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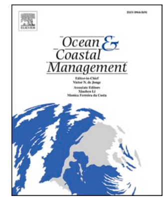

Troubled seas? The changing politics of maritime boundary disputes

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ABSTRACT

Maritime space is growing in importance. How states utilise, emphasise and view the maritime domain is changing. At the same time, maritime boundary disputes exist on all continents. Why do states engage in disputes over who owns what at sea? How do states delineate ownership and rights? How are these dynamics evolving? These core questions are examined in this article, which explores and reviews the concept of maritime boundaries and related disputes. The focus is on exclusive economic zones (EEZ), the extended maritime zones beyond territorial waters. Ocean boundaries delineating EEZs are important constructs for everything from oil and gas production to fisheries and environmental protection. Beyond function, trends like an increasing focus on the intangible attributes of disputes at sea, combined with the ongoing institutionalisation of ocean-space since the adoption of the United Nations Convention for the Law of the Sea (UNCLOS) in 1982, force us to update our assumptions regarding the political dynamics of ocean-space.

1. Introduction[1]

When the international community agreed on an international legal framework for the oceans in the post-war period, all coastal states were granted the right to extended maritime zones. This innovation secured sovereign rights to resources on the seabed and in the water column which were further offshore than thought possible a few decades earlier. In contrast to land-based border delineation, this new ocean expansionism was based on geometric propositions, the shape of the relevant coastline and international law.

Although it served as the impetus for implementing extended maritime zones across the world, the 1982 Law of the Sea Convention did little to help to solve the problem that arose as a consequence: overlapping maritime claims and boundary disputes between states. In some instances, states managed to agree rather quickly on where to delineate the maritime boundaries between opposing or adjacent coastlines, as the issue came to fore on national agendas in 1960–1980. Nevertheless, most sea boundaries were not agreed in that period.

Some took years of negotiations to settle. Others lay dormant for decades before suddenly emerging into the limelight. Most still remain in dispute. Today, maritime boundary disputes exist on all continents: an updated overview provided in this article shows that by the end of 2020, out of 460 possible maritime boundaries, only 280 have been agreed. That leaves 180 outstanding maritime boundary disputes, or approximately 39%.

'Boundary dispute' here refers to situations where two (or more) states dispute where to delineate maritime space (the water column) or the seabed, or both. This includes disputes over the territorial sea, the exclusive economic zone (EEZ) and the continental shelf. The notion of a 'boundary' in the ocean is itself a somewhat illusive concept. Determining a maritime boundary is inherently a technical process that is usually based on widely accepted legal and geographical principles; in contrast to a border on land, a maritime boundary appears merely as a line on a map without defined physical markers.

Because maritime boundaries define the space in which states operate – as do companies and individuals – the settlement of maritime disputes is also a highly political process with potentially far-reaching consequences.[2] An unsettled maritime boundary can hinder economic exploitation of offshore resources and complicate the management of transboundary fish stocks. Why, then, are not more boundaries not settled?

There would seem to be more factors involved than mere function when states consider resolving their maritime boundary disputes. At times, states even engage in indirect or direct *conflict* over such disputes, whether by arresting fishing vessels from the other party to the dispute or by engaging with navy or coast guard vessels (Østhagen 2020a,

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[2] Note that 'settled' entails that two states have formally agreed on the exact delineation of a boundary at sea, whether ratified by both countries or as a minimum adhered to as a finalised boundary. When a dispute is 'unsettled', the entire area claimed by both states remains disputed.

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80–82). Furthermore, the political importance of how delineate ocean-space has been growing since the early 2000s. The effects of climate change on the oceans have become increasingly apparent in recent decades. Sea level rise may, in turn, influence the delineation of maritime space: With changes in the baselines from which boundaries are drawn, or in the characteristics of islands and territories, states may find themselves faced with new challenges, or be forced to re-visit old and unresolved disputes (Caron 2009, 12–13; Árnadóttir 2016; Mendenhall 2019). This could cause further tension, even conflict (Rayfuse 2009; Lusthaus 2010).

Environmental concern and engagement, coupled with greater utilisation of the oceans for economic purposes through resource exploitation and transport, have propelled previously dormant or inconsequential maritime disputes onto political agendas. We see this across maritime domains, with heightened tension in recent years linked to 'who owns what' in for example the eastern Mediterranean Sea, the South and East China Seas, the Caribbean Sea, and the Arctic Ocean.

States have rights and duties regarding maritime space, and, as this space gains attention, the delineation of ownership and rights is rising to the fore of domestic and international politics. In turn, these trends require that we better comprehend the notion of boundary-making at sea, and what this concept entails for the politics of delineating ocean-space in the 21st century.

This article examines the legal, political and geographical concept of a boundary at sea, asking the following questions: Why do states engage in disputes over who owns what at sea? How do states delineate such ownership and rights? Finally, what trends are likely to impact the evolution of these processes? These questions are crucial in unpacking how international politics concerning maritime boundary disputes are changing, and what these changes in turn mean for the same political and legal processes.

In order to answer these questions, I build on a wide range of scholarly work from different fields – international law, international relations and political geography – that have grappled with the Law of the Sea,[3] maritime disputes[4] and the historic utilisation of oceans.[5] The focus here is primarily on boundary disputes pertaining to the two types of 'extended' ocean-space – EEZs and continental shelves, with an emphasis on the EEZ, where states only enjoy sovereign rights, and not full sovereignty.

I also draw on a review of the (currently) eight volumes of *International Maritime Boundaries*, which has since 1993 published on all known maritime boundary agreements. That, together with a dataset by Ásgeirsdóttir and Steinwand (2016), leaning on work done by Pratt, gives a total of 460 maritime boundary segments across the globe. As of 2020, 280 of these were agreed, but many agreements are still not ratified; only 25 were settled through arbitration or adjudication. Examples of maritime boundaries settled or still in dispute will be used, relying on the abundance of already available case studies spanning both Western and non-Western contexts and overview studies that have sought to deal with the topic more generally.[6]

The end-goal of this article is to advance the way we conceive and understand boundaries at sea across domains, which is of critical importance to world politics. Understanding the principles that underpin a boundary at sea is not just conceptually and empirically valuable; it is also of increasingly importance as certain global trends heighten the salience of maritime spatial disputes.

