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## An ocean apart? Maritime boundary agreements and disputes in the Arctic Ocean

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### ABSTRACT

The Arctic region is sometimes described as an area of geopolitical competition and boundary disputes. However, in terms of territorial and maritime claims, such portrayals are misleading. Our examination of maritime boundaries in the Arctic, and Arctic state practice concerning baselines, maritime claims and extended continental shelf submissions in the central Arctic Ocean, shows that the Arctic is a maritime space where states have settled disputes before real conflict could emerge. In that sense the Arctic is arguably an ocean apart and the case of the Arctic can be of broader relevance regarding maritime disputes in other regional contexts.

### KEYWORDS

Arctic; maritime boundaries; Law of the Sea; continental shelf; Arctic ocean

### Introduction

The Arctic Ocean has attracted growing political attention since the early 2000s. Environmental concerns, coupled with greater economic utilisation of the region through resource exploitation and maritime transport, have propelled previously dormant or inconsequential territorial and maritime disputes onto the political agenda.

The benefits of agreeing on and delimiting maritime boundaries clarifying the limits of jurisdiction, sovereignty and sovereign rights of all states might seem to outweigh the costs of concessions made through negotiations – yet almost 40% of all maritime boundaries remain unsettled and frequently disputed, across all continents.<sup>1</sup> This indicates the challenge of settling boundary disputes. As put by the Norwegian and Russian foreign ministers in September 2010 at the time their countries successfully resolved their overlapping maritime claims: ‘unresolved maritime boundaries can be among the most difficult disputes for states to resolve’.<sup>2</sup>

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<sup>1</sup>Østhagen, “Troubled Seas? The Changing Politics of Maritime Boundary Disputes.”

<sup>2</sup>Lavrov and Støre, “Canada, Take Note: Here’s How to Resolve Maritime Disputes.”

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Especially with the significant melting and contraction of Arctic Ocean summer sea-ice coverage, the Arctic region has been described by some commentators,<sup>3</sup> and in the media,<sup>4</sup> as an area of geopolitical competition and potential conflict. This discourse is often framed in terms of a competition or ‘race’ for ocean-based resources as well as access to fabled sea-lanes ‘across the top of the world’. Such narratives also tend to suggest that the Arctic Ocean is not only environmentally precious, unique and fragile but also somehow an exception legally: un- or under-governed and plagued by conflicting maritime claims and boundary disputes.

However, such dark and stormy visions do not accord with Arctic realities. Locating the Arctic in the international legal, and especially the law of the sea, context, in this paper we examine how the United Nations Convention on the Law of the Sea (LOSC) has set the parameters for the maritime claims and boundary agreements in the Arctic. Accordingly, our work provides legal analysis coupled with an evaluation of political factors. This builds on the range of scholarly work that has emerged over the last decade examining the various legal aspects of maritime boundary claims in the north. We add to this literature by comparing and contrasting different practices and outcomes, while also providing a ‘global’ perspective on recent developments in the Arctic.<sup>5</sup> In particular, we examine the efforts to define baselines in the Arctic, which in turn has consequences for Arctic maritime boundary claims, and their related disputes concerning both sovereignty and sovereign rights offshore and/or their agreements. In turn, we then examine each of the maritime claims in the Arctic, and the factors that has enabled agreement on these (when that is the case).

We argue that the substantial progress evident in the resolution of overlapping maritime claims through boundary delimitation, especially within 200 nautical mile (M) limits, has enabled the Arctic states to keep the region largely free of jurisdictional disputes and ‘territorial grabs’. Key to the high rate of agreement of maritime boundaries amongst Arctic states relate to longstanding efforts towards the practical management of disputed maritime spaces, as well as their use of innovative mechanisms concerning resource sharing and ocean boundary-making. This reflects common (geo)political interests in terms of realising and protecting the benefits to be derived for the Arctic coastal states from the LOSC as well as the advantages of conflict avoidance and cooperation in high latitudes. Additionally, a deliberate *political* push by the Arctic state leaders to re-visit dormant disputes as the Arctic region emerged on the political agenda in the early 2000s proved to be influential. This blend of pragmatism and innovation in governance and dispute management approaches is also the case with the one remaining significant boundary dispute – between Canada and the USA – and it

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<sup>3</sup>See, for example, Borgerson, “Arctic Meltdown: The Economic and Security Implications of Global Warming”; Sale and Potapov, *The Scramble for the Arctic: Ownership, Exploitation and Conflict in the Far North*; and Dadwal, “Arctic: The Next Great Game in Energy Geopolitics?”

<sup>4</sup>See for example Burkeman, “A Very Cold War Indeed”; Reilly, “China’s Ambitions Make Arctic a Global Hotspot”; Barnes, “Cold War Echoes Under the Arctic Ice”; Mandraud, “Russia Prepares for Ice-Cold War with Show of Military Force in the Arctic.” For an analysis of this, see also Klimenko, Nilsson, and Christensen, “Narratives in the Russian Media of Conflict and Cooperation in the Arctic”; and Wilson Rowe, “Analyzing Frenemies: An Arctic Repertoire of Cooperation and Rivalry.”

<sup>5</sup>United Nations, “United Nations Convention on the Law of the Sea” (LOSC), 10 December 1982, (entered into force 16 November 1994) [hereinafter, LOSC or the Convention].

is likely to be the case in the future negotiations over extensive overlapping assertions over areas of 'extended' or 'outer' continental shelf and associated potential delimitations in the central Arctic Ocean.<sup>6</sup> Notwithstanding these uncertainties the Arctic region has been characterised by substantial scientific and legal cooperation – not conflict.

## The Law of the Sea and the Arctic Ocean

The 1982 LOSC provides the generally accepted legal framework governing maritime jurisdictional claims and the delimitation of maritime boundaries between national maritime zones.<sup>7</sup> The LOSC has gained widespread international recognition: at the time of writing, 167 states (plus the European Union) had become parties to it.<sup>8</sup>

A key achievement of the LOSC was agreement on the spatial limits to national claims to maritime jurisdiction predominantly defined as extending to a set distance from baselines along the coast. Thus, the territorial sea, contiguous zone and exclusive economic zone (EEZ) are not to exceed 12, 24 and 200 M respectively from baselines along the coast (LOSC Articles 3 and 4, 33 and 57). The delineation of the outer limits of each of these zones of maritime jurisdiction requires an understanding of the location of baselines along the coast (see [Figure 1](#)).<sup>9</sup>

Defining the outer limits of the continental shelf is more complex, involving a range of geophysical criteria as well as distance measurements, as explored below concerning the central Arctic Ocean.

