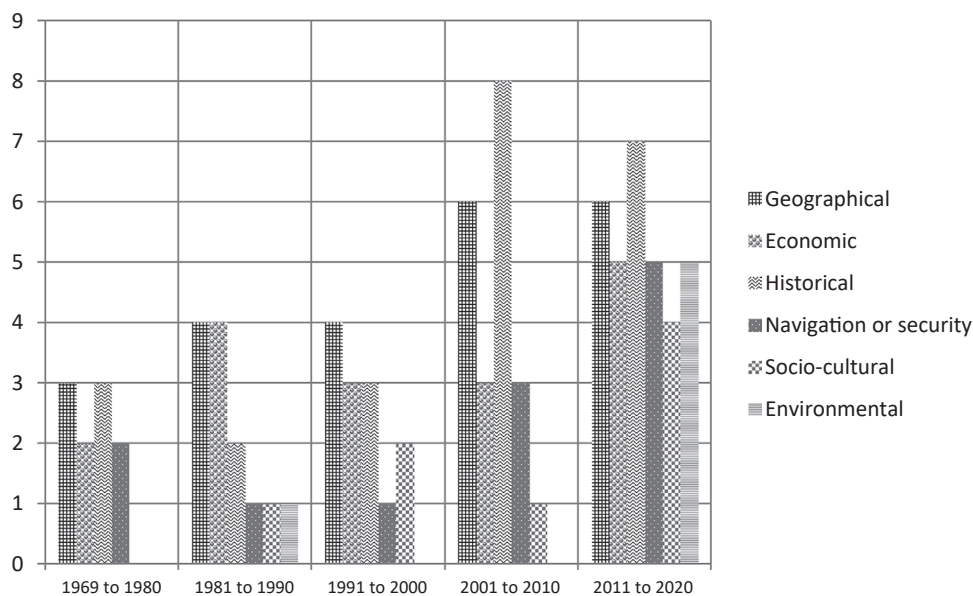
2. **Economic factors:** These include the established and potential economic activities developed by the parties related to living (e.g. fisheries) and non-living (e.g. exploitation of seabed/subsoil/hydrocarbon wells) resources in the Exclusive Economic Zone (EEZ) and continental shelf.
3. **Historical rights and the conduct of parties:** This refers to recognition of the *modus vivendi* (i.e. way of living) as evidencing a tacit boundary or an agreement between parties; and/or historic titles which refer to long term practices denoting agreed sovereignty over the disputed area. This mostly concerns fishing or navigation practices.
4. **Security interests and navigational aspects:** This category includes the parties' claims related to ensuring freedom of navigation and control over shipping traffic in the EEZ and the continental shelf.
5. **Environmental considerations:** More recently, climate change effects, coastal instability, harmful practices to the marine environment, dredging and artificial-island building have been considered relevant issues to be acknowledged in maritime delimitation procedures.
6. **Sociocultural issues:** Communities heavily dependent on fishing or traditional practices require attention in pursuing equitable results. Unlike the economic potential of a zone, sociocultural issues are often assessed in terms of the damage to livelihoods and well-being derived from the delimitation.

The advantages of this typology are twofold. First, it provides an overview of what states and courts have acknowledged as elements worthy of consideration for ocean management in the case law on maritime delimitation, and other fields of international law. Second, it enables a review of how these factors have been present over time in the pleading and judgements in maritime boundary disputes. Hence, we analyze the 'relevant circumstances' as not only contributing to the maritime delimitation, but also in a broader sense in terms of what those factors mean for ocean governance. It is helpful to bear in mind the shifting role of 'relevant circumstances', as well as the particular context of each case in regards to the maritime zone to be delimited, and how different factors might influence the process accordingly.

Based on this categorization, Fig. 3 illustrates how economic, historical and geographical arguments, and to a lesser extent security and navigation factors, have appeared in litigation over maritime boundaries since the beginning of the period under consideration. However, there is a modest but significant trend of states seeking court intervention in relation to sociocultural and environmental factors, which came to the forefront in the 1984 Gulf of Maine maritime dispute, compared to geographical arguments, which have dropped to zero in pending cases.

However, as shown in Table 2 and Fig. 4, in spite of the fact that states increasingly include a broad range of claims during the pleadings,

⁴ The estimated number of international maritime boundaries and agreements are based on Nagasaka [66], who analyzes delimitation methods from 1942 to 2014. The author builds on data from Legault and Hankey (1993) and from Blake (1985). The latest estimated there were 353 potential maritime boundaries in the world with 115 already being settled. Ndiaye [67] mentions there might be 420 boundaries, while the UN does not fix with numbers, stating that "regarding delimitation of maritime boundaries between States with adjacent or opposite coasts, it has to be noted that while an important number of maritime boundary delimitation agreements have already been concluded providing a wealth of State practice, it is estimated that a very large number of maritime boundary delimitations around the world still await some form of resolution by negotiations or other peaceful means...there are a number of unresolved territorial and sovereignty disputes (especially with respect to islands). Unless and until the States concerned settle these disputes, it will not be possible to determine the maritime boundaries and the extent of the claims for the sub-region concerned". (https://www.un.org/Depts/los/LEGISLATIONANDTREATIES/frequently_asked_questions.htm)



Source: the authors

Fig. 3. Categories of 'relevant circumstances' and the number of times states have been evoked them in Maritime Boundary Disputes since 1969

Table 2

Relevant circumstances in international maritime boundary disputes court cases.

Category of 'relevant circumstance'	Number of times evoked in solved cases	Number of times evoked in pending cases	Number of times it was considered valid	Number of times it was rejected
Geographical	23	0	18	5
Economic	15	2	2	13
Historical	22	1	6	16
Navigation or Security	10	2	3	7
Environmental	3	3	1 *	2
Sociocultural	6	2	1 *	5

NB* . Although these claims have been considered important, this does not mean that boundaries have shifted as a consequence. The court cases where these concerns have been taken into account are discussed in Sections 3 and 4.

