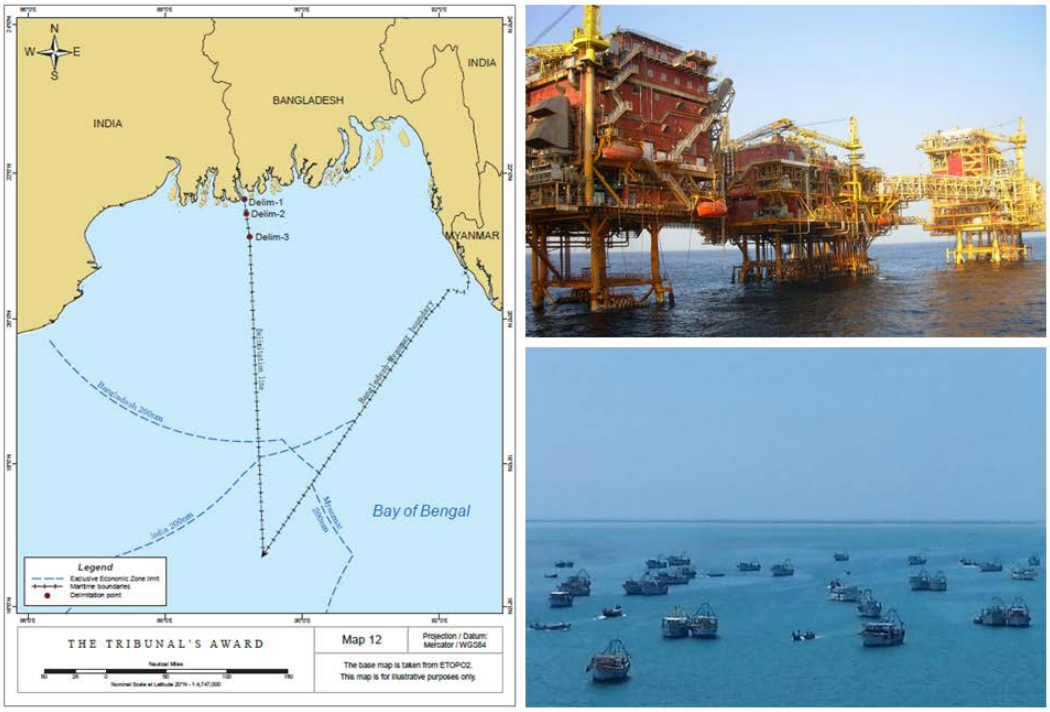
Bangladesh v. India: A Positive Step Forward in Public Order of the Seas

Mark E. Rosen, JD, LLM, and Douglas Jackson

September 2017



CNA
ANALYSIS & SOLUTIONS

CNA's Occasional Paper series is published by CNA, but the opinions expressed are those of the author(s) and do not necessarily reflect the views of CNA or the Department of the Navy.

Distribution

DISTRIBUTION STATEMENT A. Approved for public release: distribution unlimited. PUBLIC RELEASE. 9/5/2017

Other requests for this document shall be referred to CNA Document Center at inquiries@cna.org.

Photography Credit: Composite by CNA.

Left: *Bay of Bengal Mar. Boundary Arbitration (Bangl. v. India)*, (Perm. Ct. Arb.2014), p. 163, http://www.pcacases.com/web/sendAttach/383.

Top Right: Nandu Chitnis, "ONGC Oil and Gas Processing Platform," 2009, https://commons.wikimedia.org/wiki/File:ONGC_Oil_Platform.jpg (Wikimedia Commons).

Bottom Right: Suresh Babunair, "Fishing Trawlers at Rameshwaram, Bay of Bengal," 2014 http://www.panoramio.com/photo/105142297 (Wikimedia Commons).

Approved by: **September 2017**

Ken E. Gause, Director
International Affairs Group
Center for Strategic Studies

This work was performed under Federal Government Contract No. N00014-16-D-5003.

Abstract

In the last five years, two international arbitrations have resolved decades-old maritime boundary disputes in the Bay of Bengal. The first, between Bangladesh and Myanmar, was resolved in March 2012 by the International Tribunal for the Law of the Sea (ITLOS). The second, between Bangladesh and India, was resolved in 2014 by a tribunal of the Permanent Court of Arbitration (PCA) in The Hague. An earlier CNA study analyzed the *Bangladesh v. Myanmar* case and its implications for future maritime disputes. This study follows that up with an overview of the *Bangladesh v. Indi*a case history, a legal assessment of the ruling, and an analysis of the implications of the ruling for India-Bangladesh bilateral relations, maritime disputes in the South China Sea and elsewhere, and for U.S. oceans policy.

This page intentionally left blank.

Executive Summary

In 2014, a tribunal of the Permanent Court of Arbitration (PCA) in The Hague, Netherlands, delivered its decision resolving a decades-old dispute between India and Bangladesh, "regarding the delimitation of the maritime boundary between them in the territorial sea, the exclusive economic zone and the continental shelf within and beyond 200 nm in the Bay of Bengal."[1] Even though this decision is not new, it is appropriate to make a detailed examination of this case in light of a significant amount of litigation in the boundary dispute arena; most notably, the arbitration decision involving China and the Philippines that was decided in July 2016.

Background

The dispute dates back to the partition of India in 1947, when the Bengal Boundary Commission first established the border between India and Bangladesh (then East Pakistan). In the early 1970s, a feature (low tide elevation) emerged in the mouth of the river separating the two countries (called New Moore by India and South Talpatty by Bangladesh), which led to competing territorial claims and contributed to the continuation of tensions over the maritime boundary. Growing interest in oil and gas reserves in the Bay of Bengal heightened the stakes for resolving maritime boundary disputes between Bangladesh and its neighbors. These stakes were underscored in 2006, when India included over 15,000 square kilometers of ocean territory claimed by Bangladesh in oil and gas blocks it had put up for bid.

Tensions ratcheted up further in 2008 following separate incidents a month apart. In November, two ships from Myanmar's navy accompanied four survey ships from Korean company Daewoo into disputed waters, leading Bangladesh to dispatch three naval vessels to the area to halt exploration and defend its sovereignty. In December, Bangladesh's navy again responded when an Indian survey ship, at the time reportedly accompanied by two Indian naval vessels, also entered disputed waters. Bangladesh initiated arbitration proceedings under the United Nations Convention on the Law of the Sea (UNCLOS) against each country in 2009.

[1] *Bay of Bengal Mar. Boundary Arbitration (Bangl. v. India)*, (Perm. Ct. Arb.2014), Paragraph 56, https://pcacases.com/web/sendAttach/383.

Assessment

Contrary to the view by many observers that India "lost" the case in The Hague, the result was quite equitable; each side was able to claim victories and has accepted the ruling. The Award provided Bangladesh with additional territory, but India retained a greater proportion of EEZ than Bangladesh relative to the ratio of their relevant coastlines, a standard measure of whether the delimitation of a maritime boundary is equitable. Although the tribunal rejected India's argument that the low-tide elevation that sparked the dispute should be a base point in calculating the maritime boundary, the tribunal awarded to India the area containing it, which may also contain oil and gas deposits. The tribunal rejected Bangladesh's argument that the impact of climate change on its coastline constituted a "special circumstance" to deviate from the standard equidistance method of delimiting territorial seas, thereby avoiding the creation of a precedent or the opening up of past decisions to appeal.

Implications of the Ruling

With an eye toward future implications of the arbitration, two aspects of the ruling could lead to other disputes. First, while the tribunal verbally rejected Bangladesh's argument to use the angle-bisector method of delimitation of territorial seas, it ultimately favored it in practice over the equidistance method that it said it was officially upholding.[2] In other words, the final boundary award more closely resembles the proposed boundary produced by using the angle-bisector method of delimitation. The tribunal's failure to "show its math" in this regard could underscore the concerns of countries like China that are skeptical of The United Nations Convention on the Law of the Sea (UNCLOS) and its associated dispute

[2] Central to the arbitration were two methods of delimiting a maritime boundary: the angle-bisector method (preferred by Bangladesh) and the equidistance method (preferred by India and adopted by the tribunal). The angle-bisector method of delimitation "generalizes irregular coastal features" by creating a "linear approximation of coastlines." The bisector is "the line formed by bisecting the angle created by the linear approximations of coastlines." In this case, it would have resulted in a 180-degree north-south line extending from the land boundary in the middle of the Haribhanga River between India and Bangladesh. Explanation of the angle-bisector drawn from: Coalter G. Lathrop, "Territorial and Maritime Dispute Between Nicaragua and Honduras in the Caribbean Sea," *American Journal of International Law* Volume 102 (2008), accessed Aug. 17, 2017, http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=2553&context=faculty_scholarship . The equidistance method involves the use of a protractor that is placed at pairs of base points along the coastlines of each country, equally distanced from the coastal boundary and then used to draw an arc in the water. The intersections of these arc pairs result in a line that closely resembles the contours of the coastline.

settlement bodies. Second, the ruling also created "gray areas" in which one state holds rights to an EEZ (i.e., rights associated with the water column, which is the water from the surface to the seabed) and another holds rights to an extended continental shelf (i.e., rights associated with the seabed). This aspect of the ruling calls into question one of the main purposes of UNCLOS, which is to settle EEZ and continental shelf boundaries with certainty and finality. The creation of areas in which sovereignty is not uniform opens up the possibility of future legal and practical issues in the development of resources in this area.

Despite these issues, the ruling has been successful in the big picture. India and Bangladesh have accepted the ruling and viewed the decision as an opportunity to move bilateral relations forward. Indeed, clarity of maritime boundaries in the Bay of Bengal—gray areas notwithstanding—will further the development of resources by both countries, could lead to greater cooperation in maritime security, and will improve law enforcement at a time of growing transnational challenges in the Bay of Bengal. The ruling benefits all by reaffirming a rules-based order at sea, demonstrating that a smaller country can have its day in court against a much larger neighbor, and signaling that outcomes under UNCLOS are ultimately fair. A winner-take-all outcome could have disincentivized politicians in other countries from bringing disputes to arbitration under the UNCLOS system. At the end of the day, a case that yields an equitable result helps to reduce politicians' risks in resolving maritime boundary disputes through arbitration.

This page intentionally left blank.

Contents

Introduction **1**

History of the Case **3**

Overview of the Ruling **7**

Delimitation of the Territorial Sea, EEZ and Continental Shelf 7
The Issue of Gray Areas 14

Legal Assessments **18**

Outcome of the Ruling 18
Effects of Climate Change, Maritime Boundaries and Ad Hoc Agreements 21
Issues of Concern 23
Gray Areas 23
Sparse Legal Analysis behind Adoption of the Final Boundary 26
The Application of Different Delimitation Standards 29

Implications **31**

India and Bangladesh 31
Diplomatic Relations 31
Political and Economic Impacts 33
Oil & Gas Exploration and Development 34
Maritime Security 36
The South China Sea 37
Other Maritime Disputes 39
U.S. Oceans Policy 40

Conclusion **42**

Appendix: A Detailed Explanation of the Ruling **45**

Delimitation of the Territorial Sea 48
Delimitation of Areas beyond the Territorial Sea 53
The Resulting Gray Area 63

This page intentionally left blank.

List of Figures

Figure 1. Map of the Bay of Bengal 4
Figure 2. Extract of the Estuary Area from the Original Radcliffe Award Map (left) and British Admiralty Chart 859 Printed in 1931 (right) 8
Figure 3. Bangladesh's Proposed Application of the Angle-Bisector Method of Delimitation 9
Figure 4. The Tribunal's Provisional Equidistance Line Resulting from the Equidistance Method of Delimitation 11
Figure 5. Cut-Off of Bangladesh's Seaward Projection Resulting from the Provisional Equidistance Line 12
Figure 6. Adjustment of the Provisional Equidistance Line 13
Figure 7. Gray Areas Between India, Bangladesh and Myanmar 15
Figure 8. UNCLOS Maritime Entitlements 17
Figure 9. Comparison of the Tribunal's Boundary to the Boundary Produced by the Method Proposed by Bangladesh and Rejected by the Tribunal 27
Figure 10. Map Illustrating Dr. P.S. Rao's Dissenting Opinion 28
Figure 11. Extract of the Estuary Area from the Original Radcliffe Award Map (left) and British Admiralty Chart 859 Printed in 1931 (right) 47
Figure 12. Bangladesh's Boundary Proposal in the Continental Shelf Beyond 200 NM 48
Figure 13. Provisional Equidistance Line and Gray Areas 50
Figure 14. Cut-Off of Bangladesh's Bengal Delta Coast 54
Figure 15. Cut-Off of Bangladesh's West-Facing Coast 55
Figure 16. Projections from Coasts 56
Figure 17. The Angle-Bisector Method 58
Figure 18. India's Provisional Equidistance Line 60
Figure 19. Adjustment of the Provisional Equidistance Line 62
Figure 20. Gray Areas Between India, Bangladesh and Myanmar 64
Figure 21. UNCLOS Maritime Entitlements 65

This page intentionally left blank.

