

Antoine Grima (2023). *Sea level changes and maritime boundaries: Shifting baselines and maritime spaces*. IMLI Series in International Maritime Law. Routledge. Hbk. 248pp. ISBN: 978-1-0323-4078-4. £125.00.

Reading this book reminded me of the interesting delineation of the frontier between Indonesia and Papua New Guinea, on the island of New Guinea: one of the world's only nine populated islands divided between two countries. The frontier is an unequivocal straight line, running from north to south, slicing the island in two. But, what to do with a pesky and meandering river around the centre of this straight line? This is the stretch where the parties have agreed that the frontier shall follow the thalweg (the centre of the river course) of the Fly River. Hence, we have here a combination of a hard *border*, specified by longitude and latitude; and a *boundary*, which is liable to change and shapeshifting, as rivers are wont to do.

Antoine Grima's doctoral thesis, on which this book is based, examines the challenges posed by 'sea level change' to the maritime boundaries that have been established by coastal and island states, according to rights emergent from the United Nations Convention on the Law of the Sea (UNCLOS), in force since 1994. What UNCLOS set out to do, in order to create a suitable regime for ocean management and governance, was to enact a territorialisation of the seas, basically extending legal jurisdiction over stretches of water, with their status generally dependent on how far from the coast the waters are: from the inner, territorial sea; to the outer edges of the exclusive economic zone.

What the legal experts may not have realised at the time is that the sea is a much more dynamic medium than land. Land contours hardly change naturally over centuries, barring the exceptional volcanic eruption or savage hurricane. But coastal geographies, including estuaries, as well as the fate of seamounts, reefs, rocks, islets and islands or archipelagos offshore, are quite different. Water is not just a liquid medium; it is also mobile, eroding or building beaches and islets, and – in the current epoch – threatening coastal areas with sea level rise (since global warming leads to the expansion of the water body, plus glacial melt). Coastal and island geo-morphology is therefore much more active, as the US Courts acknowledged when comparing the “rock hard” coastline of California to the marshy and swampy terrain of the Louisiana coast (p. 151). So much so that coastal and island states are concerned about the implications of such changes on their aquatic claims and rights. Foremost amongst these concerns is sea level rise: an issue that small island developing states have championed quite aggressively in regional and international fora.

With baselines connected to coastal features, a coastal state's ocean rights under UNCLOS would be compromised by sea level rise: retreating coastlines would mean retreating ocean space under its purview. Ultimately, should sea level rise inundate and submerge the state itself – a misfortune that could well happen to at least four archipelago states: the Maldives, Kiribati, the Marshall Islands, and Tuvalu – then perhaps the countries, surrounding waters and all, would simply cease to exist as legitimate sovereign states. These are the stark scenarios facing some states, some more urgently than others.

In his exhaustive and painstakingly researched book, Grima pores over hundreds of documents, articles, books, and case law, outlining the problem and introducing various caveats, while building the case towards a likely solution, which may eventually find itself codified. This would be to 'freeze' coastlines and basepoints, according to geodetic coordinates, with the latter also being allowed in the sea. Should such boundaries be properly determined, and duly verified, they could firm up and establish a state's maritime boundaries under UNCLOS and avoid the confusion and indeed, impossibility, of trying to keep track of

all coastal and insular dynamics. Otherwise, it would be quite ironic for states to lose the very benefits that lie at the bedrock of the rationale for UNCLOS. And the stability and clarity that such a solution would offer would match the stability in international relations that states, especially small island and coastal states, covet and hope to secure. As a US Supreme Court statement observed, an “ambulatory coastline” would be quite an “inconvenience” (p. 183).

To get here, Grima analyses multiple texts, offering 920 endnotes to his five chapters, written with a discursive flow that does not wallow in legalese. Of course, there will be issues with this proposed course of action. Grima flags situations where a state may attempt to legally ‘freeze’ boundaries which may have been drawn up wrongly, intentionally, or otherwise, to benefit the state in question. Some states may not accept this practice (as has already happened). Some other states may resist this ‘solution’ because sea levels may be changing in their favour (with uplift of the seabed). I would also add that any regulation framed with permanence in mind may still need to create ‘escape clauses’ to take into consideration exceptional circumstances – such as the emergence of new volcanic islands? – with the agreement of the parties concerned.

Small island and archipelagic states, like the Fiji Islands, Maldives, and Seychelles, are leading the way: they have already taken initiatives in the directions intimated by this book. As sea level change becomes a matter of greater and immediate concern to even more states, the initiatives being taken by a few, small, mainly island jurisdictions are likely to become more mainstream.

My main gripe with this fantastic book is that it only has four maps. When describing the different kinds of baselines, or the implementation of specific geometric techniques, such as the determination of maritime borders based on either the principles of equidistance, relevant circumstances and proportionality, or the angle-bisector method, the text would really benefit from some drawn illustrations.

Otherwise, Grima has regaled us with a comprehensive technical manual to better understand the implications of shifting versus fixed baselines and boundaries in maritime spaces. The book is strongly recommended to those interested in maritime law and ocean governance.

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