This article starts with outlining (2.) how states' rights at sea came to fore and how these were eventually institutionalised through international legal processes. Following from this, I examine (3.) how maritime disputes arose as states had to delineate ocean-space. An overview of settled and still outstanding disputes is provided at the end of this section, showcasing the breadth of this phenomenon and how it is still an ongoing concern for states.

Thereafter, this article turns to (4.) past and current trends that have changed the way states engage with politics of ocean-space, and maritime boundaries specifically. The ever-ongoing institutionalisation (4.1.) of maritime space through various legal mechanisms continue to set the frame for international politics in the same domain. At the same time, the functional value (4.2.) of ocean-space is not constant, and as this increases, environmental concern (4.3.) also rises which in turn impact boundary-making at sea. Finally, the symbolic and domestic aspects (4.4.) of maritime boundary disputes is a trend worth considering further when grappling with questions of *why* states engage in conflict over ocean-space. All these threads are brought together in the (5.) concluding section.

2. States and the sea

From the 15th century onwards, European powers pursued colonisation in waters outside Europe. This sparked debate concerning the status of oceans and nations' rights at sea. Based on their writings in the early 17th century, Lawyers Hugo Grotius (*mare liberum* – freedom of the seas) and John Selden (*mare clausum* – closed seas) have become symbols for two opposing ways of grappling with questions of maritime ownership and rights. Grotius became a frequently cited proponent of the idea of a natural law, with the right to peaceful commerce and passage at sea held up as natural to the 'need of all men to ensure their survival' (Maier 2016, 33). Grotius originally argued for freedom of the seas to counter Portuguese and Spanish claims to trade monopolies in the non-European world when the two colonial powers divided the non-Christian world between themselves with the 1494 Treaty of Tordesillas.

The principle of the oceans as global commons clashed with the idea that nations (or sovereigns) had rights to and sovereignty over nearby waters. For example, Norwegian kings around AD 1000 claimed sovereignty in waters adjacent to Norway, stretching all the way to the opposite shorelines (Theutenberg 1987, 481). In the 15th century, a version of this stance was advanced by Britain in response to Dutch attempts at dominion of the North Sea (Maier 2016, 37).

From the 18th century, the territorial waters of states were defined as being a 'cannon shot' from land, an idea developed by van Bynkershoek in 1703, and later defined as three nautical miles (NM) by Galiami (Anand 1983, 138). The League of Nations further attempted to codify international law concerning the oceans in The Hague in 1930, but never managed to reach agreement (Friedheim 1993).

In 1945, US President Truman declared that the natural resources of the continental shelf were under the exclusive jurisdiction of the coastal state (United States 1945). Central to the success of this declaration was not only the US position of strength after the Second World War, but also the way in which the principle entitled *every* coastal state to similar

[3] See Oxman 1995; Harrison (2011); Weil (1989); Johnston (1988); Vidas (2018); Oude Elferink, Henriksen, and Busch (2018); N. Klein (2006); Nasu and Rothwell (2014); Cottier (2015); Hasan and Jian (2019); Lalonde (2002).

[4] There have been many single case studies with various approaches. For studies of single maritime boundary disputes, see for example Okafor-Yarwood (2015); Smith (2012); Bissinger (2010); Oude Elferink (2007); Moe et al. (2011); Baker and Byers (2012); Oude Elferink (2013); Okonkwo (2017); Siousiouras and Chrysochou (2014); Tanaka (2019); Thao and Amer (2007). For studies of a country's collection of maritime boundaries, or regional complexes of disputes, see for example McDorman (2009); Kaye (2001); Beckman et al., (2013); Schofield (2008); Jensen (2014); Ásgeirsdóttir (2016).

[5] See for example Redford (2014); Finamore (2004); B. Klein and Mackenthun (2004); Paine (2013); Steinberg (2001); Baker (2013); Prescott (1975); Rosenne (1996); Yorgason (2017); Dodds (2010); Song (2015); Anderson and Peters (2014).

[6] See for example Ásgeirsdóttir and Steinwand (2016); Prescott and Schofield (2004); Byers and Østhagen (2018); Hong and Dyke (2009).

rights and the fact that these sovereign rights did not depend on occupation (Byers 1999, 91–92). This was later codified in the 1958 Geneva Convention on the Continental Shelf, which preserved the prospect of exclusive coastal state jurisdiction over offshore seabed resources (UN 1958).

After the Second World War, some states also started expanding their territorial seas from three to twelve nautical miles, as negotiations for an international regime for the oceans were underway. In 1952, Peru, Chile and Ecuador made claims of exclusive rights out to 200 NM, seeking to reap the benefits from an expansion in fisheries (Chile 1952). The international community followed suit, driven largely by growing awareness of the possibilities for marine natural resource extraction (hydrocarbons, fisheries, minerals) and the desire of states to secure potential future gains (e.g. Brown 1981; Friedheim 1993).

The United Nations' first and second conferences on the Law of the Sea were held in 1956–1958 and 1960, without reaching final agreement on the extent of the territorial sea or rights extending further (see Anand 1983). Then followed decades of negotiations aimed at developing a coherent international legal framework for the oceans. In 1982, most states agreed on a comprehensive legal regime, the United Nations Convention on the Law of the Sea (UNCLOS). When it was agreed, UNCLOS provided the legal rationale for states to implement new maritime zones in addition to the 12 NM territorial sea, with a 200 NM 'resource' or 'fisheries' zone which later became the EEZ.

Thus, in the span of a few decades states went from controlling a relatively limited (often just 3 NM) territorial sea over which they exercised full sovereignty, to taking part in an international agreement that expanded the extent of the territorial sea to a maximum of 12 NM, and added an EEZ within which states have certain sovereign rights for an additional 188 NM. Moreover, with UNCLOS it was concluded that not only do states have sovereign rights on the continental shelf up to 200 NM, but that they also have rights beyond 200 NM where the shelf is a prolongation from the land mass of the coastal state.[7]

With 168 ratifications as of 2020,[8] UNCLOS has become part of the larger legal-political reality in international politics (see Finnemore and Toope 2001). Many of its provisions reflect customary international law, which is universally binding on all states, not only UNCLOS parties (Roach 2014). This legal-political regime, which took decades to develop, has enabled states to reach a relative agreement on how to tackle issues that first arose centuries ago. However, a central bone of contention that remained – and remains – is how and where to delineate maritime space and related rights to resources on the seabed and in the water column.