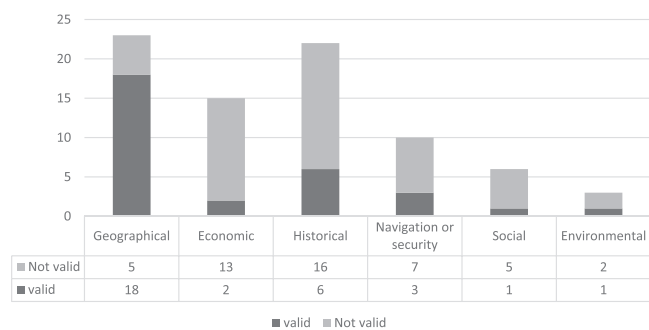


Fig. 4. Relationship between relevant circumstances and their validity for maritime delimitation.

the factors having an impact have been noticeably narrowed by the courts, for example, environmental and social factors are generally not accepted by courts. Instead, the geographical circumstances are still the most important arguments considered by the courts in maritime delimitation processes since 1969 [2,3,12,29,30,35,38,47,50,51,71,87]. However, Evans (p.248) [36] concludes that coastal states continue to

include other arguments “because they believe that they [the relevant circumstances] nevertheless may have some impact upon the overall evaluation which is being made”. Evans’s perspective supports our own argument concerning the importance of further investigation of newer elements to be included in relevant circumstances in maritime boundary-making and its contribution to effective ocean governance.

3. Environmental claims within maritime boundary delimitation

Environmental governance is considered essential for achieving effective marine resource conservation and societal outcomes [6,18]. As such, principles and instruments have been developed at the international level e.g. the global socio-environmental targets stated in the 1992 Convention on Biological Diversity (CBD, 1992), the Sustainable Development Goals established in Agenda 2030 (in particular SDG 14; UNGA 2015), the Climate Change Convention (UNFCCC, 1992), the Ramsar Convention on Wetlands (Ramsar, 1971), and the Convention for the Conservation of the Biodiversity and Protection of Priority Wilderness Areas in Central America (1993). While these address socio-environmental issues more broadly, UNCLOS is the relevant binding international agreement for the protection and preservation of the marine environment. The obligations stated in Part XII (Article 192), which include preventing pollution and transboundary harm, as well as safeguarding fragile ecosystems and marine life, are in line with the wider regulatory set of principles and policies guiding the conservation of marine resources [21].

In line with the precautionary principles established by the environmental governance framework, coastal states incorporate environmental concerns during litigation processes on maritime delimitation. As Boyle (p. 462) [21] observes, although: “the LOSC was negotiated at a time when climate change was not yet part of the international agenda [...] the LOSC was never meant to be a static or immutable legal regime”. Following this line of argument, the analyzed cases illustrate that parties might be advancing environmental arguments in the expectation that courts seem to be well-positioned to tackle them pursuant to the international legal framework above mentioned. Hence, it would be wise for the courts to consider such broader arguments in making their decisions regarding boundaries.

Early in 1984, the United States advanced that an ‘ecogeographical’

criterion should be accounted for in the delimitation process.⁶ It argued before the court that political boundaries should respect the unity of the ecosystems' discernible 'natural boundaries' (Paras 73, 167) and ecological regimes, along with the associated fishing resources present in the area underneath them (Para 174). Moreover, prospective boundaries must ensure the optimum conservation and management of living resources while reducing potential upcoming disputes between the parties (Para 110). In its ruling, the ICJ did not accept this argument.

Three decades later, the Bay of Bengal Arbitration took place.⁷ It is the first (and only) time that a tribunal was asked to examine climate change impacts for maritime delimitation. The Bangladesh government advanced evidence of coastal vulnerability of the coast in question, arguing that placing the basepoints in a highly unstable coastal area affected by sea-level rise, such as the Bengal Delta, might mean that the equidistance line would be susceptible to change in the foreseeable future.⁸ The Tribunal decided that: "neither the prospect of climate change nor its possible effects can jeopardize the large number of settled maritime boundaries throughout the world. This applies equally to maritime boundaries agreed between States and to those established through international adjudication" (Award, Para 217).

More recently, an Arbitral Tribunal was asked to consider the accusations of Philippines that China was using practices harmful to marine life and the environment in the South China Sea,⁹ such as fishing with cyanide and explosives, the harvesting of endangered species, and artificial-island building. Although the Tribunal was not asked to delimit any maritime boundary between the parties, it remarked on its jurisdiction to resolve the dispute concerning the entitlements to maritime zones and the lawfulness of China's actions in the marine area (Award, Paras 6–10). In doing so, China was found in breach of UNCLOS, regarding its marine environmental protection obligations established in Article 192 and under the relevant "corpus of international law relating to the environment", such as the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1973) and the CDB (1992) (Award, Paras 941–959). The Tribunal also required China to conduct an Environmental Impact Assessment (EIA) and appoint scientific experts to assess the environmental situation, whose reports were to be included on the merits (Award, Paras 990–991). China objected to the nature of the submission as being closely related to maritime boundary delimitation, thus refusing to participate in the proceedings and to implement the ruling. Although the South China Sea Arbitration has been since the highly debated, it might influence future cases on addressing environmental issues at the core of maritime boundary disputes.

Two new and open cases include environmental considerations as a core component of the maritime disputes, showing a rising trend compared to the few cases (three out of 30) previously ruled. In a maritime delimitation case on the Black Sea¹⁰ which is currently in court, Ukraine claims that The Russian Federation is threatening the marine environment by building a bridge in the Kerch Strait without consultation and failing to prevent an oil spill off the coast of Sevastopol. The Russian Federation disagrees, arguing that these concerns are outside the Arbitral Tribunal's jurisdiction. The Tribunal has stated that the conflict involves aspects like navigation, fisheries and environmental

concerns as a whole and, on the basis of Annex VIII, the PCA is currently examining these environmental concerns as part of a bigger conflict and disagreement over boundaries.¹¹ The second case, still in a preliminary stage at the ICJ at the time of writing this paper, entails claims concerning marine pollution and illegal fishing at the Guatemalan-Belize border¹² [74].

4. Sociocultural considerations at the core of maritime boundary disputes

Closely linked to marine resources' conservation, the sociocultural dimension of oceans is often considered integral to an effective governance framework. Traditional ocean-related living practices are recognized by international legal instruments aiming – directly or indirectly – to protect customary rights and livelihoods. These international instruments include: (1) the Sustainable Development Goals (specifically SDGs 2, 5, 6, 12, 14; UNGA 2015) and (2), the UN Declaration on the Rights of Indigenous Peoples (2007), (3) the ILO Convention 169 (1989); and (4) the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF Guidelines). Only a small part of this subject matter is directly addressed in UNCLOS, although Articles 51 and 61 do mention traditional fishing rights and the economic needs of coastal fishing communities.

