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Sea Level Rise and Maritime Delimitation in the Eastern Caribbean: A Comparative Approach

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Abstract
Thank you, Mr. Moderator. Let me just start by thanking the organizers today for having me on the program, and I want to extend to everyone my gratitude for having me here today. I am going to look at, as the title suggests, sea level rise and maritime delimitation in the Eastern Caribbean, and I am going to take a comparative approach as I compare it with the Pacific–South Pacific region. I am going to take it that all protocols have been observed, and, in the interest of time, I will go straight through to my presentation with the one caveat that the views expressed today are mine only, despite my involvement in several of the agreements that I mention today.

Keywords
International Law, International Environmental Law, Environmental Law, Law of the Sea, Caribbean

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SEA LEVEL RISE AND MARITIME DELIMITATION IN THE EASTERN CARIBBEAN: A COMPARATIVE APPROACH

ROSEMARIE CADOGAN*

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Thank you, Mr. Moderator. Let me just start by thanking the organizers today for having me on the program, and I want to extend to everyone my gratitude for having me here today. I am going to look at, as the title suggests, sea level rise and maritime delimitation in the Eastern Caribbean, and I am going to take a comparative approach as I compare it with the Pacific–South Pacific region. I am going to take it that all protocols have been observed, and, in the interest of time, I will go straight through to my presentation with the one caveat that the views expressed today are mine only, despite my involvement in several of the agreements that I mention today.

I am going to look at maritime boundary delimitation and sea level rise in these two regions, and I have included Guyana, in South America, my country of origin, mainly because it is politically linked to the Caribbean,¹ and because the low coastal plain is situated between 0.5 to one meter below sea level at high tide, so it is particularly relevant in that situation.²

I am going to look at three questions around the impact of sea level rise on boundary delimitation in the Eastern Caribbean, not so much the impacts on the States, but the impacts of boundary delimitation,

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comparing it with the impacts on South Pacific SIDS, or PSIDS, and by extension the development of international law. Then I will quickly mention likely future implications for sea level rise on boundary delimitation in the Eastern Caribbean.

By its very nature, it is not a standalone activity. I am sure everyone appreciates that. In the Caribbean, as some commentators have noted, it is a multi-level nested regional governance framework with linkages that not only affect boundaries but also economic regimes, as well as political and socio-cultural contexts associated with sovereignty, linkages to the sea, and settlement patterns. Quite often you find in these islands, between one island and another, people with relatives on either side; you are dealing with a political division in delimiting boundaries, but it also goes across communities, which is particularly strong in the Caribbean.

The factors that have driven boundary delimitation in the Eastern Caribbean are many, but one in particular I want to highlight is the focus on jurisdictional entitlements, which by itself is not a bad thing. It is often the reason that people or countries delimit, but in some instances this has led to territorial or resource conflict. In the region in 2006, Barbados and Trinidad and Tobago went to third-party arbitration over fishing rights, hydrocarbons, relevant coastal frontages, and looked at the extent to which the provisional equidistance line should be adjusted to take account of fishing interests in the area. When the Arbitral Tribunal looked at it, it did not find that Barbados had established a core contention about traditional fisheries. The Tribunal also declined to adjust the line by using high seas fishing. It is important to note that as a matter of law, the Tribunal found that it could not adjust the line based on fishing practices. Further south in the Guyana and Suriname arbitration in 2007 over disputed maritime territory and the use of force in oil and gas exploration, the Tribunal applied the three-step rule and found that

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3. See generally Patrick McConney et al., Organizing for Good Fisheries Governance in the Caribbean Community, 65 SOC. & ECON. STUD. 57 (2016).
5. Id. ¶ 266.
6. Id.
7. Id.
there were no features such as low-tide elevations or islands to be considered in the territorial sea part of the delimitation. It noted further that the geographical configuration of the relevant coastlines did not represent a circumstance that would justify adjusting or shifting the provisional equidistance line to achieve an equitable solution. Again, there were no particular considerations relating to climate change in either of the two decisions. While this feature about what is mine and what I am entitled to is not unusual, it is important to note it resonates more than climate change in sea level rise as a consideration to the parties in the delimitation.