3. Maritime boundary disputes

3.1. The legal pathway

States have developed different interpretations of how to draw maritime boundary lines (Forbes 1995, 13). These differences depend on which map projection is used when drawing the boundary; whether the boundary is based on a median principle or a sector principle; the shape of the geographical attributes of the land from which the maritime boundary is derived (i.e. the direction of the coastal front and the weight given to islands and submarine features); and which portion of the coast is relevant to delimitation (Bailey 1997; Bateman 2007; Nemeth et al., 2014).

When states expanded their EEZs to 200 NM in the post-war period (some as late as the 1980s and 1990s), existing maritime boundary disputes were enlarged as the disputed areas grew in size. New disputes arose where state boundaries overlapped or intertwined. Boundary disputes also emerged or became more significant between the maritime zones of 'adjacent' or 'opposing' coastal states.

As the need for their delimitation increased, the concept of 'equidistance' came to the fore. This guiding principle encountered another principle, 'equity'. The balance between these two principles has shifted over the last half-century, and this (legal) tension is crucial in understanding how states settle their maritime boundary disputes (and the principles that guide such processes). Equidistance entails a boundary that corresponds with the median line at an equal distance (equidistance) at every point from each state's shoreline. Some scholars have taken the position that this was codified under Article 6 (2) of the 1958 Geneva Convention on the Continental Shelf (Geneva Convention), which directs states to settle overlapping claims by reference to the equidistance principle (Franck 1995, 62).

However, the attention given to 'relevant' or 'special' circumstances by courts when adjudicating boundary disputes led to varying interpretations among states.[9] In addition to coastal length and other geographical variables, security interests and the location of natural resources have at times been accorded weight in a few international rulings. This has been termed 'equity', a principle distinct from 'equidistance' (Cottier 2015).

At the same time, in rulings in recent decades, the International Court of Justice (ICJ) has favoured a strict interpretation of which relevant circumstances to include, placing emphasis on geographical factors in a three-stage approach in delineating maritime boundaries, as outlined in the Black Sea Case between Romania and Ukraine in 2009 (Oude et al.,2018, 381).[10] Concerning the continental shelf vis-à-vis the EEZ, the rules to settle the two kinds of boundaries were initially different, but they have largely aligned with court rulings in recent decades.[11]

3.2. The difference between land and sea

It is essential to understand the difference between land and maritime space in the legal processes outlined here. Apart from the mere fact that humans cannot inhabit maritime space (at least not with ease), there are some legal differences of consequence for maritime boundaries. The concept of occupation – crucial in establishing title to land territory – does not hold the same relevance in the maritime domain. Occupation of the continental shelf itself could not lead to acquisition of

[7] To claim these extended rights beyond 200 NM, states must submit information showing prolongation of the shelf to the Commission on the Limits of the Continental Shelf (CLCS) (UN General Assembly 1982, Article 76 [8]). The limit of such claims was determined to be up to 350 NM from a country's baseline, or not exceeding 100 NM beyond the point where the seabed is at 2500-m depth (2500-m isobath) (Busch 2018, 321).

[8] The latest updates can be found here: https://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm.

[9] In particular, the 1969 North Sea Continental Shelf cases between Denmark, West Germany and the Netherlands pitted the principle of equity and equidistance against each other (Oude Elferink 2013). The court held that delimitation must be 'effected in accordance with equitable principles...taking account of all the relevant circumstances' (ICJ 1969, 53).

[10] First, a 'provisional delimitation line' between the disputing countries is established, based on equidistance. Second, consideration is given to 'relevant circumstances' that might require an adjustment of this line to achieve an 'equitable result'. This is where 'equity' is considered. Third, the court evaluates whether the provisional line would entail any 'marked disproportion', taking the coastal lengths of the states into consideration (ICJ 2009, paras. 116–122).

[11] As state practice and court rulings developed after the 1969 North Sea Continental Shelf cases, the principle of natural prolongation lost its hold. The main reason was the introduction of the 200 NM concept, where states, regardless of submarine features, immediately acquired rights over the seabed and water column out to 200 NM from shore. This does not mean, however, that the idea of natural prolongation has become totally irrelevant; it has relevance if the submarine feature is 'vast and significant' (Kaye 2001, 19). Furthermore, the notion of natural prolongation has remained the determining factor concerning 'extended' continental shelves.

the shelf, contrary to sovereignty over land-based territory (St-Louis 2014, 16). A marked separation between land and sea thus became apparent with UNCLOS, as rights to the latter derive from rights to the former.

Precisely because the ocean's qualities are so different from those of land, maritime space has been subject to extensive legalisation and a rights-based regime in favour of maritime states. Crucial to this expansion of the role of the ocean in international politics has been the *decoupling* of geophysical attributes from states' rights at sea. The 1969 North Sea cases introduced the relevance of natural prolongation and the idea that states must take into consideration the attributes of the seabed when delineating maritime space. Then, with the conclusion of UNCLOS in the early 1980s, states no longer had to prove how the seabed pertained to them to obtain rights to the resources within their 200 NM zones (Kaye 2001, 20–21).

Moreover, what we are discussing with regard to states and maritime space (apart from the territorial sea) are *sovereign rights* to resources in the water column or on the seabed, not exclusive rights to the entire maritime 'territory' in question. States cannot deny passage through their EEZs; they may only deny actors access to marine resources and apply environmental regulations in their maritime zones. We are thus discussing two different forms of 'rights' by states: 'In contrast to land boundaries which separate sovereignties in their totality, maritime boundaries (with the exception of those of the territorial sea) separate only sovereign rights with a functional, and hence limited, character' (Weil 1989, 93).