Submissions regarding sociocultural issues and traditional fisheries-related living practices have emerged six times in the thirty court cases during the last five decades, five of which have been rejected. The 1984 Gulf of Maine case was the first when such considerations were evoked. The Court was asked by Canada to assess the 'human dimension' – rather than purely the economics – of the fishing practices in the region to be considered as relevant for the delimitation. The social factors were included in the delimitation process in view of the 'catastrophic repercussions' the delimitation might cause for the communities in question. The court held that factors of 'human geography' were not relevant to assess the "equitable character of a delimitation first established on the basis of criteria borrowed from physical and political geography" (Para 232).

In the Jan Mayen case (1993), in which Denmark and Norway disputed a marine area between the east coast of Greenland and the Norwegian island of Jan Mayen, Denmark invoked sociocultural factors stating: "the overwhelming reliance of the Greenland coastal communities and economy on the seasonal capelin fishery and their attachment to their surrounding sea" (Para 79). Here the Court concluded that the "population and socio-economic factors raised by Denmark" were not considered relevant elements because the delimitation should not be affected by the relative economic position of the disputing States (Paras 79–80), hence rejecting the arguments.

Since then, the social dimension of fisheries has been frequently presented as being at risk within the delimitation process. However, international courts and tribunals have not considered it relevant for the delimitation. Instead, the states are asked to mutually agree on regulations to preserve such traditions for the benefit of the communities. The Red Sea Arbitration and the Barbados v. Trinidad and Tobago cases are examples of these procedures. In the former, the Tribunal was asked to consider the artisanal nature of fishing practices, including the local consumption of fish as part of a traditional fishing regime and local legal traditions. Although this argument was rejected, the Tribunal acknowledged local legal traditions and associated rights and held that the Red Sea's artisanal fishing practices extended throughout both Yemen and Eritrea's maritime zones. It called on the parties to mutually

⁶ Delimitation of the Maritime Boundary in the Gulf of Maine Area, Judgment, I.C.J. Reports 1984, p. 246.

⁷ In the Matter of the Bay of Bengal Maritime Boundary (Bangladesh v. India), PCA. Award. 2014

⁸ Arbitration under Annex VII of the United Nations Convention on the Law of the Sea. People's Republic of Bangladesh v. Republic of India. Memorial of Bangladesh. Volume I. Paras 6.81–6.83

⁹ South China Sea Arbitration (The Republic of the Philippines and the People's Republic of China) Award, PCA Case No 2013–19. 12 July 2016

¹⁰ Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. the Russian Federation) PCA Case No. 2017–06.

¹¹ PCA. Ukraine v. the Russian Federation. Award concerning the preliminary objections of the Russian Federation, 21 February 2020. Paras 433–443

¹² ICJ. Protocol to the Special Agreement between Belize and Guatemala to submit Guatemala's territorial insular and maritime claim to the International Court of Justice.

agree on regulations to preserve such traditions for the benefit of the communities (Paras 106–111).

The second case included social arguments around flying fish harvesting practices, and the government of Barbados included testimonies and life histories of fishers and coastal communities attesting the importance of the tradition for Barbadian fisherfolk and fish vendors, whose livelihood depends on seasonal fishing in the disputed areas, constituting an “important element of the history, economy and culture of Barbados” (Paras 128 and 247). The Tribunal dismissed the arguments, considering the evidence fragmentary and inconclusive and that: “it does not sustain its contention that its fisherfolk have traditionally fished for flying fish off Tobago for centuries” (Para 266). Barbados and Trinidad & Tobago were asked to negotiate an agreement on access to fisheries in good faith.

The approach taken at the South China Sea arbitration¹³ in 2016 demonstrates that small-scale fisheries and related practices might be given some recognition within boundary disputes. As the Philippines called for protecting traditional fishing, arguing that China prevented its fishers from pursuing their livelihoods and interfered with traditional practice, the Tribunal took note of SSF Guidelines on artisanal fishing and recognized: “the attention paid to traditional fishing rights in international law stems from the recognition that traditional livelihoods and cultural patterns are fragile in the face of development and modern ideas of interstate relations and warrant particular protection” (Paras 794–795). The Tribunal found that China failed to respect the sovereign rights of the Philippines over its fisheries and interfered with its traditional fishing practices through deploying its official ships in the region. However, in assessing China’s historic fishing rights in the region, the award stated “it does not consider it possible that the drafters of the Convention intended for traditional or artisanal fishing rights to survive the introduction of the exclusive economic zone.” Hence the tribunal explicitly disagreed with the conclusions drawn for the Red Sea delimitation process.¹⁴

Finally, the pending case of Ukraine v. the Russian Federation¹⁵ illustrates how maritime waters contain valuable resources for states, but also intangible and cultural values for people [70]. Moreover, Ukrainian claims not only included the impacts for the fishers’ livelihoods, but also its rights in relation to the underwater cultural heritage present in its waters, which could be also affected.

As seen, most sociocultural arguments revolve around small-scale fisheries as a traditional practice embedded in sociocultural practices. The courts have been reluctant, however, to accept this argument in redrawing maritime boundaries [10,58,73,86]. As Sands [80] (2016) suggests, the human relationship with the ocean through artisanal fisheries and living resources management necessitates that traditional institutions contribute to international law development. Even before UNCLOS entered into force, scholars had asked whether the delimitation process had adequately considered existing fishing practices in the special circumstances provided by Articles 15 and 59 of the Convention

[26,35,36]. The prevailing discussions concerning sociocultural rights create new challenges to ocean governance. Scholars thus argue that it should mirror institutional reconceptualization of boundary-making [24,48,65,79,90,91,92].

5. Conclusions

This paper has undertaken a governance-centered approach in analyzing the court cases on maritime boundaries from an international development studies perspective. It concludes that the number of such cases is growing and more often, coastal states urge international courts and tribunals to go beyond geographical configurations for maritime delimitation and examine a wider range of factors now considered integral to the process. We delve into this trend by focusing on the role played by ‘relevant circumstances’ in the method and approach for maritime delimitation that has been evolving within the case law. We propose that these factors can be clustered into six types and analyze their evolving role, functions and interpretation over time by coastal states, courts and tribunals.