The Convention provides its parties with a binding legal framework governing maritime jurisdictional claims and the delimitation of maritime boundaries between national maritime zones. LOSC articles 74 and 83 regarding the EEZ and the continental shelf specifies that states shall reach agreements on the basis of international law 'in order to achieve an equitable solution, but does not prescribe a particular method of delimitation. Additionally, these articles provide that pending agreement states 'shall make every effort to enter into provisional arrangements of a practical nature', thus encouraging but not requiring the adoption of cooperative mechanisms such as maritime joint development zones without prejudice to agreement on final delimitation.<sup>10</sup>

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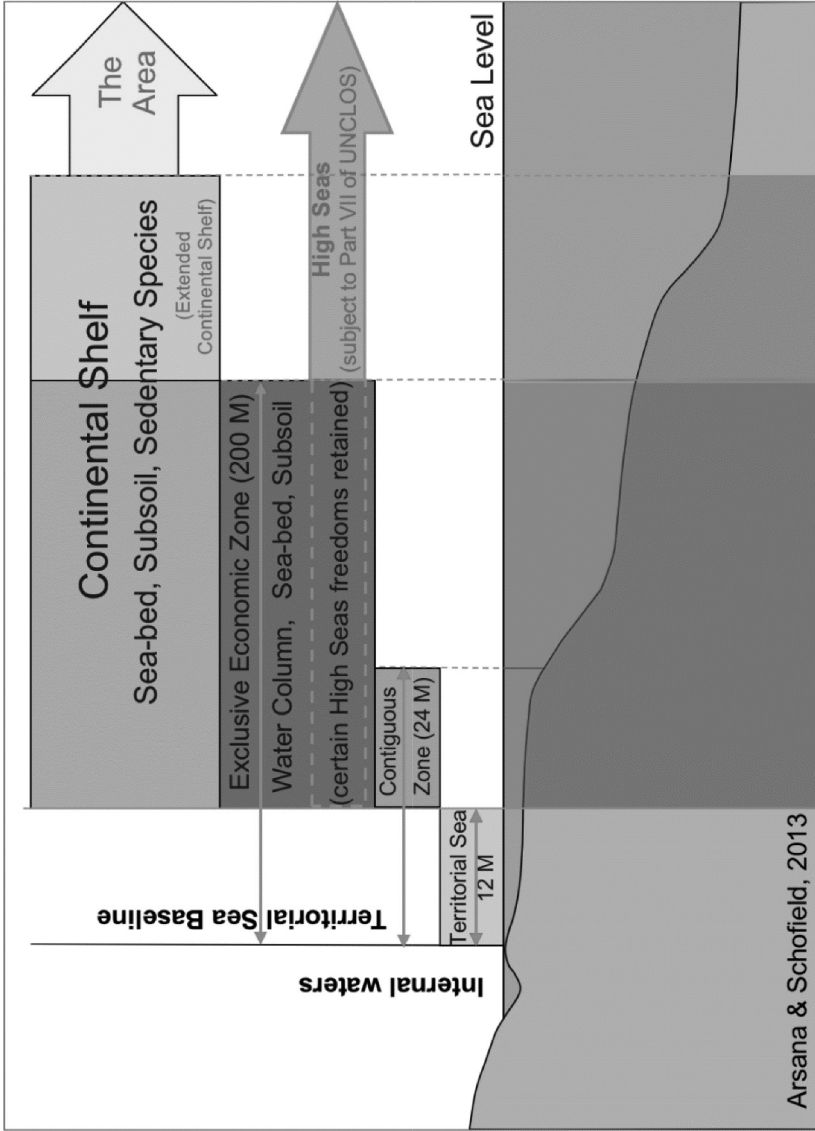
<sup>6</sup>Both of these terms are widely used in the literature to refer to continental shelf seawards of 200 M from baselines. However, neither term is entirely satisfactory or has gained universal acceptance.

<sup>7</sup>United Nations, "United Nations Convention on the Law of the Sea (LOSC)."

<sup>8</sup>United Nations, "Status: United Nations Convention on the Law of the Sea."

<sup>9</sup>Source: International Hydrographic Organization (IHO), "A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea – 1982 (TALOS)." Material from IHO-IAG publication C-51, *A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea – 1982 (TALOS)*, Edition 5.0.0 dated June 2014 is reproduced with the permission of Professor Clive Schofield and Dr I Made Andi Arsana, authors of the animated graphics, and the Secretariat of the International Hydrographic Organization (IHO) and the Executive Council of the International Association of Geodesy (IAG) (Permission N° 8/2020) acting for the International Hydrographic Organization (IHO) and the International Association of Geodesy (IAG), which do not accept responsibility for the correctness of the material as reproduced: in case of doubt, the IHO-IAG's authentic text shall prevail. The incorporation of material sourced from IHO-IAG shall not be construed as constituting an endorsement by IHO or IAG of this product.

<sup>10</sup>Moreover, during the 'transitional period' until agreement is secured states are obligated 'not to jeopardize or hamper' the reaching of a final agreement. United Nations, "United Nations Convention on the Law of the Sea (LOSC)."



**Figure 1.** Schematic of maritime jurisdiction claims of a coastal State measured seawards from baselines along the coast.

Of the five Arctic Ocean coastal states – Canada, Denmark, Norway, Russia and USA – four are parties to the LOSC. Although not a party to the LOSC, the USA generally regards the core principles of UNCLOS as being reflective of customary international law and thus binding on all states.<sup>11</sup>

## Arctic baselines and maritime claims

### Arctic baselines

Claims to maritime jurisdiction are generally measured from baselines – or critical basepoints located along such baselines – along the coast which are also often highly relevant to the delimitation of maritime boundaries. This is because of the enduring popularity of equidistance or median lines constructed between opposing sets of baselines, as a method of maritime boundary delimitation.<sup>12</sup>

According to LOSC Article 5, baselines along the coast will normally consist of ‘the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State.’ While all the Arctic coastal states possess such ‘normal’ baselines by default, all except the USA have also claimed straight baselines along parts of their coasts fronting the Arctic Ocean. LOSC Article 7 provides for straight baselines to be defined ‘where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity.’

Although Article 7 is clearly intended to deal with especially complex coastal configurations, it does not contain objective tests. This has led to a number of, what can be politely termed as liberal, straight baseline claims, arguably including some of the straight baselines defined in the Arctic. In particular, Canada, Denmark (on behalf of Greenland), Russia and Norway (in relation to Svalbard) have all defined extensive systems of straight baselines. Those claimed by both Canada and Russia include parts of what other states consider to be straits used for international navigation as their internal waters, leading to international protests.<sup>13</sup> However, straight baselines are still partly dependent on the location of normal baselines, because straight baselines must be connected to points on the low-water line on the coast, such that each system of baselines is ‘closed’.<sup>14</sup>

Identifying the location of normal baselines used to be fraught with difficulty as regards ice-covered coasts.<sup>15</sup> With the radical environmental changes that the Arctic region has experienced in recent years, this problem has arguably eased. However, normal baselines are coincident with the low-water line along the coast: as the coast

<sup>11</sup>Roach and Smith, *Excessive Maritime Claims*, 5 and 10.

<sup>12</sup>It can be observed that the vast majority of negotiated maritime boundary agreements are equidistance-based. Moreover, there has been a distinct shift in international judicial approaches to maritime delimitation with the advent of the three-stage approach to delimitation which, at the first stage, involves the construction of an equidistance-based provisional boundary line which may be adjusted at the second stage and checked at the third stage. Schofield, C.H. (2019), “An Incomplete Maritime Map: Progress and Challenges in the Delimitation of Maritime Boundaries in South East Asia”, pp.33–62 in Rothwell, D. and Letts, D. (eds) *Law of the Sea in South East Asia: Environmental, Navigational and Security Challenges*, (London: Routledge); and, Schofield, “Departures from the Coast” 729.

<sup>13</sup>The United States has protested both claims. The European Union also protested Canada’s claims. Roach and Smith, *Excessive Maritime Claims*, 111–112, 318–328; Schofield and Sas, “Uncovered and Unstable Coasts: Climate Change and Territorial Sea Baselines in the Arctic.”