List of Tables

Table 1. Comparison of Ratio of EEZ Resulting from Different Methods of Delimitation to the Ratio of the Relevant Coastlines 19
Table 2. "Winners" of Key Aspects of the Ruling 20

This page intentionally left blank.

Glossary

CLCS	Commission on the Limits of the Continental Shelf
EEZ	Exclusive Economic Zone
ICJ	International Court of Justice
ITLOS	International Tribunal for the Law of the Seas
NM	Nautical Miles (abbreviated as lower case “nm”)
PCA	Permanent Court of Arbitration
UNCLOS	The 1982 United Nations Convention on the Law of the Seas
USGS	United States Geological Survey

This page intentionally left blank.

Introduction

On July 7, 2014, the Permanent Court of Arbitration (PCA) in The Hague, Netherlands, delivered its decision resolving the India-Bangladesh maritime boundary dispute.[3] The dispute, aspects of which dated back to the partition of India in 1947 and to competing claims to a new low-tide elevation in the 1970s, had taken on greater resonance in recent years as countries in the region have sought to develop oil and gas resources in the Bay of Bengal to satisfy growing energy demand in South Asia. The arbitration followed years of failed diplomatic negotiations that ultimately led to naval tensions arising from the surveying of oil-and-gas exploration blocks in disputed waters in 2008. In 2009, Bangladesh initiated arbitration proceedings against India and Myanmar. The decision in the *Bangladesh v. India* case was a logical follow-on to a March 2012 judgment delineating the adjacent Myanmar-Bangladesh maritime boundary,[4] which made it possible for the PCA to quickly demarcate the adjacent boundary between Bangladesh and India. Because Bangladesh reportedly was awarded 80 percent of the territory under dispute (a somewhat misleading figure), some observers have concluded that India "lost" the case.[5] This is an

[3] *Bay of Bengal Mar. Boundary Arbitration (Bangl. v. India)*, (Perm. Ct. Arb.2014), Paragraph 56, accessed Aug. 17, 2017, https://pcacases.com/web/sendAttach/383 (Hereinafter *Bangladesh v. India* or "the Award" depending on context).

[4] This study is a follow-up to an earlier CNA study analyzing the arbitration between Bangladesh and Myanmar. Mark E. Rosen, JD, LLM, *Myanmar v. Bangladesh: The Implications of the Case for the Bay of Bengal and Elsewhere*, CNA, Apr. 2013, accessed Aug. 17, 2017, https://www.cna.org/CNA_files/PDF/CPP-2013-U-004603-Final.pdf. It is also part of CNA's growing body of work providing analysis of legal issues in the Indian Ocean. Mark Rosen, JD, LLM, and Douglas Jackson, *The U.S.-India Defense Relationship: Putting the Foundational Agreements in Perspective*, CNA, February 2017, accessed August 17, 2017, https://www.cna.org/CNA_files/PDF/DRM-2016-U-013926-Final2.pdf.

[5] For example, see: Ruma Paul, "U.N. tribunal rules for Bangladesh in sea border dispute with India," *Reuters*, Jul. 8, 2014, accessed Aug. 17, 2017, http://uk.reuters.com/article/uk-bangladesh-india-seaborder-idUKKBN0FD15N20140708. Haroon Habib, "Bangladesh wins maritime dispute with India," *The Hindu*, Jul. 9, 2014, accessed Aug. 17, 2017, http://www.thehindu.com/news/national/bangladesh-wins-maritime-dispute-with-india/article6191797.ece. Reporting in the *Daily Star* (Bangladesh) was more subdued, but stated that the ruling "went largely in favor of Bangladesh." Although it quoted the foreign minister as declaring the ruling a victory for both countries, it also referenced the secretary of the maritime affairs unit of the foreign ministry as declaring that Bangladesh "won." "Cheers,

oversimplification of the ruling, its outcomes, and its implications, which will be analyzed in this study.

Even though the companion case, *Bangladesh v Myanmar,* has paved the way for the development of offshore resources and has been accepted by both countries,[6] some in the U.S. policy and legal community contend that sensitive disputes are not well-suited to mandatory dispute-settlement procedures.[7] These critics of arbitration will cite the recent arbitration case brought by the Philippines against China in the South China Sea.

The purpose of this study is to examine whether the *Bangladesh v. India* PCA decision is, from legal, policy, and economic perspectives, a positive step forward in resolving a longstanding dispute between those two countries. We will also examine whether the decision has further advanced the state of international boundary delimitation law and draw some conclusions about its implications for future maritime disputes.

Bangladesh," *Daily Star*, Jul. 9, 2014, accessed Aug. 17, 2017, http://www.thedailystar.net/cheers-bangladesh-32496. For an explanation of why the "80 percent" figure is somewhat misleading, see the section of this paper entitled, "Outcome of the Ruling."

[6] Mark E. Rosen, JD, LLM, *Using International Law to Defuse Current Controversies in the South and East China Seas*, CNA, Feb. 2015, accessed Aug. 17, 2017, http://www.dtic.mil/get-tr-doc/pdf?AD=ADA615709.

[7] Julian Ku, "The Philippines' Massive Lawfare Blunder in the South China Sea," *National Interest*, Dec. 11, 2014, accessed Aug. 17, 2017, http://nationalinterest.org/feature/the-philippines-massive-lawfare-blunder-the-south-china-sea-11837. Ku argued in 2014 that cases of voluntary arbitration (such as *Bangladesh v. India*) were more likely to succeed than cases of involuntary arbitration (*Philippines v. China*) and predicted that the Philippines' "litigation strategy" would backfire, even if it won the arbitration. Since the ruling in 2016, China has lashed out against a number of states in the region, including the Philippines and Japan, because of its stinging defeat. Mark E. Rosen, "China's Reactions to the Arbitration Ruling Will Lead It Into Battles It Won't Win, Part I," *CIMSEC*, Sept. 6, 2016, accessed Aug. 17, 2017, http://cimsec.org/chinas-reactions-arbitration-ruling-will-lead-battles-wont-win-part/27598.

History of the Case

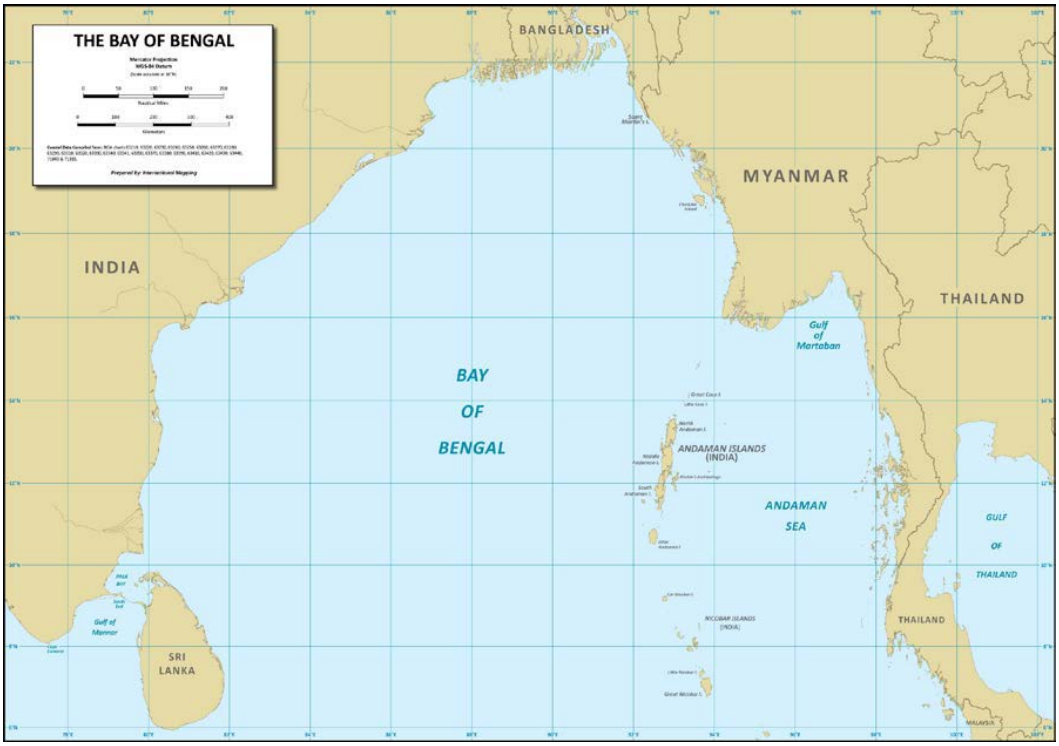
The origin of the dispute dates back to the partition of India, when the boundary between India and Bangladesh (then East Pakistan) was first established by the Bengal Boundary Commission chaired by Sir Cyril Radcliffe.[8] In the early 1970s, the emergence of a sandbar —called New Moore Island by India and South Talpatty Island by Bangladesh—in the mouth of the river separating the two countries led to competing territorial claims and contributed to the continuation of tensions over the maritime boundary.

Under UNCLOS, states are entitled to an exclusive economic zone (EEZ) and continental shelf projection from the low watermark of the coast. Under normal circumstances, these entitlements extend to 200 nautical miles (nm). The EEZ regime affects a coastal state's rights in the resources of the water column, such as fishing. The continental shelf entitlement extends to seabed and sub-seabed resources, such as minerals and hydrocarbons. These zones are normally coterminous. .

The Bay of Bengal is situated in the northeastern Indian Ocean, covering an area of approximately 2.2 million square kilometers, and is bordered by India, Bangladesh, Myanmar, and Sri Lanka. The maritime area delimited in the present case lies in the northern part of the Bay. There were multiple rounds of bilateral negotiations to agree upon a territorial boundary delimitation between 1974 and 2009. They all failed.

[8] The Award, Paragraphs 50 and 51.

Figure 1. Map of the Bay of Bengal



Source: The Award, p. 13. The map was submitted as Figure 2.1 in Bangladesh's Memorial submission.

The development of offshore drilling technology over the years also heightened the stakes for resolving disputed maritime boundaries in the Bay of Bengal, particularly as the demand for energy has grown across the region.[9] These stakes were

[9] In his 2010 analysis of the Bangladesh-Myanmar maritime boundary dispute, Jared Bissinger cites several factors as catalysts of the reemergence of the dispute in recent years, including growing energy demand in Bangladesh, Myanmar, India and China, and advances in drilling technology that made further oil and gas exploration of the Bay of Bengal possible. As the disputes are related, it stands to reason these factors apply as well to the Bangladesh-India dispute. Jared Bissinger, "The Maritime Boundary Dispute between Bangladesh and Myanmar: Motivations, Potential Solutions, and Implications," *Asia Policy*, No 10 (Jul. 2010): 103-142. See pages 105 and 111-117.

underscored in 2006 when India included over 15,000 square kilometers of ocean territory claimed by Bangladesh in oil and gas blocks it was auctioning.[10]

Tensions in Bangladesh ratcheted up further in 2008, as a result of two separate incidents with its neighbors. First, survey ships accompanied by vessels of the Myanmar navy crossed over the eastern border of waters claimed by Bangladesh—in the disputed area that Myanmar also claimed. Weeks later, at the western edge of Bangladesh's territorial sea, another survey ship entered the area disputed by India and Bangladesh, escorted by Indian naval vessels, according to initial reports. In both cases, Bangladesh dispatched its own warships to the area to monitor activity, encourage the ships to disperse, and threaten to defend its sovereignty.[11]

Hence, in October 2009 Bangladesh instituted arbitration proceedings with Myanmar and India pursuant to Annex VII of UNCLOS[12] because the parties were unable to delimit the maritime boundaries of their territorial seas, exclusive economic zones and continental shelves.