We demonstrate that pleas and judgements are including two new factors, namely the environmental and sociocultural conditions. The emergence of these factors follows from developments in other fields of international law. The review illustrates that underlying and new practices complicate governance of the marine space and reveals how indeterminate or disputed boundary delimitations interfere with sustainable management of ocean and coastal resource sustainability, thus affecting livelihoods. The paper shows that although not yet fully acknowledged, boundary disputes mirror such concerns.

However, courts and tribunals have progressively limited the circumstances worthy of consideration to essentially geographic ones. Hence, we argue that the framework for solving maritime disputes together with the existing body of rules and policies concerning coastal livelihood protection and the preservation of marine ecosystems, might require the judicial bodies to reconsider how such processes can take account of the environmental and human dimensions. By linking the existing ocean governance objectives and the ‘relevant circumstances’ claims made by the coastal states within maritime boundary disputes, we propose that the legal regime on boundary adjudication is a fertile field to achieve the societal and environmental outcomes crucial for an effective ocean governance.

Acknowledgements

The first author acknowledges the Nuffic Organization in the Netherlands (NFP grant 17/0014), the Colombian government agency COLCIENCIAS (grant 783) and the Erigaie Foundation. The second author acknowledges the Global Challenges Foundation grant for New Governance Architecture for Addressing Global Systemic Risks. We also acknowledge the constructive comments made the reviewers.

Annex 1. Examined court cases on maritime boundary disputes from 1969 until 2020 and the type of ‘relevant circumstance’ raised by the coastal state

#	MARITIME BOUNDARY DISPUTE COURT CASE	RELEVANT CIRCUMSTANCE RAISED BY ANY OF THE COASTAL STATES (based on Section 2 typology)
1	North Sea Continental Shelf Cases (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands) [1969] ICJ	Geographical, Economic
2	Fisheries Jurisdiction Case (United Kingdom of Great Britain and Northern Ireland v. Iceland) [1972] ICJ	Economic, Historical

(continued on next page)

¹³ South China Sea Arbitration (The Republic of the Philippines and the People’s Republic of China) Award, PCA Case N° 2013–19. 12 July 2016

¹⁴ South China Sea Arbitration. Final Award (Paras 803, 804b)

¹⁵ Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait. PCA

(continued)

#	MARITIME BOUNDARY DISPUTE COURT CASE	RELEVANT CIRCUMSTANCE RAISED BY ANY OF THE COASTAL STATES (based on Section 2 typology)
3	Dispute between Argentina and Chile concerning the Beagle Channel (Argentina/Chile), [1977] Report and Decision of the Court of Arbitration	Geographical, Historical, Navigation
4	Case concerning the Delimitation of Continental Shelf between the United Kingdom of Great Britain and Northern Ireland, and the French Republic [1977, 1978] ILR	Geographical, Historical, Security & Navigation
5	Dubai-Sharjah Border Arbitration, [1981] ILR	Geographical
6	Case concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya) [1982] ICJ	Geographical, Historical, Economic
7	Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States) [1984] ICJ	Geographical, Economic, Historical, Environmental, Sociocultural
8	Case concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta) [1985] ICJ	Geographical, Economic, Security
9	Delimitation of the Maritime Boundary between Guinea and Guinea-Bissau [1985] ILR	Economic
10	Case concerning the Delimitation of the Maritime Boundary between Guinea-Bissau and Senegal (Guinea-Bissau v. Senegal) [1995] ICJ	Historical
11	Case concerning the Delimitation of Maritime Areas between Canada and France [1992] Reports of International Arbitral Awards	Geographical, Economic
12	Land, Island and Maritime Frontier Dispute (El Salvador/Honduras) [1990] ICJ	Historical, Geographical
13	Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway) [1993] ICJ	Geographical, Economic, Social, Historical
14	Sovereignty and Maritime Delimitation in the Red Sea (Eritrea/Yemen) [1999] PCA	Geographical, Economic, Navigation, Sociocultural
15	Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar/Bahrain) [2001] ICJ	Geographical, Historical, Navigation
16	Newfoundland and Labrador/Nova Scotia [2002] ILR	Geographical, Historical, Economic
17	Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria; Equatorial Guinea intervening) [2002] ICJ	Historical, Geographical
18	Arbitration between Barbados and the Republic of Trinidad and Tobago [2006] PCA	Geographical, Economic, Historical, Sociocultural
19	Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras) [2007] ICJ	Geographical, Historical
20	In the Matter of an Arbitration between Guyana and Suriname (Guyana v. Suriname) [2007] PCA	Historical, Navigation & security
21	Case concerning sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore) [2008] ICJ	Historical
22	Maritime Delimitation in the Black Sea (Romania v. Ukraine) [2009] ICJ	Geographical, Economic, Historical, Security
23	Territorial and Maritime Dispute (Nicaragua v. Colombia) [2012] ICJ	Geographical, Historical
24	Delimitation of the Maritime Boundary in the Bay of Bengal (Bangladesh/Myanmar) [2012] ITLOS	Historical, Geographical
25	In the Matter of the Bay of Bengal Maritime Boundary (Bangladesh v. India) [PCA] 2014	Social, Geographical, Environmental
26	Maritime Dispute (Peru v. Chile) [2014] ICJ	Economic, Historical
27	South China Sea Arbitration (Philippines v. China) [2016] PCA	Historical, Economic, Social, Environmental, Security
28	Dispute concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana/Côte d'Ivoire) [2017] ITLOS	Geographical, Economic, Historical, Navigation
29	Arbitration Between the Republic of Croatia and the Republic of Slovenia (Croatia v. Slovenia) [2017] PCA	Geographical, Historical, Security & Navigation
30	Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicaragua) [2018] ICJ	Geographical
31	Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 nautical miles from the Nicaraguan Coast (Nicaragua v. Colombia) ICJ	Geographical
32	Maritime Delimitation in the Indian Ocean (Somalia v. Kenya) ICJ	Any relevant circumstances claimed
33	Maritime Delimitation in the Indian Ocean (Somalia v. Kenya) ICJ; Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. the Russian Federation) PCA	Historical, Economic, Environmental, Navigation, Sociocultural
34	Guatemala's Territorial, Insular and Maritime Claim (Guatemala/Belize) ICJ.	Economic, Environmental, Navigation