<sup>14</sup>United Nations, “Baselines: An Examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea,” 23.

<sup>15</sup>Prescott and Schofield, *Maritime Political Boundaries of the World*, 520–21.

moves as a result of deposition or erosion, the normal baseline can ‘ambulate’ – and the limits to maritime jurisdiction dependent upon them may also shift in location.<sup>16</sup>

This is problematic because large portions of the Arctic shoreline have a high ice content, and were previously ice-locked for most of the year – but are now exposed to wave and storm action.<sup>17</sup> This means that Arctic coasts, and thus normal baselines, are vulnerable to slumping, subsidence and erosion, resulting in retreat in the location of the coast and baselines landward, with the potential to impact on the extent of Arctic maritime claims.<sup>18</sup>

### Arctic maritime claims

All the Arctic coastal states have advanced broad maritime claims, in keeping with both international law and their own national interests.<sup>19</sup> These maritime claims include 12 M-broad territorial seas (except in respect of Greenland, where a 3 M territorial sea is claimed). Canada, Norway, Russia and the USA also claim contiguous zone rights out to 24 M, although Norway’s claim here does not apply to Jan Mayen Island or Svalbard. Additionally, all the Arctic coastal states claim EEZs out to 200 M (see [Figure 2](#)), although Norway has only provisionally implemented this through a non-discriminatory Fisheries Protection Zone around Svalbard, which nonetheless is based on the Act on Norway’s Economic Zone.

### Arctic maritime boundary agreements

There are five bilateral maritime boundary situations on the Arctic Ocean specifically: Russia–USA, USA–Canada, Canada–Denmark (Greenland), Denmark (Greenland)–Norway (Svalbard) and Norway–Russia (see [Figure 1](#)).<sup>20</sup> Considerable progress has been achieved in the resolution of overlapping maritime claims between adjacent Arctic States, at least within 200 M of the coast.

Looking at each agreement chronologically, Norway and the then-USSR delimited the first Arctic maritime boundary in 1957, from the terminus of the two countries’ land boundary on the coast for 24.35 M through the Varangerfjord.<sup>21</sup>

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<sup>16</sup>Reed, *Shore and Sea Boundaries: The Development of International Maritime Boundary Principles through United States Practice*, 3 Vols, 185; International Law Association (ILA), “Report of the Baselines under the International Law of the Sea Committee,” 31.

<sup>17</sup>International Arctic Science Committee, “State of the Arctic Coast 2010: Scientific Review and Outlook.”

<sup>18</sup>Schofield and Sas, “Uncovered and Unstable Coasts: Climate Change and Territorial Sea Baselines in the Arctic.” See also, Schofield, Clive H. and Lalonde, Suzanne, “Rising Seas and Retreating Coasts: The Implications of Sea-level Rise for the Arctic”, *International Journal of Marine and Coastal Law*, 35 (2020): 468–497.

<sup>19</sup>Churchill, “Claims to Maritime Zones in the Arctic – Law of the Sea Normality or Polar Peculiarity?”

<sup>20</sup>We have opted not to include the near-Arctic maritime boundary agreements between Iceland and Norway (Jan Mayen), and Iceland and Denmark (Faroe Islands), as these are just on the border of the Arctic Circle and do not extend into the Arctic Ocean proper.

<sup>21</sup>Norway–Soviet Union, “Agreement between Norway and the Soviet Union Concerning the Sea Frontier in the Varanger Fjord.”

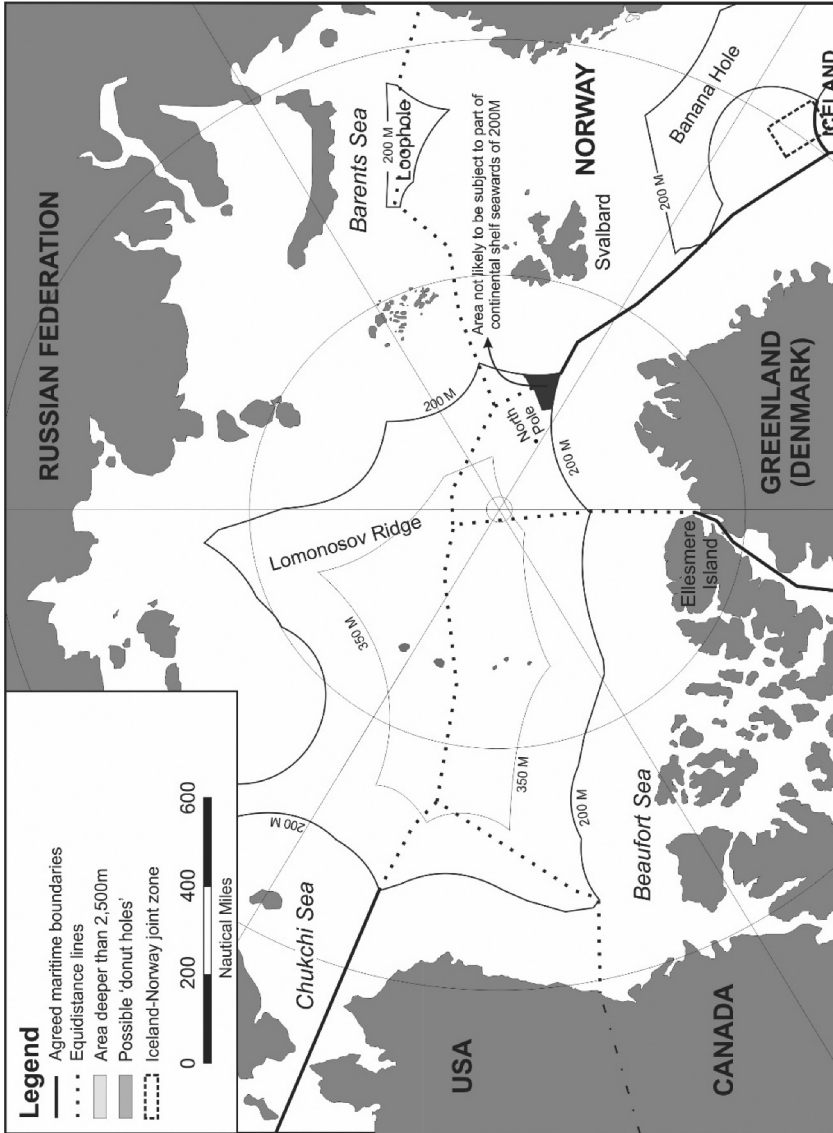


Figure 2. Arctic maritime claims and boundaries. Source: prepared for the authors by I Made Andi Arsana.





**Figure 3.** Maritime Delimitation between Canada and the Kingdom of Denmark (Greenland). Source: Prepared for the authors by I Made Andi Arsana.

In 1973 Canada and Denmark, on behalf of Greenland, agreed on an almost 1,500 M long continental shelf boundary.<sup>22</sup> The boundary stretches from near the intersection their 200 M limits at the mouth of the Davis Strait, to the Lincoln Sea by way of Baffin Bay, Nares Strait and Robeson Channel.<sup>23</sup> The agreement is innovative in two ways. First, the boundary includes a short gap in the Nares Strait within which the disputed Hans Island lies. Measuring just over 1 km<sup>2</sup>, this islet is the sole disputed land territory in the Arctic region. Entirely ignoring this disputed feature was a creative way to circumvent this sovereignty dispute (see Figure 3).

