Rising Sea Level, Receding Boundaries and Freezing Baselines in a Warming Climate

Abstract

This paper discusses the less publicised but far from less significant, an issue of how the international community's approach to maritime boundary delimitation will be impacted by climate change resulting in sea level rise with coastal lands submerging affecting the international boundaries and impacting on biodiversity and human survival in the future. The climate change effect is already creating pressure on international law regardless of the direction that the law of the sea takes in remedying this dilemma. It is quite apparent that global disputes and conflicts are arising and solutions are needed urgently. The climate change and the consequent global sea level rise are widely touted to submerge islands and coastlines without discrimination. The international community has been relatively slow to react to what could pose an unprecedented threat to human civilisation. The policies that have been applied have arguably been reactive and not proactive. In future climate change may develop other by-products which may not be understood at this moment and may require a proactive approach. Further discussion of the merits of the potential paths is ideal in ensuring that appropriate and well thought-out resolutions are negotiated. Regardless of the outcome, the thorough debate is required to ensure the correct decision is made and that the balancing act between fulfilling states' interests and achieving a meaningful result does not become detrimental to the solidity and the enforceability of the outcome. There is a need to establish a comprehensive framework for ocean governance for management and long-term development and sustainability.

Keywords: Rising sea level, receding boundaries and freezing baselines

I INTRODUCTION

The Industrial Revolution is often held to be one of the most influential periods in recent economic and social effects occurring roughly 250 years ago. But this rings true in an environmental context as well. The impact of human activities during this period (*Anthropocene* period) represents a figurative blip on the radar of the earth's existence, yet

arguably has the most significant effect on the earth ecosystems.[2] There is irrefutable ~~evidence that, the coastlines of~~ the future will differ greatly to the coastlines of today. This is not necessarily a new phenomenon. Scientific studies illuminate that sea levels have been greatly variable throughout the existence of oceans on Earth. But it was in the 18th and 19th Centuries that humans began to have an undue influence on the rate at which the sea was rising. Since this time, thirst for fossil fuels has had the undesirable effect of greatly contributing to CO_2 and methane gases emissions and depleting the ozone layer. NASA climate scientist, Jim Hansen, has stated that the "greatest threat of climate change for human beings lies in the potential destabilization of the massive ice sheets in Greenland and Antarctica.[3] The accelerated breaking up of these ice sheets has been widely scientifically linked to anthropogenic climate change, and this essay will, therefore, continue without much further debate on this topic. The notion of unstable coastlines was evidently contemplated by the drafters of the United Nations Convention on the Law of the Sea (UNCLOS 1982). Specifically, article 7(2)[4] expressly considers this idea. Bird and Prescott suggest that this should indicate some degree of foresight regarding sea level rise in the treaty.[5] There is some literature proposing that there is a "negative implication" under UNCLOS that when a feature becomes submerged, baselines would have to be redrawn to reflect this.[6] The same would apply to islands that lose their capacity to fall under the definition of island as per article 121(3) of UNCLOS 1982.[7] Coastlines were well acknowledged to be a dynamic feature, but it could perhaps be suggested that there is a minute element of contradiction in the placement of "appropriate points" in order to establish a coastal state's maritime zones.[10]This statement is not designed to criticise the current regime, as it has clearly been a serviceable approach to the definition of maritime boundaries and zones since its inception and pragmatism may invite a level of hypocrisy. However, in a physically changing world, a new regime may be required to affront the situation at hand. What this regime will constitute is a source of some divisiveness.

In a world where the sea levels are rising and it is almost universally acknowledged that, due to the lag in the planet's response to human impacts, even if significant reduction to CO_2 emissions were made overnight, the effect of such changes would not be noticeable until many years later.[8]As consumption of fossil fuels continues to increase, it is clear that the challenges that currently face humankind are only going to get worse before they get better.[9]This has led to widespread calls for clarity and certainty for the

potentially turbulent decades/centuries to come. This may come in the form of the 'freezing' of baseline; a somewhat ironic term seeing as it is the warming of the planet that may necessitate these changes. These calls for the freezing of baselines, as mentioned earlier, deviates from the traditional 20th century approach to maritime boundary delimitation. It also somewhat contradicts that the prevailing notion of ambulatory baselines. One of the core concepts of maritime law is that the points which determine how a maritime boundary is drawn will be subject to change to reflect their physical position. With sea level rises expected to be anywhere up to a meter[10], even by "conservative" estimates[11], the predominant argument in favour of freezing baselines as they are (or were) at a particular date aims at providing much needed consistency in a field that has been lacking in this quality in recent times.[12]