References

- [1] Y.E. Acikgonul, Reflections on the principle of non-cut off: A growing concept in maritime boundary delimitation law, *Ocean Dev. Int. Law* 47 (1) (2016) 52–71, <https://doi.org/10.1080/00908320.2016.1124485>.
- [2] Y.E. Acikgonul, Equitable delimitation of maritime boundaries: the uncontested supremacy of coastal geography in case law, *Ocean Yearb. Online* 31 (1) (2017) 171–196.
- [3] M.S. Alam, A.Al Faruque, The problem of delimitation of Bangladesh's maritime boundaries with India and Myanmar: Prospects for a solution, *Int. J. Mar. Coast. Law* 25 (3) (2010) 405–423, <https://doi.org/10.1163/157180810x517015>.
- [4] E.H. Allison, B.D. Ratner, B. Åsgård, R. Willmann, R. Pomeroy, J. Kurien, Rights-based fisheries governance: from fishing rights to human rights, *Fish Fish* 13 (1) (2012) 14–29.
- [5] N. Antunes, V. Becker-Weinberg, Entitlement to Maritime Zones and Their Delimitation, in: A.O. Elferink, T. Henriksen, S. Busch (Eds.), *Maritime Boundary Delimitation: The Case Law: Is It Consistent and Predictable?*, Cambridge University Press, Cambridge, 2018, pp. 62–91, <https://doi.org/10.1017/9781108344302.004>.
- [6] D. Armitage, R. Loe, De, R. Plummer, Environmental governance and its implications for conservation practice, *Conserv. Lett.* 5 (2012) 245–255, <https://doi.org/10.1111/j.1755-263X.2012.00238.x>.
- [7] S. Árnadóttir, Ecological changes justifying termination or revision of EEZ and EFZ boundaries, *Mar. Policy* 84 (April) (2017) 287–292, <https://doi.org/10.1016/j.marpol.2017.06.021>.
- [8] Arsana, I. Made A. (2007). *The Delineation of Indonesia's Outer Limits of its Extended Continental Shelf and Preparation For its Submission: Status and Problems*. New York.
- [9] Á. Ásgeirsdóttir, M. Steinwand, Dispute settlement mechanisms and maritime boundary settlements, *Rev. Int. Organ.* 10 (2) (2015) 119–143, <https://doi.org/10.1007/s11558-015-9217-9>.
- [10] Á. Ásgeirsdóttir, M.C. Steinwand, Distributive outcomes in contested maritime areas: the role of inside options in settling competing claims, *J. Confl. Resolut.* 62 (6) (2018) 1284–1313, <https://doi.org/10.1177/0022002716677568>.
- [11] M. Barbesgaard, Blue growth: savior or ocean grabbing? *J. Peasant Stud.* 45 (1) (2018) 130–149, <https://doi.org/10.1080/03066150.2017.1377186>.
- [12] R. Barnes, *The Convention on the Law of the Sea: An Effective Framework for Domestic Fisheries Conservation?*, 1st ed in: R. Barnes, D. Freestone, D.M. Ong (Eds.), *The Law of the Sea: Progress and Prospects* Oxford University Press, Oxford, 2006, pp. 233–260, <https://doi.org/10.1093/acprof:oso/9780199299614.003.0013>, 1st ed.
- [13] R. Barnes, D. Freestone, D.M. Ong, *The Law of the Sea: Progress and Prospects*, 1st ed, in: R. Barnes, D. Freestone, D.M. Ong (Eds.), *The Law of the Sea: Progress and Prospects*, Oxford University Press, Oxford, 2006, pp. 1–27, 1st ed.
- [14] M. Bavinck, J. Verrips, Manifesto for the marine social sciences, *Marit. Stud.* 19 (2) (2020) 121–123, <https://doi.org/10.1007/s40152-020-00179-x>.
- [15] N.J. Bennett, Navigating a just and inclusive path towards sustainable oceans, *Mar. Policy* 97 (February) (2018) 139–146, <https://doi.org/10.1016/j.marpol.2018.06.001>.
- [16] N.J. Bennett, A.M. Cisneros-Montemayor, J. Blythe, J.J. Silver, G. Singh, N. Andrews, U.R. Sumaila, Towards a sustainable and equitable blue economy, *Nat. Sustain.* 2 (11) (2019) 991–993, <https://doi.org/10.1038/s41893-019-0404-1>.
- [17] N.J. Bennett, H. Govan, T. Satterfield, Ocean grabbing, *Mar. Policy* 57 (2015) 61–68, <https://doi.org/10.1016/j.marpol.2015.03.026>.
- [18] N.J. Bennett, T. Satterfield, Environmental governance: a practical framework to guide design, evaluation, and analysis, *Conserv. Lett.* 11 (2018) 1–13, <https://doi.org/10.1111/conl.12600>.