If you go back further, in the same region, when there was a Common Fishery Surveillance Zones Agreement among the Organization of Eastern Caribbean States (OECS) which used jurisdictional considerations to establish the zones, it gained wider acceptance when it changed to using an ecosystems approach looking at the management of the living resources and the fisheries, rather than the limits of jurisdiction.

The issue of jurisdiction is one that can be a means of conflict, but it can also be a means of conflict avoidance. Again, this area is similar to the Pacific because there is a very strong framework of regionalism in the Eastern Caribbean. In the Eastern Caribbean Regional Oceans Policy (ECROP), there is a policy outcome written into the policy itself that access to resources is secured by negotiation of maritime boundaries. It is the first outcome that Member States sign on to.

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9. Id. ¶¶ 376–77.
13. Id. at 5 (“Goal 1.1—OECS member countries formalize maritime boundaries in order to secure, exercise and protect their rights and jurisdiction over marine areas and resources.”).
Within the OECS, cooperation is becoming normative. It is marked by the absence of conflict and the realization that you can get better outcomes quicker, cheaper, and with more control by negotiation. Five negotiated maritime boundaries were concluded within six years between 2015 and 2021.  

In the context of small island developing states (SIDS), which I will not say much on because we are all familiar with the particular criteria that come with SIDS, there is a need to harness ocean resources, focus on healthier diets, and the need for investment certainty, but I want to focus on the fact that delimitation can also highlight technology, data, and legislative gaps. It can be an instigator or a catalyst. In preparing for negotiations, coordinates need to be surveyed, large-scale charts need to be updated, and revised coordinates need to be publicized; thus delimitation can be a positive thing.

Although SIDS are particularly small and defined as large ocean states in an attempt to reverse the conversation about them being small, most of the delimitations in the Eastern Caribbean have been accomplished with development partner technical assistance. This is

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significant because although there are some “go it alone” examples like Barbados, which was accomplished by their own resources, most of the delimitations have been accomplished with development partner support.

Existential factors, as the moderator mentioned, are significant. Arguably for Eastern Caribbean SIDS, delimiting maritime boundaries is not viewed as a particular priority either as a distinct political activity or in the context of climate change, particularly when viewed with the risk of climate and the risk perceptions that it could occasion. This is interesting because as my previous commentator outlined, the impacts on the coast are significant. But, for delimitation, the issues in relation to sea level rise and climate change are not as stark in the region. For example, if you ask the average person “what do you think about climate change,” they will immediately refer to catastrophic natural events like Tropical Storm Erika in Dominica in 2015, Category 5 Hurricanes Maria and Irma in the British Virgin Islands, Antigua, and Barbuda in 2017, which

commonwealth.org/news/caribbean-nations-prepare-maritime-boundary-talks-commonwealth-support (highlighting the technical guidance eight Caribbean countries would receive in London from the Commonwealth Secretariat).

17. Thomas E. Basset & Gregory R. Scruggs, Water, Water Everywhere: Sea Level Rise and Land Use Planning in Barbados, Trinidad and Tobago, Guyana, and Pará, 7–8 (Lincoln Inst. of Land Pol’y, Working Paper No. WP13TB1, 2013) (discussing projects planned and funded by the Barbados government, like the Coastal Zone Management Unit, to research, regulate, and educate the population about coastal management).


19. See generally Carlos Fuller, Address at the American University Washington College of Law Conference: Climate Change and Sea Level Rise: Assessing Their Impacts on Belize 2–4 (July 26, 2022) (outlining the various threats to livelihood due to climate change in Belize, none of which included delimitation).


21. See Richard Pasch et al., Hurricane Maria, NAT’L HURRICANE CTR. (Jan. 4, 2023), https://www.nhc.noaa.gov/data/ter/AL152017_Maria.pdf. (“Maria was a very severe Cape Verde Hurricane that ravaged the island of Dominica at category 5 . . . intensity, and later devastated Puerto Rico as a high-end category 4 hurricane. It also inflicted serious damage on some of the other islands of the northeastern Caribbean Sea.”); John Cangialosi et al., Hurricane Irma, NAT’L HURRICANE CTR.
had huge consequences that everyone can relate to. That is not surprising because for islands, everything is coastal. Proximity and infrastructure—everything is proximate to the coast, so that is the immediate perception of what damage climate change has caused.