For delimitation in the maritime domain, both states may have valid legal claims to a given area, in which case it becomes a matter of 'reasonable sacrifice such as would make possible a division of the area of overlap' (Weil 1989, 91–92). Joint sharing is also possible, as with oil and gas resources or a joint fisheries zone. We must bear in mind the crucial difference between sovereign rights (EEZ, continental shelf) and complete sovereignty as per for example Krasner's (1999) accounts.

3.3. Maritime boundary disputes today

The principles that guide the drawing of maritime boundaries are one thing, but the process by which states settle maritime boundary disputes is something rather different. States may choose several pathways for settlement: They may agree on a mutual solution after bilateral negotiations; they may submit the case for adjudication at the ICJ or another international court such as the International Tribunal for the Law of the Sea (ITLOS); or they may use third-party arbitration, such as the Permanent Court of Arbitration (PCA).

Out of these options, settlement pathways involving international arbitration are generally unappealing if it can be avoided. Uncertainty as to the outcome of international adjudication and arbitration does not inspire states to bring cases before courts and tribunals. This article does not go into the lengthy debate on what forum is most suitable for maritime disputes, and why states choose/prefer certain forums over others (so-called 'forum-shopping'). Although this is an important part of understanding the processes of dispute settlement between states, this is not the primary focus here.[12]

Resolving a dispute bilaterally leaves states with the option of a creative resolution not confined by the international rules applied by courts and tribunals (Johnston 1988, 14–15). Moreover, litigation is costly, and in the maritime domain, the process often requires a great deal of scientific data, making it expensive for states to pursue delimitation in this manner (Prescott and Schofield 2004, 245).

Consequently, approximately 95% of those maritime boundaries that have been agreed between 1950 and 2020 were settled through negotiations outside the realms of arbitration or adjudication, with states free to choose whichever approach they prefer when delineating maritime space. However, studies show that although states choose bilateral negotiations to avoid the shackles of international adjudication and arbitration, they still lean on, and mostly adhere to, the legal principles as set out by international court rulings (Nemeth et al., 2014; Ásgeirsdóttir and Steinwand 2015; Qiu and Gullett 2017).

Despite the approaches and principles outlined here, and even though settlement of outstanding disputes continues to take place, maritime boundary disputes still exist on *all* continents. In 2020, out of 460 possible maritime boundaries, only 280 have been agreed (see Table 1). That leaves 180 outstanding maritime boundary disputes, or approximately 39%. These range from active and conflictual to dormant or successfully managed (see Table 2).

Based on dataset by (anonymized). In some instances, a dyad (consisting of one boundary segment with two countries) may consist of countries from two different continents (e.g., Africa and Europe in the Mediterranean). In such instances, allocations to a specific continent were made on a case-by-case basis (see Fig. 1).

Perhaps more interesting are the countries with *outstanding* disputes in 2020 (see Fig. 2):

These figures give a rough idea of the global extent of this phenomenon, not confined to one part of the world or a specific group of states. Unsurprisingly, large countries with more access to maritime space have a larger number of maritime boundaries. Australia, China, Canada, Norway and Russia have long coasts, resulting in multiple neighbours and, in turn, multiple maritime boundaries. Also, areas like the Mediterranean and the Caribbean, where numerous small states are clustered together have a large number of maritime boundaries. Moreover, countries with overseas colonies or dependencies – such as France, the United Kingdom, Spain and the United States – have multiple maritime boundaries, settled as well as unsettled.

With 180 boundaries at sea still not agreed on, it is likely that maritime boundary disputes linger on the national and international agendas in decades to come. Some will remain dormant and rather insignificant, whereas others might flare up due to climatic, economic and/or political changes. It is therefore crucial to examine some specific trends that impact boundary-making at sea, to which I turn to in the following sections.

4. The changing politics of maritime disputes

Some trends impacting boundary-making at sea deserve further consideration: the continued institutionalisation of ocean space; increasing functional (economic) and environmental interest in and concern for the maritime domain; and the growing symbolic relevance of the maritime domain in domestic politics.

4.1. Institutionalisation and territorialisation

Despite the differences outlined between territory on land and sovereign rights at sea, we can draw some parallels between land and sea in terms of political dynamics. Zacher (2001) argues that the value of territory (on land) can change, especially in terms of its economic significance. The same can arguably be said of maritime space as it became institutionalised in the period after the Second World War. The ultimate driver of this change was when all coastal states were awarded EEZs of 200 NM.

Table 1
Total number of maritime boundaries as dyads.

Total number of boundary segments	460
Number of settled boundary segments, by 2020	280
- settled through adjudication/arbitration	25
- ratified	243
Remaining boundaries in dispute, by 2020	**180**

[12] See for example Nyman and Tiller (2020); Wiegand (2011); Nemeth et al., (2014); Ásgeirsdóttir and Steinwand (2015).

Table 2
Settled/ not settled maritime boundaries as dyads across continents.

Continent	Boundaries	Agreements	Still in dispute	Settlement rate (%)
Africa	92	32	60	35%
Asia	102	62	40	61%
Europe	97	79	18	81%
North America	89	45	44	51%
Oceania	50	37	13	74%
South America	30	25	5	83%
Total	**460**	**280**	**180**	61%

The expansion from 12 NM zones to 200 NM zones ensured that all states (apart from those that are landlocked) acquired new rights and opportunities (Bailey, 1997). At the time, Osgood (1976, 10) argued that a new era had emerged where ocean politics would cause 'new patterns of conflict and alignment, and new instruments of national policy'. Booth (1985) predicted that UNCLOS would 'blur the boundaries between land and ocean, leading nations to feel protective and sensitive about their maritime spaces' (Baker 2013, 152).