Natural resource acquisition and distribution have on modern international politics that has a predominant factor, whether expressly mentioned or as an ulterior motive in the majority of international maritime boundary disputes. As resources diminish and once plentiful reserves are exhausted, it is safe to say that competition will only grow.[13] Resources are bountiful in oceans and seas around the globe and may provide expansive economic benefit for the state in whose possession the area resides. With this in mind, maximisation of the territory is always at the forefront of any rational state's international agenda. Applying a realist approach to this issue, states will endeavour to fulfil their own national interests, often at the expense of other states, and there should be no inherent negative to this because states have the right to do this. On the contrary, if these national interests can be attained in a manner that adheres to global norms and legal requirements, there ought to be no stigma attached to these goals. However, even in a field that is mostly governed by overarching legislation, there continue to be inter-state disputes that, in the modern diplomacy, have the potential to already simmering tensions between these states.[14] One of the most prevalent of these is the Sino-Japanese relations in recent decades. There have long been disagreements between China and Japan, and along with these disagreements comes a persistent fear that these disputes may boil over into more serious conflicts in a region seen by many to be a volatile one. The importance of maintaining stability in this region often goes under-appreciated. Particular attention is often paid to the clusters of islands and nearby low-tide elevations in the South China Sea known as the Spratly Islands (in the southern area of the sea) and the Paracel

islands (to the north). But there is also the Okino-tori Shima dispute in the Philippine Sea, which poses a more direct threat to Sino-Japanese relations than the two island groups mentioned earlier.[15] This low- lying reef has the capacity of generating significant EEZ rights, but there is scepticism around whether or not these structures should possess this capacity and Japan has spent an estimated $600 million in 'strengthening' the reef and ensuring it remains above tide.[16] This "manipulation of international law"[17] is, however, at risk of being made inconsequential in the wake of a rising sea. The reef is likely to be wholly inundated in the relatively near future owing to its extremely low height above sea level. Japan's tentative claim to the reef, and its subsequent EEZ entitlements adds an extra dimension to the dilemma[18]. Sea level rise could alter maritime boundaries is that some islands that support baselines and maritime boundaries could be rendered uninhabitable by the effects of sea level rise. This could see these islands reclassified as 'rocks' that can no longer sustain 'human habitation or economic life'[19]. Sea level rise presents a significant threat to international security which needs to be given appropriate attention and concern. As existing boundaries are rendered uncertain, inter-state disputes and conflict will likely evolve[20]. This paper discusses the less publicised but far from less significant, an issue of how the international community's approach to maritime boundary delimitation will be impacted by climate change resulting in sea level rise with coastal lands submerging affecting the international boundaries and impacting on biodiversity and human survival in the future

II FIXED BASELINES: BUSINESS AS USUAL

As mentioned earlier, coastlines have long been held to be ambulatory in nature, and this has not been challenged to any significant extent since the implementation of UNCLOS in 1982. However, it is clear that a very real challenge is being posted to this existing regime by global warming. There are two prevailing schools of thought regarding the future of maritime boundary delimitation: that the existing regime ought to continue to be in force, or that, in order to provide future consistency, baselines should be 'frozen'. Although there is evidently a shifting of support away from the existing regime to the latter of these options, it would be naïve to discuss the dilemma without due consideration to maintaining the existing regime. When provided with two such distinct options, in the majority of cases the status quo in international law is the preferred path when pitted against change. This is because the world thrives on stability and certainty. Ambulatory

coasts have been a tried and true concept in law and, whilst not always perfect, has provided the consistency that strengthens international law.[19] As global warming continues to take its toll on both the social and economic facets of society, perhaps maintaining a consistent maritime order is the best way to assist in achieving global stability.[22]The importance of this branch of international law in contributing to this stability is often underplayed. So, therefore, it appears that one key question arises: Is this consistency to be achieved through a business as usual approach, or would it be better achieved through making the baselines themselves consistent by freezing them?