There have been some studies, for example, in Saint Lucia, on the impacts and the projections of climate change and sea level rise over a number of years.\(^\text{22}\) Usually these have not included critical base points for delimitation or issues relating to the loss of jurisdiction through sea level rise.\(^\text{23}\) These are mostly coastal projections.\(^\text{24}\) The OECS Commission has recognized and categorized the impacts as high temperatures or change in rainfall; however, while rises in sea level is in there, it mostly focused on hurricane intensity, threats to life, property, and livelihoods.\(^\text{25}\) In a 2019 report, the

\(\text{\footnotesize \text{(Sep. 24, 2021), https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf ("The catastrophic hurricane made seven landfalls, four of which occurred as a category 5 hurricane across the northern Caribbean Islands. Irma made landfall as a category 4 hurricane in the Florida Keys and struck southwestern Florida at category 3 intensity.")}}\)

\(\text{\footnotesize \text{\text{22. See, e.g., Saint Lucia, National Communication (NC) 3, Prepared in Fulfillment of its Obligations under UNFCCC, 281 (Aug. 2017) (noting the maritime boundary delimitation and maritime mapping projects).}}\)}\)

\(\text{\footnotesize \text{\text{23. See id. at 174–77 (looking at projections in sea-level rise for Saint Lucia for both the near and far future, but focusing mainly on the importance of this related to storm activity).}}\)}\)

\(\text{\footnotesize \text{\text{24. See, e.g., ORG. OF E. CARIBBEAN STATES, OECS CLIMATE CHANGE ADAPTATION STRATEGY & ACTION PLAN: CLIMATE TRENDS AND PROJECTIONS FOR THE OECS REGION 7 (2020) [hereinafter CLIMATE TRENDS & PROJECTIONS FOR THE OECS REGION], https://www.oecs.org/en/our-work/knowledge/library/climate-trends-and-projections-for-the-oecs-region/viewdocument/2136 ("Future climate projections point to rising temperatures and increased evapotranspiration, as well as continued sea level rise, altered precipitation patterns, and increasing hurricane intensity. These projected changes will impact the region’s coastal ecosystems and fisheries, water supplies, agriculture, biodiversity, human health, tourism and critical infrastructure.").}]}}\)

\(\text{\footnotesize \text{\text{25. See Climate Change, OECS, https://www.oecs.org/climate-&-disaster-resilience/about/about-the-cddrmu/climate-change-overview.html (last visited Feb. 23, 2023) (mentioning sea level rise as one of several climate change-related factors that will threaten livelihoods and survival); CLIMATE TRENDS & PROJECTIONS FOR}}\)
Intergovernmental Panel on Climate Change (IPCC) focused on the fact that for the Caribbean islands—specifically listing Saint Vincent, the Grenadines, and the Bahamas—sea level rise is rarely addressed separately from sea-related extreme events.\textsuperscript{26} Climate change is considered a distinct psychological risk, making that and sea level rise different from the way that it has been traditionally perceived as a threat to the environment. In relation to Guyana, Dalrymple, a commentator, has noted that coastal flooding risk is often externalized, and flooding is seen as an aberration instead of a natural occurrence.\textsuperscript{27}

It must be acknowledged that risk perceptions differ and the connection between maritime boundary delimitation and climate change-induced sea level rise is not as strong in the region. It could be geographical, because most of the islands are volcanic and rise out of the sea. It could be a question of risk perception. It could be cultural. There are several reasons. But in the five delimitations mentioned earlier, there were no issues about critical base points being threatened or inundated by rising sea levels. Similarly, as I said in the Guyana–Suriname arbitration, no islands, rocks, reefs, or low-tide elevations were relevant in determining the boundary.\textsuperscript{28} It could be that it is due to the relatively straightforward geography of the region; but it is fair to say that advocacy for the maintenance of maritime claims and jurisdiction is nowhere as strong as it is in the South Pacific, and that is where I will turn for the purposes of comparison.