Weil (1989, 93–94) further noted that the 'entry of security considerations' into the delineating process of maritime space, as well as the general trend of 'territorialisation' of the 200 NM zone, showcased to the growing importance of the maritime domain and the expanding capacity of states to enforce and uphold their rights within this space. As put by

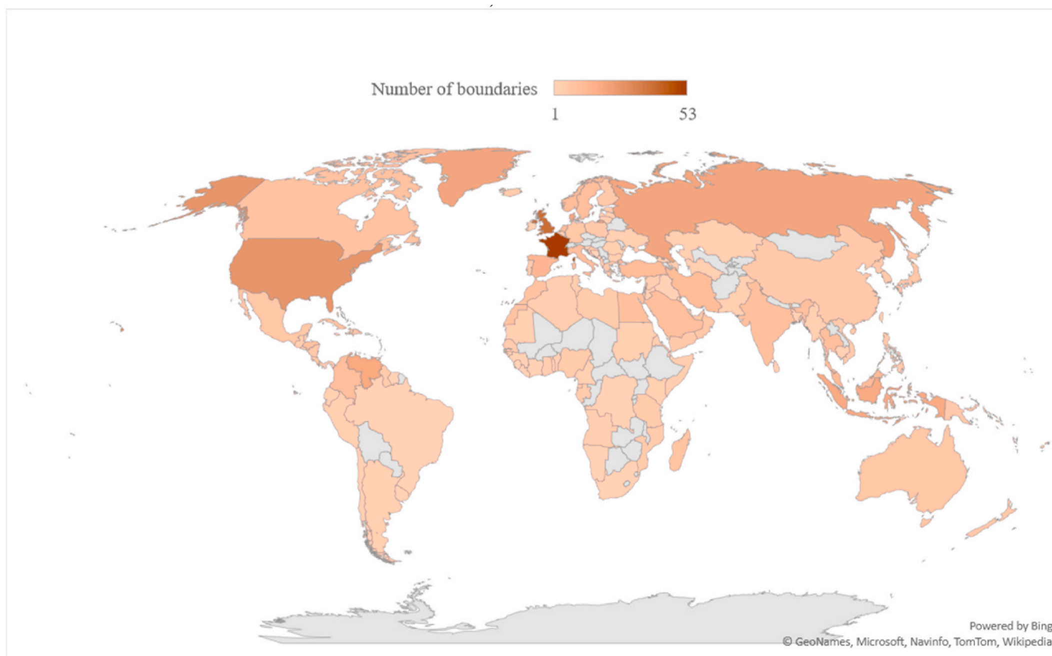

Fig. 1. Countries with maritime boundaries, in total.

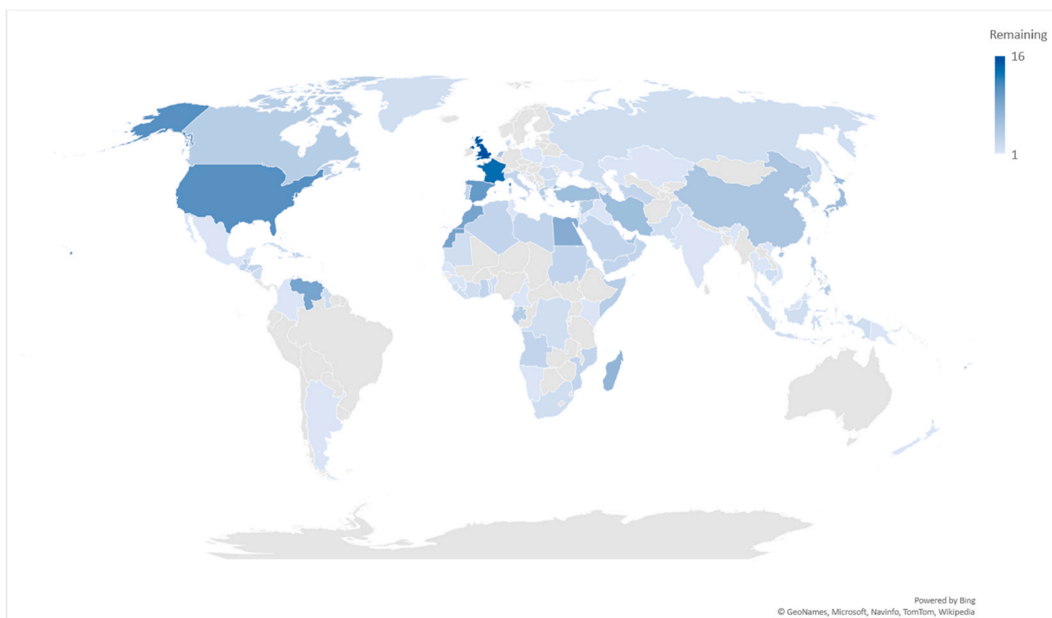

Fig. 2. Countries with remaining maritime boundary disputes per 2020.

Keohane and Nye (1977, 75): 'Just as medieval villages were eventually fenced off in response to economic change, so states in the 1970s "fenced off" larger parts of the oceans as technological and economic change increased the uses of the oceans'. Maritime space previously dismissed as uninteresting suddenly became an entitlement in need of protection.

In essence, from being an area of what Ruggie (1993, 165) called 'shared [political] spaces', the maritime domain became legalised, internationally as well as under the jurisdiction of maritime states. This entails a continued transfer of rights from international society to individual states, through processes unfolding on the international stage. Hurd (1999, 382) terms this the 'institutionalisation' of territorial sovereignty, which in this case took place at sea. The EEZ became the key contributing factor in maritime disputes, both as a rationale for several new disputes and as a domain where states suddenly had to defend newly acquired sovereign rights.

Although states engaged in disputes – sometimes even using blunt force – to have their way at sea, they nevertheless operated – and still operate – within the boundaries of the international legal regime that awarded them these new rights. Engaging in disputes that might challenge aspects of specific UNCLOS principles might prove to be a poor long-term strategy for any coastal state that benefits from these principles. Coastal states themselves became eager to uphold and defend that regime.[13] Baker (2013, ii) therefore argues that, as on land, states are conditioned behaviourally by an international norm *against* the 'forceful acquisition of maritime spaces and resources of other states'. States have ensured a 'lock-in' of their sovereign rights at sea, while technological developments as well as resource demands continue to prompt greater functional use of maritime space.

