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## WHAT STATES SAY AND DO ABOUT LEGAL STABILITY AND MARITIME ZONES, AND WHY IT MATTERS

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**Abstract** States increasingly refer to ‘legal stability’ in connection with maritime zones, amidst concern to preserve their jurisdictional rights in the face of climate-change induced sea-level rise. Yet such a claim for preservation is at odds with the widely-expressed scholarly view that baselines, and their associated maritime zones, ‘ambulate’ with coastal changes. This article interrogates this tension by focussing on the understudied notion of legal stability as it relates to maritime zones, under the international law of the sea. The article examines the development of the term ‘legal stability’ in the discourse of States (what States say) and contends that a claim for the stability of maritime zones should be seen as an expression of the long-standing value placed on legal stability by States in the system of maritime zones. Further, the article presents the results of a global study of States’ implementation of the normal baseline in domestic legislation (what States do). The results show that many States have taken practical measures to secure legal stability for their normal baselines within their domestic frameworks, suggesting that existing international law may accommodate a greater degree of stability than widely appreciated. The article concludes by asserting that these findings matter not only for how we should receive States’ claims for maritime zone preservation on the basis of legal stability, but also prompts reconsideration of our overall understanding of the existing law on baselines and maritime zones.

**Keywords:** public international law, law of the sea, legal stability, sea-level rise, baselines, maritime zones, State practice.

### I. INTRODUCTION

In August 2021, the Leaders of the Pacific Islands Forum (PIF) issued the *Declaration on Preserving Maritime Zones in the Face of Climate Change*-

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*Related Sea-Level Rise*,<sup>1</sup> stating the intention that their maritime zones, and rights and entitlements flowing from those zones, would be maintained notwithstanding the effects of sea-level rise. The position articulated by these States is not new; it is consistent with similar regional statements made over preceding decades,<sup>2</sup> as well as statements from individual Pacific countries at the international level.<sup>3</sup> However, it is at odds with the widely-expressed scholarly view that, in general, baselines and associated maritime zones ‘ambulate’ with the coastline, so that if a coastline recedes as the sea-level rises, the baseline recedes with it, potentially causing a shrinking of the maritime zones drawn from that baseline. In this context, should the PIF Declaration be viewed as a radical claim for legal stability? This article contends that it should not, offering two arguments in support.

The first argument is signalled by the PIF Declaration itself, which situates its position on the maintenance of baselines and maritime zones by reference to ‘the principles of legal stability, security, certainty and predictability that underpin the Convention and the relevance of these principles to the interpretation of the Convention in the context of sea-level rise and climate change’.<sup>4</sup> The PIF Declaration directs our attention inwards, pointing to the existing international legal framework, and specifically, the UN Convention on the Law of the Sea.<sup>5</sup> So rather than turning to options to amend this legal framework—or even to suggest a new one<sup>6</sup>—this article pauses to reconsider the extent to which the current legal regime reflected in the LOSC might

<sup>1</sup> *Declaration on Preserving Maritime Zones in the Face of Climate Change-related Sea-Level Rise* signed 6 August 2021, <<https://www.forumsec.org/2021/08/11/declaration-on-preserving-maritime-zones-in-the-face-of-climate-change-related-sea-level-rise/>>, signed by Australia, the Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, the Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu (PIF Declaration).

<sup>2</sup> Such as the 2010 Framework for a Pacific Oceanscape: Pacific Islands Forum Secretariat, Strategic Priority 1 (Jurisdictional Rights and Responsibilities) <<https://www.forumsec.org/wp-content/uploads/2018/03/Framework-for-a-Pacific-Oceanscape-2010.pdf>>.

<sup>3</sup> For example, the Statement of Tuvalu at UN Ocean Conference 2017, Partnership Dialogue 7 (9 June 2017): Enhancing the conservation and sustainable use of oceans and their resources by implementing the international law as reflected in the United Nations Convention on the Law of the Sea <<https://sustainabledevelopment.un.org/content/documents/24716tuvalu.pdf>>.

<sup>4</sup> PIF Declaration (n 1).

<sup>5</sup> United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 397 (LOSC).

<sup>6</sup> These and other options oriented towards *lex ferenda* are discussed in: eg JG Stoutenburg, *Disappearing Island States in International Law* (Brill Nijhoff 2015) Ch 3; M Hayashi, ‘Sea-Level Rise and the Law of the Sea: Future Options’ in D Vidas and PJ Schei (eds), *The World Ocean in Globalisation* (Brill Nijhoff 2011) 187; C Schofield and D Freestone, ‘Options to Protect Coastlines and Secure Maritime Jurisdictional Claims in the Face of Global Sea Level Rise’ in MB Gerrard and GE Wannier (eds) *Threatened Island Nations: Legal Implications of Rising Seas and a Changing Climate* (Cambridge University Press 2015) 141; the International Law Association, Sea Level Rise Committee, *Report of the Sydney Conference* (2018) at <<https://www.ila-hq.org/index.php/committees>> 18, and K Scott, ‘Rising Seas and Pacific Maritime Boundaries’ (*Australian Outlook: Australian Institute of International Affairs*, 2018) <<http://www.internationalaffairs.org.au/australianoutlook/rising-seas-and-pacific-maritime-boundaries/>>.

already provide a basis for responding to sea-level rise impacts. The article argues that the stability of the legal order of maritime zones is a long-standing value of the LOSC system, evident throughout its development and increasingly invoked by States in connection with sea-level rise impacts.

The second argument offers evidence that many States have pursued stability in very practical ways, namely in how they have implemented the baseline provisions of the LOSC in domestic frameworks. The article argues that general acceptance of a diversity of methods among States in the implementation of baselines—including methods which have a stabilising effect—tends to suggest that the existing international law does accommodate the legal stability of maritime zones, at least to this extent.

Part II briefly introduces the legal framework for this article's focus on unilateral maritime zones, arguing that legal stability in this context remains understudied. While jurisprudence and scholarship on maritime boundaries illuminates some legal rules promoting stability, such rules do not readily translate from an inter-State context (ie an adjudicated boundary, or a maritime boundary treaty) to the situation of unilaterally-declared maritime zones. Furthermore, the logic underpinning the 'ambulatory' theory of baselines—widely-held amongst scholars—tends to leave the notion of legal stability in a conceptual blind spot.

To advance the first argument that legal stability is a long-standing value of the LOSC system, Part III asks the question: what do States *say* about legal stability in connection with maritime zones? It analyses the views of States at two key points in time—during the negotiation of the LOSC, and in the period 2017–2021 in the context of international discussions on sea-level rise—to consider the ways in which States have articulated a concern for legal stability. Across both time periods, States not only affirm the importance of the stability of the zonal legal order, but also draw attention to a more concrete understanding of the term 'legal stability' as it applies to maritime zones in the context of sea-level rise.

To advance the second argument that States pursue legal stability in the way they implement baselines, Part IV asks the question: what do States *do* when they implement their baselines? A case study of domestic legislation on the normal baseline (the most commonly used type of baseline) finds that most definitions of the normal baseline have some degree of stability, with the result that the baseline maintains its location on the surface of the earth over time.

These findings matter not only for how we might receive the PIF Declaration, but also, as argued in Part V, because they pose a challenge to the ability of the 'ambulatory' theory to provide a full account of the law, thus prompting a reconsideration of our overall conception of that law. Recognising the importance of legal stability to States, and understanding how this is complemented by action, provides a firm foundation for reassessing how the LOSC should be interpreted now and in the future.

II. THE LOSC FRAMEWORK<sup>7</sup> FOR UNILATERAL MARITIME ZONES

The international law of the sea draws a close nexus between the sea and the land in the sense that a coastal State's maritime entitlements flow from its sovereignty over land. This is reflected in the terms of the LOSC, since it is 'coastal States' (rather than all States) which have entitlements to maritime zones adjacent to their land territory, and also in the well-known principle that 'the land dominates the sea'.<sup>8</sup> The term 'baseline' refers to a juridical concept that has strong links to a particular part of land: the coast. A baseline is 'the legal expression of the coast',<sup>9</sup> and certain physical characteristics of that coast will influence the type of baseline available to be used in any particular geographic area. A coastal State may employ different baseline types (normal,<sup>10</sup> straight,<sup>11</sup> archipelagic,<sup>12</sup> or a combination thereof)<sup>13</sup> if relevant criteria are met. The principal significance of the baseline in the law of the sea is that it is the starting point for determining the location and extent of a coastal State's maritime zones, such as the territorial sea<sup>14</sup> (which may be established with a breadth of up to 12 nautical miles from the baseline),<sup>15</sup> or the exclusive economic zone (with a breadth of up to 200 nautical miles from the baseline),<sup>16</sup> and States' rights and responsibilities (for example, relating to customs enforcement, or environmental obligations) differ according to the maritime zone in which a particular activity occurs.

This article focuses on situations where maritime zones are established unilaterally by the coastal State. This occurs where such zones do not overlap with the entitlements of an adjacent or opposite coastal State (for example, where there is more than 400 nautical miles between opposite States, allowing each coastal State to claim an exclusive economic zone of 200

<sup>7</sup> It is also important to note that while there is some debate about whether all of the core provisions of the LOSC are either reflective of or have passed into custom, it is generally considered that the LOSC provisions on baselines and maritime zones discussed in this Part are reflective of customary international law: see generally J Crawford, *Brownlie's Principles of Public International Law* (9th edn, Oxford University Press 2019) 724, RR Churchill, AV Lowe and A Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) 53, and for an examination of specific Articles and customary status, see JA Roach, 'Today's Customary International Law of the Sea' 45 *Ocean Development & International Law* 239. The United States has publicly expressed the view that it considers Part II LOSC (containing baseline rules) to be binding as a matter of custom: see United States, 'Comments of the United States regarding Sea-Level Rise in Relation to the Law of the Sea', Submission of the United States of America to the International Law Commission, 14 February 2020, 1 (<[https://legal.un.org/ilc/sessions/72/pdfs/english/slr\\_us.pdf](https://legal.un.org/ilc/sessions/72/pdfs/english/slr_us.pdf)>) ('US Submission').

<sup>8</sup> *North Sea Continental Shelf (Federal Republic of Germany v Denmark; Federal Republic of Germany v The Netherlands)* [1969] ICJ Rep 3 [96]. For a useful modern discussion of this concept, see BB Jia, 'The Principle of the Domination of the Land over the Sea: A Historical Perspective on the Adaptability of the Law of the Sea to New Challenges' 57 *German Yearbook of International Law* 1.

<sup>9</sup> CG Lathrop, 'Baselines' in DR Rothwell et al (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 69.

<sup>12</sup> Art 47 LOSC.

<sup>13</sup> Art 14 LOSC.

<sup>10</sup> Art 5 LOSC.

<sup>11</sup> Art 7 LOSC.

<sup>14</sup> Art 2 LOSC.

<sup>15</sup> Art 3 LOSC.

<sup>16</sup> Art 57 LOSC.

nautical miles' breadth). In these circumstances, the legal framework described above is applicable and determinative regarding the location and extent of maritime zones. The following discussion briefly considers jurisprudence and scholarship relating to maritime boundaries between States. Although the concept of stability does arise in these contexts, so too do different legal considerations (such as equity), making it difficult to translate from these situations to that of unilateral maritime zones.