The facts there speak for themselves, but it is interesting to note that the number of treaties signed over a particular period has increased in response to strengthened regional cooperation. This is one area that the Caribbean and the South Pacific have in common.

Sea-level rise is existential as shown by the pronouncements by Tuvalu, both by prime ministers and before the International Law

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THE OECS REGION, supra note 24, at 7.
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27. O. Kofi Dalrymple, Review and Adaptation Assessment of Sea Level Rise in Guyana: Commonwealth SIDS and Sea Level Rise Study.
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Commission. Only recently, in 2021, the Tuvalu Foreign Minister spoke to COP26 standing in ankle-deep sea to illustrate that Tuvalu is sinking. For the Pacific, it is an existential issue far more than it has been in the Caribbean. It is also very strongly tied to regionalism and the idea that a shared identity brings a sharper focus on the sea; it is less likely to lead to conflict over maritime limits and is rooted in islanders’ cultural relationships to the oceans, as well as economic and political considerations based on what the exclusive economic zone and the fisheries’ resources can do for the islands. Cumulatively, over time, these have begun to influence international law, as we have seen.

There are several strategies that have consistently incorporated the wording of international resolutions—I will point here to International Law Association Resolution 5 of 2018—that incorporated the wording of those regional proclamations into their own international proclamations as relates to the law of the sea. For example, at the 2019 Pacific Islands Forum in Tuvalu, leaders committed to a collective effort including to develop international law with the aim of ensuring that once a forum member’s maritime zones are delineated in accordance with the UN Convention on the Law of the Sea (UNCLOS), that members’ maritime zones could not be challenged or


30. See Tuvalu Minister to Address Cop26 Knee Deep in Water to Highlight Climate Crisis and Sea Level Rise, GUARDIAN (Nov. 8, 2021), https://www.theguardian.com/environment/2021/nov/08/tuvalu-minister-to-address-cop26-knee-deep-in-seawater-to-highlight-climate-crisis (explaining and showing a picture of the Minister standing in the ocean to draw attention to the severity of sea-level rise during his speech).


reduced as a result of sea level rise and climate change. This has consistently been repeated in several of these declarations. In Resolution 5 of 2018, this emergence of state practice was noted, particularly in the South Pacific region, but it would be subject to the fact that the Pacific states would be considered as those whose interests are especially affected, and it had to be built up by a pattern of state practice as well as opinio juris. It is not a done deal but it is significant in the way that it is progressing. You can say, in some regard, that this is a mutually enforcing impact based on geographic conditions, advocacy, and state practice, and having an impact on the development of international law, with caveats that outer limits have already existed, they have to be lawful maritime entitlements determined in accordance with UNCLOS, and the time for consideration of these claims is prior to the physical coastline.

33. See Pacific Islands Forum Secretariat, Fiftieth Pacific Islands Forum: Forum Communiqué, ¶ 26, PIF(19)14 (Aug. 6, 2021), https://www.forumsec.org/wp-content/uploads/2019/08/50th-Pacific-Islands-Forum-Communique.pdf ("Leaders committed to a collective effort, including to develop international law, with the aim of ensuring that once a Forum Member’s maritime zones are delineated in accordance with the 1982 UN Convention on the Law of the Sea, that the Members maritime zones could not be challenged or reduced as a result of sea-level rise and climate change.").

34. See, e.g., Pacific Islands Forum, Declaration on Preserving Maritime Zones in the Face of Climate Change-Related Sea-Level Rise, at 2 (Aug. 6, 2021) [hereinafter Declaration on Preserving Maritime Zones], https://www.forumsec.org/wp-content/uploads/2021/08/Declaration-on-Preserving-Maritime.pdf (mentioning "the long-standing concern in our Pacific region for preserving maritime zones in the face of climate change-related sea-level rise . . ."); Pacific Islands Forum, Final Declaration of the 5th France-Oceania Summit, ¶ 8 (July 19, 2021), https://www.forumsec.org/2021/07/20/final-declaration-of-the-5th-france-oceania-summit-19-july-2021 ("we share the importance of further discussing the issue of how best to ensure the preservation of maritime zones, properly delineated in accordance with UNCLOS . . ."); Pacific Islands Forum, Leaders Declaration: Japan-PALM9, ¶ 12 (July 2, 2021), https://www.forumsec.org/2021/07/02/leaders-declaration-japan-palm9-2nd-july-2021 ("The PALM Leaders jointly noted the importance of protecting maritime zones established in accordance with UNCLOS, and concurred to further discuss the issue of preserving maritime zones, properly delineated in accordance with UNCLOS, in the face of climate change-related sea level rise including at the multilateral level.").