<sup>22</sup>Canada–Denmark, Agreement relating to the delimitation of the continental shelf between Greenland and Canada (with annexes). Signed at Ottawa on 17 December 1973.

<sup>23</sup>Alexander, “Canada–Denmark (Greenland),” 371–72.

Moreover, while the boundary is based on equidistance between opposite shores, at the time of its negotiation there was uncertainty over the location of certain basepoints in the high Arctic, so the treaty made provision for later adjustment of the line, in light of new surveys, on the basis of the same principles.<sup>24</sup> Accordingly, a slight adjustment to the boundary line was made in 2004.<sup>25</sup>

A further long maritime boundary was delimited between the USA and the then-USSR in 1990.<sup>26</sup> This agreement stretches through the Bering Strait between Alaska and Russia and extends into the Arctic Ocean to the north and the Bering Sea to the south. The agreement is based on the line defining the western limit of the area covered by the 1867 Convention whereby the USA purchased Alaska from the Russian Empire.<sup>27</sup> The boundary line relevant to the Arctic Ocean is a straight line heading due north from a specified point in the Bering Straits ‘as far as permitted under international law’ and thus to their 200 M limits and potentially further seaward in the central Arctic Ocean depending on the delineation of outer continental shelf limits beyond their EEZ limits.

The agreement provides for four ‘Special Areas’, one of which is located in the Arctic Ocean (the other three being in the Bering Sea) and comprises an area on the US side of the boundary line which lies within 200 M of the baselines of the USSR but beyond 200 M from the baselines of the USA.<sup>28</sup> These special areas ensured that all maritime spaces within 200 M of either or both of their coasts are delimited between these two states. Although this boundary treaty is not in force (Russia has not formally ratified it), both sides have respected its terms, consistent with an exchange of notes between them (see Figure 4).<sup>29</sup>

In February 2006 further progress was made in maritime delimitation in the Arctic Ocean, when Denmark and Norway reached agreement on an approximately 430 M-long equidistance-based continental shelf and fisheries zone boundary between the coasts of Greenland and Svalbard.<sup>30</sup> In concluding that treaty, Denmark implicitly recognised that Svalbard generates both fishing and continental shelf rights. For Norway, this was an important consideration, as it underpins the Norwegian view that Svalbard is capable of generating offshore zones and thus its relevance for maritime boundary delimitation in the Arctic. This point is at times disputed by other states on the wording of the Svalbard Treaty.<sup>31</sup>

<sup>24</sup>Canada–Denmark, Agreement relating to the delimitation of the continental shelf between Greenland and Canada (with annexes). Signed at Ottawa on 17 December 1973, para. 4.

<sup>25</sup>Canada–Denmark, “Exchange of Notes Constituting an Agreement to Amend the 1973 Canada–Denmark Continental Shelf Agreement.”

<sup>26</sup>United States–Union of Soviet Socialist Republics, “Agreement between the United States of America and The Union of the Soviet Socialist Republics on the Maritime Boundary”; and Verville, “United States–Soviet Union.”

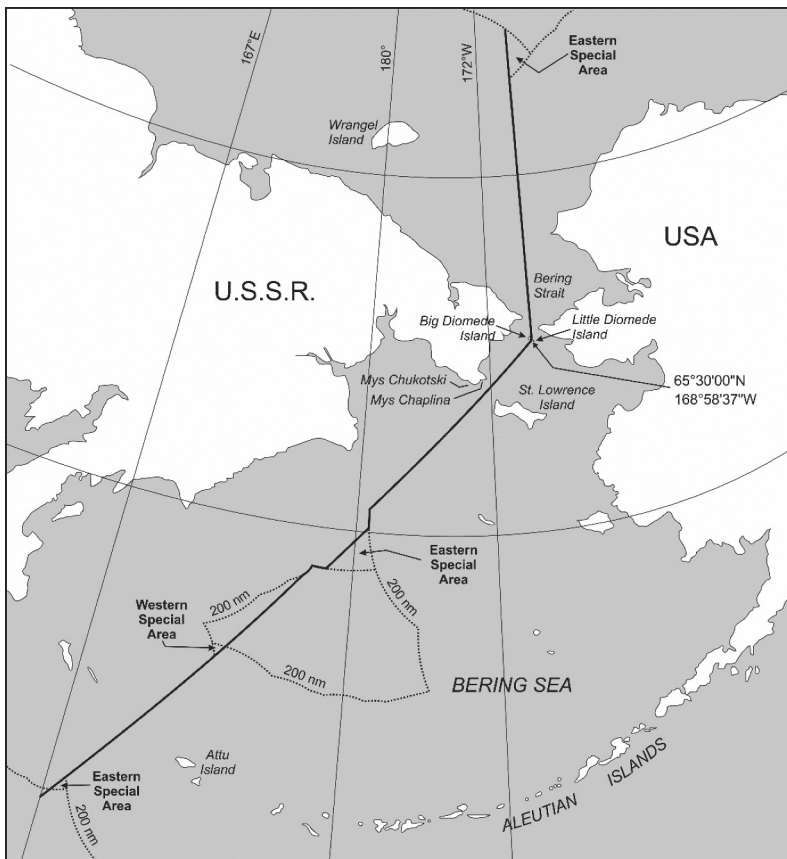
<sup>27</sup>Russia–United States, “Convention Ceding Alaska to Russia and the United States, 30 March 1867.”

<sup>28</sup>United States–Union of Soviet Socialist Republics, “Agreement between the United States of America and The Union of the Soviet Socialist Republics on the Maritime Boundary,” para. 3 (1).

<sup>29</sup>Verville, “United States–Soviet Union,” 454; Smith, “United States–Russia Maritime Boundary”; and Schofield, “Dividing and Managing Increasingly International Waters: Delimiting the Bering Sea, Strait and Beyond.”

<sup>30</sup>Denmark–Norway, Agreement between the Government of the Kingdom of Norway on the One Hand, and the Government of the Kingdom of Denmark Together with the Home Rule Government of Greenland on the Other Hand, Concerning the Delimitation of the Continental Shelf and the Fish; Oude Elferink, “Maritime Delimitation between Denmark/Greenland and Norway.”

<sup>31</sup>Svalbard Treaty, “Treaty between Norway, The United States of America, Denmark, France, Italy, Japan, the Netherlands, Great Britain and Ireland and the British Overseas Dominions and Sweden Concerning Spitsbergen Signed in Paris 9 February 1920.” For more on this dispute, see for example: Østhagen, Jørgensen, and Moe, “The Svalbard Fisheries Protection Zone: How Russia and Norway Manage an Arctic Dispute”; Tiller and Nyman, “Having the Cake and Eating It Too: To Manage or Own the Svalbard Fisheries Protection Zone”; Pedersen and Henriksen, “Svalbard’s Maritime Zones: The End of Legal Uncertainty?”; Østhagen, “Managing Conflict at Sea: The Case of Norway and Russia in the Svalbard Zone”; Jensen, “The Svalbard Treaty and Norwegian Sovereignty”; and Pedersen and Henriksen, “Svalbard’s Maritime Zones: The End of Legal Uncertainty?”