#### *A. Jurisprudence and Scholarship on the Stability of Maritime Boundaries*

A handful of international decisions have touched upon stability in the context of maritime delimitations. In *Bangladesh v India*, the Tribunal noted that 'maritime delimitations, like land boundaries, must be stable and definitive to ensure a peaceful relationship between the States concerned in the long term'.<sup>17</sup> In a similar way, the ICJ has observed (in considering the exclusion of 'boundary agreements' from the rule permitting unilateral treaty termination where there is a fundamental change of circumstance) that 'whether it is a land frontier or a boundary line in the continental shelf that is in question, the process is essentially the same, and inevitably involves the same element of stability and permanence'.<sup>18</sup> As explained by the Tribunal in *Bangladesh v India*, the stability of a maritime boundary between two States should be seen as an expression, in a maritime context, of the general principle in international law on the stability of land boundaries. A clear enunciation of that general principle may be found in the *Temple of Preah Vihear*, where the ICJ stated that 'when two countries establish a frontier between them, one of the primary objects is to achieve stability and finality'.<sup>19</sup>

Another context relates to the doctrine of *uti possidetis*, which provides that newly-independent States 'inherit as their borders those administrative boundaries which were in place at the time of independence',<sup>20</sup> providing a basis for the continuity of boundaries pre- and post- independence. It does so by preserving their location while at the same time transforming their legal status from internal boundaries to international ones. *Uti possidetis* also applies in the context of maritime delimitations, illustrated by the ICJ's inquiry into whether the waters of the Gulf of Fonseca were 'divided or apportioned between the different administrative units which [...] became the three coastal States of El Salvador, Honduras and Nicaragua'.<sup>21</sup> The Court in

<sup>17</sup> *Bay Of Bengal Maritime Boundary Arbitration (Bangladesh v India)* (Award) (LOSC Arbitral Tribunal, 7 July 2014) [216] (*Bangladesh v India*).

<sup>18</sup> *Aegean Sea Continental Shelf Case (Greece v Turkey)* (Judgment) [1978] ICJ Rep 3, [85].

<sup>19</sup> *Temple of Preah Vihear (Cambodia v Thailand)* (Merits) [1962] ICJ Rep 6, 34.

<sup>20</sup> See Crawford (n 7) 224, discussing the principal case on this point: *Frontier Dispute (Burkina Faso/Mali)* (Judgment) [1986] ICJ Rep 554.

<sup>21</sup> *Land, Island and Maritime Frontier Dispute (El Salvador/Honduras: Nicaragua Intervening)* (Judgment) [1992] ICJ Rep 351, [405].

*Nicaragua v Honduras* also made clear that the application of the doctrine could provide for the continuity of borders encompassing the territorial sea (even though in this case, the evidence did not support Honduras' claimed maritime boundary).<sup>22</sup>

Treaty law also provides a source of stability for the maritime boundaries agreed between States. Lisztwan argues that this is because maritime boundaries fall within the exception in Article 62 of the *Vienna Convention on the Law of Treaties*<sup>23</sup> (applying the jurisprudence on land boundary delimitations, noted above), with the effect that 'most maritime boundaries will not be affected by changes in coastal geography, providing substantial stability to areas of overlapping and contested maritime claims'.<sup>24</sup> Relatedly, Purcell contends that a principle of legal stability in the law of the sea should be recognised under the category of 'relevant rules of international law applicable in the relations between the parties',<sup>25</sup> and therefore relevant for the purposes of treaty interpretation. Purcell argues that for any particular maritime boundary treaty, the 'principle of stability supports the conclusion that the ambulatory character of an international boundary should be clearly established by reference to the intentions evidenced by the particular boundary treaty, decision, or award',<sup>26</sup> rather than presumed.

Common to these discussions is the recognition that a boundary in the ocean has a purpose analogous to a land boundary, in that both serve the goals of stability in the relations between neighbouring States. This is the case not only for borders delineating areas of sovereignty (such as territory or the territorial sea), but also for borders delineating areas of sovereign rights (such as an exclusive economic zone).<sup>27</sup>

However, because the particular legal rules securing such stability arise in a bilateral context (such as a maritime delimitation dispute or treaty) it is difficult to translate them directly to the unilateral context, which is the focus of this article. Maritime boundary delimitation between States, whether through treaty or adjudication, is influenced by equitable principles.<sup>28</sup> While coastal

<sup>22</sup> *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v Honduras)* (Judgment) [2007] ICJ Rep 659, [232].

<sup>23</sup> Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 (VCLT).

<sup>24</sup> J Lisztwan, 'Stability of Maritime Boundary Agreements' 37 *YaleJIntL* 153, 192. Though note that some writers come to a different conclusion: eg S Árnadóttir, 'Termination of Maritime Boundaries Due to a Fundamental Change of Circumstances' 32 *Utrecht Journal of International and European Law* 94.

<sup>25</sup> K Purcell, *Geographical Change and the Law of the Sea* (Oxford University Press 2019) 151.

<sup>27</sup> See *Bangladesh v India* [218]: 'In the view of the Tribunal, the sovereign rights of coastal States, and therefore the maritime boundaries between them, must be determined with precision to allow for development and investment.'

<sup>28</sup> Note that there are slight variations in how this is reflected in relation to delimitation of the different maritime zones: art 15 LOSC regarding the delimitation of the territorial sea refers to the 'equidistance line' and special circumstances, and the comparable provisions regarding delimitation of the exclusive economic zone (art 74) and continental shelf (art 83) refer to 'an equitable solution'.

geography remains important, the legal relationship between the ‘relevant coast’<sup>29</sup> and the associated maritime zone in a maritime boundary delimitation can also be influenced by a range of non-geographical factors including the availability of hydrocarbon resources, fisheries activities, and potentially navigational and security interests.<sup>30</sup> Where the delimitation is undertaken by a court or tribunal, an additional factor relevant to stability is the binding nature of third party decisions on parties to the dispute.<sup>31</sup> In relation to *uti possidetis*, the application of the doctrine presupposes not only a newly-independent State, but pre-existing administrative borders which are capable of being transformed into international borders. And the stabilising effect of treaty law, or application of a principle of stability to the interpretation of a boundary treaty, is available only where the coastal States have concluded such a treaty. There may be an argument that unilateral maritime zones should be treated as analogous with delimited maritime boundaries, on the basis that unilateral maritime zones also have a necessarily ‘international aspect’,<sup>32</sup> and so should have the same degree of legal stability. However, such normative arguments cannot assist the inquiry of this article into the extent to which legal stability is available under existing international law relating to unilateral maritime zones. That inquiry intersects with scholarship considering the nature of baselines under existing international law, which is discussed below.

### *B. The Problematic Logic Underpinning the ‘Ambulatory’ Theory of Baselines*

Considering the close nexus between the land and the sea in the LOSC provisions on baselines, a rich scholarship has emerged assessing the possible legal implications for such baselines when there are changes to the coastline caused as a result of sea-level rise.<sup>33</sup> Do changes to the physical characteristics of the coastline entail changes to the corresponding baseline?

Scholarship on this question falls into three broad positions.<sup>34</sup> Some take a ‘fixed’ view of baselines, so that ‘once the normal baseline has been established and cartographically depicted on large scale charts, it remains in place until such time as it is redrafted, irrespective of whether or not the

<sup>29</sup> See discussion of ‘relevant coasts’ in *Maritime Delimitation in the Black Sea (Romania v Ukraine)* [2009] ICJ Rep 61 [77].

<sup>30</sup> See S Fietta and R Cleverly, *A Practitioner’s Guide to Maritime Boundary Delimitation* (1st edn, Oxford University Press 2016) 52ff.

<sup>31</sup> For example under Part XV UNCLOS. *Fisheries (United Kingdom v Norway)* [1951] ICJ Rep 116, [132] (*Fisheries*).

<sup>32</sup> Other coastal impacts in addition to sea-level rise may also arise as a result of climate change, for example an increase in coastal hazards such as erosion or flooding might be caused by more frequent and higher-intensity weather events: see H-O Pörtner et al, *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019) B.3.6.

<sup>34</sup> This section broadly draws from discussion in F Anggadi, ‘Establishment, Notification, and Maintenance: The Package of State Practice at the Heart of the Pacific Islands Forum Declaration on Preserving Maritime Zones’ (2022) 53 *Ocean Development & International Law* 19, 21.

actual low-water line has physically moved'.<sup>35</sup> Another view, a variation of the first, is that baselines may be only temporarily fixed, and that there is an obligation 'to update in the event of significant geographic change'.<sup>36</sup> While not couched in terms of stability, both these views clearly envisage a baseline remaining 'in place' or being temporarily 'fixed': here, legal stability may be achieved by establishing and charting the baseline, and such stability then continues to be available for the baseline notwithstanding changes to the low-water line along the coast.

But these views have not attracted broad support among scholars. The most widely-held view is the 'ambulatory theory' of baselines.<sup>37</sup> Under this view, 'the normal baseline is *constituted* by the low-water line along the coast',<sup>38</sup> and as a result, '[t]here is no doubt that changes in the shoreline, however and how quickly effected, result in changes in the baseline from which the territorial sea is measured'.<sup>39</sup> So as the shoreline 'moves landward and seaward with accretion and erosion, so does the baseline. As the baseline ambulates, so does each of the maritime zones measured from it.'<sup>40</sup>

The Baselines Committee of the International Law Association considered a range of expert views on the normal baseline and concluded that '[t]he preponderance of the scholarship in this area appears to support the view that charts are not determinative of the naturally ambulatory normal

<sup>35</sup> DC Kapoor and AJ Kerr, *A Guide to Maritime Boundary Delimitation* (Carswell 1986) 31. See also Carleton and Schofield: 'it is [...] the chart that is the legal document determining the position of the normal baseline and this remains the case even where the coastline has, in reality, changed. Thus, if the coastline has altered, but it has not been published, the legal baseline is still that on the published chart.' See also C Carleton and C Schofield, *Developments in the Technical Determination of Maritime Space: Charts, Datums, Baselines, Maritime Zones and Limits* (International Boundaries Research Unit, 2001) vol 3, 24–5, and Purcell (n 26).

<sup>36</sup> CG Lathrop (n 9) 77. Hayashi adds that the possibility of temporary 'fixing', due to an implied obligation to update if there is significant coastal change, could also extend to the outer limits of maritime zones: M Hayashi, 'Sea Level Rise and the Law of the Sea: How Can the Affected States Be Better Protected?' in C Schofield, S Lee and M-S Kwon (eds), *The Limits of Maritime Jurisdiction* (Brill Nijhoff, 2014) 607, 612.

<sup>37</sup> T Stephens, 'Warming Waters and Souring Seas: Climate Change and Ocean Acidification' in DR Rothwell et al (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 789. See also eg R Rayfuse, 'Sea Level Rise and Maritime Zones: Preserving the Maritime Entitlements of "Disappearing" States' in *Threatened Island Nations* (Cambridge University Press 2013); JL Jesus, 'Rocks, New-Born Islands, Sea Level Rise and Maritime Space' in *Verhandeln für den Frieden Negotiating for Peace Liber Amicorum Tono Eitel* (Springer 2003) 579; DD Caron, 'When Law Makes Climate Change Worse: Rethinking the Law of Baselines in Light of a Rising Sea Level' (1990) 17 *Ecology Law Quarterly* 621; Stoutenburg (n 6).

<sup>38</sup> AHA Soons, 'The Effects of a Rising Sea Level on Maritime Limits and Boundaries' (1990) 37 *NILR* 207, 210 (emphasis added).

<sup>39</sup> DP O'Connell, *The International Law of the Sea*, vol I (IA Shearer ed, Clarendon Press 1984) 682, 682. See also Alexander, who noted that non-natural changes to the low-water line could result in changes to the baseline: 'Normal baselines may change over time as the low-water line changes because of erosion, deposition or the emplacement of human-made structures on the shore', in LM Alexander, 'Baseline Delimitations and Maritime Boundaries' 23 *VaJIntL* 503, 535.