- [19] J.L. Blythe, D. Armitage, N.J. Bennett, J.J. Silver, A.M. Song, The politics of ocean governance transformations, *Front. Mar. Sci.* 8 (July) (2021), <https://doi.org/10.3389/fmars.2021.634718>.
- [20] G. Borrini-Feyerabend, R. Hill, Governance for the conservation of nature, *Prot. Area Gov. Manag.* June (2015) 169–206.
- [21] A. Boyle, Litigating climate change under part XII of the LOSC, *Int. J. Mar. Coast. Law* 34 (2019) 458–481, <https://doi.org/10.1163/15718085-13431097>.
- [22] D.W. Bromley, The crisis in ocean governance: conceptual confusion, spurious economics, political indifference, *Mast* 6 (2) (2008) 7–22.
- [23] D.D. Caron, Climate change, sea level rise and the coming uncertainty in oceanic boundaries: A proposal to avoid conflict, in: S.-Y. Hong, J.M. Van Dyke (Eds.), *Maritime Boundary Disputes, Settlement Processes, And The Law Of The Sea*, Martinus Nijhoff Publishers, 2009, pp. 1–17.
- [24] M. Casas-Cortes, S. Cobarrubias, P. John, 'Good neighbours make good fences': Seahorse operations, border externalization and extra-territoriality, *Eur. Urban Reg. Stud.* 1 (21) (2014) 1–20, <https://doi.org/10.1177/0969776414541136>.
- [25] R. Churchill, The general dispute settlement system of the UN convention on the law of the sea: overview, context, and use, *Ocean Dev. Int. Law* 48 (3–4) (2017) 216–238, <https://doi.org/10.1080/00908320.2017.1327287>.
- [26] R.R. Churchill, Fisheries issues in maritime boundary delimitation, *Mar. Policy* 17 (1) (1993) 44–57, [https://doi.org/10.1016/0308-597X\(93\)90005-N](https://doi.org/10.1016/0308-597X(93)90005-N).
- [27] A.M. Cisneros-Montemayor, M. Moreno-Báez, G. Reygondeau, W.W.L. Cheung, K. M. Crosman, P.C. González-Espinoza, Y. Ota, Enabling conditions for an equitable and sustainable blue economy, *Nature* 591 (7850) (2021) 396–401, <https://doi.org/10.1038/s41586-021-03327-3>.
- [28] P.J. Cohen, E.H. Allison, N.L. Andrew, J. Cinner, L.S. Evans, M. Fabinyi, B. D. Ratner, Securing a just space for small-scale fisheries in the blue economy, *Front. Mar. Sci.* 6 (MAR) (2019) 1–8, <https://doi.org/10.3389/fmars.2019.00171>.
- [29] T. Cottier, *Equitable Principles of Maritime Boundary Delimitation. The Quest for Distributive Justice in International Law*, Cambridge University Press, Cambridge, UK, 2015.
- [30] L. Delabie, The Role of Equity, Equitable Principles, and the Equitable Solution in Maritime Delimitation, in: A.G. Oude Elferink, T. Henriksen, S. Veierud Busch (Eds.), *Maritime Boundary Delimitation: The Case Law: Is It Consistent and Predictable?*, Cambridge University Press, Cambridge, 2018, pp. 145–172, <https://doi.org/10.1017/9781108344302.007>.
- [31] Dundua, N. (2006). *Delimitation of maritime boundaries between adjacent States*. New York.
- [32] L.X.C. Dutra, I. Sporne, M. Haward, S. Aswani, K.L. Cochrane, S. Frusher, I.E. van Putten, Governance mapping: a framework for assessing the adaptive capacity of marine resource governance to environmental change, *Mar. Policy* 106 (May) (2019), <https://doi.org/10.1016/j.marpol.2018.12.011>.
- [33] Edward H., A., John, K., Yoshitaka, O., Adhuri, D.S., Bavinck, J.M., Cisneros-montemayor, A., Weeratunge, N. (2020). *The Human Relationship with Our Ocean Planet*. Washington, DC. Retrieved from oceanpanel.org/blue-papers/%0AHumanRelationshipwithOurOceanPlanet.
- [34] A.G.O. Elferink, T. Henriksen, S. Veierud Busch, 1st ed., in: A.G.O. Elferink, T. Henriksen, S. Veierud Busch (Eds.), *Maritime Boundary Delimitation: The Case Law. Is It Consistent and Predictable?*, Cambridge University Press, Cambridge, 2018.
- [35] Malcolm Evans, Maritime boundary delimitation: where do we go from here? in: R. Barnes, D. Freestone, D.M. Ong (Eds.), *The Law of the Sea: Progress and Prospects* Oxford University Press, Oxford, 2006, pp. 137–160, <https://doi.org/10.2307/3411206>.
- [36] Malcolm Evans, Relevant circumstances, in: A.G.O. Elferink, T. Henriksen, S. V. Busch (Eds.), *Maritime Boundary Delimitation: The Case Law: Is It Consistent and Predictable?*, Cambridge University Press, Cambridge, 2018, pp. 222–261.
- [37] Malcolm Evans, *Relevant Circumstances and Maritime Delimitation*, Oxford University Press, Oxford, 1989.
- [38] S. Fieta, R. Cleverly, *A Practitioner's Guide to Maritime Boundary Delimitation*, Oxford University Press, Oxford, 2016.
- [39] S.M. Garcia, M. Hayashi, Division of the oceans and ecosystem management: a contrastive spatial evolution of marine fisheries governance, *Ocean Coast. Manag.* 43 (2000) 445–474.
- [40] J. Gillespie, Wetland conservation and legal layering: managing Cambodia's great lake, *Geogr. J.* 184 (1) (2018) 31–40, <https://doi.org/10.1111/geoj.12216>.
- [41] C. Gupta, Bonded bodies: coastal fisherfolk, everyday migrations, and national anxieties in India and Sri Lanka, *Cult. Dyn.* 19 (2–3) (2007) 237–255, <https://doi.org/10.1177/0921374007080293>.
- [42] E. Haque, D. Hassan, Oceans maritime boundary delimitation: a normative standard? *Environ. Policy Law* 44 (5) (2014) 433–450.
- [43] G. Houlden, N. Hong (Eds.), *Maritime Order and the Law in East Asia*, Routledge, 2018.
- [44] D.M. Johnston, *The theory and history of ocean boundary-making (I)*. Québec, McGill-Quenn's University Press, Canada, 1988.
- [45] J.B. Jouffray, R. Blasiak, A.V. Norström, H. Österblom, M. Nyström, The blue acceleration: the trajectory of human expansion into the Ocean, *One Earth* 2 (1) (2020) 43–54, <https://doi.org/10.1016/j.oneear.2019.12.016>.
- [46] H.J. Kim, South Korea's use of force against Chinese illegal fishing in the course of law enforcement in the Yellow Sea, *Mar. Policy* 99 (October 2018) (2019) 148–156, <https://doi.org/10.1016/j.marpol.2018.10.007>.
- [47] R. Kolb, *Case Law on Equitable Maritime Delimitation*, Martinus Nijhoff Publishers, London, 2003.
- [48] V. Konrad, Toward a theory of borders in motion, *J. Borderl. Stud.* 30 (1) (2015) 1–17, <https://doi.org/10.1080/08865655.2015.1008387>.