In 1994, UNCLOS, the preeminent treaty in the existing framework, finally came into effect; 21 years after the third United Nations Conference on this matter was convened. In fact, we are closer in time to UNCLOS coming into effect, than Arvin Pardo's seminal 1967 speech was. His urging to avoid "escalating tension" are reminiscent of what could occur in a future of maritime boundary uncertainty.[23] This time frame also illustrates the sheer length of time often involved in devising international conventions. It is also notoriously difficult to garner the support of a sufficient number of states to make an international convention worthwhile.[24]

In attempting to maximise involvement in a regime of frozen baselines, the agreement could be at risk of becoming too compromised and diluted as states aim to get the best deal and protect their national interests.[25] States would approach this opportunity tentatively, and it must be acknowledged that some states could potentially have a net disadvantage under the new proposal. disputes may be settled by a new regime, but to the detriment of one state. And in the world of maritime boundary delimitation where losing possession of even a small coral reef could mean losing 150,000 square miles of its exclusive economic zone,[26] a cautious approach to reform is entirely understandable. It has even been suggested that Bangladesh, in the event of a 1.5m rise in sea level, would have extended access to a number of oil and gas reserves in the Bay of Bengal assuming their practice of using straight baselines is legally permitted in such circumstances.[27] A stronger opposing argument could be made, however, that Bangladesh would not really be benefitting in this situation as its capital Dhaka would be at risk of being submerged.[28] Even a meter sea level rise would flood 17% of Bangladesh's land mass,[23] resulting in mass displacement[15] and loss of fertile arable land. Factoring in the increase of severity in weather events would only exacerbate the losses suffered by such low-lying coastal states. It must be remembered that a rising sea will not discriminate between states. Whereas

China may benefit from Japan losing Okino-tori Shima, Shanghai would also be at risk of being flooded. Perhaps when factoring in these details, a unanimous consensus may not be unattainable after all. A status quo approach is arguably ignorant to the fact that the climate is changing, and the world would benefit if international law could keep up with this change.

There is also a claim that states will suffer significant economic costs in fixing boundaries as opposed to allowing them to remain ambulatory. This is tied to the costs involved in developing accurate charts and precise satellite imagery that reflects their new 'frozen' boundaries. As Caron argues, however, the costs associated with maintaining "uncertain boundaries" could very well offset these merely monetary expenses. The risk of "eternal litigation" increases with ambulatory baselines, and with this, the aforementioned global stability that is so desired is threatened. In addition to these claims of extensive costs, it can be argued that the "wasteful spending"[20] undertaken by Japan in protecting Okino-tori Shima justifies having the boundaries frozen. Perhaps not specifically for this particularly tentative claim, but for other low-tide elevations and drying reefs that risk being submerged in the coming decades, the freezing of boundaries could prove to be a more affordable choice than attempting to ensure that their low-lying objects can support the economic activity required for it to maintain its status under UNCLOS.[27] The case of Okino-tori Shima bears a resemblance to the United Kingdom's claim to Rockall – which as the name suggests, is not much more than a large exposed granite rock in the North Atlantic Ocean – in 1955. In this case, the UK was attempting to maintain its claim to Rockall's EEZ, but upon its ratification to UNCLOS in 1997, this was no longer possible. The UK had a period where they stationed royal guards there in a display of their claim, but this was evidently fruitless. As is common- place in international law, states will go to seemingly illogical lengths to protect their national interests. While Rockall will not be at risk of submergence for quite some time, there are clear similarities between the UK's actions and Japan's protection of its reef.

IV FREEZING BASELINES: THE BEST WAFORWARD

The majority of academic literature on this topic is clearly in favour of a shift away from what has been the norm for coastal states utilising the straight baseline system under UNCLOS 1982. Evolving to a regime of freezing baselines has, in the grand scheme of climate change, been a relatively recent development. For that matter, reacting to climate change has been a comparatively recent development. This is a blight on the international

community and it may have permitted the situation to worsen to an irreversible extent. Despite this, action can and should still be taken to resolve the issues that appear almost universally in every facet of civilisation and the environment. There is a level of irony that, in freezing baselines, states are shoring up their ability to exploit natural resources; an activity that has undoubtedly help to create the predicament that necessitates this action. This notion has to be weighed up against the aforementioned idea of global stability. But it appears that this approach would resolve many issues that have plagued the international community, and more consistent proposed regime.[20] The most obvious benefit to be had in freezing baselines would be the consistency and certainty it would entail. Once states agreed on their boundaries, there would be no real reason for many more disputes to arise.[16] Once the reform has settled along with the disputes that had arisen out of the reform or any pre-existing disputes, it would be difficult to foresee states possessing the opportunity to concoct new disputes. Clearly this is an idealistic view, but there is a large degree of truth to the statement that consistency breeds stability.[30] If states are all in a grievance on their maritime boundaries again a difficult task in itself – then there will be a definite reduction in major flare-ups that could threaten geopolitical stability in places like Asia this stability is so direly required.