<sup>40</sup> MW Reed, *Shore and Sea Boundaries: The Development of International Maritime Boundary Principles through United States Practice* (U.S. Government Printing Office, 2000) vol 3, 185.



baseline'.<sup>41</sup> Those adhering to the 'ambulatory theory' of baselines point to two circumstances which, under that theory, provide for legal stability as a matter of exception. David Caron (who first articulated this argument, and whose work has been influential)<sup>42</sup> referred to the ability to temporarily maintain straight baselines under Article 7(2) of the LOSC where there are highly unstable deltaic coastal conditions causing the regression of the low-water line. Caron also noted the possibility that the outer limits of the continental shelf may have a degree of stability, since the LOSC provides that a coastal State may, after following the substantive and procedural requirements of Article 76, deposit information 'permanently describing the outer limits of its continental shelf'.<sup>43</sup> Since no similar provisions expressly address the regression of the low-water line other than those in Article 7(2), and no similar provisions expressly 'operate to freeze maritime boundaries'<sup>44</sup> other than potentially that of the continental shelf, Caron concluded that:

the outer boundary of the exclusive economic zone, the contiguous zone and the territorial sea are ambulatory in that they will move with the baselines from which they are measured.<sup>45</sup>

In this way, the conclusion that baselines and outer limits have an 'ambulatory character' is underpinned by a 'negative implication'<sup>46</sup> drawn from the language of Article 7(2) on deltaic baselines, and Article 76 on the continental shelf outer limit.

However, if we are interested in better understanding legal stability in connection with baselines, this logic is problematic for several reasons.<sup>47</sup> First, this argument assumes that the LOSC will signal its provision for legal stability through the use of words such as 'remain'<sup>48</sup> and 'permanent'<sup>49</sup> and 'final'<sup>50</sup>. But how does this account for the practice of States that is embedded within the meaning of other words, such as 'officially-recognised charts' in Article 5 on the normal baseline?<sup>51</sup> Second, the 'negative implication' makes much of one instance of legal silence in the LOSC (no

<sup>41</sup> International Law Association, Committee on Baselines under the International Law of the Sea, *Final Report* (2012) <<http://www.ila-hq.org/en/committees/index.cfm/cid/1028>> 22.

<sup>42</sup> See for example C Schofield, 'Departures from the Coast: Trends in the Application of Territorial Sea Baselines under the Law of the Sea Convention' (2012) 27 *The International Journal of Marine and Coastal Law* 723, 725; N Klein, 'Land and Sea: Resolving Contested Land and Disappearing Land Disputes under the UN Convention on the Law of the Sea' in C Giorgetti and N Klein (eds), *Resolving Conflicts in the Law* (Brill Nijhoff 2018); S Sefrioui, 'Adapting to sea level rise: a law of the sea perspective' in G Andreone (ed), *The Future of the Law of the Sea* (Springer, Cham 2017) 3; and J Lusthaus, 'Shifting Sands: Sea Level Rise, Maritime Boundaries and Inter-state Conflict' 30 *Politics* 113, 113.

<sup>43</sup> Art 76(9) LOSC.  
<sup>44</sup> Caron (n 37) 625. Note that Caron refers to 'maritime boundaries' to mean the outer limits of maritime zones.  
<sup>45</sup> *ibid* 625.  
<sup>46</sup> *ibid* 634.

<sup>47</sup> Purcell also offers a critique of Caron's reliance on the 'negative implication', arguing that it is based on a misreading of arts 7(2) and 76, leading to a problematic conclusion about those baselines and maritime zones provided for beyond those provisions: see Purcell (n 26) 45.

<sup>48</sup> Art 7(2) LOSC.

<sup>49</sup> Art 76(9) LOSC.

<sup>50</sup> Art 76(8) LOSC.

<sup>51</sup> See discussion below in Section IV.B on State practice relating to art 5 on the normal baseline.

general express provision for baseline stability), but does not account for the potential relevance of another legal silence (no positive duty to review or update maritime zones information). Third, considering that the LOSC jurisdictional framework permits coastal States to use a range of baseline types, and entitles coastal States to a number of maritime zones, could there be a potentially absurd result if only one type of straight baseline and one type of maritime zone outer limit has some degree of legal stability, but not any others? The effect of assuming that legal stability is exceptional to one type of baseline and one type of outer limit obscures the possibility that such stability may be more broadly available for baselines and maritime zones than the ‘ambulatory’ theory of baselines suggests.

This article now turns to exploring that possibility.

### III. WHAT DO STATES SAY ABOUT LEGAL STABILITY IN CONNECTION WITH MARITIME ZONES?

Some expert bodies have begun to show signs of an emerging recognition of the importance of the concept of ‘legal stability’ in connection with maritime zones. For example, the International Law Association endorsed the view of its Sea-Level Rise Committee that ‘on the grounds of legal certainty and stability, provided that the baselines and the outer limits of maritime zones of a coastal or an archipelagic State have been properly determined in accordance with the 1982 Law of the Sea Convention, these baselines and limits should not be required to be recalculated should sea level change affect the geographical reality of the coastline’.<sup>52</sup> Aurescu and Oral (Co-Chairs of the ILC Study Group on Sea-Level Rise) made the preliminary observation that ‘the ambulatory theory/method regarding baselines and the limits of maritime zones measured from them does not respond to the concerns expressed by Member States that are prompted by the effects of sea-level rise, especially as regards the rights of the coastal State in the various maritime zones, and the consequent need to preserve legal stability, security, certainty and predictability’.<sup>53</sup> But what does it mean to refer to ‘legal stability’ in connection with maritime zones? Though the term refers to the legal artefacts of maritime zones (and their constituent parts, such as the baseline and outer limit) it is not itself a term of art, nor drawn from legal instruments or jurisprudence: its origins lie in the discourse of States.

To begin to give substance to the meaning of ‘legal stability’ in this context, this Part examines selected State discourse during two historical periods. The first period (1973–1982, Section A) relates to the Third United Nations

<sup>52</sup> International Law Association, Resolution 5/2018 [5].

<sup>53</sup> B Aurescu and N Oral, *First issues paper by Bogdan Aurescu and Nilüfer Oral, Co-Chairs of the Study Group on Sea-level Rise in Relation to International Law* (2020) UN Doc A/CN.4/740 [104(d)].

Conference on the Law of the Sea (UNCLOS III), which culminated in the adoption of the LOSC: this period gives insights into the goals of the drafters in designing the architecture of the LOSC, and in particular the zonal allocation of rights and responsibilities. The second period (2017–2021, Section B) covers the beginning of States' formal discussion of sea-level rise and maritime zones in the international community (2017), up to the 76th session of the UN General Assembly (UNGA76, in 2021), at which States debated the ILC's work on the topic for the first time. States have affirmed their concern for the value of legal stability over both periods, though there is evidence that in response to the particular challenge of sea-level rise, States' views suggest both increasing support for the concept, as well as a more substantial understanding of what such legal stability entails.

#### *A. 1973–1982: Bringing Stability to Chaos*

Delegates representing a range of geographic regions and maritime interests expressed the hope and intention that the work of UNCLOS III would promote stability in the oceans. The first president of UNCLOS III encapsulated this sentiment when stating that

a convention or conventions ensuring a generally acceptable, stable and durable law of the sea would be not only a monument to the patience, perseverance, diplomatic skill and spirit of fraternal cooperation of the participants and the States they represented, but would also honour the highest ideals of the Charter and other international legal instruments which sought to express the aspirations and yearnings of all peoples of the world.<sup>54</sup>

Indeed, this need for stability had become pressing by the mid-twentieth century, a period described by the third president of UNCLOS III as one in which 'the old legal order had collapsed and the world was faced with a plethora of conflicting claims for jurisdiction and resources by coastal States. Instead of order, we had chaos.'<sup>55</sup> At this time, the question of the breadth of the territorial sea remained unresolved (not having been agreed in discussions at the Hague Conference in the 1930s, the 1958 *Convention on the Territorial Sea and Contiguous Zone*, nor at UNCLOS II in 1960). Meanwhile many coastal States had asserted some form of maritime jurisdiction exceeding the traditionally-recognised breadth of the territorial sea of 3 nm: these included the United States' 1946 Truman Proclamation claiming jurisdiction over its adjacent continental shelf, the 1952 Declaration of Santiago by Chile, Peru and Ecuador to sovereignty and jurisdiction over its ocean not less than 200

<sup>54</sup> Amerasinghe (Sri Lanka), 1st meeting of the General Committee, 20 June 1974, extracted in *Official Records of the Third United Nations Conference on the Law of the Sea, Volume I (Summary Records of Plenary Meetings of the First and Second Sessions, and of Meetings of the General Committee, Second Session)* UN Doc A/CONF./BUR/SR.1, 4.

<sup>55</sup> T Koh, *Building a New Legal Order for the Oceans* (NUS Press 2020) 4.

nm from its coast,<sup>56</sup> and claims by Indonesia and the Philippines to enclose the interconnecting waters of their outermost islands as internal waters.<sup>57</sup>

Against this backdrop, States expressed the concern during the negotiations at UNCLOS III that an unfettered ability to determine national maritime zones would 'create permanent instability and a proliferation of legal conflicts among States'.<sup>58</sup> Particularly salient noting the significant participation of newly-independent States in UNCLOS III, the path towards avoiding such instability would require balancing the full range of interests:

resolved in a spirit of accommodation, so that the necessary consensus could be reached. But consensus did not mean the majority bowing to an intransigent minority, or the bullying of a minority by an unthinking majority. All States would benefit if, by yielding a little, they could attain stable legal rights and benefits.<sup>59</sup>

At the conclusion of UNCLOS III, Indonesia remarked that this approach to negotiations also contributed to the political legitimacy and durability of the resulting treaty, because it was

the result of long years of negotiation and represented compromises that balanced all the conflicting interests of different States. As such it offered the best guarantee for the stability and orderly development of the world's oceans and there was no viable alternative for promoting law and order in ocean affairs.<sup>60</sup>

Stevenson and Oxman write that 'the goal was a stable accommodation of coastal and maritime interests both within and between coastal States that would be respected by each state's *class politique* as a continuing restraint

<sup>56</sup> Discussed in O'Connell (n 39) 553.

<sup>57</sup> See CR Symmons, 'Article 47 – Archipelagic Baselines' in A Proelss (ed), *United Nations Convention on the Law of the Sea: A Commentary* (1st edn, CH Beck 2017) 356.

<sup>58</sup> Godoy (Paraguay), 6th meeting of the Second Committee, 17 July 1974, extracted from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume II (Summary Records of Meetings of the First, Second and Third Committees, Second Session) A/CONF.62/C.2/SR.6*, 149. Nicaragua also made a similar intervention: 'The contemporary world needed a stable and certain law of the sea. Unilateral declarations, although made by peoples in exercise of their sovereignty, their right of self-determination and in justifiable defence of their interests and needs, were not the best means of establishing that law': Montiel Arguello (Nicaragua), 29th plenary meeting, 4 July 1974, *Official Records of UNCLOS III (vol I)* (n 54), 186.

<sup>59</sup> Engo (Cameroun), 41st meeting of the First Committee, 14 April 1978, extracted from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume IX (Summary Records, Plenary, General Committee, First, Second and Third Committees, as well as Documents of the Conference, Seventh and Resumed Seventh Session) A/CONF.62/BUR/SR.44*, 53.

<sup>60</sup> Djalal (Indonesia), 165th plenary meeting, 1 April 1982, extracted from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume XVI (Summary Records, Plenary, First and Second Committees, as well as Documents of the Conference, Eleventh Session) A/CONF.62/SR.165*, 77. On the importance of the participation of developing and developed countries in reaching an agreed outcome, and relevance to the creation of a 'stable international regime for the oceans' see BH Oxman, 'The Rule of Law and the United Nations Convention on the Law of the Sea' (1996) 7 EJIL 353, 361.

upon its jurisdictional choices'.<sup>61</sup> In this way, the stabilising purpose underlying the zonal allocation of jurisdiction in the LOSC was not only set against the mischief of a 'plethora of conflicting claims for jurisdiction and resources', but also intended to uphold a new balance of interests in the ocean that reflected the geopolitics of the time. States identified political and practical implications of the new regime, such as 'the importance of navigation and overflight through straits for the global flow of trade and communications and for a stable and peaceful world order',<sup>62</sup> and how common rules to govern exploitation of natural resources may promote equity and avoid conflict.<sup>63</sup> Indeed, States viewed the new legal order of the oceans as vital 'for the promotion of the rule of law in international affairs, and hence the shaping of a peaceful world with a stable and equitable world order'.<sup>64</sup>

The resulting 'package deal'<sup>65</sup> of the LOSC was adopted in 1982 and presently has 168 Parties (including the European Union),<sup>66</sup> and its preamble sets out the aspirations of States to establish 'a new legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment'.<sup>67</sup> This period demonstrates the concern of States for legal stability in connection with the overall system of maritime zones, at risk in the 'chaos' of unfettered

<sup>61</sup> JR Stevenson and BH. Oxman, 'The Future of the United Nations Convention on the Law of the Sea' (1994) 88 AJIL 488, 492.