**Figure 4.** Maritime delimitation between the USA and USSR/Russian Federation. Source: prepared for the authors by I Made Andi Arsana.

The most significant recent progress in resolving Arctic Ocean maritime disputes involves Norway and Russia and the landmark 2010 maritime boundary agreement. First, in 2007, the two countries reached an agreement essentially replacing the 1957 Varangerfjord treaty, extending the delimitation line to 39.41 M.<sup>32</sup> However, further north, in the Barents Sea and Arctic Ocean, overlapping claims to continental shelf and encompassing an area of approximately 175,000 km<sup>2</sup> persisted from the 1970s.<sup>33</sup> At the core of the dispute was Norway's preference for a median line solution and Russia's preference for a sector line. Access to fisheries resources, especially commercially valuable cod and haddock stocks supported by the highly productive and

<sup>32</sup>Russia–Norway, "Agreement between the Russian Federation and the Kingdom of Norway on the Maritime Delimitation in the Varangerfjord Area (2007)."

<sup>33</sup>Moe, Fjærtøft, and Øverland, "Space and Timing: Why Was the Barents Sea Delimitation Dispute Resolved in 2010?"

diverse ecosystem of the Barents Sea, also caused friction, although this led to effective cooperative management measures being adopted over the course of three and a half decades preceding the boundary agreement.<sup>34</sup>

The breakthrough on the remaining boundary issues came in 2010, when the two countries committed to an all-purpose boundary to be drawn ‘on the basis of international law in order to achieve an equitable solution’, recognising ‘relevant factors . . . including the effect of major disparities in respective coastal lengths’ while dividing ‘the overall disputed area in two parts of approximately the same size’.<sup>35</sup> The agreement contains provisions aimed at continued cooperation over fisheries<sup>36</sup>; there are also provisions on co-management of any hydrocarbons that straddle the boundary.<sup>37</sup>

An innovative feature of the agreement is that, analogous to the Special Areas defined between the USA and USSR, an area of EEZ located on the Russian side of the boundary line is actually beyond 200 M from Russian baselines but is within 200 M of the Norwegian coast.<sup>38</sup> This negotiated arrangement enabled the two states to divide the entirety of the EEZ area within 200 M of their coasts, albeit not necessarily within 200 M of the baselines of the state on whose side of the line a particular area of EEZ is located (see Figure 5), which was deemed an acceptable compromise on both sides in lieu of the overarching goal of achieving an agreement.

In 2012, Canada and Denmark (Greenland) announced an agreement in principle on a maritime boundary out to 200 M in the Lincoln Sea<sup>39</sup> equidistance would be applied, with further technical adjustments to be made to the 1973 Agreement (see Figure 1).

It can therefore be observed that many maritime boundaries in the Arctic Ocean have been subject to agreement and that long-running and previously apparently intractable boundary disputes have been peacefully resolved. This reality contrasts sharply with alarmist depictions of the Arctic as region of geopolitical competition and boundary disputes. It can also be noted that most Arctic maritime boundary agreements are based on equidistance lines,<sup>40</sup> albeit equidistance lines modified as a consequence of the negotiation process, something that is in keeping with maritime delimitation globally.<sup>41</sup>

<sup>34</sup>Churchill and Ulfstein, *Marine Management in Disputed Areas: The Case of the Barents Sea*; Stabrun, “The Grey Zone Agreement of 1978: Fishery Concerns, Security Challenges and Territorial Interests”; Hønneland, *Making Fishery Agreements Work: Post-Agreement Bargaining in the Barents Sea*.

<sup>35</sup>Norwegian Government, “Joint Statement on Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean.”; Norway–Russian Federation, “Treaty between Norway and the Russian Federation Concerning Maritime Delimitation and Cooperation in the Barents Sea and Arctic Ocean, 15 September 2010.”

<sup>36</sup>Henriksen and Ulfstein, “Maritime Delimitation in the Arctic: The Barents Sea Treaty,” 1.

<sup>37</sup>Byers, *International Law and the Arctic*, 43–44; Fjærtøft et al., “Unitization of Petroleum Fields in the Barents Sea: Towards a Common Understanding?”

<sup>38</sup>Norway–Russian Federation, “Treaty between Norway and the Russian Federation Concerning Maritime Delimitation and Cooperation in the Barents Sea and Arctic Ocean, 15 September 2010,” para. 3.

<sup>39</sup>Canadian Department of Foreign Affairs, “Canada and Kingdom of Denmark Reach Tentative Agreement on Lincoln Sea Boundary.”

<sup>40</sup>An exception to this general rule is the due north line extending into the Arctic Ocean delimited between Russia and the United States (see Figure 4).

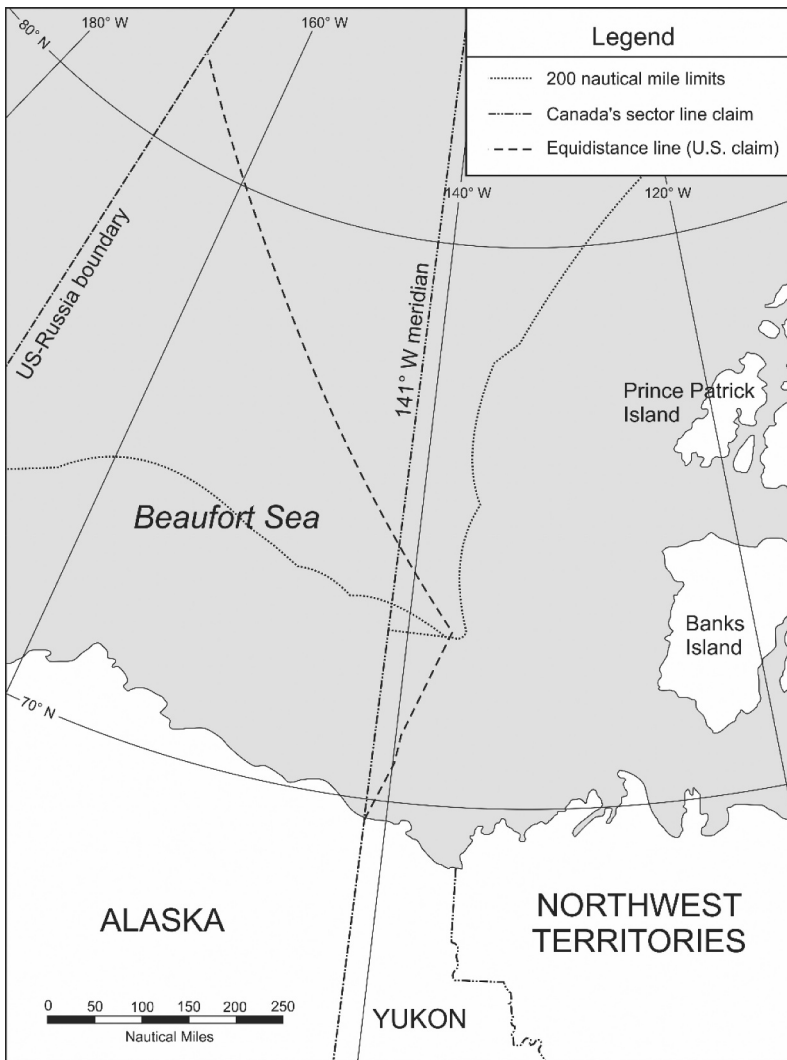
<sup>41</sup>Equidistance is the most popular method of maritime delimitation in State practice though it may be strict, simplified or modified in character. It can also be noted that since the Black Sea case before the ICJ in 2009 international jurisprudence on maritime delimitation has moved decisively towards a three-stage process, the first stage of which is the construction of a provisional delimitation line based on geometric methods, the adjustment of that line to achieve an equitable outcome at the second stage and at the final stage a testing of the line through a disproportionality test. See, *Case Concerning Maritime Delimitation in the Black Sea* (Romania v. Ukraine), Judgement of 3 February 2009, [2009] ICJ Rep 61, para.116.