Myanmar separately proposed that its maritime boundary dispute be submitted to the International Tribunal for the Law of the Sea (ITLOS). Bangladesh acquiesced, and the matter between both countries moved to trial and decision by the tribunal at its seat in Hamburg, Germany, in 2012.[13]

---

[10] Sharier Khan, "India's exploration bid 'overlaps' block 21 in Bay Bangladesh yet to act," *Daily Star*, May 12, 2006, accessed Aug. 27, 2017, http://archive.thedailystar.net/2006/05/12/d6051201033.htm.

[11] For the Myanmar-Bangladesh incident, see: Bissinger, "Maritime Boundary Dispute," 109. For the India-Bangladesh incident, see: "Bangladesh to protest India's oil exploration in Bay of Bengal," *IANS*, Dec. 27, 2008, accessed Aug. 17, 2017, http://indiatoday.intoday.in/story/Bangladesh+to+protest+Indias+oil+exploration+in+Bay+of+Bengal/1/23711.html. "Indian ships refuse to back off despite navy protests," *BDNews24.com*, Dec. 26, 2008, accessed Aug. 17, 2017, http://bdnews24.com/bangladesh/2008/12/26/indian-ships-refuse-to-back-off-despite-navy-protests. Anisur Rahman, "Bangladesh sends warships against 'intrusion' by Indian vessels," *Rediff*, Dec. 26, 2008, accessed Aug. 17, 2017, http://www.rediff.com/news/2008/dec/26bangladesh-sends-warships-against-intrusion-by-indian-vessels.htm.

[12] Under Article of 298 of UNCLOS, arbitration is the default method of resolving disputes if the two parties have selected a different dispute settlement process for matters within the jurisdictional competence of an UNCLOS dispute settlement body.

[13] This was the first time that such a boundary dispute has ever been adjudicated by ITLOS. *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangl./Myan.),* Case No. 16, Judgment of Mar. 14, 2012 , 12 ITLOS Rep. 4, accessed Aug. 17, 2017, https://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/C16_Judgment_14_03_2012_rev.pdf (Hereinafter *Bangladesh v Myanmar*).

The second action, against India, remained with the PCA. Each party appointed one member of the arbitral tribunal. Because they could not agree on the identity of the other arbitral members, the president of ITLOS appointed three additional members to the arbitral tribunal in February of 2010. Interestingly, three of the five members of the arbitral panel (Wolfram, Cot, and Mensah) were all members of the arbitral panel in the *South China Sea Arbitration* between the Philippines and China.

Overview of the Ruling

This section provides a brief overview of the ruling to enable an understanding of the legal analysis of notable components of the ruling and the broader implications of the case. A more nuanced overview of the case can be found in the appendix, which includes several maps that illustrate the methods used to determine the maritime boundary, and explains related issues.

Delimitation of the Territorial Sea, EEZ and Continental Shelf

The process for delimitation of the territorial sea, established in the 2001 International Court of Justice case *Qatar v. Bahrain,*[14] consists of three steps. First, the tribunal draws a provisional equidistance line. Second, the tribunal considers if there is historic title, i.e., an existing agreement between the parties regarding the boundary, or long-standing acquiescence to a boundary, evident, for example, in customs and usage. Third, the tribunal considers whether there are special circumstances present. Such special circumstances might include the concavity of a coastline, traditional fishing areas, or, as argued in *Bangladesh v. India*, climate change.

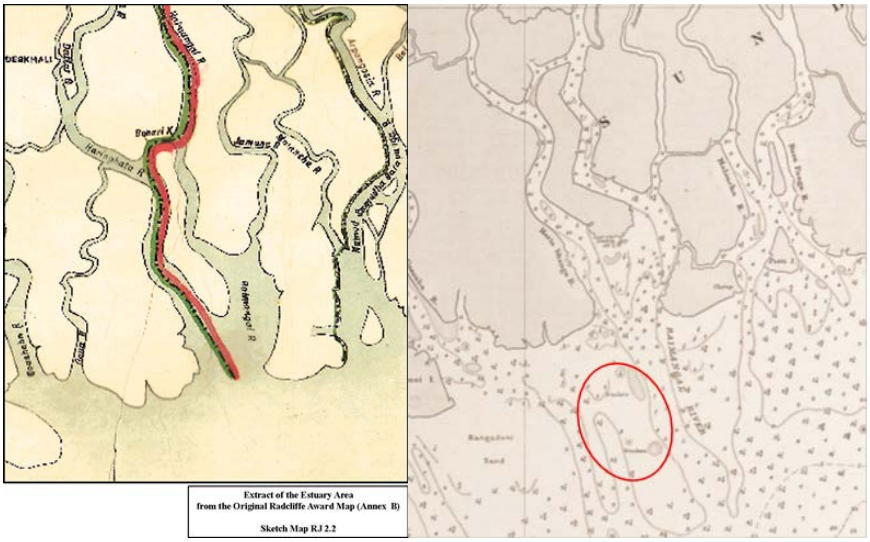
The process for delimiting the EEZ and continental shelf, established in the ICJ case *Romania v. Ukraine*, follows a similar three-step process. First, the tribunal draws a provisional equidistance line based on "methods that are geometrically objective." Second, the tribunal makes adjustments to reach an equitable solution, if needed, taking into account special circumstances such as those described above. Third, the tribunal verifies that the provisional equidistance line (adjusted or not) does not yield an inequitable award of EEZ and continental shelf. The test for this is to ensure

[14] 2001 ICJ Rep, paras. 176, 280, 281. A similar process is used in delimitation of the EEZ and continental shelf, although the ICJ case law employs more "flexible" language in applying this process in order to achieve an "equitable solution." The *Romania v. Ukraine,* 2009 ICJ Rep., paragraphs 116-122 discuss the three-step process.

there is no "marked disparity" between the ratio of the relevant coastlines and the ratio of the EEZ and continental shelf awarded.[15]

The Bengal Boundary Commission, led by Radcliffe, established the land boundary in the "mid-stream of the main channel" formed by the Haribhanga River, which separates modern-day India and Bangladesh.

Figure 2. Extract of the Estuary Area from the Original Radcliffe Award Map (left) and British Admiralty Chart 859 Printed in 1931 (right)



Source: The Award, p. 32 and 36. The Radcliffe map (left) was submitted by India in its counter-memorial in the case, and was referenced in the Award. Chart 859 (right) depicts the Haribhanga main river channel and the location of the feature known as South Talpatty/New Moore Island when it later emerged (marked by the notation "breakers," circled by CNA).

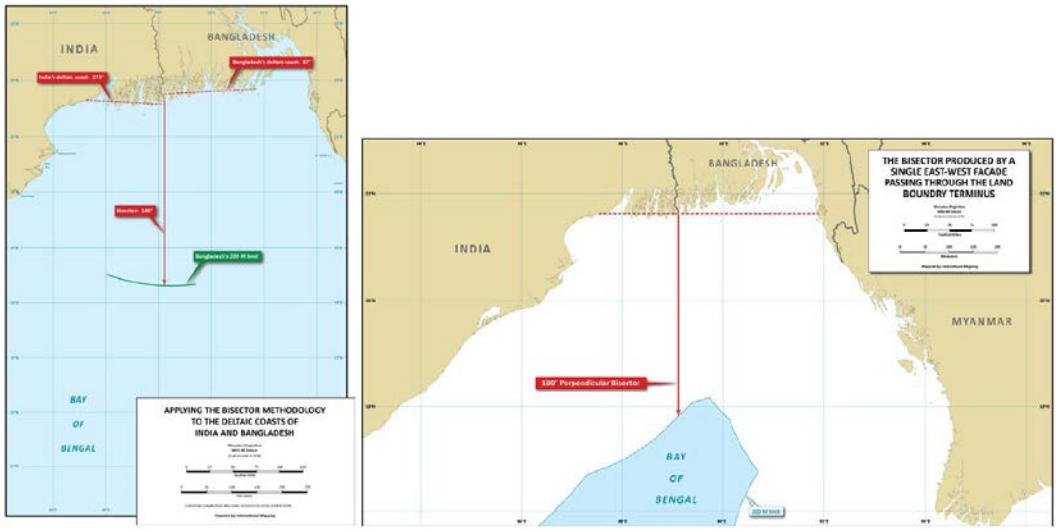
Even though fixing the near land boundary has little effect on the delimitation of the territorial seas and beyond, India pushed hard to have the tribunal interpret the Radcliffe boundary materials in such a way as to encompass the small, uninhabited sandbar immediately offshore, known as South Talpatty/New Moore Island. To discern the actual mid-stream location of the Haribhanga River's 1947 shipping channel, the tribunal relied upon a nautical chart prepared by the British Admiralty (BA 859) in 1931 that depicted that the shipping channel was located to the east of South Talpatty/New Moore Island. The tribunal agreed with India that the boundary generally continued offshore in a direction that would keep the boundary line east of the sandbar and followed this course at the mouth of the River. As a result, India was

[15] *Romania v. Ukraine*, 2009 ICJ Rep., paras. 116-122.

awarded South Talpatty Island—an uninhabited low-tide elevation that may have some associated oil and gas—though the tribunal took an unusual legal path to reach that conclusion.

The tribunal next fixed base points for delimitation of the territorial sea and beyond. Bangladesh proposed that the tribunal adopt the angle-bisector method of delimitation,[16] given its coastal instability and the concavity of the Bay of Bengal. This method would result in a 180-degree, due north-south boundary of the territorial sea.

Figure 3. Bangladesh's Proposed Application of the Angle-Bisector Method of Delimitation



Source: The Award, p. 125-126. Bangladesh proposed two applications of the angle-bisector method of delimitation based on previous cases. Each involves a north-south line (180 degrees) from the terminus of the land boundary.

Ultimately, the court rejected this argument. Under Article 15 of UNCLOS, absent an agreement between the parties, an equidistance line is the proper method of

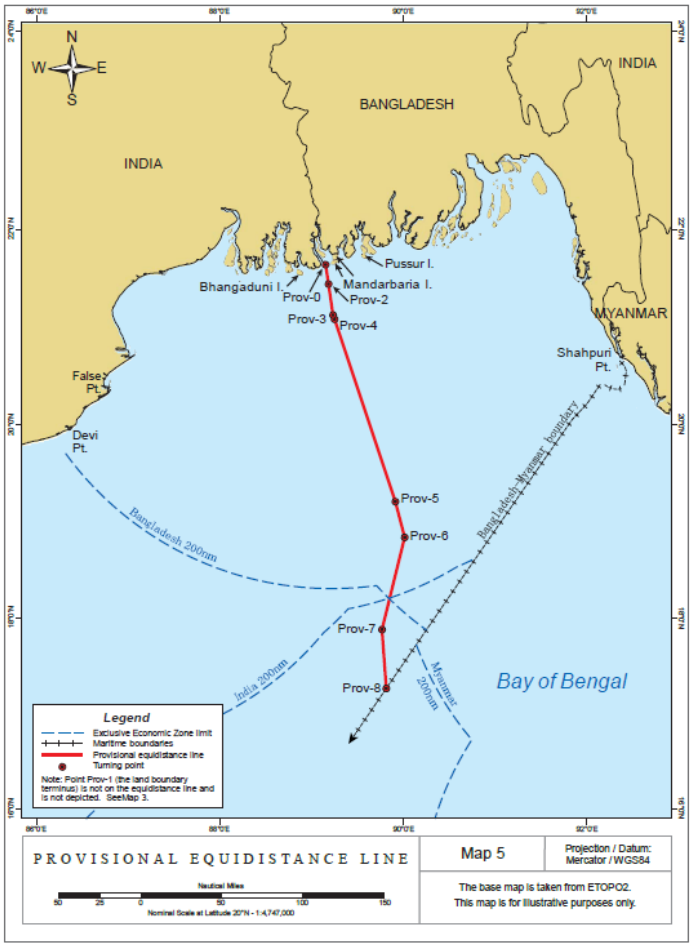
[16] The angle-bisector method of delimitation "generalizes irregular coastal features" by creating a "linear approximation of coastlines." The bisector is "the line formed by bisecting the angle created by the linear approximations of coastlines." In this case, it would have resulted in a 180-degree north-south line extending from the land boundary in the middle of the Haribhanga River between India and Bangladesh. Explanation of the angle-bisector drawn from: Coalter G. Lathrop, "Territorial and Maritime Dispute Between Nicaragua and Honduras in the Caribbean Sea," *American Journal of International Law* Volume 102, (2008): 1-7, accessed Aug. 17, 2017, http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=2553&context=faculty_scholarship

delimiting adjacent territorial seas.[17] Those calculations are to be taken from pairs of base points equidistant from the coastline boundary, which are then projected via a protractor seaward to the point where the arcs intersect. The tribunal also held that the base points for the calculations had to be located on physical land features of each country. More precisely, the tribunal did, however, side with Bangladesh that features chosen as base points need to be high-tide elevations at least, and need to be geographically associated with the coast—not offshore (this took South Talpatty/New Moore Island and similar features out of the equation in the delimitation). The tribunal refused to adjust the location of the provisional line based on various arguments by Bangladesh that their concave coastline, climate change or fishing patterns justified a deviation from the equidistance method. Rhetorically, at least, the tribunal closely adhered to the standards contained in relevant case law. So the tribunal established a provisional equidistance line out to the 12 nm limit.