<sup>62</sup> Moore (USA), 12th meeting of the Second Committee, 22 July 1974, *Official Records of UNCLOS III (vol II)* (n 58) 128.

<sup>63</sup> See for example the intervention of Boaten (Ghana): 'There was urgent need for a convention to regulate the exploration and exploitation of the sea-bed beyond the limits of national jurisdiction, which had been proclaimed the common heritage of mankind, before a state of anarchy was reached in the area, with consequent potential danger to world peace and stability', 12th meeting of the First Committee, 7 August 1974, *Official Records of UNCLOS III (vol II)* (n 58) 60; and Rashid (Bangladesh): 'Bangladesh attached great importance to the procedure of dispute settlement, since, as a developing country, it would be depending more and more on the extensive exploitation and exploration of sea resources, which could be carried out only when the interests of countries like Bangladesh were secure and an atmosphere of peace reigned over the ocean' 62nd plenary meeting, 7 April 1976, extracted from from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume V (Summary Records, Plenary, General Committee, First, Second and Third Committees, as well as Documents of the Conference, Fourth Session)* A/CONF.62/SR.62, 41.

<sup>64</sup> MacEachen (Canada), 65th plenary meeting, 12 April 1976, *Official Records of UNCLOS III (vol V)* (n 63) 51. See also the intervention of Knoke (Germany): 'They hoped that the Conference would justify the hopes for the establishment of a universal and equitable law of the sea, which would greatly enhance peace and stability in the world': 1st plenary meeting, 3 December 1973, *Official Records of UNCLOS III (vol I)* (n 54) 4.

<sup>65</sup> For a useful discussion of this oft-used term to describe the result of UNCLOS III, see X Liao, 'The LOSC as a Package Deal and Its Implications for Determination of Customary International Law' (2020) 35 *The International Journal of Marine and Coastal Law* 704.

<sup>66</sup> Status as at March 2020, indicated in the United Nations Treaty Collection ([https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg\\_no=XXI-6&article=21&Temp=mtdsg3&clang=\\_en](https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&article=21&Temp=mtdsg3&clang=_en)).

<sup>67</sup> Preamble, LOSC.

and conflicting maritime claims, and brought to order in the agreement of the LOSC framework.

*B. 2017–2021: The Affirmation of Legal Stability and Its Substantive Development*

This section now considers the period almost 40 years after the conclusion of the LOSC, at which time States' concerns for legal stability may be seen again in the context of discussions on sea-level rise. Key milestones in this period commence with the beginning of States' engagement with the topic in 2017 (formally calling for the International Law Commission (ILC) to consider sea-level rise) up to UNGA76 at the end of 2021. The inclusion of the topic of sea-level rise in international law on the ILC's programme of work is significant not only because of the ILC's scholarly contribution to these substantive questions, but also because it has prompted the engagement of States. States have submitted information to the ILC (individually or also as part of a regional group, such as the Pacific Islands Forum or the Association of Small Island States), and have also participated in discussions on the topic in the UN General Assembly<sup>68</sup> and the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea, which in July 2021 dealt with 'Sea-level rise and its impacts'.<sup>69</sup> An analysis of the written and oral statements made by States in these settings reveals a range of views regarding legal stability in connection with sea-level rise and maritime zones. Some views clearly support sentiments expressed during the LOSC's development, and other views show signs of substantive development.

During this period, States continued to articulate a concern for legal stability in connection with the overall framework of the LOSC and the 'legal order' buttressed by it. States also affirmed the importance of 'a common set of rules' set out in the LOSC, applicable to all, and that the question of sea-level rise should be approached with a concomitant concern to 'safeguard and strengthen the Convention system'.<sup>70</sup> While different views were expressed on the need for new laws to address this topic, States nevertheless identified features of the existing law that continued to be relevant: the balance of rights and obligations should be preserved,<sup>71</sup> noting not only the rights of coastal States to maritime zones, but also the rights of third States.<sup>72</sup> States should continue 'to maximize the stability and clarity that the Convention

<sup>68</sup> Discussions in the Sixth Committee of the UN General Assembly in its 73rd session (2018), 74th session (2019), 75th session (2020) and 76th session (2021). <sup>69</sup> <[https://www.un.org/depts/los/consultative\\_process/consultative\\_process.htm](https://www.un.org/depts/los/consultative_process/consultative_process.htm)>.

<sup>70</sup> Statement of Norway, UNGA Sixth Committee (74th Session) (31 October 2019) UN Doc A/C.6/74/SR.27.

<sup>71</sup> Statement of New Zealand, UNGA Sixth Committee (74th Session) (31 October 2019) UN Doc A/C.6/74/SR.26.

<sup>72</sup> Statement of the USA, UNGA Sixth Committee (74th Session) (5 November 2019) UN Doc A/C.6/74/SR.30.

brought to oceans governance and maritime jurisdiction'.<sup>73</sup> Otherwise, '[j]urisdictional uncertainty could cause enforcement issues and create potential for conflict in the region'<sup>74</sup> and prompt disputes.<sup>75</sup> Any approach to this issue should affirm 'the centrality of the United Nations Convention on the Law of the Sea and strive to preserve its integrity and the stability provided by its rules'.<sup>76</sup> Caution should be exercised in relation to 'any interpretation that would undermine the delicate balance of rights and obligations set out in the United Nations Convention on the Law of the Sea or its universal and unified character. It was important to proceed on the basis of legal stability, security, certainty and predictability in international law.'<sup>77</sup> These themes clearly reinforce many of the original objectives of the LOSC to establish a stable zonal allocation of rights and responsibilities in ocean space, outlined above in Section A.

During this period, States have also begun to refer more directly and concretely to stability in connection with maritime zones. One indicator of this is an express engagement with the term 'legal stability': of the 66 delegations<sup>78</sup> which substantively addressed the topic of sea-level rise at UNGA76, 14<sup>79</sup> used the term 'legal stability' in connection with maritime zones, of which three expressly turned to the *meaning* of 'legal stability': Sierra Leone noted the ILC discussion<sup>80</sup> on the term's meaning 'with

<sup>73</sup> Statement of Australia, UNGA Sixth Committee (73rd Session) (24 October 2018) UN Doc A/C.6/73/SR.23.

<sup>74</sup> Statement of Papua New Guinea, UNGA Sixth Committee (75th Session) (5 November 2020) UN Doc A/C.6/75/SR.13.

<sup>75</sup> Statement of Tuvalu (on behalf of the Pacific Islands Forum), UNGA Sixth Committee (75th Session) *ibid.*

<sup>76</sup> Statement of Lebanon, UNGA Sixth Committee (76th Session) (1 November 2021) UN Doc A/C.6/76/SR.22 [133].

<sup>77</sup> Statement of the Philippines, UNGA Sixth Committee (76th Session) (2 November 2021) UN Doc A/C.6/76/SR.23 [19].

<sup>78</sup> Croatia, Samoa, European Union (as observer), Fiji (on behalf of the Pacific Islands Forum), Antigua and Barbuda (on behalf of the Association of Small Island States (AOSIS)), Iceland (on behalf of the Nordic countries), Singapore, Sierra Leone, Iran, France, Egypt, Belarus, El Salvador, Netherlands, South Africa, Turkey, Italy, China, USA, Israel, Liechtenstein, Portugal, Romania, Brazil, Cuba, Slovakia, Japan, Mexico, Chile, Hungary, Germany, Vietnam, Czechia, Slovenia, New Zealand, Sri Lanka, Estonia, Ireland, Maldives, United Kingdom, Micronesia, Malaysia, Thailand, Cote d'Ivoire, Cameroon, Argentina, Papua New Guinea, Austria, Republic of Korea, Australia, Poland, Latvia, Solomon Islands, Indonesia, Russian Federation, Algeria, Cyprus, Spain, Tonga, Greece, Lebanon, Tuvalu, India, Costa Rica, Philippines, Colombia, Holy See (as observer): UNGA Sixth Committee (76th Session) (26 October–2 November 2021). Delegations which simply mentioned the topic of sea-level rise, without engaging substantively, were not included in this list.

<sup>79</sup> Antigua and Barbuda (on behalf of AOSIS), Sierra Leone, Israel, Chile, Vietnam, Czechia, New Zealand, Estonia, Papua New Guinea, Australia, Spain, Tuvalu, Costa Rica, Philippines: UNGA Sixth Committee (76th Session), *ibid.*

<sup>80</sup> The Report of the ILC's 72nd session noted that 'the Study Group welcomed the suggestion that the meaning of "legal stability" in connection with the present topic needed further clarification, including by addressing specific questions to the Member States, [and] it was noted that the statements delivered in the Sixth Committee by the delegations of States affected by sea-level rise seemed to indicate that, by "legal stability", they meant the need to preserve the baselines and outer

interest',<sup>81</sup> and Chile<sup>82</sup> and Papua New Guinea<sup>83</sup> agreed that the term referred to 'the need to preserve the baselines and outer limits of maritime zones'.

Furthermore, States' comments have begun to give substance to this idea, in particular by illuminating different dimensions of their concern for legal stability in connection with maritime zones. Some States draw attention to a spatial dimension of their concern, in the sense of connecting the goal of stability with certain practical steps taken by States to define their baselines. For example, Belize (on behalf of the Association of Small Island States) outlines how '[m]any small island and low-lying States had taken political and legislative measures to preserve their baselines and the existing extent of their maritime zones by adopting domestic laws, concluding maritime boundary agreements and depositing charts or coordinates along with declarations'.<sup>84</sup> Micronesia gives an example of this position, explaining how it had in 2019 'deposited with the Secretary-General lists of geographical coordinates of points, accompanied by illustrative maps, for the maritime zones of the Federated States of Micronesia',<sup>85</sup> accompanied by its observations that 'it understood that it was not obliged to keep under review the maritime zones reflected in the deposit; and that it intended to maintain those zones in line with that understanding, notwithstanding climate change-induced sea-level rise'.<sup>86</sup> The Solomon Islands explained it had also taken this approach, describing that '[i]n accordance with international law and regional practice, the Solomon Islands had deposited geographic coordinates for nearly all its maritime zones with the Secretary-General. Those zones were fixed and should not be altered, despite sea-level rise.'<sup>87</sup> Similarly, the Maldives expressed the view that 'once a State deposited the appropriate charts and/or geographic coordinates with the Secretary-General, those

limits of maritime zones': International Law Commission, 'Report of the International Law Commission' (26 April–4 June and 5 July–6 August 2021) UN Doc A/76/10 [266].

<sup>81</sup> Statement of Sierra Leone, UNGA Sixth Committee (76th Session) (28 October 2021) UN Doc A/C.6/76/SR.19 [28].

<sup>82</sup> Statement of Chile, UNGA Sixth Committee (76th Session) (29 October 2021) UN Doc A/C.6/76/SR.21 [55].

<sup>83</sup> Statement of Papua New Guinea, UNGA Sixth Committee (76th Session) (n 76) [35].

<sup>84</sup> Statement of Belize (on behalf AOSIS), UNGA Sixth Committee (75th Session) (n 74).

<sup>85</sup> Statement of the Federated States of Micronesia, UNGA Sixth Committee (75th Session) (n 74) [54].