changes.\textsuperscript{36} The very latest declaration launched at COP26 in November 2021—the Declaration of Preserving Maritime Zones in the Face of Climate Change-Related Sea Level Rise—underpinned the accepted principles of legal stability, security, certainty, and predictability, and it acknowledged that that relationship was not contemplated,\textsuperscript{37} (we have heard this earlier) by the drafters of UNCLOS, and the Convention was premised on the basis that these were generally considered to be stable.\textsuperscript{38} Again, this Declaration continues to incorporate Resolution 5 of 2018.\textsuperscript{39}

Based on this stress on existing entitlements, existing claims, and existing boundaries established by agreement prior to physical coastline changes, it stands to reason that this could be considered as something anticipatory. Is it now saying that these things must be done prior to the time of physical coastline changes? There is a resource component here because if these things have to be established at the time that it is relevant, there is going to be a financial outlay that is necessary, and the question of development assistance again will come in because surveying vulnerable base points is not a cheap exercise, to put it mildly.

Is this the way that the jurisdiction jurisprudence is developing? I am turning here to the jurisprudence of Bangladesh and India where the statement was made clearly that it had to be considered at the present time of the physical reality at the time of the delimitation, and

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\item \textsuperscript{36} See generally National Oceanic and Atmospheric Administration (NOAA), \textit{Maritime Zones and Boundaries}, https://www.noaa.gov/maritime-zones-and-boundaries (last updated Oct. 4, 2022) ("The breadth of the territorial sea, contiguous zone, and EEZ (and in some cases the continental shelf) is measured from the baseline determined in accordance with customary international law as reflected in the 1982 Law of the Sea Convention.").
\item \textsuperscript{37} See Declaration on Preserving Maritime Zones, \textit{supra} note 34, at 2 ("Recognizing the principles of legal stability, security, certainty and predictability that underpin the Convention and the relevance of these principles to the interpretation and application of the Convention in the context of sea-level rise and climate change.").
\item \textsuperscript{38} See id. ("Acknowledging that the relationship between climate change-related sea-level rise and maritime zones was not contemplated by the drafters of the Convention at the time of its negotiation, and that the Convention was premised on the basis that, in the determination of maritime zones, coastlines and maritime features were generally considered to be stable.").
\item \textsuperscript{39} Declaration on Preserving Maritime Zones, \textit{supra} note 34, at 3.
\end{itemize}
the tribunal refused to address the issue of the future instability of the coastline.40 Most tellingly, it said, “future changes of the coast including those resulting from climate change cannot be taken into account in adjusting a provisional equidistance line.”41 In that instance, for many places, this will require some level of acceptable scientific data compiled over time, and it might raise the question: why not proceed more expeditiously to delimit and have at least certainty from having an agreement? Several places have started doing that, with the support of the Secretariat of the Pacific Community (SPC).42 This, and the revision of maritime areas legislation, is already happening in Tuvalu, Solomon Islands, Marshall Islands, and Kiribati, with technical support through SPC and development partners.43 It is essentially a theory of change. With the technical assistance, country officials can now limit, declare, and update possible boundary legislation and the limits of the zones. By doing so, the region collectively secures rights to maritime jurisdiction and accrues rights and responsibilities.