The tribunal repeated the process of drawing a provisional equidistance line to delimit the adjacent 200 nm EEZs of the two countries (Figure 4). In doing that, the tribunal closely adhered verbally to the standards contained in relevant case law and, as was the case with the Territorial Sea, rejected claims that climate change or fishing patterns justified a deviation from the equidistance method. Bangladesh argued that its rapidly eroding coastline (due to climate change) and disproportionate award of sea space to India (relative to the length of the coastline) supported application of an exception to the equidistance method. That argument was also dismissed.

[17] The equidistance method involves the use of a protractor that is placed at pairs of points along the coastlines of each country, equally distanced from the coastal boundary and then used to draw an arc in the water. The intersections of these arc pairs result in a line that closely resembles the contours of the coastline.

Figure 4. The Tribunal's Provisional Equidistance Line Resulting from the Equidistance Method of Delimitation

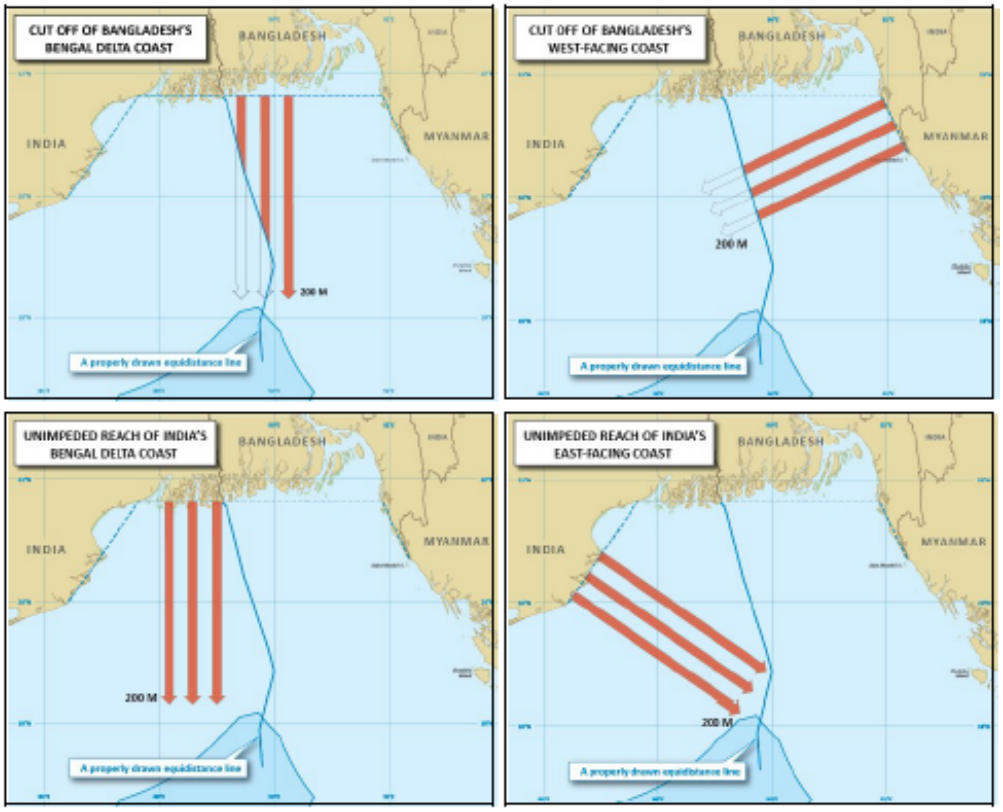


Source: The Award, p. 107. The red line illustrates the tribunal's provisional equidistance line, after considering the provisional equidistance lines proposed by India and Bangladesh. The blue hash marks indicate the claimed limits of the countries' EEZs.

In something of a surprise, however, the tribunal agreed with Bangladesh that the provisional equidistance line, as it extended into Bangladesh's EEZs, resulted in a cut-off of a 200 nm projection into the sea from Bangladesh's main coastlines because the Indian boundary line had the effect, from different aspects, to block egress from Bangladesh's territory to the high seas (Figure 5). In the end, the tribunal said that while the equidistance method is the default method for adjudicating the delimitation of a territorial sea, UNCLOS does not prescribe a black-letter rule when it

comes to the delimitation of an EEZ and continental shelf within 200 nm. The tribunal ruled that since it was not hampered by a specific rule, it would rely upon past jurisprudence to arrive at a solution that produced an "equitable result."[18]

Figure 5. Cut-Off of Bangladesh's Seaward Projection Resulting from the Provisional Equidistance Line



Source: The Award, p. 111. The figure was submitted by Bangladesh to demonstrate that the provisional equidistance line resulted in a "cut-off" of its 200 nm seaward projection.

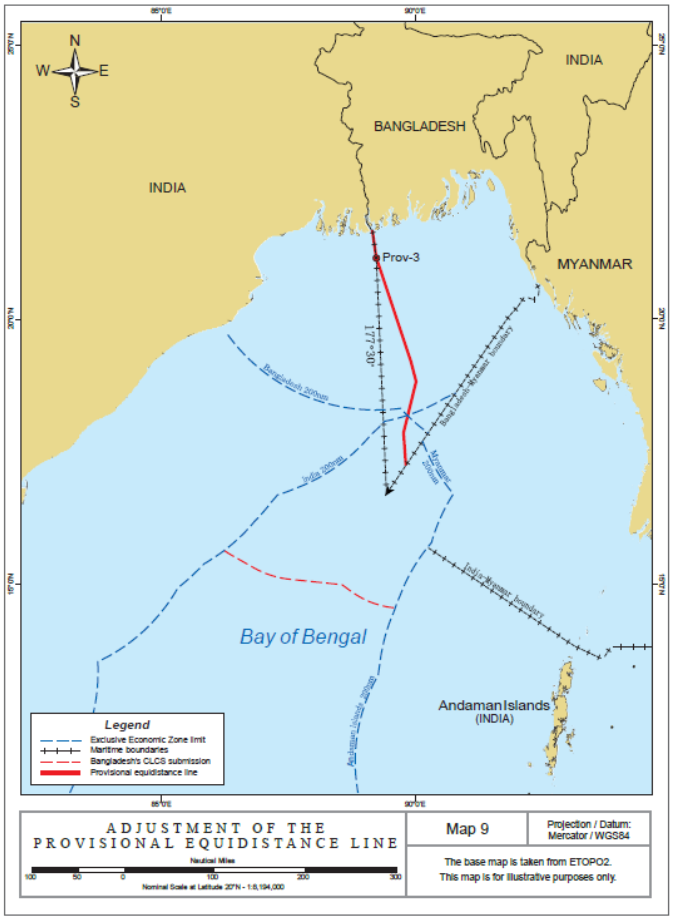
Ultimately, the tribunal decided that it needed to adjust the provisional equidistance line both within 200 nm and beyond, relying upon the approach taken by ITLOS in the *Bangladesh v. Myanmar* case.[19] In doing so, the tribunal sought to ameliorate the effects of the provisional equidistance line cutting off Bangladesh's entitlements to the EEZ, continental shelf, and extended continental shelf. The tribunal ultimately

[18] The Award, Paragraphs 339 and 397.

[19] The Award, Paragraphs 471-472.

adopted a boundary that was nearly a north-south line (177.5 degrees). This line closely resembles the 180-degree north-south line that resulted from the angle-bisector method of delimitation proposed by Bangladesh. Such adoption was interesting because the tribunal had earlier rejected the angle-bisector method as a matter of law.

Figure 6. Adjustment of the Provisional Equidistance Line



Source: The Award, p. 163. In its award of the maritime boundary, the tribunal adjusted the Provisional Equidistance Line (in red) to "ameliorate the negative impact" it would have on Bangladesh's entitlement to the continental shelf, EEZ and continental shelf beyond 200 nm. The tribunal's award of the maritime boundary is a nearly north-south line at 177.5 degrees, represented by the black hash marks. The line closely resembles the 180-degree line proposed by Bangladesh using the angle-bisector method.

The boundary line that the tribunal decided upon has generally been regarded as equitable, but the legal reasoning behind this ruling remains obscure, since the ruling does not provide a detailed explanation of how they came to this decision. However,

a comparison of the ratio of the two countries' coastlines to the ocean areas in dispute both before and after the tribunal made an adjustment in the equidistance line shows marked improvement in the position of Bangladesh. Had the tribunal mechanically applied the equidistance method of delimitation, Bangladesh would have been deprived of considerable sea space and multiple outlets to the high seas. This important adjustment demonstrates that the tribunal was sensitive to these equitable considerations.

The Issue of Gray Areas

The tribunal's ruling created a "gray area," where Bangladesh had a potential entitlement to an extended continental shelf[20] but no EEZ entitlement in the water column above the extended continental shelf. According to UNCLOS, a country's continental shelf is the underwater "natural prolongation of its land territory to the outer edge of the continental margin," before it drops to deep ocean floor. States can have rights to the resources in the seabed or the subsoil of the continental shelf even beyond the edge of an EEZ, subject to certain limitations and technical approval by the Commission on the Limits of the Continental Shelf. However, what is unusual about gray areas is that they are not explicitly sanctioned in UNCLOS and go against the conventional UNCLOS wisdom that one cannot have split sovereignty over an area of EEZ and extended continental shelf because the two zones are supposed to be coterminous.

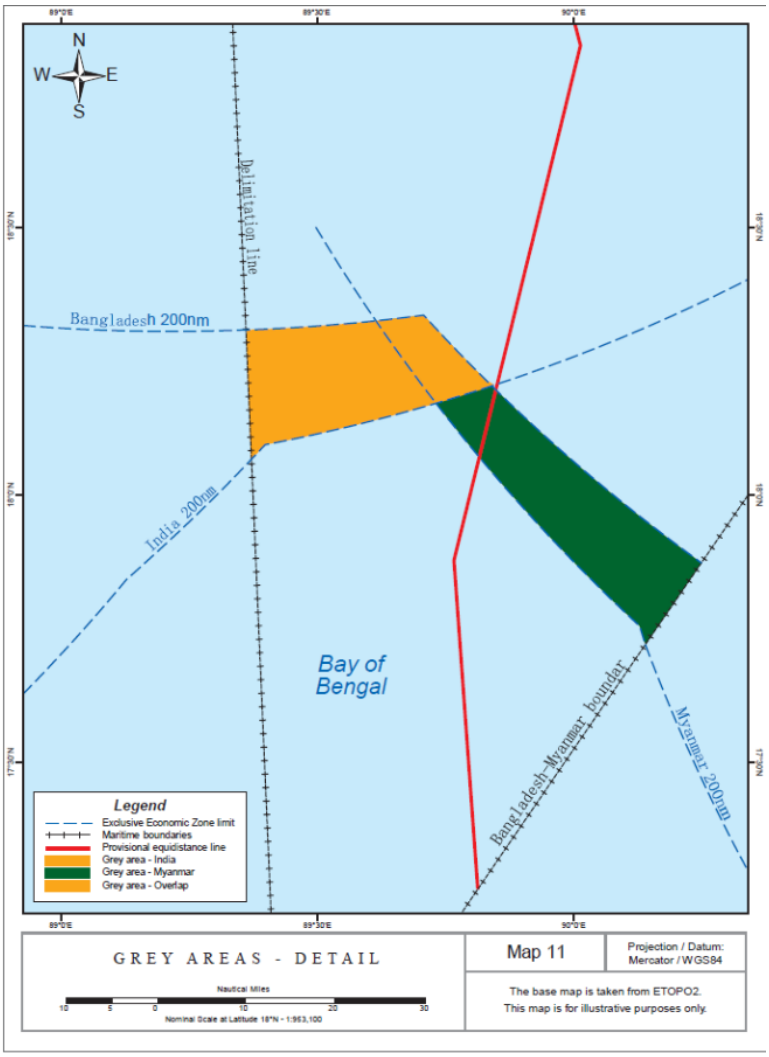
The gray area in this case is the area beyond the 200 nm limit of India's EEZ but within Bangladesh's extended continental shelf entitlement. But even as India controls the water column in this zone for fisheries, Bangladesh could potentially claim the seabed below as part of its extended continental shelf for such purposes as oil and gas development (Figure 7).[21] The single precedent for this finding is the companion *Bangladesh v. Myanmar* case, in which the International Tribunal for the Law of the Sea (ITLOS) held that "Article 76 of the Convention embodies the concept

[20] Even though oil and gas exploration in ocean areas beyond 200 nm is modest, gas hydrates offer a potential resource opportunity for the future, including in areas of extended continental shelf. The International Energy Agency has opined that estimates of methane hydrate deposits are uniformly large. Keith Burnard, "How Resources Become Reserves Tapping into Plenty," *World Energy Agency Market and Security Report* (2014): 16-17, accessed Aug. 17, 2017, https://www.iea.org/media/etp/etp2014/R2Rarticle_IEA_ENERGY_Issue5.pdf.