<sup>86</sup> Statement of the Federated States of Micronesia, *ibid.* See Observations made on 24 December 2019, and revised on 15 January 2020, by the Federated States of Micronesia in connection with the official deposit of lists of geographical coordinates of points, accompanied by illustrative maps, for maritime baselines and maritime zones in accordance with the 1982 United Nations Convention on the Law of the Sea <<https://www.un.org/depts/los/LEGISLATIONANDTREATIES/STATEFILES/FSM.htm>>. Cook Islands has also made similar observations: see Observations made on 12 August 2021 by the Cook Islands in connection with the official deposit of lists of geographical coordinates of points, accompanied by illustrative maps, for maritime baselines and maritime zones in accordance with the 1982 United Nations Convention on the Law of the Sea <<https://www.un.org/depts/los/LEGISLATIONANDTREATIES/STATEFILES/COK.htm>>.

<sup>87</sup> Statement of the Solomon Islands, *Summary Record of the 13<sup>th</sup> Meeting* (n 74) [74].



entitlements were fixed and would not be altered by any subsequent physical changes to the State's geography as a result of sea-level rise'.<sup>88</sup>

In these comments, States draw attention to the importance of particular domestic actions to implement their baselines and maritime zones in connection with the goal of stability: namely, the use of charts and/or geographic coordinates to define the relevant lines and areas in order to 'fix' their location on the surface of the earth. This is key to understanding the spatial dimension of legal stability: defining a baseline or outer limits by means of a chart and/or coordinates is part of what makes those lines *capable* of remaining in the same location, what gives the legal artefacts of the baseline and the maritime zone the capacity to occupy the same location and space on the surface of the earth. As Part IV will demonstrate, this practice is widely found in the domestic legislation of many States.

These statements also show that States see this spatial dimension interacting with a temporal one, in the sense that once the maritime zones information has been established by charts and/or coordinates, those States consider that baseline or maritime zones may remain in place over time. In support of this view, Belize, Micronesia, the Maldives and the Solomon Islands (and others) agree with Aurescu and Oral's preliminary observation that the LOSC does not contain any express obligation to update maritime zones information once established and published.<sup>89</sup> Fiji,<sup>90</sup> on behalf of the PIF, drew attention to the PIF Declaration, which relevantly states that 'the Convention imposes no affirmative obligation to keep baselines and outer limits of maritime zones under review nor to update charts or lists of geographical coordinates once deposited'.<sup>91</sup> In very similar terms, Antigua and Barbuda pointed out that the leaders of the members of the Alliance of Small Island States had also in 2021 affirmed 'that there is no obligation under the United Nations Convention on the Law of the Sea to keep baselines and outer limits of maritime zones under review nor to update charts or lists of geographical coordinates once deposited with the Secretary-General of the United Nations'.<sup>92</sup> The emerging discussion on maintaining baselines and maritime zones once established and publicised, continuing in their effect over time, draws attention to a temporal dimension of the notion of legal stability.

A handful of States also point out implications for stability of legal status under the LOSC: this issue arises because certain questions of legal status also have a close nexus to the land. For example, an island is 'a naturally

<sup>88</sup> Statement of the Maldives, UNGA Sixth Committee (75th Session) (n 74) [57]; see also Statements of Australia, Tonga and Micronesia at the 21st Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (2021) (noting these are all PIF members) <[https://www.un.org/depts/los/consultative\\_process/consultative\\_process.htm](https://www.un.org/depts/los/consultative_process/consultative_process.htm)>.

<sup>89</sup> Aurescu and Oral (n 53) [104(e)].

<sup>90</sup> Statement of Fiji, UNGA Sixth Committee (76th Session) (28 October 2021) UN Doc A/C.6/76/SR.19 [75].

<sup>91</sup> PIF Declaration (n 1).  
<sup>92</sup> Statement of Antigua and Barbuda (on behalf of the Alliance of Small Island States), UNGA Sixth Committee (76th Session) *Summary Record of the 19<sup>th</sup> Meeting* (n 90) [78].

formed area of land, surrounded by water, which is above water at high tide';<sup>93</sup> and only States which are constituted by archipelagos—meaning 'a group of islands, including parts of islands, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographical, economic and political entity, or which historically have been regarded as such'—may have status as an 'archipelagic State'.<sup>94</sup> Questions of status are key for maritime zones since not all maritime zones are available for all types of legal status: under Article 121 of the LOSC, an 'island' is entitled to the full suite of maritime zones, while '[r]ocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf'.<sup>95</sup> Similarly, 'archipelagic waters'<sup>96</sup> are available only to archipelagic States. Considering the possibility that sea-level rise might impact the geographic features relevant to these kinds of legal status, Antigua and Barbuda took the view that 'sea-level rise cannot lead to the requalification of islands as rocks'.<sup>97</sup> In a similar vein, Papua New Guinea expressed the concern that 'potential loss, owing to sea-level rise, of small islands and other features that served as basepoints could affect existing maritime zone entitlements and could compromise the ability of an archipelagic State to maintain that status',<sup>98</sup> noting also the relationship between maritime entitlement with statehood '[a]s only States could generate maritime zones, it was essential for island States to maintain statehood in order to preserve their maritime zones'.<sup>99</sup>

Seen in this way, the views expressed by States in these discussions give meaning to the concept of 'legal stability' in connection with maritime zones by highlighting its different dimensions relating to space, time and status. A brief note of caution is required here, since this analysis of States' representations takes into account the views of only those States which have publicly participated in the settings examined: for example, out of 168 LOSC Parties<sup>100</sup> (noting also there are 14 non-Parties which are coastal States),<sup>101</sup> 66

<sup>93</sup> Art 121(1) LOSC.

<sup>94</sup> Art 46 LOSC.

<sup>95</sup> Art 121(3) LOSC. The differing entitlements of different features within the 'regime of islands' was considered by the Arbitral Tribunal in *South China Sea Arbitration (Philippines v China)* (Award) PCA Case No. 2013-19 (LOSC Arbitral Tribunal, 2016), where much depended on the Tribunal's assessment of whether a feature was above or below high tide in its natural state in order to assess whether the feature should be considered a 'fully-titled island' or a 'rock' within the meaning of art 121.

<sup>96</sup> Art 49 LOSC.

<sup>97</sup> Antigua and Barbuda, 'Antigua and Barbuda's submission on the effects of sea level rise on the law of the sea', Submission of Antigua and Barbuda to the International Law Commission, 10. (<[https://legal.un.org/ilc/sessions/72/pdfs/english/slr\\_antigua\\_barbuda.pdf](https://legal.un.org/ilc/sessions/72/pdfs/english/slr_antigua_barbuda.pdf)>) ('Antigua and Barbuda submission').

<sup>98</sup> Statement of Papua New Guinea, UNGA Sixth Committee (74th Session) (5 November 2019), UN Doc A/C.6/74/SR.30.

<sup>99</sup> Statement of Papua New Guinea, UNGA Sixth Committee (73rd Session) (n 73). See also comments of Japan, Romania and Lebanon who raised questions of statehood more generally in connection with sea-level rise (n 98).

<sup>100</sup> United Nations Treaty Collection (n 66).

<sup>101</sup> Landlocked States excluded for the purposes of this study are those indicated as such by the UN Division of Ocean Affairs and Law of the Sea: 'Status of the United Nations Convention on the

delegations<sup>102</sup> made oral statements at UNGA76 and 13 States made submissions to the ILC.<sup>103</sup> Further, there is some variation in State practice revealed in States' interventions: for example, while some States emphasise the absence of a duty to update, other States point to their practice of updating charts (for example, the United States and the Netherlands).<sup>104</sup> With this caution in mind, this analysis of States' views nevertheless demonstrates that legal stability has retained its relevance from the conclusion of the LOSC up to now.

Across both time periods examined, States have shown that their concern for the stability for the LOSC zonal framework is similar to the role stability plays in the context of land boundaries: at this level, stability may be seen as an end-state secured by legal means (the LOSC framework), and pertains to stable relations between States achieved by means of the LOSC system a whole, including maritime zones. States' interventions in the latter period also show some substantive development of the concept as it relates to baselines and maritime zones in particular: States have begun to translate the goal of stability into this context (referring to the *preservation* of baselines and maritime zones), and to identify different dimensions of stability in relation to space, time and status. In this more concrete sense, legal stability entails the preservation of spatially-defined rights.

And as the following Part will show (and some States, such as Belize, foreshadowed), what States do when implementing their baselines is closely connected to maximising such legal stability.

#### IV. WHAT DO STATES DO WHEN THEY IMPLEMENT THEIR BASELINES (AND DO SOME METHODS ACHIEVE MORE OR LESS STABILITY)?

This Part offers evidence that States also pursue legal stability in the way they implement baseline provisions of the LOSC in their domestic frameworks. Taking the normal baseline as a focus, the study shows that States' methods of implementation fall into four broad groupings. As is explained below, this reveals a more diverse implementation practice than previous studies have

Law of the Sea, the Agreement relating to the Implementation of Part XI of the Convention and the Agreement for the Implementation of the Provisions of the Convention relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, as at 31 July 2019) <[https://www.un.org/Depts/los/reference\\_files/UNCLOS%20Status%20table\\_ENG.pdf](https://www.un.org/Depts/los/reference_files/UNCLOS%20Status%20table_ENG.pdf)>.

<sup>102</sup> See delegations listed at (n 78), noting that these reflect the views of more than 66 States, since some statements were on behalf of regional groupings eg Nordic Group, AOSIS.

<sup>103</sup> As at March 2020, the ILC has received comments from 13 States, in addition to those from the Pacific Islands Forum and five other organisations: see <[https://legal.un.org/ilc/guide/8\\_9.shtml](https://legal.un.org/ilc/guide/8_9.shtml)>.

<sup>104</sup> US Submission (n 7) 2, and Kingdom of the Netherlands, Submission to the International Law Commission, 27 December 2019, 2 <[https://legal.un.org/ilc/sessions/72/pdfs/english/slr\\_netherlands.pdf](https://legal.un.org/ilc/sessions/72/pdfs/english/slr_netherlands.pdf)> ('Netherlands Submission') 3. Note, however, that these submissions do not make clear whether such updates are done under any sense of duty to update the charts, or for some other reason.

shown. Noting especially the prevalence of the use of coordinates, this also prompts an inquiry into the significance of practice not expressly envisaged by the language of Article 5 on the normal baseline, and a consideration of whether some implementation methods are capable of offering a greater degree of spatial stability than others.

### *A. Rationale and Method for a Case Study on the Normal Baseline*

This article presents a case study focussed on the normal baseline because it is the dominant type of baseline:<sup>105</sup> Article 5 of the LOSC defines it as ‘the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State’.<sup>106</sup>

The case study has sought to be as comprehensive as possible in examining the legislation of all coastal States. Out of 193 UN Member States,<sup>107</sup> 150 are coastal States (comprising 136 Parties to the LOSC and 14 non-Parties). In addition to these and for consistency with the approach taken by the UN Division of Ocean and Law of the Sea (UN DOALOS), this study also included the State of Palestine,<sup>108</sup> Niue and the Cook Islands,<sup>109</sup> bringing the overall sample size to 153 coastal States.

The study took a broad approach in characterising the relevant ‘legislation’ for the purposes of the survey,<sup>110</sup> including both primary and secondary legislation, as well as other instruments within the relevant national framework (for example, an Order, Decree or Proclamation).

The study examined the legislation of each coastal State to answer the following questions:

- Does the coastal State use the normal baseline?
- How does the legislation define the normal baseline?
  - Does the legislation define the normal baseline by reference to the terms/concepts ‘low-water line’ and ‘charts’ (reflective of LOSC Art 5)?
  - Does the legislation define the normal baseline by reference to other concepts (including those not expressly reflective of LOSC Art 5), such as coordinates?

<sup>105</sup> Schofield (n 42) 724. <sup>106</sup> Art 5 LOSC. <sup>107</sup> United Nations, ‘Member States’ <<https://www.un.org/en/about-us/member-states>>.