- [49] B. Kwiatkowska, Resource, Navigational and Environmental Factors in Equitable Maritime Boundary Delimitation, in: R.W.S. Jonathan I. Charney, David A. Colson, Lewis M. Alexander (Eds.), *International Maritime Boundaries, Volume 5*, Martinus Nijhoff Publishers, Leiden/Boston, 2005, pp. 3223–3244.
- [50] B. Kwiatkowska, The world court and peaceful settlement of oceans disputes, 1st ed, in: R. Barnes, D. Freestone, D.M. Ong (Eds.), *The Law of the Sea: Progress and Prospects*, Oxford University Press, Oxford, 2006, pp. 432–457, <https://doi.org/10.1093/acprof:oso/9780199299614.003.0022>, 1st ed.
- [51] B. Lakićević-Duranović, Theoretical and practical significance of the issue of maritime delimitation in the law of the sea, *Trans. Marit. Sci.* 6 (2) (2017) 125–129, <https://doi.org/10.7225/toms.v06.n02.004>.
- [52] M. Lando, Judicial uncertainties concerning territorial sea delimitation under article 15 of the United Nations convention on the law of the sea, *Int. Comp. Law Q.* 66 (3) (2017) 589–623, <https://doi.org/10.1017/S0020589317000197>.
- [53] C.G. Lathrop, Why litigate a maritime boundary? Some contributing factors, in: N. Klein (Ed.), *Litigating International Law Disputes: Weighing the Balance*, Vol. 149, Cambridge University Press, Cambridge, 2014, pp. 230–259, <https://doi.org/10.1017/CBO9781139062008.015>.
- [54] A.S. Levine, L. Richmond, D. Lopez-Carr, Marine resource management: culture, livelihoods, and governance, *Appl. Geogr.* 59 (2015) 56–59, <https://doi.org/10.1016/j.apgeog.2015.01.016>.
- [55] M. Lockwood, J. Davidson, A. Curtis, E. Stratford, R. Griffith, Governance principles for natural resource management, *Soc. Nat. Resour.* 23 (10) (2010) 986–1001, <https://doi.org/10.1080/08941920802178214>.
- [56] K. Madani, O.M. Rouhani, A. Mirchi, S. Gholizadeh, A negotiation support system for resolving an international trans-boundary natural resource conflict, *Environ. Model. Softw.* 51 (2014) 240–249, <https://doi.org/10.1016/j.envsoft.2013.09.029>.
- [57] M. McCreath, Z. Scanlon, Prospects for the future use of ITLOS Ad Hoc special chambers after the Ghana/Côte d'Ivoire Case, *Law Pract. Int. Courts Trib.* 17 (2) (2018) 309–334, <https://doi.org/10.1163/15718034-12341382>.
- [58] T.L. McDorman, Global ocean governance and international adjudicative dispute resolution, *Ocean Coast. Manag.* 43 (2–3) (2000) 255–275, [https://doi.org/10.1016/S0964-5691\(99\)00073-3](https://doi.org/10.1016/S0964-5691(99)00073-3).
- [59] D. McRae, *The Applicable Law: The Geneva Convention on the Continental Shelf, the LOSC, and Customary International Law*, in: A.G.O. Elferink, T. Henriksen, S. Veierud Busch (Eds.), *Maritime Boundary Delimitation: The Case Law: Is It Consistent and Predictable?*, Cambridge University Press, Cambridge, 2018, pp. 92–116.
- [60] A. Menon, M. Bavinck, J. Stephen, R. Manimohan, The political ecology of palk bay fisheries: geographies of capital, fisher conflict, ethnicity and nation-state, *Antipode* 48 (2) (2016) 393–411, <https://doi.org/10.1111/anti.12181>.
- [61] B. Miller, An ethnographic view of legal entanglements on the salish sea borderlands, *UBC Law Rev. Soc.* 47 (2014) 8–23, <https://doi.org/10.3868/s050-004-015-0003-8>.
- [62] M.A. Miller, B/ordering the environmental commons, *Prog. Hum. Geogr.* 44 (3) (2020) 473–491, <https://doi.org/10.1177/0309132519837814>.
- [63] C. Mirasola, Historic waters and ancient title: outdated doctrines for establishing maritime sovereignty and jurisdiction, *J. Marit. Law Commer.* 47 (1) (2016) 29–75.
- [64] Moore, J.N., & Nordquist, M.H. (Eds.). (2012). *Center for Oceans Law and Policy*. London: Brill | Nijhoff.
- [65] A. Mount, N. Hiemstra, Spatial Strategies for Rebordering Human Migration at Sea, in: T.M. Wilson, H. Donnan (Eds.), *A Companion to Border Studies*, Blackwell Publishing Ltd, 2012, pp. 455–472, <https://doi.org/10.1002/9781118255223>.
- [66] N. Nagasaka, Visualising historical trends in global maritime boundary delimitations since the 1940s, *Mar. Policy* 71 (2016) 29–37, <https://doi.org/10.1016/j.marpol.2016.05.017>.
- [67] T.M. Ndiaye, The judge, maritime delimitation and the grey areas, *Indian J. Int. Law* 55 (4) (2015) 493–533, <https://doi.org/10.1007/s40901-016-0027-2>.
- [68] J. Nevins, Contesting the boundaries of international justice: state countermapping and offshore resource struggles between east timor and Australia, *Econ. Geogr.* 80 (1) (2004) 1–22, <https://doi.org/10.1111/j.1944-8287.2004.tb00226.x>.
- [69] K. Noussia, On international arbitrations for the settlement of boundary maritime delimitation disputes and disputes from joint development agreements for the exploitation of offshore natural resources, *Int. J. Mar. Coast. Law* 25 (1) (2010) 63–80, <https://doi.org/10.1163/092735210x12589554057569>.
- [70] E. Nyman, Culture, economics, and maritime disagreements: barbados and the culture, economics, and maritime disagreements: barbados and the flying fish, *Soc. Econ. Stud.* 61 (4) (2012) 145–169. (<http://www.jstor.org/stable/24384430>).
- [71] F. Olorundami, The ICJ and its Lip Service to the non-priority status of the equidistance method of delimitation, *Camb. J. Int. Comp. Law* 4 (1) (2015) 53–72, <https://doi.org/10.7574/cjicl.04.01.53>.
- [72] Österblom, H., C.C. Wabnitz, C., Tladi, D., Allison, E.H., Arnaud-haond, S., Bebbington, J., ... Mcdougall, C. (2020). *Towards Ocean Equity*. Washington, DC. Retrieved from www.oceanpanel.org/how-distribute-benefits-ocean-equitably.
- [73] B.H. Oxman, International maritime boundaries: political, strategic, and historical considerations, *Univ. Miami Inter-Am. Law Rev.* 26 (2) (1995) 243–295.
- [74] A. Perez, C. Chin-ta, F. Afero, Belize-Guatemala territorial dispute and its implications for conservation, *Trop. Conserv. Sci.* 2 (1) (2009) 11–24.
- [75] J. Phillipson, D. Symes, "A sea of troubles": Brexit and the fisheries question, *Mar. Policy* (2018) 90, <https://doi.org/10.1016/j.marpol.2017.12.016>.