[21] The Award, Paragraph 503. The Award creates a so-called "gray area" in which the EEZ of India subsumed an extended continental shelf area within Bangladesh's extended continental shelf entitlement. The tribunal did not determine any rights in this area but encouraged the parties to establish a cooperative arrangement.

of a single continental shelf" and that "in accordance with Article 77, paragraphs 1 and 2 of the Convention, the coastal state exercises exclusive sovereign rights over the continental shelf in its entirety without any distinction being made between the shelf within 200 nm and the shelf beyond that limit."[22]

Figure 7. Gray Areas Between India, Bangladesh and Myanmar



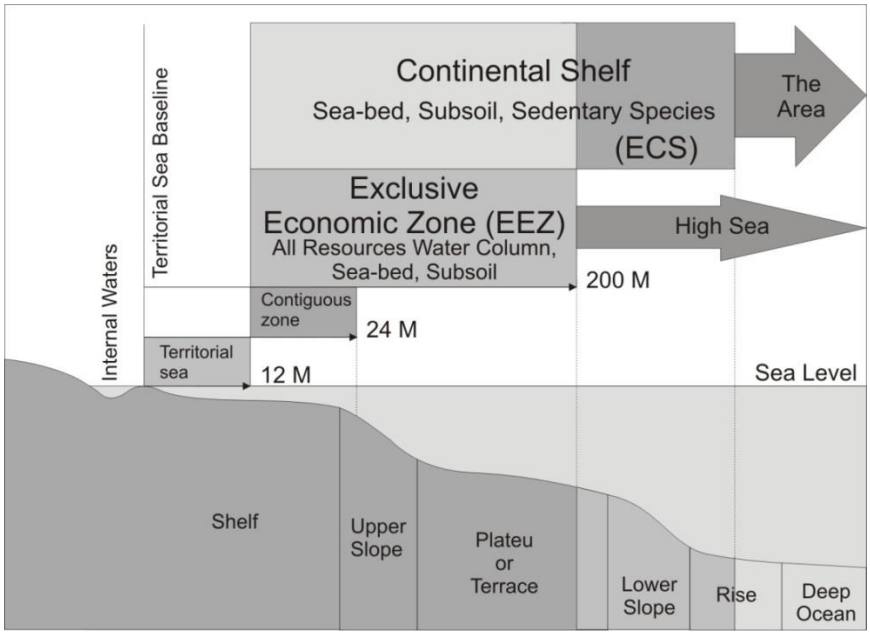
Source: The Award, p.161.

[22] *Bangladesh v. Myanmar*, Paragraph 361.

On the basis of that holding, ITLOS found a gray area between Myanmar and Bangladesh (as depicted by the yellow shaded area "Zone 23" in Figure 7), in which Myanmar enjoyed an area of EEZ that was on top of the continental shelf belonging to Bangladesh. In the case of India and Bangladesh, the tribunal acknowledged that both countries have submitted their extended continental shelf claims to the Commission on the Limits of the Continental Shelf (CLCS) (pursuant to Article 76 and Annex II of UNCLOS) for a legally binding technical assessment of whether their seabeds qualify for extension beyond 200 nm. Yet, the tribunal still went forward and established an extended continental shelf demarcation line. The tribunal held that within the gray area, this boundary only delimited the parties' sovereign rights in respect of the continental shelf, and did not take away from India's rights to the waters immediately above—even though the entitlements are different (Figure 8).[23] Despite the fact that each country would have a legal right to traverse and manage the same ocean space, the tribunal seemed confident that both countries would conclude a cooperative arrangement respecting the management of the fisheries and other interests in the gray area. Time will tell whether such a shared sovereignty arrangement is practical.

[23] Clive Schofield, "The Delimitation of Maritime Boundaries: An Incomplete Mosaic," in *The Ashgate Research Companion to Border Studies*, edited by Doris Wastl-Walter, (Surrey: Ashgate, 2011), 665 and 669.

Figure 8. UNCLOS Maritime Entitlements



Source: Clive Schofield, "Securing the Resources of the Deep: Dividing and Governing the Extended Continental Shelf," *Berkeley Journal of International Law*, 33, 1 (2015): 278, accessed Aug. 17, 2017, http://scholarship.law.berkeley.edu/bjil/vol33/iss1/7/.

Legal Assessments

Although the adjudication of the maritime boundary lines was a mixed bag for the litigants, there were several notable features of the ruling. The following explores these issues in greater detail, including their impact on the litigants and their implications for future maritime boundary disputes.

Outcome of the Ruling

So who "won" the case? Initial reporting concluded that Bangladesh had won, claiming that Bangladesh was awarded 80 percent of the territory under dispute. In truth, the decision was not so clear cut, and assigning victory to one side or another based on the percentage of territory awarded is misleading. Such headlines were an oversimplification of a complex ruling that followed years of arbitration, and somewhat mischaracterized figures from the award.

It is true that Bangladesh was awarded 80 percent of the territory it would have received if the tribunal had used its preferred method of setting the boundary. Bangladesh advocated for the angle-bisector method of delimitation, which would have yielded a north-south 180-degree line. India advocated the equidistance method of delimitation, which yielded a line further east. The court used the method advocated by India to set its own equidistance line, but ultimately adjusted it to a line with a 177-degree angle, closer to the one claimed by Bangladesh. It is the proportion of the areas created by these lines to which reports that Bangladesh was awarded 80 percent of the area under dispute (approximately 19,000 square kilometers out of 25,000 square kilometers) referred.[24] In a sense, the difference

[24] See for example Paul, "U.N. tribunal," and Habib, "Bangladesh wins." These articles cite the fact that Bangladesh was awarded approximately 19,000 square kilometers out of approximately 25,000 square kilometers under dispute (or "four fifths"). Habib cites the foreign minister of Bangladesh as the source. The precise figure cited as the area under dispute (25,602 sq. km) is not found in the Award, but the closest figure relates to the difference in the area of territory Bangladesh would have received using the 180-degree line as compared to the equidistance line. See: "In comparing the degree of relief from the concavity on the India side and on the Myanmar side, Bangladesh finds that the 180-degree line would grant to Bangladesh

between the claim lines could be understood as the "area under dispute," but in fact it was a sliver of the portion of the Bay of Bengal that was part of the arbitration. The tribunal calculated this "relevant area" to be 406,833 square kilometers based on the relevant portions of each country's coastline.[25] Widening the aperture in this way yields a much different picture: rather than a clear victory for Bangladesh, the ruling was actually quite equitable, and technically in India's favor.

The tried and true legal method used to determine whether the award of maritime territory is equitable is to compare the length of the coastline to the relevant EEZ. Using this metric, the ruling was actually in India's favor. The ratio of Bangladesh's coastline to the relevant portion of India's coast on the Bay of Bengal is 1:1.92, but the ratio of EEZ awarded to Bangladesh compared to the EEZ awarded to India is 1:2.81. In other words, despite the tribunal adjusting the equidistance line in a way that significantly favored Bangladesh, India still received a larger EEZ, even in relative terms (the ratio of EEZ compared to the ratio of relevant coastlines).

Table 1. Comparison of Ratio of EEZ Resulting from Different Methods of Delimitation to the Ratio of the Relevant Coastlines

	Bangladesh	India
Ratio of EEZ Resulting from India's Claim Line (i.e., the boundary claimed by India in the arbitration)	1	3.44
Ratio of EEZ Resulting from Bangladesh's Claim Line (i.e., the boundary claimed by Bangladesh in the arbitration)	1	1.52
Ratio of EEZ Resulting from Provisional Equidistance Line (i.e., the boundary initially drawn by the tribunal)	1	3.25
Ratio of EEZ Resulting from Adjusted Provisional Equidistance Line (i.e., the final boundary)	1	2.81
Ratio of Relevant Coastlines	1	1.92

Source: Table created by CNA from data in The Award, Paragraphs 486, 494, and 495.

Another way to assign victory is to evaluate instances in which the tribunal ruled in favor or against each side. By this measure, there was no clear "winner" or "loser" of the case; both sides "won" and "lost" different aspects of the ruling.

25,069 square kilometers beyond the equidistance line, an amount smaller than the 25,654 square kilometers resulting from the adjustment of [the] line in Bangladesh/Myanmar." The Award, Paragraph 432. An appendix to the award, entitled, "Technical Report of the Tribunal's Hydrographer," states that "the adjustment done to the provisional equidistance line increased Bangladesh's maritime area by 19,467 sq. km." The Award, Paragraph 36 of the Appendix. In effect, this would mean that Bangladesh received 80 percent of the territory it was seeking.

[25] The Award, Paragraph 311.

Table 2. "Winners" of Key Aspects of the Ruling

Aspects of the Ruling Favoring India	Aspects of the Ruling Favoring Bangladesh
Tribunal awarded to India the area containing South Talpatty/New Moore Island—the land feature that sparked the dispute—which may contain oil and gas deposits.	Tribunal rejected India's argument that South Talpatty/New Moore Island should be a base point in the calculation of the maritime boundary.
Tribunal awarded territory such that India has a greater proportion of ocean territory than Bangladesh relative to their coastlines.	Tribunal awarded 80 percent of the territory "under dispute" to Bangladesh
Tribunal sided with India on the 12 nm territorial sea delimitation line.	Tribunal altered the base points (at least high tide elevations) resulting in a final 12 nm boundary line further to the west, which favored Bangladesh.
Tribunal rejected Bangladesh's arguments regarding what constitutes "special circumstances" to deviate from the equidistance line method of delimitation (including, for example, the effect of climate change on its coastline), which favored India.	
Tribunal ruled that the concavity of a coast and resulting cut-off of maritime access did not constitute a special circumstance to deviate from the equidistance method of delimiting a maritime boundary close to shore, which favored India.	Tribunal agreed with Bangladesh that the cut-off in areas beyond the territorial sea affected outbound navigation and access to traditional fishing areas and maritime egress, and adjusted the provisional equidistance line accordingly.
Tribunal rejected Bangladesh's angle-bisector method of delimitation.	Tribunal favored the angle-bisector method over the equidistance test in practice, adjusting the provisional equidistance line in Bangladesh's favor.

Source: CNA

The fact that the result was equitable enough to be immediately accepted by both sides is a victory for UNCLOS itself. Aspects of the case that may be troublesome to legal scholars will be assessed in the next section. In the bigger picture, the perceived fairness of the result should reduce the risk for politicians who might want to bring future cases to arbitration, even against more powerful neighbors. On September 15, 2015, the Republic of East Timor initiated an action versus Australia regarding a

dispute over the interpretation of the 2002 Timor Sea Agreement.[26] Later, on September 16, 2016, Ukraine initiated an action with the PCA for a dispute that it had with Russia concerning coastal state rights in the Black Sea, Sea of Azov, and the Kerch Strait.[27] While the details of these cases are not yet available on the PCA's docket, it is still encouraging that states with unequal power are continuing to use arbitration as a means of resolving their maritime disputes.