<sup>108</sup> Considered a Non-Member Observer State to the UN: <<https://www.un.org/en/about-us/non-member-states>>.

<sup>109</sup> Niue and the Cook Islands are independent self-governing countries in free association with New Zealand <<https://www.mfat.govt.nz/en/countries-and-regions/australia-and-pacific/cook-islands/new-zealand-high-commission-to-the-cook-islands/about-cook-islands/>>.

<sup>110</sup> Legislation was sourced from publicly-accessible repositories such as UN DOALOS, FAOLEX (<<http://www.fao.org/faolex/country-profiles/en/>>), the Pacific Islands Legal Information Institute (<<http://www.pacii.org/>>) or a coastal State’s own official legislation websites. The information is current as at 30 June 2022.

The case study builds upon two other studies collecting information on the normal baseline. The first was conducted by the ILA Baselines Committee, which undertook to ‘identify, categorize, and provide representative examples of a robust sample of relevant state practice through a survey of the practice of Committee members’ home States, among other States’. One hundred and twenty-four coastal States are referred to in the Report’s footnotes (including both Parties and non-Parties to the LOSC).<sup>111</sup> However, the Committee was focussed on the use or non-use of charts in legislation,<sup>112</sup> and did not discuss the prevalence or significance of other methods. The second study is that presently occurring in the ILC, led by the Study Group on Sea-Level Rise. However, both the ILC as a whole<sup>113</sup> and Aurescu and Oral<sup>114</sup> have remarked that further evidence of State practice is needed, and in that context, the ILC has not yet made any conclusions on global legislative practice.

The findings of this study aim to contribute to this exercise, offering a comprehensive examination of coastal States’ legislation on the normal baseline, proposing a typology of definitions that includes all approaches observed in such legislation, and leaving scope for an inquiry about legal stability.

## *B. Findings on the Normal Baseline*

### *1. Summary of overall findings*

Out of 153 coastal States surveyed, 108 (71 per cent) coastal States use the normal baseline.<sup>115</sup> Noting that many coastal States use a combination of methods in the context of their overall baseline system (either implementing the normal baseline in different ways for different segments of the coast; and/or using a combination of normal, straight or archipelagic baselines), the survey identified 117 uses of normal baseline definition.

The study classified those 117 definitions<sup>116</sup> of the normal baseline into four types of definition, where the national legislation specifies that the normal baseline is:

<sup>111</sup> International Law Association (Committee on Baselines under the International Law of the Sea), ‘Baselines under the International Law of the Sea’ 16 (see legislation listed in fns 100ff).

<sup>112</sup> The Report identified four categories relating to use and non-use of charts in definitions on the normal baseline: ‘(1) the normal baseline is described with no reference to a charted line; (2) the normal baseline is described with an explicit reference to a charted line; (3) the normal baseline is described with an implied reference to a charted line; and (4) the State does not have a normal baseline’. *ibid.*, 16.

<sup>113</sup> Report of the International Law Commission (n 80) [268].

<sup>114</sup> Aurescu and Oral (n 53) [104(i)].

<sup>115</sup> The legislation of Bahrain, Brunei, Jordan, Montenegro and Singapore did not disclose whether the normal baseline was used so their legislation has not been classified in the study. For the remaining coastal States, the study confirmed that only other baseline types were used (eg a completely archipelagic baseline system).

<sup>116</sup> Note this number is higher than the 108 coastal States, because a coastal State can use more than one definition type. For example, Australia uses a Type 1 definition for most of its mainland coast, and Type 4 for its external territories: so this is one coastal State that is included as using two types of definition.

- ‘the low-water line (along the coast)’ (Type 1)
- located by reference to coordinates (Type 2)
- ‘the low-water line as marked on charts’ (Type 3)
- ‘determined in accordance with international law’ (Type 4).<sup>117</sup>

The first of these—legislation which specifies that the normal baseline *is* the low-water line along the coast—is the most commonly used method, comprising approximately 41 per cent of methods observed. The next most prevalent method is legislation which specifies the location of the normal baseline by reference to coordinates (approximately 30 per cent), followed closely by legislation which specifies that the normal baseline is the low-water line as marked on charts (approximately 25 per cent). A handful of coastal States (approximately 4 per cent) specify that the normal baseline is determined in accordance with international law.

The following section discusses each of these methods in decreasing order of prevalence, offering examples to illustrate each type of definition.

## 2. *Type 1: Normal baseline is the low-water line (along the coast)*

The survey identifies 48 occurrences in which a coastal State defines the normal baseline as the low-water line along its coast; of these, 43 are in the legislation of coastal States Parties to the LOSC,<sup>118</sup> and five in that of non-Parties.<sup>119</sup> The survey classified a definition as Type 1 if it defines the normal baseline only by reference to the low-water line along the coast, and not also by reference to other concepts such as charts or coordinates.<sup>120</sup>

A central feature of this type of definition is that the legislation identifies the normal baseline with the low-water line along the coast (whether or not the coast is expressly referred to). For example, the legislation of Honduras provides that the ‘normal baseline for measuring the breadth of the Honduran territorial sea and other maritime areas is the low-water line along the coast’;<sup>121</sup> similarly, the legislation of Guinea states that ‘baselines are comprised of the low-water *mark*

<sup>117</sup> For the avoidance of doubt, a Type 4 definition is one whose express terms define the normal baseline by reference to no other concept or method than ‘determined in accordance with international law’, or similar. For the purposes of this typology of definition types, it does not mean that Types 1–3 are inconsistent with international law, only that Types 1–3 do not contain express references to international law in the definition of the baseline.

<sup>118</sup> Australia, Barbados, Belize, Bulgaria, Cameroon, Canada, Cote d’Ivoire, Djibouti, Equatorial Guinea, Gambia, Georgia, Germany, Greece, Grenada, Guatemala, Guinea, Haiti, Honduras, Ireland, Kenya, Kuwait, Lebanon, Madagascar, Mauritania, Monaco, Namibia, New Zealand, Nicaragua, Nigeria, Poland, Romania, Senegal, Slovenia, Somalia, South Africa, Spain, Sri Lanka, Saint Kitts and Nevis, Saint Lucia, Sweden, Tonga, Tunisia, Ukraine.

<sup>119</sup> Colombia, Eritrea, Iran, Israel, Syria.

<sup>120</sup> The study made this assessment on the face of the terms of the legislation alone; it was beyond the scope of the study to examine other practical factors (eg whether despite having a Type 1 definition of the normal baseline in its legislation, a coastal State in practice only employed straight baselines).

<sup>121</sup> *Act on Honduran Maritime Areas 1999* (Honduras) art 3.

and the straight baseline',<sup>122</sup> and that of Slovenia states that 'the baseline shall be the hydrographic zero line running along the coast'.<sup>123</sup> The study includes such variations in this category where the apparent meaning is that the normal baseline is in principle defined as a line along the coast, taking from the coast its direction and shape.

In this way, a Type 1 definition locates the normal baseline by pointing to a specific physical feature on the surface of the earth, which is the low-water line along the coast.<sup>124</sup> And importantly (and in contrast to Type 2 and Type 3 definitions, discussed below), in this type of definition, the legislation refers to the coast as the sole reference point for locating the normal baseline.

### 3. Type 2: Normal baseline is located by reference to coordinates

The second most prevalent group is the Type 2 definition, where the normal baseline is located by reference to coordinates. The survey identified 35 instances of these: 34 are in the legislation of LOSC parties<sup>125</sup> and one in a non-Party.<sup>126</sup>

The study revealed two ways in which coordinates are used in the context of the normal baseline. First, some coastal States use coordinates to link segments of a mixed baseline system, that is, linking the normal baseline together with other baseline types. A good example is the legislation of France concerning the continental mainland and Corsica, which provides that 'the baselines from which the breadth of the territorial sea adjacent to the Mediterranean continental seaboard is measured, shall be defined by the following basepoints and lines'.<sup>127</sup>

<sup>122</sup> *Decree No. D/2015/122/PRG/SGG* (Guinea) art 7 (emphasis added). Noting that Guinea uses the term 'low-water mark', this study has used the terms 'low-water line' and 'low-water mark' interchangeably, consistently with the approach taken by UN DOALOS: see entry for 'low-water line/low-water mark' in the Glossary, United Nations Office for Ocean Affairs and the Law of the Sea, *Baselines: An Examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (United Nations 1989) 58. The drafting history also shows that the term 'low-water mark' was also used in earlier versions of what became art 5 of the LOSC, but no particular reason is apparent for the adoption of one version of the phrase over the other: see SN Nandan, MH Nordquist and S Rosenne, *United Nations Convention on the Law of the Sea 1982: A Commentary* (Brill 2013) para 5.4(b).

<sup>123</sup> *Maritime Code (PZ) 2001* (Slovenia) art 13.

<sup>124</sup> Or seaward low-water line of a fringing reef, as the case may be (eg *Maritime Zones Act 2009* (Tonga)).

<sup>125</sup> Angola, Argentina, Bangladesh, Benin, Brazil, Canada, Congo, Cook Islands, Costa Rica, Denmark, Democratic Republic of Congo, Estonia, Fiji, France, Iceland, India, Indonesia, Kiribati, Lithuania, Marshall Islands, Mauritius, Micronesia, Nauru, Niue, Palau, Samoa, Saudi Arabia, Seychelles, State of Palestine, Togo, Tuvalu, Ukraine, Uruguay, Vanuatu.

<sup>126</sup> Peru.

<sup>127</sup> *Decree No. 2015-958 of 31 July 2015 defining the baselines from which the breadth of the French territorial sea adjacent to the territory of mainland France and Corsica is measured* (France) art 3.

The Decree specifies that the baseline is to be located by reference to the listed geographic coordinates, as well as specifying the type of line that links those coordinates, which ‘may be a rhumb line (a straight baseline) or the low-water line’.<sup>128</sup>

A similar approach is found in the legislation of Canada,<sup>129</sup> Costa Rica,<sup>130</sup> Denmark,<sup>131</sup> Democratic Republic of the Congo,<sup>132</sup> Estonia,<sup>133</sup> Indonesia,<sup>134</sup> Iceland,<sup>135</sup> Lithuania,<sup>136</sup> Mauritius,<sup>137</sup> Ukraine,<sup>138</sup> Uruguay<sup>139</sup> and Peru.<sup>140</sup> Common to these examples is that coordinates are specified in the legislation with information that the points are to be linked by the low-water line along the coast, or similar wording (such as ‘the coastal line’<sup>141</sup> in Danish legislation).

A variation of this kind of approach can be seen in the legislation of a handful of coastal States which, instead of specifying that the normal baseline is the low-water line between particular coordinates, rather refer to a charted low-water line between specified points. The legislation of Brazil defines the normal baseline as ‘the low-water lines as indicated in the large-scale nautical charts published by the Directorate of Hydrography and Navigation of the Brazilian Navy’<sup>142</sup> and also stipulates that the ‘coordinates of the starting and final points, as well as those of the points defining the continental and insular SBL [straight baselines] that constitute the Baseline of Brazil are contained in the

<sup>128</sup> *ibid*, art 1.

<sup>129</sup> *Territorial Sea Geographical Coordinates Order C.R.C.*, c. 1550 (Canada).

<sup>130</sup> *Decree 18581-RE (concerning straight baselines in the Pacific Ocean, 14 October 1988)* (Costa Rica) art I(A).

<sup>131</sup> *Executive Order No. 680 of 18 July 2003, amending Executive Order No. 242 of 21 April 1999 concerning the Delimitation of Denmark’s Territorial Sea* (Denmark).

<sup>132</sup> *Law delimiting the maritime areas of the Democratic Republic of the Congo (2009)* (Democratic Republic of the Congo).

<sup>133</sup> *Law on the boundaries of the maritime tract, 10 March 1993* (Estonia).

<sup>134</sup> *The Government Regulation Of The Republic Of Indonesia Number 38 Of 2002 As Amended By The Government Regulation Of The Republic Of Indonesia Number 37 Of 2008* (Indonesia).