**Figure 5.** Maritime delimitation between Norway and the Russian Federation. Source: prepared for the authors by I Made Andi Arsana.

### Arctic disputes and overlaps

The main dispute still remaining on Arctic maritime zones concerns delineation in the Beaufort Sea between Canada and the USA. The dispute centres on the wording of a treaty concluded between Russia and Great Britain in 1825 (the USA assumed Russia’s Treaty rights when it purchased Alaska in 1867; Canada acquired Britain’s rights in 1880). This treaty set the eastern border of Alaska at the ‘meridian line of the 141st degree, in its



**Figure 6.** Overlapping maritime claims in the Beaufort Sea. Source: prepared for the authors by I Made Andi Arsana.

prolongation as far as the frozen ocean'.<sup>42</sup> Canada asserts that this treaty provision established both the land border and the maritime boundary, and that both must follow a straight northern line. In contrast, the USA holds that the delimitation applies only to land and therefore does not extend beyond the terminus of the land boundary on the coast. For delimitation in the Beaufort Sea, the USA considers an equidistance line to be the legally and geographically appropriate solution (see [Figure 6](#)).<sup>43</sup>

<sup>42</sup>Great Britain-Russia, "Great Britain-Russia: Limits of Their Respective Possessions on the North-West Coast of America and the Navigation of the Pacific Ocean," para. 3.

<sup>43</sup>US Department of State, Public Notice 2237: Exclusive Economic Zone and Maritime Boundaries.

Canada and the USA sought to resolve the Beaufort Sea dispute in the late 1970s, but without success. Collaborative mapping beyond 200 M with a Canadian and a US icebreaker (2008–2011) arguably opened the way to resolution of this, by showing that the continental shelf in the Beaufort Sea might stretch 350 M or more offshore.<sup>44</sup> The extended continental shelf adds a twist to the Beaufort Sea boundary dispute as seawards of 200 M, an equidistance line is diverted to the northwest because of the influence of Canadian Arctic islands.<sup>45</sup> In spatial terms, therefore, both Canada and the USA would benefit from adopting the other's position (see [Figure 6](#)).

In March 2010, the Canadian government signalled its desire to 'work with other northern countries to settle boundary disagreements'.<sup>46</sup> Discussions were, however, suspended in 2011, after the two countries decided they would need more scientific information on the existence and location of hydrocarbon reserves before negotiating a boundary.

The other dispute that remains concerning maritime zones is between Canada and Denmark in the Lincoln Sea. In 2004, the scope of the dispute was reduced when Denmark modified its straight baselines, replacing the 40.9 M baseline east of Beaumont Island with a series of shorter baselines, including one connecting Beaumont Island to John Murray Island, the next island in the chain.<sup>47</sup> These Danish changes reduced the size of the northernmost disputed area almost to the point of eliminating it, and likely contributed to the announcement made by the Canadian and Danish foreign ministers in 2012 that negotiators 'have reached a tentative agreement on where to establish the maritime boundary in the Lincoln Sea'.<sup>48</sup> The only issue left for negotiation was a joint management regime for any straddling hydrocarbon deposits. This point could not be dealt with solely by the Danish and Canadian negotiators, because, although Denmark retains control over Greenland's foreign policy, the Greenland government has since 2008 exercised control over natural resources, including on the continental shelf.<sup>49</sup> In 2018, Denmark and Canada established a 'Joint Task Force on Boundary Issues' in order to settle the outstanding issues regarding this maritime boundary.<sup>50</sup>

### ***Outer continental shelf areas and the central Arctic Ocean***

On 2 August 2007, a Russian expedition used a submersible to drop a rustproof titanium casket containing a Russian flag on the Arctic seabed at around 4,200 m depth beneath the North Pole.<sup>51</sup> This action generated considerable media coverage, much of which was decidedly alarmist in nature. This tone extended to the diplomatic arena when the

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<sup>44</sup>Baker and Byers, "Crossed Lines: The Curious Case of the Beaufort Sea Maritime Boundary Dispute"; and Byers and Østhagen, "Why Does Canada Have So Many Unresolved Maritime Boundary Disputes?"

<sup>45</sup>Baker and Byers, "Crossed Lines: The Curious Case of the Beaufort Sea Maritime Boundary Dispute."

<sup>46</sup>Government of Canada, "Speech from the Throne."

<sup>47</sup>Kingdom of Denmark, "Royal Decree on Amendment of Royal Decree on Delimitation of the Territorial Waters of Greenland, 15 October 2004."

<sup>48</sup>Canadian Department of Foreign Affairs, "Canada and Kingdom of Denmark Reach Tentative Agreement on Lincoln Sea Boundary"; Mackrael, "Canada, Denmark Closer to Settling Border Dispute."

<sup>49</sup>Erdal, "Independence on the Horizon A Study of the Interplay Between Sovereignty and Natural Resources in Greenland."

<sup>50</sup>Global Affairs Canada, "Canada and the Kingdom of Denmark (with Greenland) Announce the Establishment of a Joint Task Force on Boundary Issues."

<sup>51</sup>BBC News, "Russia Plants Flag under N Pole."

Canadian Foreign Minister, Peter MacKay, appeared to dismiss the flag-dropping incident as a stunt, stating “This isn’t the 15<sup>th</sup> century. You can’t go around the world and just plant flags and say ‘We’re claiming this territory’”.<sup>52</sup> In response, the Russian Foreign Minister, Sergei Lavrov, observed that ‘no one is throwing flags around’; analogies were drawn between Russia’s action and Hillary and Tenzing planting the Union Jack on the summit of Everest in 1953.<sup>53</sup> Indeed, Lavrov was at pains to emphasise that Russia was not acting unilaterally: its actions were ‘in strict compliance with international law’.<sup>54</sup>

Concerning continental shelf areas seawards of 200 M, LOSC Article 76 lays down complex criteria whereby the outer limits of the continental shelf may be determined with assistance from a scientific and technical body established through the Convention – the Commission on the Limits of the Continental Shelf (CLCS). This complexity arises because continental shelf entitlements seawards of 200 M limits are delineated not solely by reference to a distance formula. These areas of continental shelf seawards of 200 M limits are often referred to as ‘outer’ or ‘extended’ continental shelf, although legally there is only one continental shelf. Two maximum constraint or cut-off lines are then applied: a limit of 100 M from the 2500-metre depth isobath (depth contour), or 350 M from the coastal state’s baselines at the coastal state’s discretion (Article 76(5)).