In other words, it is central to recognise how the process of institutionalisation of the maritime domain prompted changes in how states engage with and perceive ocean space. Maritime space and spatial rights have become central components of the modern state. From having been considered a 'void' to becoming a legalised space for resource exploitation and protection, the trend emanating is the 'territorialisation' of the maritime domain as a continuing process. This process did not come to an end with the legalisation of this domain in the 1980s—it is still underway today as states utilise more and more of their maritime space for resource exploitation as well as political purposes. Especially prominent here are the current negotiations creating an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) (Tiller et al., 2019; De Santo et al., 2019). Linked to these considerations is both how the functional value and environmental concern over ocean-space have changed over the last decades.

4.2. Functional value of oceans

Maritime space and its value for states have been defined as inherently functional. As Steinberg (2001, 58) wrote describing the Micronesian approach to ocean space prior to the arrival of the first Europeans, 'Territoriality [at sea] is driven by function'. When the function (as a resource base, strategic point, etc.) ceased to exist, maritime 'territory' was not worth protecting or upholding a form of limited sovereignty.

This may make it seem tempting to equate the value and importance of maritime space (and subsequent disputes) to the functional value of that space. In a 2016 study of 417 outcomes of boundary negotiations, Ásgeirsdóttir and Steinwand (2016, 1290) argue that states settle maritime boundary disputes to provide legal certainty to ensure potential oil and gas resource development. The same findings are confirmed across case studies in areas ranging from the Arctic to the Bay of Bengal (Moe et al. 2011; Bissinger 2010; Baker and Byers 2012).

Coupled with this, the function of ocean space itself has expanded, with more and more resources being harvested at sea, ranging from fisheries to hydrocarbons. Several trends worth highlighting are fuelling this expansion. A considerable amount of the gas that is expected to replace oil consumption will be found in offshore reservoirs (IEA 2018), while offshore wind farms are increasingly becoming a source of global investment (Corbetta et al. 2015, 7). Seabed minerals are also coming to fore (Jaeckel et al. 2017; Levin et al., 2016). Using ship-based extraction technology, Japan successfully mined metals from its seabed in 2017, and expects large-scale commercialisation of several offshore deposits in the near future (Kyodo 2017; Woody 2017).[14] Straddling (and high seas) fish stocks constitute a shared resource,[15] but as Wood et al. (2008) emphasise, global fish stocks are decreasing due to overfishing, both in international waters and within national EEZs. And the debate on how to govern and utilise marine genetic resources is increasingly pertinent, linked to the ongoing BBNJ-negotiations (Mossop and Schofield 2020; Tiller et al., 2019; Blasiak et al. 2018).

One could assume, then, that settling outstanding maritime boundaries as almost half of all remain in dispute, would become an easier process as the functional value of the disputed space is on the rise. However, further nuance is needed. There is an alternative argument: that offshore resources make a disputed area more valuable and thus costlier to give up, since almost any maritime boundary resolution involves compromise. This is frequently invoked when scholars and media alike highlight the potential for 'geopolitical conflict' in maritime areas with resource abundance, be it the Arctic (Raspotnik 2018), the South China Sea (Kleine-Ahlbrandt 2012) or the Caspian Basin (Manning and Jaffe 1998; Kuniholm 2000). This leads to a point crucial to this article: the need to examine such casual statements further when considering maritime disputes and their possible resolution.

Given the complexity of maritime boundaries (and their negotiations), it is difficult to find simple causal mechanisms that explain why states settle their disputes. Functional value (e.g., oil and gas resources) undoubtedly plays a considerable role as a motivating factor. Still, this value must be seen in tandem with security relations between negotiating actors. Ásgeirsdóttir (2016, 191) actually shows that in the case of US maritime boundaries, a negative security relationship can act as a trigger for settlement. This has also been shown by Moe et al. (2011) concerning the 2010 agreement between Norway and Russia in the Barents Sea, and has been discussed more generally when Canada and Norway are compared (Byers and Østhagen 2017).

Furthermore, specific legal characteristics of the boundary dispute in question (i.e., its origin, which veto-players exist, and how the position of each country stands vis-à-vis contemporary international court rulings) sets the parameters of boundary disputes unique to that case (Byers and Østhagen 2018). Countries are also sensitive to changes in international jurisprudence, eying their boundary disputes as an interlinked collection instead of single-issue cases (Schofield 2008a; Østhagen 2020b; Londoño 2015). On top of this, increasing environmental concern for the maritime domain and its role in national politics – issues examined in the two next sections – make agreeing on maritime boundary disputes more than mere function.

[13] See for example studies on Arctic maritime boundaries and disputes (Moe et al. 2011; Claes and Moe 2018; Tamnes and Offerdal 2014; Byers 2017; Hoel 2014).

[14] Other potentially valuable deposits have recently been discovered across the world's ocean. In the Atlantic, British scientists discovered minerals that 'contain the scarce substance tellurium in concentrations 50,000 times higher than in deposits on land' (Shukman 2017).

[15] Fish resources are an example of a resource that cannot be appropriated by any individual group and is therefore vulnerable to overexploitation by self-interested, uncoordinated and profit-seeking behaviour (the classic 'tragedy of the commons') (see; also Crowe, 1969, pp. 1103–4; Stuart, 2013).

4.3. Increasing environmental concerns

As early as the 1950s and 1960s, when UNCLOS negotiations were underway, there were critical voices arguing for a 'global commons' approach to the oceans (Vogler 2000, 48–63), or advocating for states to manage oceans jointly under the UN, to avoid disastrous consequences 'for the future of mankind' (Pardo 1968, 223). Fuelled by the increasingly evident effects of climate change, this conception of the ocean as space in need of environmental protection is now also on the rise.

Specific issues such as plastic pollution in the oceans have received considerable focus from the media and politicians alike (Harrabin 2017).[16] The United Nations has dedicated the period 2021–2030 to 'Ocean Science for Sustainable Development', linked to Sustainable Development Goal #14: to conserve and sustainably use the oceans, seas and marine resources. There has been increased interest among policymakers around the world in examining the potential for the 'blue economy' and developing better governance mechanisms for maritime space (Colgan 2017; Voyer et al., 2018; Keen et al. 2018).