<sup>135</sup> *No. 41 of 1 June 1979 concerning the Territorial Sea, the Economic Zone and the Continental Shelf* (Iceland).

<sup>136</sup> *Annex 1 to Resolution 1597 of 6 December 2004 of the Government of the Republic of Lithuania, ‘Coordinates of Turning Points of the Limits of the Territorial Sea of the Republic of Lithuania’* (Lithuania).

<sup>137</sup> *Maritime Zones (Baselines and Delineating Lines) Regulations 2005* (Mauritius). In addition to specifying the normal baseline for the entirety of Agalega and Tromelin islands by coordinates, the Regulation also contains a ‘Description of Lines Connecting the Basepoints’ which makes clear that the overall baseline system of Mauritius comprises a variety of different lines connecting specified coordinates, including the low-water line along the coast (or reef edge).

<sup>138</sup> *List of geographical coordinates of points defining the baselines for measuring the breadth of the territorial sea, exclusive economic zone and the continental shelf in the Black Sea [1991]* (Ukraine).

<sup>139</sup> *Act 17.033 of 20 November 1998 establishing the boundaries of the territorial sea, the adjacent zone, the exclusive economic zone, and the continental shelf* (Uruguay).

<sup>140</sup> *Law No. 30223 – Adapts Law No. 28621, Law of baselines of the maritime domain of Peru, in accordance with the ruling of the International Court of Justice of 2014* (Peru).

<sup>141</sup> *Executive Order No. 680 of 18 July 2003, amending Executive Order No. 242 of 21 April concerning the Delimitation of Denmark’s Territorial Sea*, section 2.

<sup>142</sup> *Decree No 8.400 (4 February 2015)* (Brazil) art 2.



Annex'.<sup>143</sup> This approach is also taken in Angola,<sup>144</sup> Argentina,<sup>145</sup> Bangladesh,<sup>146</sup> and India.<sup>147</sup>

The second way in which coordinates are used to locate the normal baseline is where coordinates are used for the entirety of the normal baseline around a whole feature or coastal front. For example, Samoa declared that its 'Territorial Seas Baseline shall comprise of a series of successive geographical coordinates located on the outermost reef edge points around and classified as normal baseline'<sup>148</sup> and Palau lists coordinates for the normal baseline along fringing reefs at North Coast and East Coast.<sup>149</sup> The Cook Islands,<sup>150</sup> Republic of the Marshall Islands,<sup>151</sup> Fiji,<sup>152</sup> Federated States of Micronesia,<sup>153</sup> Kiribati,<sup>154</sup> Nauru,<sup>155</sup> Vanuatu,<sup>156</sup> Niue,<sup>157</sup> Seychelles,<sup>158</sup> Palestine<sup>159</sup> and Tuvalu<sup>160</sup> all take a similar approach.

Coordinates express location by referring to a geographic grid created by 'two sets of imaginary lines around our earth', allowing the statement of 'the absolute location of any point on the earth by calculating the degrees of latitude north or south of the equator and the degrees of longitude east and west of the prime meridian'.<sup>161</sup> Where a Type 2 definition uses coordinates as turning points in a mixed baseline system, normal baseline segments are anchored to an 'absolute location' by the same coordinates that are the endpoints of neighbouring straight or archipelagic baseline segments. Notably, these anchored segments of normal baseline rely on the physical coast or reef, or chart, for the location and shape of the line between the coordinates, a characteristic which a Type 2 definition has in common with Type 1 and Type 3. Where a Type 2 definition uses coordinates for the

<sup>143</sup> Decree No 8.400, of 4 February 2015 (Brazil) art 5.

<sup>144</sup> *Law No. 17/14 defining the Baselines for the delimitation and demarcation of Maritime Zones of Angola* (Angola).<sup>145</sup> *Act No. 23.968 of 14 August 1991* (Argentina).

<sup>146</sup> *Ministry of Foreign Affairs, Notification of 4 November 2015* (Bangladesh).

<sup>147</sup> *Notification of the Government of India, 11 May 2009* (India).

<sup>148</sup> *Maritime Zones Order 2017* (Samoa).

<sup>149</sup> *Republic of Palau, Maritime Boundary Contention 2008* (Palau).

<sup>150</sup> *Maritime Zones Act 2018 and Maritime Zones (Baselines of Territorial Sea) Regulations 2020 of 29 September 2020* (Cook Islands).

<sup>151</sup> *Baselines and Outer Limits of Maritime Zones Declaration 2016*, Pt 2 (Republic of the Marshall Islands), noting that archipelagic baselines are declared in Pt 1.

<sup>152</sup> *Marine Spaces (Rotuma and Its Dependencies) Order 2012* (Fiji), Pt 3 in relation to Ceva-I-Ra Island.

<sup>153</sup> *Federated States of Micronesia Maritime Boundaries, PART I, Annex I Title 18 of the FSM Code (Annotated), Territorial Sea Baseline* (Federated States of Micronesia).

<sup>154</sup> *Territorial Sea Baselines of Kiribati Regulations 2014* (Kiribati).

<sup>155</sup> *Basepoints of the Baseline of Nauru* (Nauru).

<sup>156</sup> *Schedule of the Maritime Act [Cap 138]* in relation to Mathew Island and Hunter Island (Vanuatu).<sup>157</sup> *Territorial Sea Baseline Notice 2013* (Niue).

<sup>158</sup> *Maritime Zones Baselines Order SI of 2008* (Seychelles).

<sup>159</sup> *Declaration of the State of Palestine regarding the maritime boundaries of the State of Palestine in accordance with the United Nations Convention of the Law of the Sea, 24 September 2019* (Palestine).<sup>160</sup> *Declaration of Territorial Sea Baselines 2012* (Tuvalu).

<sup>161</sup> MN DeMers, *Fundamentals of Geographic Information Systems* (4th edn, Wiley 2009) 42.

entirety of a normal baseline around whole features, that whole baseline may be seen to have an ‘absolute location’ too, in that it may be located solely by reference to coordinates (even if the legislation refers to a coast or reef, or provides an illustrative chart).

#### 4. Type 3: Normal baseline is the low-water line as marked on official charts

The survey identified 29 occurrences in which a coastal State defines the normal baseline as that marked on officially recognized charts. Of these, 28 examples are in the legislation of coastal States Parties to the LOSC,<sup>162</sup> and one in that of a non-Party.<sup>163</sup>

Many examples of legislation in this category employ language which closely mirrors all the elements of Article 5 of the LOSC on the normal baseline. Some, like that of the Republic of Korea, closely replicate that wording, stating that ‘the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the Republic of Korea’.<sup>164</sup> Some legislation refers to charts in the context of defining or specifying the term ‘low-water line’. For example, after stating that the territorial sea shall be measured from the low-water line along the coast, the legislation of the Netherlands states that ‘the low-water line shall be defined as the line indicating the depth of 0 metres on the large-scale Dutch sea charts issued upon the instructions of the Minister of Defence’.<sup>165</sup> Similarly, Timor-Leste legislation states that “‘Low-tide line’ means the low-tide line of the seashores of the territory of Timor-Leste, as shown in official larger-scale maps officially recognized by the Government of Timor-Leste’,<sup>166</sup> and that the normal baseline shall be ‘the low-tide line along the coast’.<sup>167</sup>

Understanding the purpose of a chart sheds light on how a Type 3 definition works in practice. In the context of the LOSC, which refers to charts in numerous provisions in addition to Article 5 on the normal baseline, a chart is understood to mean a nautical chart,<sup>168</sup> which is a ‘map specially designed to meet the needs of marine navigation’.<sup>169</sup> It is apparent that national legislation also uses the term ‘chart’ in this way. Given the purpose of charts,

<sup>162</sup> Angola, Argentina, Bangladesh, Belgium, Brazil, Croatia, Gabon, Ghana, Guyana, India, Italy, Japan, Republic of Korea, Liberia, Malaysia, Mexico, Mozambique, Netherlands, Palau, Portugal, Russian Federation, Sierra Leone, Solomon Islands, Sudan, Suriname, Tanzania, Timor-Leste, Yemen. <sup>163</sup> Venezuela.

<sup>164</sup> *Territorial Sea and Contiguous Zone Act* Promulgated on 31 December 1977 (Republic of Korea), Section 2(1).

<sup>165</sup> *Netherlands Territorial Sea (Demarcation) Act* of 9 January 1985 (Netherlands), Section 1 (2).

<sup>166</sup> *National Parliament Law No. 7/2002 Maritime Borders of the Territory of the Democratic Republic of Timor-Leste* (Timor-Leste) art 1(g) <sup>167</sup> *ibid.*, art 2. <sup>168</sup> Nordquist (n 122) 90.

<sup>169</sup> GK Walker, *Definitions for the Law of the Sea: Terms Not Defined by the 1982 Convention* (Martinus Nijhoff 2012) 126.

where terrestrial maps focus on accurately depicting features of the land, a chart will focus only on those land features significant for navigation (whether for positioning, or presenting a potential hazard).<sup>170</sup> According to the International Hydrographic Organization, a ‘chart’ is

specifically designed to meet the requirements of marine navigation, showing among other things depths, nature of the seabed, elevations, configuration and characteristics of the coast, dangers, and aids to navigation. Nautical charts provide a graphical representation of relevant information to mariners for executing safe navigation.<sup>171</sup>

And today, a chart is not confined to an analogue (paper) form (with historical antecedents including the Portolan charts of the fourteenth century).<sup>172</sup> Coastal States increasingly use electronic charts (either a raster chart or a vector electronic navigational chart),<sup>173</sup> and there are discussions in the international charting community about the future of the paper chart.<sup>174</sup> While a raster chart is a simply a scanned, passive image of a paper chart, a fully digitised electronic navigational chart (ENC) contains vector data and is essentially a ‘digital database of all the objects (points, lines, areas, etc) represented on a chart’.<sup>175</sup> This means that a low-water line on an ENC will be a line made up of points, each of which correspond to certain geographic coordinates.<sup>176</sup> In this way, if a coastal State uses an ENC for the purposes of its normal baseline, the charted low-water line very much resembles a line that is specified by reference to coordinates; it is just that the ENC presents a visual representation of the information, in a way that a bare list of coordinates does not. Many countries now use or produce ENCs,<sup>177</sup> including those identified here as using a Type 2 definition of the baseline (eg Canada).<sup>178</sup>

<sup>170</sup> JA Gaspar and H Leitão, ‘Early Modern Nautical Charts and Maps: Working Through Different Cartographic Paradigms’ 23 *Journal of Early Modern History* 1, 5.

<sup>171</sup> International Hydrographic Organisation, *S-66 – Facts about Electronic Charts and Carriage Requirements* (2010) 7

<sup>172</sup> See discussion of the practical nature of portolan maps in M Denny, *The Science of Navigation: From Dead Reckoning to GPS* (Johns Hopkins University Press 2012) 91.

<sup>173</sup> See discussion of the two types of electronic charts in ‘what kinds of electronic charts are available?’ in International Hydrographic Organisation (n 171) 8.

<sup>174</sup> For example, see International Hydrographic Organisation, *The Future of the Paper Nautical Chart – Final Report* (Nautical Cartography Working Group 2020).

<sup>175</sup> International Hydrographic Organisation, *S-66 – Facts about Electronic Charts and Carriage Requirements* (n 171) 8.

<sup>176</sup> See International Hydrographic Organisation, *IHO Electronic Navigational Chart Product Specification S-101* (1st edn, November 2018), Section 4.8 (Geometry) <[https://registry.who.int/productspec/view.do?idx=78&product\\_ID=S-101&statusS=5&domainS=ALL&category=product\\_ID&searchValue=IHOPublicationS-101](https://registry.who.int/productspec/view.do?idx=78&product_ID=S-101&statusS=5&domainS=ALL&category=product_ID&searchValue=IHOPublicationS-101)>.