It has been suggested that delineating the outer limits of the continental shelf seawards of 200 M limits is challenging because of numerous ‘complexities and ambiguities’ associated with Article 76,<sup>55</sup> as well as issues concerning the way in which the Commission works.<sup>56</sup> Preparing a submission for the CLCS requires a coastal state to gather information related to the morphology of its continental margin and its geological characteristics as well as bathymetric information relating to water depth, and also to determine distance measurements, for example, the location of 200 M and 350 M limit lines. Although this is necessarily an expensive and time-consuming task, this process does have the significant virtue of providing for a definable outer limit to the continental shelf – which McDorman has termed ‘the real achievement’ of Article 76 of LOSC.<sup>57</sup>

All the Arctic coastal states have been active in gathering the data required to formulate submissions. Some – like the USA and Canada – have cooperated amongst themselves, for example in order to facilitate joint surveys. All the Arctic littoral states except the USA (as a non-LOSC party) have made submissions to the CLCS.<sup>58</sup> It appears from these submissions that, should the Commission be in agreement, the vast majority of the seabed of the Arctic Ocean will form part of the outer or extended continental shelf of the coastal states.

The major uncertainty here relates to the CLCS’s view of how the major Arctic Ocean ridge systems are to be treated. These include the Lomonosov and Gakkel Ridges, where the submissions of Canada, Denmark (Greenland) and Russia overlap; and the Alpha

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<sup>52</sup>Parfitt, “Russia Plants Flag on North Pole Seabed.”

<sup>53</sup>Parfitt.

<sup>54</sup>Novosti, “Russia Guided By International Law In Its Polar Shelf Probe.”

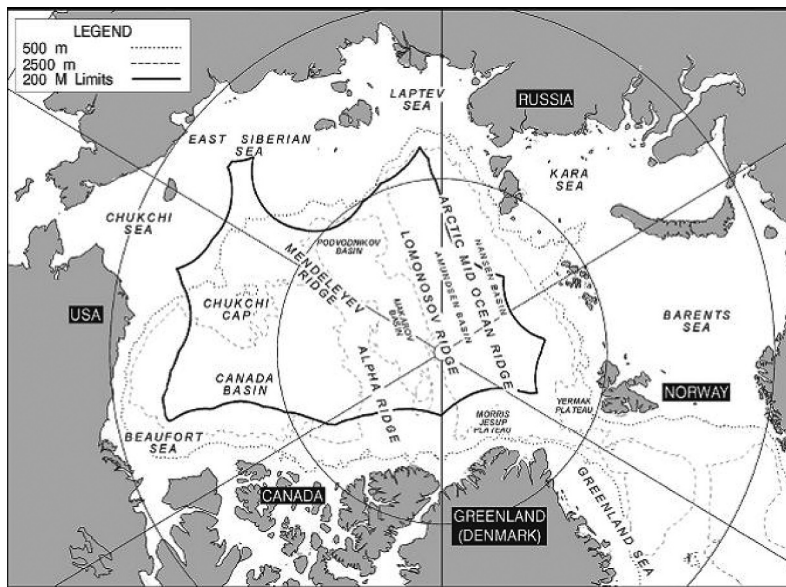
<sup>55</sup>Macnab, “The Outer Limit of the Continental Shelf in the Arctic Ocean”; Macnab, “The Case for Transparency in the Delimitation of the Outer Continental Shelf in Accordance with LOSC Article 76”; and Cook and Carleton, *Continental Shelf Limits: The Scientific and Legal Interface*.

<sup>56</sup>McDorman, “The Role of the Commission on the Limits of Continental Shelf: A Technical Body in a Political World.”

<sup>57</sup>McDorman, 307.

<sup>58</sup>United Nations, “Submissions to the CLCS.”





**Figure 7.** Arctic Ocean 200 M limits and undersea features. Source: prepared for the authors by I Made Andi Arsana.

Rise, where the submissions of Canada, Russia and the USA intersect (see [Figure 1](#) and [7](#)). Here it is important to note that the provisions of Article 76 of the LOSC are without prejudice to delimitation of continental shelf boundaries.<sup>59</sup> If a submission involves an area of continental shelf subject to overlapping claims and a protest arises, the Commission lacks the mandate to consider the submission unless all the states concerned agree that the CLCS can proceed.<sup>60</sup>

Ultimately, therefore, these overlapping assertions of continental shelf rights will need to be resolved by the submitting states themselves through diplomacy and negotiations, on which Article 76 leaves it up to states to choose the appropriate mechanism. Indeed, the three Arctic littoral states most likely to have to enter bilateral or trilateral negotiations over delimitation of their extended continental shelves – Canada, Denmark (Greenland) and Russia – have all declared their intention to work within the framework of LOSC and international diplomacy.<sup>61</sup> A caveat here is that it is as yet unclear whether maritime delimitation for outer continental shelf areas will follow the same approach as that for delimitation within 200 M limits. Existing State practice is limited and tends to either only marginally

<sup>59</sup>LOSC, Article 76(10).

<sup>60</sup>Rules of Procedure of the Commission on the Limits of the Continental Shelf, CLCS/40/Rev.1, 17 April 2008, Annex I, Article 5(a).

<sup>61</sup>Byers, "Crises and International Cooperation: An Arctic Case Study"; Bykova, "Canada Makes Substantial Step in Arctic Territory Delimitation, Submits Claim Which Includes North Pole."

**Table 1.** Total number of maritime boundaries in the world as dyads.<sup>a</sup>

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

<sup>a</sup>From Østhagen, "Troubled Seas? The Changing Politics of Maritime Boundary Disputes."

**Table 2.** Settled/not settled maritime boundaries as dyads across continents.<sup>a</sup>

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%
Arctic	9	7	2*	78%
<b>Total</b>	<b>460</b>	<b>280</b>	<b>180</b>	61%

<sup>a</sup>From Østhagen, "Troubled Seas? The Changing Politics of Maritime Boundary Disputes."

\*This includes the Denmark/Greenland-Canada tentatively agreed boundary in the Lincoln Sea.

stray beyond 200 M limits or simply continues the methodology applied within 200 M of the coast.<sup>62</sup> While it has been suggested that there may be only a 'a limited role' for geophysical factors in delimitation of outer continental shelf areas,<sup>63</sup> exceptions exist so it is arguably too early to be definitive on this point.<sup>64</sup>

## An ocean apart?

What do these experiences in the Arctic mean for our wider understanding of the processes that lead states to settle their maritime boundary disputes? Moreover, does Arctic practice offer any lessons for the management of disputes at sea? Here it can be observed that the Arctic littoral states have in recent times accelerated efforts to settle outstanding maritime disputes, arguably pushed into action by the focus on this part of the globe in the early 2000s. It can be observed, however that while similar attention has been given to maritime disputes elsewhere in the global ocean, such as in the South and East China Seas, and the Eastern Mediterranean, less progress in terms of dispute resolution is evident. With 39% of all maritime boundaries across the globe still in dispute (see Table 1) – active or dormant it is clear that many maritime disputes persist.

What makes the Arctic Ocean exceptional with respect to maritime boundaries is that so many are *settled*, in contrast to the general trend (see Table 2). Moreover, relevant fisheries agreements and, perhaps more importantly, hydrocarbon resource-sharing arrangements

<sup>62</sup>Schofield, Clive H. and Bernard, Leonardo, "Disputes Concerning the Delimitation of the Continental Shelf Beyond 200 M", pp.157–182 in Heidar, Tomas (ed.), *New Knowledge and Changing Circumstances in the Law of the Sea*, (Leiden/Boston: Brill, 2020), at p.181.