Effects of Climate Change, Maritime Boundaries and Ad Hoc Agreements

The tribunal twice ruled that climate change is not a "special circumstance" that would justify a departure from the normal equidistance method(s) of boundary delimitation, once in relation to the territorial sea and again in relation to EEZ and the continental shelf. There are certainly extensive geographic and climatic facts that indicate Bangladesh will be more adversely affected than most countries[28] by climate change. Largely made up of river delta, the country has one of the most irregular coastlines in the world, and sea level rise has exacerbated the normal river marine erosion[29] that occurs over time. That coastal erosion will also result in a retreat of the coastline.

Had the tribunal moved in the direction of accepting climate change as a "special circumstance," it would have potentially opened up past boundary decisions to future adjustment and created uncertainty in current cases, since the impacts of climate change are still not totally known and are politically debated. The United States is one of the very few countries that have not ratified UNCLOS, and the Heritage Foundation[30] has argued that were the United States to accede to UNCLOS, it

[26] *Arbitration under the Timor Sea Treaty (Timor-Leste v. Australia)*, (Perm. Ct. Arb. 2015), accessed Aug. 17, 2017, https://pca-cpa.org/en/cases/141/.

[27] *Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. the Russian Federation)*, (Perm. Ct. Arb. 2016), accessed, Aug. 17, 2017, https://pca-cpa.org/en/cases/149/.

[28] Standard and Poor's, *Climate Change Is a Global Mega-Trend for Sovereign Risk,* May 15, 2014, Table 1, accessed Aug. 17, 2017, https://www.globalcreditportal.com/ratingsdirect/renderArticle.do?articleId=1318252&SctArtId=236925&from=CM&nsl_code=LIME&sourceObjectId=8606813&sourceRevId=1&fee_ind=N&exp_date=20240514-20:34:43.

[29] Bangladesh submitted evidence that the Bengal Delta is the principal recipient of 'massive quantities of sediment' from the Ganges and Brahmaputra Rivers.

[30] One of the leading opponents to U.S. accession to UNCLOS.

would subject the United States to lawsuits from "virtually every developing nation in the world that claims to have experienced a negative impact from climate change."[31] Heritage's analysis is that it is not far-fetched to envision a compulsory dispute settlement jurisdiction against the United States under the UNCLOS dispute settlement system, because this type of dispute is not expressly excluded in Article 298, and the UNCLOS dispute settlement judgments have been increasingly proactive. Had the tribunal in *Bangladesh v. India* decided to open up the door to adjustment of boundaries based on climate change it would have provided fodder to U.S. opponents of UNCLOS. Further, Heritage's Stephen Groves hypothetically argues that if international courts rendered judgments which, at the core, found fault associated with climate change, those decisions would be enforceable in U.S. courts,[32] because the United States must, in its ratification instruments, specifically recognize the jurisdiction of the UNCLOS dispute settlement mechanisms in its ratification documents. While Groves has good reason to raise this issue, UNCLOS dispute-settlement bodies still lack the ability to issue general injunctions or direct that one sovereign state pay damages to another. It is always possible that the United States could be attacked for its positions on climate change in some other way, including politically. However, our estimate is that use of an UNCLOS dispute settlement mechanism is not a viable legal strategy to attack U.S climate change policies.[33]

In this respect, the decision was important because it established a firewall against future judicial meandering. UNCLOS does not dictate how legal boundaries will change due to natural conditions, but the consensus view among most international law experts is that territorial physical boundaries are "ambulatory" to take into effect the changes in erosion or inundation.[34] Under Article 7(2), if straight baseline

[31] Stephen Groves, "Accession to U.N. Convention on the Law of the Sea Would Expose the U.S. to Baseless Climate Change Lawsuits," *Backgrounder* No. 2660, (Mar. 12, 2012): 1-26, accessed Aug. 17, 2017, http://www.heritage.org/global-politics/report/accession-un-convention-the-law-the-sea-would-expose-the-us-baseless-climate, citing international law professors Michael Faure and Andre Nollkaemper as well as U.S. domestic law (the 1941 *Trail Smelter Arbitration* between the U.S. and Canada). Groves outlines a number of plausible litigation theories that could be used to sue the United States under the dispute settlement processes to pay damages to states to remedy the adverse effects of climate change.

[32] Groves cites *Medillin v. Texas*, 552 U.S. 491 (2008) in which Justice Stevens took an expansive view that various international obligations/treaties are self-implementing in U.S. law. The majority was more circumspect on this point.

[33] Use of a WTO dispute settlement panel is another approach. The theory is that since the U.S. is "avoiding" its international obligations to combat climate change, U.S. trade is being subsidized in the form of an absence of regulation.

[34] Larry Mayer, "The Continental Shelf and Changing Sea Level," (Talk presented at the International Conference on Maritime Boundary Diplomacy, Bali, Indonesia, Jun. 24, 2011), accessed Aug. 23, 2017, http://www.virginia.edu/colp/pdf/Bali-Mayer.pdf.

coordinates are established by the coastal state, those baselines remain in effect until the coastal state has published new baseline coordinates.[35] This would seem to also affect the limits of the coastal state's EEZ and continental shelf because those zones are measured from the low water mark or from a straight baseline. However, there are conflicting opinions over whether these same principles would carry forward to the outer limit of an extended continental shelf—should one be established—because of language in Article 76 of UNCLOS that suggests that the outer limit is inviolate.

In the same way that the tribunal refused to accept climate change as a per se basis for adjusting a boundary determination, the tribunal did reinforce the basic norm that boundary agreements are nearly inviolate and that only high-level agreements can serve to amend them. This was certainly the case when it came to determining whether the Radcliffe agreement had been amended by a low-level 1951 exchange of notes. Appropriately, the tribunal held that evidence of boundary agreements, like title to property, must adhere to certain formalities. This principle has application to many of the vexing territorial disputes elsewhere in the world in which small shreds of historical evidence are being used to establish evidence of an agreement or evidence of title. In this respect, the decision was quite helpful in helping to promote certainty and stability of boundaries.

Issues of Concern

Gray Areas

This is the second time that a tribunal has had to deal with the issue of gray areas in which one country has a right to an extended continental shelf entitlement within the claimed EEZ of another state. Some of this is obviously due to the severely concave nature of the Bay of Bengal but some is also due to judicial activism. As much as the tribunal tried to rationalize the gray areas concept by pointing to the ITLOS decision, this is not something that was envisioned by the drafters of UNCLOS.[36] It was also

[35] If, as is the case with some countries, a country simply states in their domestic legislation that the outer limits of the territorial sea, EEZ, etc., is measured 200 nm from the low water mark, or some other features, then as the low water mark or some features erode, the outer limits of the claim would most likely retreat as the physical coast retreats.

[36] Suzette V. Suarez, "The Arbitral Award in the Bangladesh-India Maritime Delimitation

in the Bay of Bengal and its Contribution to International Maritime Boundary Law: A Case Commentary" *Maritime Safety and Security Law* Journal 2, (2016): 74, accessed Aug. 24, 2017, http://www.marsafelawjournal.org/wp-content/uploads/2016/10/Issue2_SUAREZ_Article.pdf. UNCLOS envisioned that that ocean and airspace claims would be both exclusive and

not unanimously agreed upon by the tribunal. The award of another gray area in the Bay of Bengal precipitated a vigorous dissent from one of the five arbitrators. Dr. P.S. Rao felt that the creation of gray areas is not supported in the text of UNCLOS, its negotiating history, or any of the case law, excepting the gray area in the *Bangladesh v Myanmar* case, which he regarded as an aberration (the yellow area shown in Figure 7).

Rao made a very persuasive case that the gray area concept in both cases is "ill-conceived" and will give rise to complex legal and practical problems associated with "transboundary resources." He argued that the concept of gray areas does violence to the structure of UNCLOS, the purpose of which is to identically deal with the delimitation of the EEZ and continental shelf, since the two areas are indispensable, and inseparable.[37] Rao also argued that the inclusion of the extended continental shelf territory into the disproportionate testing (length of coastline to ocean areas in dispute) skewed the results. Following the ruling, a legal commentator argued that while it might have been appropriate to establish a political boundary that could be later extended, there was no compelling reason for the tribunal to give its presumptive approval of an extended continental shelf, even though that matter is still under consideration by the CLCS.[38] The commentator concluded that while "historic…[the decision]…raises more questions than delivers answers."[39]

Judicial efficiency might support the tribunal's effort to establish the boundaries, but in this particular case, the parties did not agree to the arbitrators' exercising jurisdiction in this area. For that reason, it is appropriate to criticize the decision. The tribunal had neither the evidence nor technical competence to make a finding

coterminous to eliminate ambiguity or the practical administrative issues of having concurrent sovereign rights.

[37] P.S. Rao, "Concurring and Dissenting Opinion," *Bay of Bengal Mar. Boundary Arbitration (Bangl. v. India)*, (Perm. Ct. Arb.2014) 17, https://www.pcacases.com/web/sendAttach/384. (Hereinafter, "Rao Dissent.")

[38] Suarez, "Arbitral Award," 87. In contrast, Bjarni Magnusson argues in his treatise, *The Continental Shelf Beyond 200 Nautical Miles: Delineation, Delimitation and Dispute Settlemen*t, that this is a "unique situation in international law" but one that appears to be "justifiable in special circumstances" like the Bay of Bengal and one justified by judicial economy i.e., that even though it is appropriate to first adjudicate the question that an extended continental shelf exists, it serves little purpose to force the parties to have to go back to court to delimit the extended continental shelf area where there is overlap. Bjarni Magnússon, *The Continental Shelf Beyond 200 Nautical Miles: Delineation, Delimitation and Dispute Settlement*, Publications on Ocean Development, 78 (Leiden: Brill Nijhoff, 2015), 182-184.

[39] Ashwita Ambast, "Divvying Up the Bay of Bengal," *The Hindu*, Jul. 28, 2014, accessed Aug. 24, 2017, http://www.thehindu.com/opinion/op-ed/divvying-up-the-bay-of-bengal/article6254935.ece.

whether an extended continental shelf even existed as a matter of geomorphology. In essence, the court's action amounted to slicing up a pie before anyone had decided to bake one.

The authors share Rao's view that it is troubling that implicit in the decision is the presumption that Bangladesh and India have an extended continental shelf entitlement. UNCLOS 76 and the CLCS process were intended to reflect "exceptional" rather than ordinary geographic circumstances. In some respects, this headlong rush to establish an extended continental shelf is no different than the actions of many states that "push the envelope" in Article 121 of UNCLOS to proclaim huge swaths of EEZ territory based on small specs of uninhabited territory.[40]

In our judgement, there is also very little law on the question of coastal state responsibilities with respect to these remote subsurface seabed areas, i.e., extended continental shelf areas. Prematurely pushing states into these far reaches before their responsibilities are identified could lead to breakdowns in law and order at sea, or worse, negative impacts on marine biodiversity. It would have made more sense not to push forward to presumptively award the contestants extended continental shelf areas before there was international legal clarity on how the owner of these territories was supposed to administer them. The deep seabed Mining Code has been developed to address some of these issues for seabed mining in the "Area" beyond the scope of national jurisdiction. And, at least one eminent scholar has urged that states should be required to model that Code's environmental planning and protection requirements.[41] While it may have been efficient to determine ownership entitlements and not force the countries to come back to court, the ruling effectively created an uncertain situation in which one state administers the seabed and the other administers the water column. There is not much law or regulatory guidance regarding such gray areas. This could lead, for example, to the country that

[40] This is admittedly somewhat of an *ex post facto* critique since until the *Philippine v. China* PCA decision, no one knew for certain that such EEZ claims could be found invalid because of the way the PCA elected to determine what support human habitation meant in the context of whether a feature met the legal test to be an "island" under UNCLOS Article 121. That said, there were a number of decisions by the International Court of Justice (in *Nicaragua v. Colombia* and *Romania v. Ukraine*) in which courts were cutting back on the Article 121 entitlement in boundary delimitation cases. For more on the vast EEZ claims of these countries, which in several cases are based on very small, uninhabited features, see: Mark E. Rosen, "China Has Much to Gain From the South China Sea Ruling," *The Diplomat*, Jul. 18, 2016, accessed Aug. 23, 2017, http://thediplomat.com/2016/07/china-has-much-to-gain-from-the-south-china-sea-ruling/.