The concept of fairness and equity could also be a victor if this change were to come into force.[13] In an ideal situation, the reform would be a sweeping one, where all those boundaries agreed upon at a certain date to be in force indefinitely. Fittingly, just as global warming does not discriminate against states, neither should these reforms. The question then arises: how would such a reform be devised and enacted? Naturally, different parties would want different outcomes. This could complicate any planned legislative reform. In addition to this, any proposed reform would be far-reaching and could undermine or at least contradict a large part of UNCLOS and the other components of the over-arching law of the sea framework. This could lead to another major overhaul of maritime law similar to that experienced in the middle to late 20th century. Caron, however, summarises his arguments by saying that fixing boundaries would be equitable as "it preserves the allocation of authority over the oceans", a system which is deemed to be rather fair. [23]

What would be required to bring this change to fruition would be convening an open meeting under the auspices of the United Nations with a maximisation of involvement to

ensure that all points of view are heard and understood and to ensure widespread consistency and equity is achieved to the best of their ability. This is no easy achievement and it should not be expected that a panacea-type outcome will be reached within a short time-frame. Beginning of discussions, however, should take place as soon as practicable. The benefits of such an overhaul to the existing system and analyse. There will undoubtedly be a fair share of opponents to an approach that could be seen as quite an altruistic sacrifice by some parties. Expecting states to commit to such an endeavour would be somewhat optimistic, to say the least, but in order to minimise future disputes coming from this proposal, this is the possibly the most suitable avenue. Bird and Prescott suggest an alternative policy that could be employed by coastal states which they term "masterly inactivity".[31] This would entail effectively not reacting and leaving the boundaries as they are through a sort of implied agreement. This would likely prove a risky strategy as states would not be under any real obligation to not re-evaluate their baseline. It could also contribute to inequity as a state may choose to re-evaluate their boundaries if it suits their own interests, which may impinge or impede on another state's interests, which in turn would carry an undesirable potential for conflict.

The most preferred path, in order to ensure a strongly concretised regime, would be for either an amendment to relevant treaties, an entirely new treaty to be developed and brought into force. There is an unfortunate expectation with international law, however, that such grand revisions of existing practices would take a substantial amount of time, and in such circumstances where a decade could mean sea level rise of anywhere between an inch and a foot, an expeditious resolution should be at the top of the agenda of the international community. This could mean some compromises on significant points, but the importance of this proposed regime should not be underestimated. The certainty that it could provide for the decades and centuries to come would be invaluable. Perhaps in the interim period, an approach similar to the freezing of sovereignty claims in Antarctica could be taken while the international community gathers itself to perfect a more viable long-term method.[13]

CONCLUSION & RECOMMENDATIONS

In conclusion, it is clear that the earth will continue to reveal the full extent of the detrimental impact we have had on it. While this all unfolds, what is required is 'proactive responsiveness' in all affected fields. As has been said numerous times, the effects of

climate change are not isolated to one facet of life. They are far-reaching and non-discriminatory. Despite this gloomy outlook, there is one issue, the resolution of which is well within the capabilities of the international community. The inflaming of tensions that are already at boiling point is one indirect impact that climate change will undeniably have in the form of its effect on maritime boundaries. Avoidance of conflict is always to be strived for to ensure a harmonious planet, especially when competition for ocean resources increases. As the effects of global warming become clearer, an element that the international community can control is political stability and genuine efforts should be made to achieve this goal. The most ‘accessible' option may be a hybrid approach that best satisfies the majority of states' desires and this should be acceptable as long as it provides consistency. Regardless of the outcome, the thorough debate is required to ensure the correct decision is made and that the balancing act between fulfilling states' interests and achieving a meaningful result does not become detrimental to the solidity and the enforceability of the outcome. There is a need to establish a comprehensive framework for ocean governance for management and long-term development and sustainability. This involves Reformulating and re-evaluating of policies, legislative framework and concept for the governance of the ocean spaces and marine resources for effective governance of resources within the maritime zone and lastly, reviews of the out-dated law, policies with criteria involving stakeholder, review based on scientific data and well spelt out the responsibility of agencies.

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