<sup>63</sup>Van Pay, Brian J., "Disputed Areas Beyond 200 Nautical Miles: How Many and Will Geophysical Characteristics Matter in Their Resolution?", in Myron H. Nordquist and John Norton Moore (eds), *Maritime Border Diplomacy* (Leiden/Boston: Martinus Nijhoff, 2012), at 56.

<sup>64</sup>For example, geophysical factors were influential in respect of parts of the boundary seawards of 200 M limits agreed between Australia and New Zealand in 2004. See, Schofield and Bernard "Disputes Concerning the Delimitation of the Continental Shelf Beyond 200 M", p.175.

have lowered the domestic costs for the Arctic states as regards settling with neighbours. Still, as seen in the case of the unsettled Beaufort Sea dispute between Canada and the USA and the settled boundaries between the United States and Russia and Norway and Russia, domestic opposition has been a considerable hurdle – with the possibility of toppling the agreement in the latter case,<sup>65</sup> and proving a severe constraint in the former case. Moreover, for all the progress in terms of settling maritime boundary disputes within 200 M of the coast, there remain broad areas of overlapping assertions to outer continental shelf rights underlying the majority of the central Arctic Ocean that remain unresolved.

The Law of the Sea provides the best framework for dealing with the challenges arising over how to manage ocean space including areas of overlapping maritime claims, especially in the Arctic Ocean context where all of the littoral states have overtly indicated that they remain committed to its terms.<sup>66</sup> Measures ranging from Marine Protected Areas to Regional Fisheries Management Organisations provide mechanisms for tackling proliferating ocean-based environmental issues.<sup>67</sup> The Arctic stands as a highly relevant case study for how states respond to these ocean-based challenges to international cooperation: having highlighted their support for LOSC in the Arctic in 2008, the littoral states continue to support the process of submitting data to the CLCS; they signed a moratorium on High Arctic fisheries in 2018, and work in bilateral and regional forums addressing not only maritime boundary disputes, but cooperation ranging from environmental policies to resource development at sea.

Looking to other regions with unsettled maritime boundary disputes, or the boundaries at sea more generally, the importance of maritime space in domestic politics seems to have changed – from a functional space that inspired limited engagement, to that of a national space requiring ‘protection’ and defence.<sup>68</sup> The trend towards greater utilisation of the oceans, or national maritime zones, in domestic politics as well as increasing realisation of the need to ensure protection and preservation of the Arctic Ocean’s environment and biodiversity, is likely to increase as the governance of ocean space continues to rise on the international agenda. Increased use of oceans as a resource and economic base, symbolised by ‘blue economy’ initiatives, has further heightened the importance of maritime space for states. However, as seen with the Arctic region, managing and settling disputes *before* they escalate into outright conflict and/or stalemates can remove some of the impetus for friction. That is a lesson relevant not only to the Arctic, but to maritime regions across the globe.

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<sup>65</sup>For more on this, see Hønneland, *Hvordan skal Putin ta Barentshavet tilbake? (How Shall Putin Reclaim the Barents Sea?)*; Hønneland and Jørgensen, “Kompromisskulturen i Barentshavet (the Culture of Compromise in the Barents Sea)”; Jørgensen and Østhagen, “Norges vern av suverene rettigheter rundt Svalbard: Russiske persepsjoner og reaksjoner (Norway’s defence of sovereign rights around Svalbard: Russian perceptions and reactions).”

<sup>66</sup>Jacobsen, “Ilulissat Declaration’s 10-Year Anniversary.”

<sup>67</sup>Lalonde, “A Network Of Marine Protected Areas In The Arctic: Promises And Challenges”; Berkman and Young, “Governance and Environmental Change in the Arctic Ocean.”

<sup>68</sup>Steinberg, *The Social Construction of the Ocean*; Østhagen, “Maritime Boundary Disputes: What Are They and Why Do They Matter?”; Østhagen, “Troubled Seas? The Changing Politics of Maritime Boundary Disputes”; and Schofield and Sas, “Uncovered and Unstable Coasts: Climate Change and Territorial Sea Baselines in the Arctic.”

## Concluding remarks

We have seen how the Arctic littoral states, in their efforts to delineate the outer limits of their maritime zones and delimit maritime boundaries where such claims overlap with those of neighbouring states, have largely abided by the international legal regime for the oceans (LOSC).

The counterpoint to this general compliance with the international law of the sea provisions is the practice of the Arctic States concerning some of the baselines from which maritime claims are predominantly measured. That said, liberal practice concerning straight baselines is by no means confined to the Arctic Ocean.<sup>69</sup> Fundamentally, affirming LOSC, the practical management of maritime spaces subject to overlapping claims and their associated marine resources and ultimately agreeing on maritime boundaries in the Arctic region have not only been steps taken in order to provide frameworks for ocean-based resource development: they have involved efforts to ensure the primacy of the Arctic states as other actors are increasingly engaged in regional affairs ranging from science to fisheries. Further, as noted above, the Arctic coastal states have shown considerable innovation in their ocean boundary-making practice. Such creative practice may well be necessary in the future, especially in the context of a changing climate and coastline. This necessarily has implications for Arctic baselines, maritime zones and undelimited maritime boundaries. That said, efforts and experiences across the Arctic region are not uniform. Thus, the different boundary agreements and processes leading to those agreements across the Arctic do not seem to reflect any ‘special Arctic circumstances’ or one distinct *approach* to these issues. Rather, the resolution of each maritime delimitation dispute depends on a unique suite of inter-related issues specific to each distinct case. However, in a broad sense, it can be observed that the heightened attention given to the Arctic by the littoral states at the start of the new millennium appear to have prompted renewed efforts in settling the boundaries still in dispute at that time. Between 2006 and 2012, four agreements or tentative agreements were signed, while Canada and the USA embarked on renewed efforts to solve their maritime boundary delimitation issues in the Beaufort Sea even if a resolution remains out of sight for the present.

What seems clear from these Arctic cases is how the entitlements that LOSC has delivered to the littoral states has prompted practical cooperation, ranging from managing shared fish stocks (relevant across all cases examined here) to joint development projects regarding petroleum resources. The trend towards cooperative dispute management and conflict avoidance mechanisms arguably enabled the resolution of Arctic maritime disputes through maritime boundary delimitation. For example, for the 2010 maritime boundary treaty between Norway and the Russian Federation, whilst this agreement appears to have four decades to realise, it was arguably built on long-standing and substantive maritime cooperation, especially with respect to fisheries in that part of the Barents Sea subject to competing maritime claims and, crucially, this fisheries-related cooperation endures to the present day. Indeed, it can be suggested that the continuation of these cooperative measures were an essential ingredient in

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<sup>69</sup>Lathrop, Roach, and Rothwell, *Baselines under the International Law of the Sea: Reports of the International Law Association Committee on Baselines under the International Law of the Sea*, 126–53.

realising agreement on the maritime boundary. Similarly, despite concerns being raised over access to and control over the central Arctic Ocean, this area has featured a series of submissions to the relevant scientific and technical body established under the LOSC, the CLCS, as well as cooperative management of pressing issues through regional instruments, especially the Arctic Council.

The Arctic ‘experience’ in practice not only counters the recurrent alarmist claims of territorial grabs, but it also showcases how the international legal framework that allows for maritime jurisdictional expansion underpins a situation devoid of outright conflict over who owns what, where.

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