[41] Clive Schofield, "Securing the Resources of the Deep: Dividing and Governing the Extended Continental Shelf," *Berkeley Journal of International Law*, 33, 1 (2015): 291, accessed Aug. 17, 2017, http://scholarship.law.berkeley.edu/bjil/vol33/iss1/7/.

administers the water column objecting to ships in its waters to develop resources in the seabed.

Sparse Legal Analysis behind Adoption of the Final Boundary

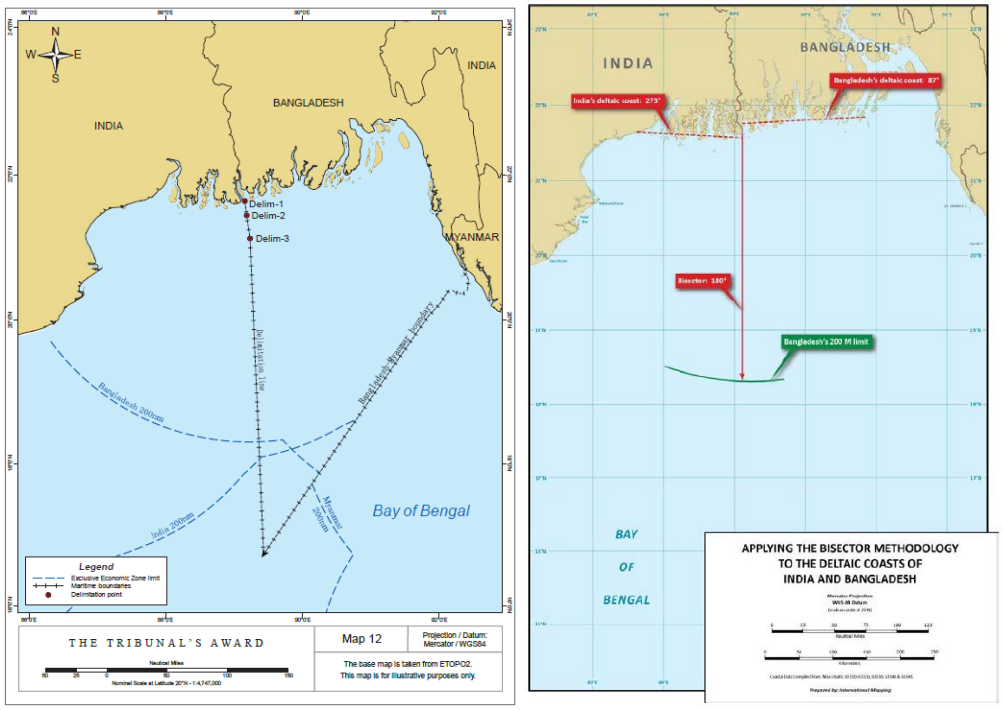
In his dissent, Judge Rao lamented that the tribunal's ruling cites all of the correct authorities, and mouths the correct legal standards, but its actual decision to establish a boundary line with an azimuth from true north of 177.5 degrees was devoid of analysis.[42] The tribunal went out of its way to dismiss the various exceptions to the equidistance method of delimitation; however, in the end, they reached a result that clearly indicated that these exceptions would have provided legal and factual support for the end product. Although the result was just, it didn't appear to adhere closely to existing precedent.

Rao wrote that the award was "purely arbitrary and cannot be justified by any principle of law."[43] Indeed, an objective reading of the opinion leaves the reader puzzled as to how the tribunal was able to reach its conclusion so quickly without providing the normal supporting analysis that one would find in judicial opinions. In this sense, the tribunal failed to "show its math" in adjusting its provisional equidistance line. On the other hand, from a policy perspective, a decision that does not scrupulously follow past precedent is not necessarily a bad thing for the future of the UNCLOS arbitration process if, in the end, it will provide an equitable outcome for the parties involved. In the end, an equitable outcome (versus strict conformance to western standards of legal analysis and legal transparency) is what will motivate politicians and others involved in resolving tense international issues relating to boundaries to send their disputes to arbitration or some other dispute settlement mechanism.

[42] Rao Dissent, Paragraphs 21-22.

[43] Rao Dissent, Paragraph 23.

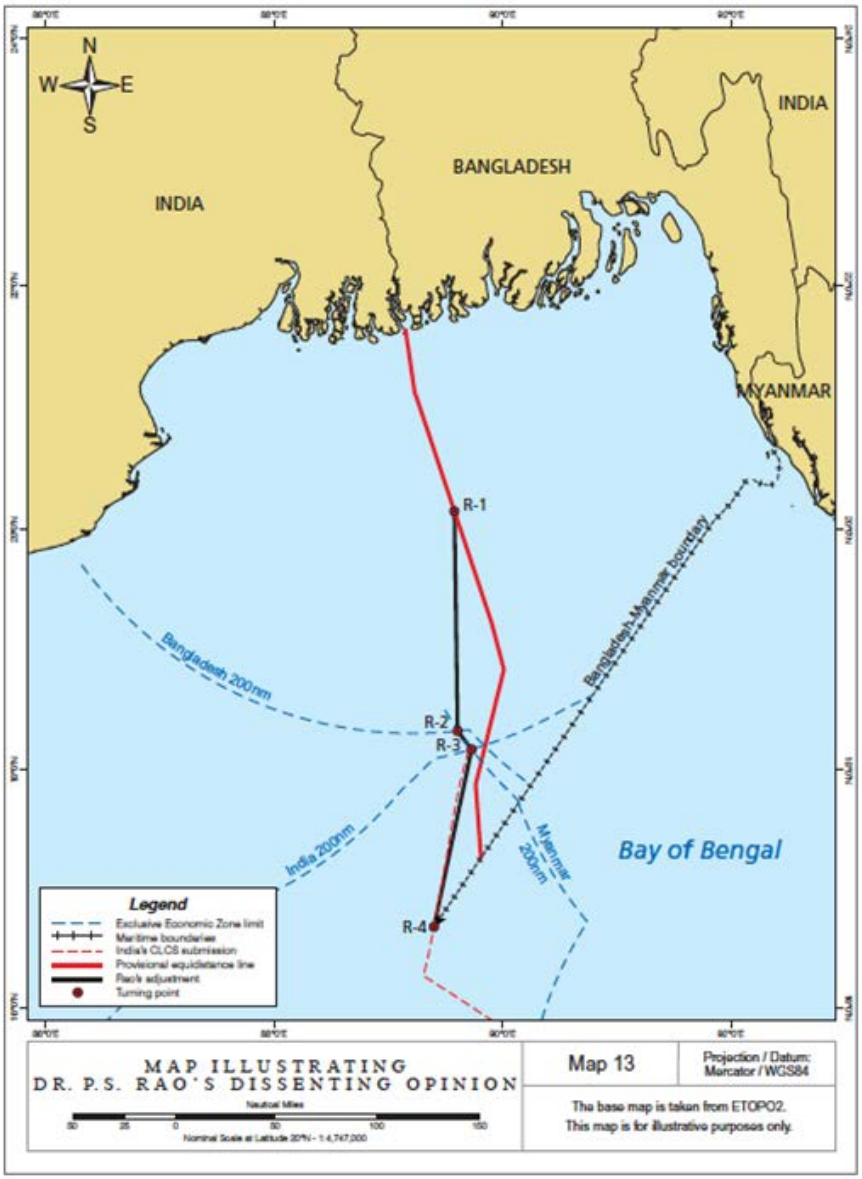
Figure 9. Comparison of the Tribunal's Boundary to the Boundary Produced by the Method Proposed by Bangladesh and Rejected by the Tribunal



Source: The Award, p. 163 and 125. The left map shows the tribunal's award of the maritime boundary, which is closer in angle (177.5 degrees) to the line proposed by Bangladesh using the angle-bisector method (180 degrees, map on the right) than it is to the tribunal's provisional equidistance line produced by the equidistance method of delimitation, which the tribunal had upheld as the proper method.

As noted previously, the boundary awarded by the tribunal is very similar in angle (177 degrees 30' and 00" azimuth) to the line proposed by Bangladesh using the angle-bisector method (180 degrees), a method that the tribunal rejected as a matter of law (Figure 9). The only real difference between the north-south angle-bisector line proposed by Bangladesh and the tribunal's boundary is that the final line is a bit less generous to Bangladesh, angling further east. Rao argued that had the tribunal wished to demonstrate fidelity to the principle of applying "special circumstances" in addressing the cut-off problem from especially Bangladesh's west-facing coastline, then the tribunal could have followed the provisional equidistance line to a point roughly midway (point R-1 of Figure 10) and then moved the boundary westward to avoid cut-off at that point rather than the over the full course of the boundary.

Figure 10. Map Illustrating Dr. P.S. Rao's Dissenting Opinion



Source: Rao Dissent, p. 23.

Rao's argument makes a lot of sense. The tribunal can't have it both ways; it can't say it is applying the equidistance method and then *de facto* use another method to establish the boundary. Rao's suggestion (Figure 10) would have resulted in a little less ocean territory for Bangladesh, but in the end the country would have gotten relief where it mattered most, in the southerly expanses of their maritime zone.

Rajeev Sharma, a New Delhi-based journalist and strategic analyst, similarly argued, "The tribunal has admitted the justice of India's argument but nevertheless proceeded to fix the delimitation line in a rather arbitrary fashion."[44] The tribunal did, however, live up to its statement that "the overarching objective of the delimitation process is to achieve an equitable solution," suggesting that its ultimate aim was equity, rather than a rigid application of past practice.[45] Despite his criticisms, Sharma soundly concludes that there were multiple positive outcomes in the decision for both sides, many more than were reported by the press. Most press accounts indicated that India was the loser despite the fact that they retained most sea space near the low-tide elevation of South Talpatty/New Moore Island, where there are reports of possible hydrocarbons, and they retained the rights to an EEZ in areas where there is overlap with Bangladesh's extended continental shelf. Sharma notes that the ratio of Bangladesh's EEZ area to India's was adjudicated at 1:2.81, closer to India's original proposal than to Bangladesh's. This is far more important from an economic perspective than the meandering prose in the tribunal's decision that tended to favor Bangladesh. This may explain why Sharma concluded that "even though the award may have fallen short of expectations by both parties," it should still be viewed as a "win-win" because it resolves a longstanding "thorn in the India-Bangladesh" relationship.

The Application of Different Delimitation Standards

The tribunal used separate analysis for adjudicating the delimitation lines between the territorial sea, the EEZ, continental shelf, and the extended continental shelf, creating a significant amount of redundancy in the decision. The tribunal correctly defended this separate zone analysis, citing the *Qatar v. Bahrain* decision by the International Court of Justice.[46] In the end, the court applied the equidistance formula for the 12 nm territorial sea (under UNCLOS 15) and then refused to make any adjustments based on coastal erosion or concavity. As regards the formula for the EEZ, continental shelf, and the extended continental shelf, the tribunal said that UNCLOS is less prescriptive on the method, although the case law favors the equidistance line/special circumstances method. Methods like the 180-degree angle-bisector method have been used in just a few cases. In the end, the tribunal adopted

[44] Rajeev Sharma, "UN tribunal puts an end to 40-year-old India-Bangladesh maritime dispute," *RT*, Jul. 16, 2014, accessed Aug. 24, 2017, https://www.rt.com/op-edge/172960-un-india-bangladesh-dispute-end/.

[45] The Award, Paragraph 397.

[46] *Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v Bahrain) (Merits)* 2001 ICJ Rep 40 173-174 referring to *Delimitation of the Maritime Boundary in the Gulf of Maine Area* 1984 ICJ Rep 194, 246.

the same equidistance method as its starting point for the areas beyond the territorial sea on the grounds that it was—allegedly—more transparent. Yet, they also found that the cut-off of 200 nm projections resulting from the concavity of the coastline was a circumstance that justified an adjustment.