- [76] R. Prerna, D.K. Pandey, The shades of grey over blue: a maritime delimitation dogma, *Ocean Coast. Manag.* 158 (February) (2018) 93–102, <https://doi.org/10.1016/j.ocecoaman.2018.03.027>.
- [77] M.A. Rogoff, *Overv. Exist. Marit. Bound. Disput. Recomm. Their Settl.* 7 (2) (2009) 401–406.
- [78] D.R. Rothwell, International Law of the Sea and the Nicaraguan Cases, in: S. O. Edgardo, B. Samson (Eds.), *Nicaragua Before the International Court of Justice*, Springer, Cham, 2018, p. 432, https://doi.org/10.1007/978-3-319-62962-9_14.
- [79] C. Rumford, Theorizing borders, *Eur. J. Soc. Theory* 9 (2) (2006) 155–169, <https://doi.org/10.1177/1368431006063330>.
- [80] P.Q.C. Sands, Climate change and the rule of law: adjudicating the future in international law, *J. Environ. Law* 28 (1) (2016) 19–35, <https://doi.org/10.1093/jel/eqw005>.
- [81] H.N. Scheiber, Preface, 7 issues legal scholarship, *Issues Leg. Scholarsh.* 7 (2) (2008) 1–2, <https://doi.org/10.3366/ajicl.2011.0005>.
- [82] H.N. Scheiber, The Law of the Sea Institute: A New Forum for Debate of Ocean Law in the 1960s “Decade of Uncertainty”, in: H.N. Scheiber, N. Oral, M.-S. Kwon (Eds.), *Ocean Law Debates: The 50-year legacy and Emerging Issues for the years ahead*, Leiden: Brill, 2018, pp. 11–92.
- [83] C. Schofield, Blurring the lines. Maritime joint development and the cooperative management of ocean resources, *Issues Leg. Scholarsh.* 7 (1) (2008) 1–27, <https://doi.org/10.2202/1539-8323.1103>.
- [84] C. Schofield, Parting the waves: claims to maritime jurisdiction and the division of ocean space, *Penn State J. Law Int. Aff.* 1 (1) (2013) 38–58. (<http://elibrary.law.psu.edu/jlia/vol1/iss1/3>).
- [85] C. Schofield, Seeking lines in the sea: progress and challenges in the delimitation of maritime boundaries over the past 50 years, *Ocean Law Debate.: 50-year Leg. Emerg. Issues years Ahead* (2018) 135–157.
- [86] D.M. Schug, International maritime boundaries and indigenous people. The case of the Torres Strait, *Mar. Policy* 20 (3) (1996) 209–222.
- [87] O.K. Seneadza, The law and practice in maritime boundary delimitation: lessons for the resolution of dispute between Cote d’Ivoire and Ghana, *Commonw. Law Bull.* 37 (2) (2011) 295–305, <https://doi.org/10.1080/03050718.2011.570903>.
- [88] A.M. Song, Pawns, pirates or peacemakers: fishing boats in the inter-korean maritime boundary dispute and ambivalent governmentality, *Political Geogr.* 48 (2015) 60–71, <https://doi.org/10.1016/j.polgeo.2015.06.002>.
- [89] A.M. Song, J. Scholtens, J. Stephen, M. Bavinck, R. Chuenpagdee, Transboundary research in fisheries, *Mar. Policy* 76 (July 2016) (2017) 8–18, <https://doi.org/10.1016/j.marpol.2016.10.023>.
- [90] P.E. Steinberg, Of other seas: metaphors and materialities in maritime regions, *Atl. Stud. Glob. Curr.* 10 (2) (2013) 156–169, <https://doi.org/10.1080/14788810.2013.785192>.
- [91] J. Stephen, A. Menon, Wet ontologies, fluid spaces: giving depth to volume through oceanic thinking, *Environ. Plan. D: Soc. Space* 33 (2) (2015) 247–264, <https://doi.org/10.1068/d14148p>.
- [92] P. Steinberg, K. Peters, Wet territories: rethinking state territorialisation in Palk Bay, South Asia, *Nor. Geogr. Tidsskr.* 70 (5) (2016) 263–275, <https://doi.org/10.1080/00291951.2016.1239656>.
- [93] Sutherland, M., & Nichols, S. (2006). *Administering Marine Spaces: International Issues.* (M. Sutherland & S. Nichols, Eds.), A publication of FIG Commissions 4 & 7 Working Group 4.3. International Federation of Surveyors. Copenhagen, Denmark: The International Federation of Surveyors (FIG).
- [94] Tanaka, Y. (2008). *Passing of Sovereignty: the Malaysia/Singapore Territorial Dispute before the ICJ.* Retrieved from (http://www.haguejusticeportal.net/Docs/CommentariesPDF/Tanaka_ICJ_Singapore-Malaysia_EN.pdf).
- [95] Y. Tanaka, *The International Law of the Sea (Third Edit)*, Cambridge University Press., Cambridge, 2019.
- [96] N.H. Thao, R. Amer, Coastal states in the South China Sea and submissions on the outer limits of the continental shelf, *Ocean Dev. Int. Law* (2011), <https://doi.org/10.1080/00908320.2011.592473>.
- [97] J.P.M. Van Tatenhove, Integrated marine governance: questions of Legitimacy, *Mast* 10 (1) (2011) 87–113.
- [98] N. Vaughan-Williams, M. Pisani, Migrating borders, bordering lives: everyday geographies of ontological security and insecurity in Malta, *Soc. Cult. Geogr.* 21 (5) (2020) 651–673, <https://doi.org/10.1080/14649365.2018.1497193>.
- [99] L. Vives, Unwanted sea migrants across the EU border: the Canary Islands, *Political Geogr.* 61 (2017) 181–192, <https://doi.org/10.1016/j.polgeo.2017.09.002>.
- [100] M. Yip, We have never been so bounded: pandemic, territoriality, and mobility, *R. Geogr. Soc.* 187 (2021) 174–181, <https://doi.org/10.1111/geoj.12389>.