To look at future implications, is it, or should it be considered, that climate change-impacted sea level rise, is a settled question that cannot be a special or relevant circumstance that would influence international jurisdiction? I am not talking here about it being a fundamental change of circumstance. That is an entirely different issue. But is the issue entirely settled? Could climate change attain that

41. Id. ¶ 399.
43. See, e.g., id. at 1 (“In the field of maritime boundaries, the SPC and its partners, assists member countries in the technical preparations of the negotiations between neighboring countries.”); Suva, SPC Focusses on 7 PICs to Strengthen Maritime Boundaries in the Region, PAC. CMTY. (Aug. 21, 2017), https://www.spc.int/updates/news/2017/08/spc-focusses-on-7-pics-to-strengthen-maritime-boundaries-in-the-region (looking at a project aimed at helping seven Pacific Island countries, which have not yet fully set their maritime boundaries, to negotiate them).
level of importance that it is, or could be considered, a special circumstance? There is dicta in Bangladesh that says no, but is it a settled question?\textsuperscript{44} We can look back at some of the earlier cases that say there is no closed list of considerations, as in Libya/Malta.\textsuperscript{45} Jan Mayen said adjudicative bodies have to consider the “circumstances of the case,” as well as “previous decided cases and the practice of States.”\textsuperscript{46} We see that that sentiment is building, mindful of the need to achieve consistency and a degree of predictability, but is the question settled? There are other decisions that can be brought collectively into that. Bearing in mind that, the Eastern Caribbean and the Pacific, even in negotiations, look at the decisions of third-party tribunals.\textsuperscript{47} They look to see what the outcome would be if negotiations are not successful.\textsuperscript{48} I think it is not possible to suggest that the question is entirely settled.

I do want to say that at least for the Eastern Caribbean, although it may have been convenient, not to make maritime boundary delimitation a priority, and to adopt a reactive approach if there is a discovery of oil and gas or a challenge to fisheries’ rights, then to take it to resolution, (although it may have been convenient), I am proposing that now—particularly with the volume of deliberation at the ILA, and ILC level, at international fora, and the emerging case law that have climate change buried in there or explicitly as in Bangladesh-India, and the implications for settled boundaries and unresolved maritime boundaries claims—this should be a wakeup call for Eastern Caribbean states. Both for those that have delimited and those that have not—because both issues can be shaken by the issue of sea level rise. This should be a wakeup call to make the nexus between boundary delimitation, climate change, and sea level rise, and to complete delimitations and related processes. There are still gaps. For those who have delimited, they are still not optimally utilizing the

\textsuperscript{44} Bangl. v. India, PCA Case Repository 2010-16, ¶ 399.
\textsuperscript{45} Continental Shelf (Libya v. Malta), Judgment, 1985 I.C.J. 13, ¶ 48 (June 3).
\textsuperscript{46} Case Concerning Maritime Delimitation in the Area Between Greenland and Jan Mayen (Den. v. Nor.), Judgement, 1993 I.C.J. 38, ¶ 58 (June 14).
\textsuperscript{48} Id. ¶ 4.
space that they have and there are still challenges in negotiations and
the legal and the technical outputs that are required—geospatial data
collection is not cheap—all require resourcing and will require
development partner support. But they are bright spots. Boundary
treaty-making in the region is founded on a strong body of regional
cooperation and coordination, both at the policy level and at the
institutional level in both regions. And there is a strong ethos for
using peaceful negotiation to settle boundary claims.

In any event, and I will close here, that for both the Eastern
Caribbean and Pacific region, boundary delimitation contributes to
greater understanding of international law, Law of the Sea principles,
respect for and adherence to international law, and international
norms. I will leave it there for the time being.

Thank you, Mr. Moderator.

49. See generally Abdullah al Hassan et al., Is the Whole Greater than the Sum
of its Parts? Strengthening Caribbean Regional Integration, IMF WP/20/8, ¶ 48
(2019) (focusing on the strong intergovernmental elements, but also noting the need
to move further into supranational cooperation).

50. See Andreas Østhagen, Maritime Boundary Disputes: What Are They and
Why Do They Matter?, 120 MARINE POL’Y 1, 5 (2020) (“Consequently, more than
90% of maritime boundaries have been settled through bilateral negotiations . . .
where states are free to choose whichever approach they prefer when delineating
maritime space. However, studies show that although states choose bilateral
negotiations to avoid the shackles of international adjudication/arbitration, they still
lean on, and mostly adhere to, the legal principles as set out by international court
rulings.”).