<sup>177</sup> See International Hydrographic Organisation, ‘ENC Coverage Catalogue’, a visual representation of global ENC coverage <<https://www.arcgis.com/apps/webappviewer/index.html?id=06d967702c7f4094bbc5b4f8e485b712>>.

<sup>178</sup> See ENCs produced by the Canadian Hydrographic Service at <<https://open.canada.ca/data/en/dataset/12b769c8-48b8-4562-80fb-4a2e5ee9b45b>>.

For these reasons, legislation adopting a Type 3 definition of the normal baseline relies on a 'graphical representation' of relevant information about the coast, or in the case of an ENC, embedded digital information as well.

#### 5. Type 4: Normal baseline is determined in accordance with international law

The survey identifies five occurrences in which a coastal State defines the normal baseline as determined under, or in accordance with, international law. Of these, four examples are in the legislation of LOSC Parties,<sup>179</sup> and one in that of a non-Party.<sup>180</sup>

The United Kingdom's legislation states that 'the baselines from which the breadth of the territorial sea adjacent to the United Kingdom, the Channel Islands and the Isle of Man shall be established in accordance with the relevant provisions of the United Nations Convention on the Law of the Sea'.<sup>181</sup> The Explanatory Memorandum makes clear that this includes the use of the normal baseline insofar as '[g]enerally the baseline will follow the low-water line, except that a straight line can be drawn across bays'.<sup>182</sup> Similarly, 'the territorial sea of the United States henceforth extends to 12 nautical miles from the baselines of the United States determined in accordance with international law'<sup>183</sup> and for the external territories of Australia, maritime zones are measured from 'baselines established under international law'.<sup>184</sup> In practical terms, the USA<sup>185</sup> and Australia's external territories also use the normal baseline.<sup>186</sup> Since this definition type does not specify any particular method for locating the normal baseline, the degree of spatial stability relevant to any of these coastal States' segments of normal baseline specified in this way will depend on practical or policy factors outside the legislation itself (for example, if the coastal State in practice uses coordinates or an official chart for the purposes of its baseline). The influence of such extra-legal factors has not been explored here, since this study has focused on legislation alone.

<sup>179</sup> Australia, Morocco, Qatar, United Kingdom.

<sup>180</sup> United States.

<sup>181</sup> *The Territorial Sea (Baselines) Order 2014* (United Kingdom) art 2(1).

<sup>182</sup> Explanatory Memorandum to *The Territorial Sea (Baselines) Order 2014* (United Kingdom), para 7.1.

<sup>183</sup> *Territorial Sea of the United States of America by the President of the United States of America; A Proclamation of 27 December 1988* (USA).

<sup>184</sup> *Proclamation under Seas and Submerged Lands Act 1973 made under section 10B Seas and Submerged Lands Act 1973* (Cth) (26 July 1994).

<sup>185</sup> For example, 'US Submission' (n 7) 1: 'The United States, as a matter of long-standing practice, uses the normal baseline'.

<sup>186</sup> For example, the visual representation of the baseline around Cocos (Keeling) Islands in the Australian Marine Spatial Information System indicates the normal baseline <<http://www.ga.gov.au/scientific-topics/marine/jurisdiction/amsis>>.

*C. Analysis of Findings and Implications for the Legal Stability of Maritime Zones*

This snapshot of what States *do* when they implement the normal baseline gives us three key insights pertinent to legal stability and maritime zones. First, the results show that there is a greater diversity in the types of definition of the normal baseline than appreciated in previous scholarship. In particular, not only is there a distinction between the use and non-use of charts (as identified in the ILA Baseline Committee's 2012 study), but the study has identified a new category (one that relies on coordinates) and which is the second-most prevalent definition. Secondly, while UN DOALOS records<sup>187</sup> show that the declaration of some States' maritime zones has at times met with protest, none of these protests relate to what type of definition a coastal State has used for the normal baseline; this is the case even for those using a Type 2 definition, which does not strictly follow the language of Article 5 in the way that a Type 3 definition does. This tends to suggest a general acceptance of a diversity of methods to implement the normal baseline in domestic frameworks, and specifically an acceptance of a broadening of acceptable methods to include an increasing reliance on coordinates.<sup>188</sup>

Thirdly, the definition types differ in the way they locate the normal baseline on the surface of the earth. States have begun to articulate a *spatial* dimension of stability:<sup>189</sup> some States have drawn the connection between a legal approach in implementation (a definition type that defines a baseline or outer limits by means of a chart and/or coordinates) and resulting stability (that definition type is what makes those lines *capable* of remaining in the same location). Accordingly, the legal stability of the normal baseline (at least, its spatial dimension) is influenced by the type of definition used in its implementation. If Types 2 and 3 are grouped together on the basis that both charts and coordinates offer some stabilising effect, this represents 64 out of 117 uses of the normal baseline (approximately 55 per cent).

#### V. CONCLUSION

This article contends that the PIF Declaration's claim for the preservation of baselines and maritime zones in the face of climate-change induced sea-level rise is not radical because it is both an expression of the long-standing value

<sup>187</sup> Based on a review of communications published on the UN DOALOS coastal State pages.

<sup>188</sup> Indeed, UNGA endorsement of IHO work on S-121 (a data standard for an international, coordinates-based, representation of maritime boundaries and their associated rights, restrictions, and responsibilities that is authoritative and easy to interpret) also tends to support such general acceptance of this method: see *Oceans and the law of the sea*, UNGA RES 76/72 (9 December 2021), UN Doc A/RES/76/72 [5]-[6] and M Sutherland, S Durand, J Pritchard and CD O'Brien, 'S-121: A New Standard for Maritime Limits and Boundaries' Hydro International (November/December 2018) 19.

<sup>189</sup> See discussion of statements of Belize and Micronesia in Section III.B, above.

placed on legal stability in the LOSC system by States, and consistent with the practice of many States which have secured legal stability for their normal baselines within their domestic frameworks, to apparent general acceptance. For these reasons, we should take seriously the interpretative claim in the PIF Declaration that ‘maintaining maritime zones established with the Convention, and rights and entitlements that flow from them, notwithstanding climate change-related sea-level rise, is supported by both the Convention and the legal principles underpinning it’.<sup>190</sup>

Three consequences flow from this. First, it invites us to revisit the dominance of the widely-held view of many writers that baselines are ambulatory. The evidence of what States *say* and *do* about legal stability calls into question whether the ‘ambulatory theory’ of baselines fully accounts for the diversity of State practice. Further, given the emphasis placed on legal stability in the establishment of the LOSC’s jurisdictional framework, it seems an absurd result if only one type of straight baseline and one type of maritime zone outer limit have some degree of legal stability, but not any others. Indeed, States’ discussion of stability during the period 2017–2021 is framed in broad terms, not generally differentiating between the various baseline types or outer limits for particular zones. Only the archipelagic baseline is given particular mention (not the deltaic baseline under Article 7(2), as one might expect): the Solomon Islands and Papua New Guinea point to the stability of archipelagic baselines, expressing their view that such baselines (as well as each country’s delimited maritime boundaries) are not subject to change.<sup>191</sup> These statements support the idea that there is a more broadly available legal stability that States call upon to be ‘maximised’ or ‘preserved’. Such broad claims are at odds with the notion that legal stability is available only in limited circumstances, as would be the case under an ‘ambulatory theory’.

Secondly, what States say and do about legal stability matters directly to explicit elements of an exercise of treaty interpretation of the LOSC: what States *say* might provide evidence of the object and purpose of the LOSC,<sup>192</sup> or evidence of the agreement of LOSC parties regarding its interpretation;<sup>193</sup> what States *do* very likely amounts to subsequent practice in application of the LOSC baseline rules.<sup>194</sup> And while custom is not mentioned in the PIF Declaration, there is room left for its parallel development. The ILC has signalled that in its future work on the issue, it will consider all relevant sources of law—in both treaty and custom. When applying the analytical

<sup>190</sup> PIF Declaration (n 1).

<sup>191</sup> See Statement of Solomon Islands (n 87) and Statement of Papua New Guinea (n 98).

<sup>192</sup> Art 31(1) VCLT. States’ interventions at UNCLOS III might also form part of supplementary means of interpretation under art 32, VCLT, as they form the preparatory work for the LOSC. For further discussion on the drafting history of art 5 on the normal baseline as it relates to legal stability, see F Anggadi, ‘Reconceptualising the “Ambulatory Character” of Baselines: The International Law Commission’s Work on Sea-Level Rise And International Law’ 22(2) MJIL 163.

<sup>193</sup> Art 31(3)(b) VCLT.

<sup>194</sup> *ibid.*

frameworks for treaty interpretation and the identification of custom, the ILC should do so with its eyes open to the potential legal significance of what States say and do about legal stability and maritime zones.

Thirdly, addressing a conceptual blind spot to look squarely at legal stability for maritime zones means that it is also necessary to grapple with the question of how much legal stability can or should exist. As many have pointed out, UNCLOS III did not canvas sea-level rise, climate change more broadly, nor any of their possible legal impacts on the LOSC jurisdictional framework.<sup>195</sup> This is unsurprising, since it was only after the conclusion of the LOSC in 1982 that the international community began seriously to engage with such matters.<sup>196</sup> From the early twenty-first century, scholars began to articulate the emergence of the Anthropocene,<sup>197</sup> a new geological epoch characterised by human impacts on the earth<sup>198</sup> which challenges ‘the assumption, based on our experience so far, of constantly stable circumstances of the late Holocene. Many aspects of international law are based on such understanding of the stability of the Earth conditions.’<sup>199</sup> Our focus needs to shift to considering how much legal stability is available for baselines and maritime zones, now that States better appreciate that there is increasing geographic instability.

Fully addressing the question of how much entails taking a cue from what States say, to look at the different dimensions of legal stability. To understand its temporal dimension more fully, it is necessary to examine the increasing prominence placed on the LOSC’s silence regarding a duty to update baselines and outer limits once they have been notified to the international community through an act of deposit. Considering the stability of status might also require considering whether the principle of continuity of statehood<sup>200</sup> may have any relevance in the context of questions of status under the law of the sea. This article has demonstrated that the capacity of the existing law to accommodate a measure of spatial stability is well

<sup>195</sup> See for example A Boyle, ‘Law of the Sea Perspectives on Climate Change’ in D Freestone (ed), *The 1982 Law of the Sea Convention at 30: Successes, Challenges and New Agendas* (Brill 2013), Caron (n 37) 635, Rayfuse (n 37) 180 and Schofield (n 42) 726.

<sup>196</sup> For example, the Intergovernmental Panel on Climate Change (IPCC) was established in 1988, issuing its First Assessment Report in 1990. See IPCC, *Climate Change: The 1990 and 1992 IPCC Assessments* (United Nations, 1992).

<sup>197</sup> The precise date at which the Anthropocene commenced is a matter of debate, and to some extent necessarily arbitrary: see K Scott, ‘International law in the anthropocene: responding to the geoenvironmental challenge’ (2012) 34 *MichJIntL* 309, 315.

<sup>198</sup> JS Dryzek and J Pickering, *The Politics of the Anthropocene* (Oxford University Press 2019) 2. See also W Steffen, PJ Crutzen and JR McNeill, ‘The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?’ in C Schlottmann et al (eds), *Environment and Society: A Reader* (New York University Press 2020).

<sup>199</sup> D Vidas et al, ‘International Law for the Anthropocene? Shifting Perspectives in Regulation of the Oceans, Environment and Genetic Resources’ (2015) 9 *Anthropocene* 1, 4.

<sup>200</sup> See J Crawford, *The Creation of States in International Law* (2nd edn, Clarendon Press 2006) 701 and D Vidas, ‘Sea-level Rise and International Law: At the Convergence of Two Epochs’ (2014) 4 *Climate Law* 70, 82.

illustrated by how many States have implemented their baselines in ways that have a stabilising effect.

Turning our focus to look squarely at legal stability means that evidence of its expression in States' actions and pronouncements can now be brought to bear to better understand the existing international law in circumstances of sea-level rise.