The question is to what extent these trends are compatible with increased functional use of maritime space. Greater 'territorialisation' (for exploitative purposes) will necessarily clash – on both the conceptual and the practical level – with the environmental stewardship ideas currently on the agenda. Steinberg (2001, 176), therefore, holds that we are witnessing a clash of 'social constructions' of the ocean, with the 'capitalist' or 'materialist' trends in the maritime domain fuelling this clash.

The various areas of jurisdiction under the legal regime developed for the oceans are subsequently facing new challenges. Examples here range from efforts to implement marine protected areas (MPA) in parts of Antarctica (Brooks 2013); attempts at establishing an international code of conduct for deep-sea mining (Jaeckel et al. 2017); and the convening of the BBNJ-processes (Freestone et al., 2014; Tiller et al., 2019).

Moreover, as shipping is increasing in territorial waters across the globe, issues of access rights, the status of sea lanes and environmental protection are also at the forefront of international debates (Hasan et al. 2019). Climate change and other environmental factors are further causing variability in the spatial distribution of fish stocks, challenging established management regimes or prompting the establishment of new regional fisheries management organisations (RFMO) (Stokke 2017; Østhagen et al. 2020). The processes for determining the limits of continental shelves beyond 200 NM are becoming increasingly relevant and potentially conflictual (Busch 2018; Qiu and Gullett 2017).

Proponents of the Law of the Sea regime and the increasing legalisation of maritime space would argue that this offers the best framework for dealing with the issues arising over the management of maritime space. Tools ranging from MPAs (or even highly protected marine areas[17]) to RFMOs provide mechanisms to tackle the growing number of ocean-based environmental issues. Relevant questions that emerge are whether these mechanisms are sufficiently able to tackle rapidly changing climatic conditions in the oceans and whether states are willing to forgo potential economic benefits in order to deal with these challenges.

In any case, what the increased environmental concern has led to is adding a complicating factor when states evaluate and negotiate their maritime boundary disputes. Not only does this concern the functional use of the maritime domain in question; it also concerns the interest and engagement of domestic actors and how ocean politics is increasingly entangled in national politics.

4.4. Symbolism and national politics

The final change occurring in ocean politics is how states and more importantly their leaders and politicians view and relate to the ocean: disputes over maritime space are increasingly entangled in domestic politics.

Vasquez and Valeriano (2009, 194) describe a conflict as spiralling when it becomes infused with symbolic qualities. It might be assumed that maritime disputes – whether concerned with fishing rights or boundaries – would be a simple matter of delineating rights and ownership, given the tangible character of such disputes. Huth (1998, 26), for example, has argued that 'the political salience of the [maritime] dispute is generally limited, in contrast with the importance and attention often given to land-based disputes'.

However, as outlined, the role of maritime space in domestic politics has changed over the course of four decades, from purely a functional space that inspired limited engagement to a national space requiring 'protection' and defence (Steinberg 1999, 2001; Baker 2013; Nyman 2013; Hannigan 2017). When a maritime dispute reaches the political agenda, there are domestic actors who stand to benefit from infusing it with intangible dimensions like 'national pride' or 'being cheated out of what is ours' (Hønneland 2013, 2; Nyman 2015).

Opposition to concessions in the maritime domain takes the form of lobbying by powerful interest groups, loss of the popular vote or confidence or strong media opposition (Byers and Østhagen 2017). If concessions made in negotiations (inherent to any maritime boundary delimitation) are not perceived as acceptable domestically, settling the dispute will prove challenging, even if leaders and foreign policy elites have reached agreement through bilateral negotiations.

For example, maritime disputes were a prominent part of the campaign to leave the EU during the Brexit referendum in the United Kingdom in 2016, despite fisheries only accounting for 0.05% of the country's GDP (Lichfield 2018; Phillipson and Symes 2018). In bilateral Norwegian-Russian negotiations over fisheries around Svalbard from the 1990s onwards, the domestic audience has played a central role in relations (Østhagen 2020a, 52). Officials in Murmansk and Russian fishing industry representatives have attempted to infuse an intangible dimension to the underlying conflict of interests, arguing that, as compared to Soviet times, Russia was now 'weak' and failing to 'protect its rights' (Åtland and Ven Bruusgaard 2009; Hønneland 2013). These attempts at agenda-setting did not succeed in spurring Moscow to escalatory actions, but they show how maritime disputes are not devoid of intangible, symbolic elements that can result in conflicts escalating beyond the dispute at hand (Østhagen 2020a, 84).

Similarly, when in 1975 Colombia agreed on its first maritime boundary with Ecuador, the government was criticised for 'wasting time' on the maritime domain, and for its futile efforts at drawing an 'imaginary line in the sea' (Londoño 2015, 248).[18] Four decades later, however, in the 2018 Colombian presidential elections, the maritime boundary disputes between Nicaragua and Colombia over the San Andrés Archipelago (and the 2012 ICJ ruling) were used by candidates to stir up popular support (Al Dia, 2018; Vega-Barbosa 2018).

Maritime disputes are thus not devoid of the intangible and symbolic elements that can lead to conflicts escalating beyond the initial dispute itself. This concerns not only the economic interests of the actors involved, but also wider ideas of symbolism and identity. States (and their inhabitants) *do* care about their maritime disputes, even those of limited economic value, and increasingly so.

Once a dispute has become politicised, any resolution of the dispute carries domestic political risk. Kleinsteiber (2013, p. 15) argues that 'The fundamental drivers behind the disputes in the East and South China Seas are not potential or claimed natural resources, but rather *domestic*

[16] See also Lejeusne et al. (2010); D. Laffoley and Baxter (2016); Levin and Le Bris (2015).

[17] See Carrington, 2020.

[18] Author's translation.

politics, rising nationalism, and irredentism'.[19] Indeed, even undertaking negotiations may be risky.

These examples demonstrate how disputes over maritime space can acquire importance in national campaigns aimed at rallying domestic support. Additionally, as states enhance their naval capabilities in line with technological developments, their capacities for monitoring and controlling their maritime zones have expanded. To a greater extent than before, events at sea trigger immediate response and attention from political leaders.

One the one hand, we therefore have the idea of the ocean and states' ocean space as a legalised, institutionalised and governed domain, where states tend to abide by the rules set forth by UNCLOS because it is in their common interest to do so. On the other hand, greater domestic engagement is also spurred by recognition of the ocean as a policy issue in need of common efforts to combat everything from sea-level rise to plastic pollution.

Maritime boundary disputes that have appeared on agendas more recently (in the past two decades) have involved a wider range of relevant factors and seem to foster broader public engagement than maritime disputes tackled in the 1970s and 1980s. As put by the lead negotiator of Norway's latest rounds of negotiations: 'A boundary itself is just *one* element. More important are those normative factors increasingly related, such as military interests, economy and larger security considerations' (Østhagen 2020b, 7). Greater utilisation of oceans, or national maritime zones, in domestic politics is a trend likely to increase as ocean space continues to rise on the agenda.

The processes of agreeing on disputed maritime space is, therefore, not as straightforward as one might imagine. This also helps explain why some states actually prefer to keep their dispute unsettled, albeit sufficiently managed, through resource-sharing mechanisms and bilateral cooperation (Beckman et al., 2013a; Byers and Østhagen 2017; VanderZwaag 2010). Still, as several maritime boundary dispute case studies show,[20] states benefit from agreeing on clear lines of jurisdiction at sea before a dormant dispute erupts into an outright conflict, even if that means conceding access to some resources or historic rights.

5. Troubled seas?

This article has examined the concept of a boundary at sea: Why it came about, how states enact such an institution, and how related disputes emerge, are settled, or remain across the globe. The exploration of maritime boundary-making ties into trends and developments that are ongoing and have an impact on the associated legal and political practices. Of particular relevance are the ever-ongoing processes of institutionalising ocean-space through international legal regimes; the changes in functional and environmental value of, and concern for, maritime space; and how the same space is increasingly tied to national politics.

How, then, do these trends impact how and why states agree on maritime boundaries? It would be reasonable to expect that as maritime space becomes increasingly relevant for states, related outstanding boundary disputes will be more difficult to settle. The preoccupation of states and state leaders with marine resources, as well as the general strategic value of extended maritime space and technological developments that enable greater control over the maritime domain (coast guard vessels, satellites, drones, subsea installations, etc.), will not render current disputes any less relevant. Changes in technology and in states' capacity to monitor and be present in the maritime domain may engender greater risks of conflicts over ocean space. Increased use of oceans as a resource base, for everything from seabed minerals to fisheries, has further heightened the 'salience' of maritime space for states.

Additionally, as maritime disputes become infused with intangible dimensions and symbolic issues that engage domestic audiences, the characteristics of dispute 'containment' at sea could change. Contrary to popular belief, maritime disputes may assume some of the same characteristics as disputes on land. Although disputes over ocean space may initially be more concerned with tangible questions of resource delimitation and 'who owns what', they too can become infused with symbolism and intangible characteristics. The domestic political focus on expanded utilisation of oceans or national maritime zones is a trend likely to increase as ocean space continues to rise on the agenda.

Indeed, it might be said that maritime disputes are coming to resemble traditional territorial conflicts on land. Especially in bilateral relationships that are already fraught, maritime disputes may prove to hold latent conflict potential. However, the maritime domain has certain characteristics that nevertheless keeps it separate from the terrestrial domain. There are geographical barriers that hinder prolonged interaction between the actors concerned. Maritime boundaries are also a construct of international law, and coastal states seem to depend on the UNCLOS regime and seek to apply the regime to their own advantage.

If, as predicted by the Food and Agriculture Organisation (FAO) (2016), fisheries continue to grow in importance in terms of livelihoods and as a source of protein, certain characteristics of fisheries and maritime boundaries might also become more pronounced, spurring cooperation. As states fulfil their Law of the Sea obligation to manage transboundary fish stocks, the continued development of multinational management regimes might render the exact location of a maritime boundary less important for this specific purpose. The current UNCLOS regime was developed at a time when resource extraction from the continental shelf was gearing up. We could question to what extent this overarching regime is adequate and sufficiently adaptable to handle the changes occurring both *in* the oceans and with the politics surrounding resource distribution, as environmental changes grow exponentially.

These trends are only briefly explored here – and could be further examined as maritime issues continue to rise on the political agenda. A key challenge would be to see whether these trends are relevant across geographical, political and temporal contexts. Another approach would be to further specific the conditional propositions associated with settlement of maritime boundaries and test these on a range of cases.

Such academics endeavours are likely to continue to have relevance. With the sea having transformed from great blue empty space to an institutionalised policy domain, the expansion of activities taking place at sea and the growing reliance on maritime activities have resulted not only in greater importance being placed on the outcome of maritime boundary disputes but also in shifts in the political relevance and usage of the maritime domain. Today, oceans matter more than before for states in their power relations with other states, as well as for political leaders seeking to sway domestic audiences.

In the 1960s and 1970s, when states were implementing EEZs, the idea that maritime space and the location of an invisible, slightly arbitrary boundary at sea should hold such significance would probably have been unimaginable. However, the relevance of the maritime domain is not a dichotomous option of either/or; it is a process in which states' relationships to ocean space are fluctuating and shifting. The maritime domain as such continues to be distinct from land in terms of sovereignty and sovereign rights, and more generally as a spatial domain. As the same time, maritime politics are acquiring characteristics resembling those of politics over land.

The settlement of maritime boundary disputes does not seem set to become an easier process with the trends described. Barriers mentioned here will remain relevant, perhaps even more so. On the other hand, several factors might make the exact location of the maritime boundary itself (if not the maritime domain) less important, including the use of complex resource-sharing mechanisms, the increasing focus on developing adequate RFMOs concerned with transboundary fish stocks, and the establishment of MPAs in tandem with greater environmental awareness concerning the state of the oceans.

Establishing agreements on these mechanisms is still necessary, but entails perhaps a slightly different focus than the settlement of maritime

[19] Italics added.

[20] See note 4.

boundaries in the traditional sense. In some instances, managing the disputed maritime area might also be an easier, and even preferred, solution. That being said, it does not seem likely that maritime boundaries – settled or unsettled – and related issues of resource management, ownership and access are likely to become less relevant in years to come.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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