The difficulty with the resulting decision is that while the tribunal paid lip-service to the correct legal standard(s), it effectively applied a different method for the areas beyond the territorial sea (the angle-bisector method). While most commentators regard the final result to be "in the ballpark" in terms of equitably dividing up the pie, the tribunal's tortuous reasoning to support its final decision probably does more harm than good to the body of law in this area. The exceptionally "high bar" that the tribunal established to constitute a "special circumstance" to deviate from a provisional equidistance line will make future decisions more difficult to analyze and judge.[47] As noted previously, this may, however, be more troublesome to legal practitioners than policymakers who may consider whether to bring future disputes to arbitration.

[47] This may be due to the fact that the case was an arbitration rather than a court case. Arbitrations have more flexibility than courts, although decisions are published and have the effect of precedent in future international law matters.

Implications

The decision certainly has implications for India and Bangladesh. It affects diplomatic relations between the two countries, their respective political and economic interests—including oil and gas development—and maritime security in the Bay of Bengal. The ruling, and the legal issues it raises, also has broader implications for other maritime boundary disputes, such as in the South China Sea, and for U.S. oceans policy going forward.

India and Bangladesh

The Indian and Bangladeshi foreign ministries both made positive statements after the tribunal's decision was announced and called it a win for each side. [48] Each country praised the other's willingness to resolve the dispute peacefully and looked forward to enhanced economic development of the Bay of Bengal.

Diplomatic Relations

This particular adjacent boundary had been a source of controversy for a number of years before the decision. There have been ongoing conflicts over fisheries, particularly involving traditional fisherman who frequently operate outside of the law, as well as licensed operators on both sides of the border.[49] According to one

[48] "Press statement of the Hon'ble Foreign Minister on the verdict of the Arbitral Tribunal/PCA," Ministry of Foreign Affairs, Government of the People's Republic of Bangladesh, Jul. 8, 2014, accessed Aug. 24, 2017, http://www.mofa.gov.bd/media/press-statement-hon%E2%80%99ble-foreign-minister-verdict-arbitral-tribunalpca. See also, "Official Spokesperson's response to a question on the award of the tribunal on the Maritime Boundary Arbitration between India and Bangladesh," Ministry of External Affairs, Government of India, Jul. 8, 2014, accessed Aug. 24, 2017, http://mea.gov.in/media-briefings.htm?dtl/23575/official+spokespersons+response+to+a+question+on+the+award+of+the+tribunal+on+the+maritime+boundary+arbitration+between+india+and+bangladesh.

[49] See generally, N.D. Salayo, M. Ahmed, L. Garces and K. Viswanathan, "An Overview of Fisheries Conflicts in South and Southeast Asia: Recommendations, Challenges and Directions,"

Indian analyst, the matter had been under discussion since 1974, and despite "several high level meetings," the two sides clashed in their interpretations of how the essentially north-south boundary line would be drawn.[50] Finally, seismic studies suggesting rich offshore oil and gas deposits and prompted both countries to "throw in the towel" and seek resolution of the matter.

Following the ruling, diplomats from both countries put a positive spin on the decision. Bangladesh's Foreign Minister Abul Hassan Mahmood Ali said in a statement that "it is the victory of friendship and a win-win situation for the peoples of Bangladesh and India. … We commend India for its willingness to resolve this matter peacefully by legal means and for its acceptance of the tribunal's judgment."[51] V.K. Singh, Minister of State for External Affairs, told Indian lawmakers that "the award puts an end to a long-standing issue between India and Bangladesh which has impeded the ability of both countries to fully exploit the resources in that part of the Bay of Bengal" and that "the peaceful settlement of this issue on the basis of international law symbolizes friendship, mutual understanding and goodwill between the two countries."[52]

Three years after the initial diplomatic responses, the ruling has not negatively impacted the relationship. Bilateral relations between India and Bangladesh are steadily improving under the Modi and Hasina governments. Since resolving the maritime boundary dispute, India and Bangladesh have also implemented an agreement on a long-standing land boundary dispute. During a visit by Bangladeshi Prime Minister Sheikh Hasina to New Delhi in April 2017, the Indian government pledged $5 billion in loans,[53] on top of a $2 billion line of credit extended to

WorldFish Center Quarterly 29, No. 1 and 2 (Jan.-Jun. 2006), accessed Aug. 24, 2017, http://pubs.iclarm.net/resource_centre/overview.pdf.

[50] Oyindrala Chattopadhyay, "International Tribunal's Verdict on India-Bangladesh Maritime Boundary: An Analysis," National Maritime Foundation, Jul. 10, 2014, accessed Aug. 24, 2017, http://www.maritimeindia.org/CommentryView.aspx?NMFCID=153.

[51] Ministry of Foreign Affairs (Bangladesh), "Press statement."

[52] Andrew MacAskill and Arun Devnath, "India Drops Sea Claim to Seek Offshore Oil in China Contrast," *Bloomberg*, Jul. 31, 2014, accessed Aug. 24, 2017, https://www.bloomberg.com/news/articles/2014-07-30/india-drops-sea-claim-to-unlock-offshore-oil-in-china-contrast.

[53] Jayanth Jacob, "India announces $5-billion line of credit to Bangladesh, 22 pacts signed," *Hindustan Times*, Apr. 8, 2017, accessed Aug. 24, 2017, http://www.hindustantimes.com/india-news/india-announces-4-5bn-line-of-credit-to-bangladesh-22-pacts-signed/story-qExR2itHj3fAKsisPI3P7J.html.

Bangladesh in 2015.[54] The two countries also signed nearly two dozen agreements on a range of issues, including nuclear energy and defense, with a further 12 agreements expected to yield $9 billion in investment.[55] In the last three years, India has pledged to double its supply of power to Bangladesh, Bangladesh has created two special economic zones for India, and the two countries have cooperated on issues ranging from counterterrorism to connectivity.[56] While the ruling may yet lead to future diplomatic disputes, for example with regard to gray-areas administration, the amicable resolution of the maritime dispute appears to have cleared the way for bilateral cooperation on a number of other fronts.

Political and Economic Impacts

It is premature to make sweeping conclusions regarding the political and economic impacts of the decision, which will play out over many years; however, in the companion case of *Bangladesh v Myanmar,* is it noteworthy that very shortly after the 2012 decision, Myanmar was able to conduct a successful auction of a number of offshore oil and gas blocks, bringing much-needed outside investment capital from the United States, Norway, Japan to that developing country.[57] Another result of that decision was that the clarification of boundaries will make it easier for coastal authorities in Myanmar and Bangladesh to establish catch limits and enforcement priorities for fishing.[58] While not guaranteed, it is not unreasonable to expect that there may be similar positive outcomes for India and Bangladesh, since marine law enforcement officials prefer to enforce laws when there are clear boundaries, and international oil companies are only inclined to invest precious exploration funds on leases for which legal title is clear. If the agreement results in markedly less illegal

[54] Harsh V. Pant, "Delhi Woos Dhaka: Bangladesh PM Hasina Gets a Warm Welcome in India," *The Diplomat*, April 8, 2017, accessed Aug. 24, 2017, http://thediplomat.com/2017/04/delhi-woos-dhaka-bangladesh-pm-hasina-gets-a-warm-welcome-in-india/.

[55] Jacob, "India announces."

[56] Pant, "Delhi Woos Dhaka."

[57] Mark Rosen, *Using International Law to Defuse Current Controversies in the South and East China Sea,* CNA, 2015, p 35-31, http://www.dtic.mil/get-tr-doc/pdf?AD=ADA615709

[58] Md. Mostafa Shamsuzzaman, Xu Xiangmin, Yu Ming and Nusrat Jahan Tania, "Towards Sustainable Development of Coastal Fisheries Resources in Bangladesh: An Analysis of the Legal and Institutional Framework," *Turkish Journal of Fisheries and Aquatic Sciences* 17 (2017), accessed Aug. 24, 2017, http://www.trjfas.org/uploads/pdf_1051.pdf.

fishing and greater investment in energy exploration, it will have a positive impact on the economies of both countries.[59]

Oil & Gas Exploration and Development

The unresolved boundary dispute had negatively impacted hydrocarbon investment in the Bay of Bengal. In 2007, Australian energy producer Santos was awarded two oil and gas blocks near the maritime boundary between India and Bangladesh by the Indian Government. The company halted exploration activities after Bangladesh brought the dispute to arbitration and invoked force majeure. After investing $60 million in the project, Santos ultimately decided to pull out of its lease in 2013, partly as a result of the maritime boundary dispute.[60]

Bangladesh was the eighth largest natural gas producer in the Asia Pacific region in 2014, all of which was supplied by onshore fields and consumed domestically.[61] Due to growing demand for electricity, the country has sought investment to develop its offshore oil and gas blocks. Its own offshore blocks are underexplored,[62] but there is great potential for large offshore gas resources. Prior to the 2012 and 2014 rulings, both India and Myanmar had discovered and developed large offshore gas fields in their waters in the Bay of Bengal.

Since the rulings, there have been several more oil and gas discoveries in India's and Myanmar's maritime territories in the Bay of Bengal. For example, in September 2015, Oil and Natural Gas Corporation Limited (ONGC), India's state-run oil and gas company, discovered oil and gas in block KG-D5, the thirteenth discovery in the

[59] Rupak Bhattacharjee, "Delimitation of Indo-Bangladesh Maritime Boundary," Institute for Defence Studies and Analysis, Aug. 19, 2014, accessed Aug. 24, 2017, http://www.idsa.in/idsacomments/DelimitationofIndo-Bangladesh_rbhattacharjee_190814.

[60] The company also cited as a reason for giving up the lease separate Ministry of Defense restrictions that had been placed on the blocks. "Santos pulls out of Indian oil and gas blocks," *Press Trust of India*, Dec. 9, 2013, accessed Aug. 24, 2017, http://timesofindia.indiatimes.com/business/india-business/Santos-pulls-out-of-Indian-oil-and-gas-blocks/articleshow/27137967.cms.

[61] "Bangladesh," U.S. Energy Information Administration, updated Sept. 2015, accessed Aug. 24, 2017, https://www.eia.gov/beta/international/analysis.cfm?iso=BGD.

[62] Badrul Imam, "Bangladesh will not run out of gas any time soon," *Daily Star*, Jun. 16, 2016, accessed Aug. 24, 2017, http://www.thedailystar.net/op-ed/politics/bangladesh-will-not-run-out-gas-any-time-soon-1240168.

area.[63] In July 2016, the Government of India and the U.S. Geological Survey (USGS) partnered in a research expedition that discovered "large, highly enriched accumulations of natural gas hydrate" that could be producible. The expedition consisted of scientists from ONGC, the USGS, the Japan Drilling Company, and the Japan Agency for Marine-Earth Science and Technology.[64] The Australian company Woodside Energy discovered gas off the coast of Myanmar in January 2016 in blocks shared with Myanmar Petroleum Resources and French oil major Total. A month later, Woodside made another gas discovery in a block operated by Daewoo International of Korea.[65]

In this regard, the 2014 ruling may increase Bangladesh's future prospects: as a result of the boundary award, India surrendered 10 oil and gas blocks to Bangladesh.[66] However, the development of Bangladesh's offshore blocks has been hampered at least as much by the country's need to build capacity—developing technical expertise in deep-water drilling and oceanography, and creating legal frameworks for environmental protections—as by any prior uncertainty surrounding the maritime boundaries.[67] International oil and gas majors could provide this capability, but have been reluctant in recent years to commit the investment required for deep-water exploration and development until Bangladesh increases natural gas

[63] "ONGC discovers oil, gas in Bay of Bengal's KG block," *Press Trust of India*, Sept. 15, 2015, accessed Aug. 24, 2017, http://www.hindustantimes.com/business/ongc-discovers-oil-gas-in-bay-of-bengal-s-kg-block/story-0F7r56L5B57aQ3CAmx1nmN.html.

[64] "Large Deposits of Potentially Producible Gas Hydrate Found in Indian Ocean," U.S. Geological Survey, Jul. 25, 2016, accessed Aug. 24, 2017, https://www.usgs.gov/news/large-deposits-potentially-producible-gas-hydrate-found-indian-ocean. See also, Asmita Sarkar, "India, US discover large deposits of natural gas in Bay of Bengal," *International Business Times*, Jul. 26, 2016, accessed Aug. 24, 2017, http://www.ibtimes.co.in/india-us-discover-large-deposits-natural-gas-bay-bengal-687934.

[65] Aung Shin, "Second gas column discovered in the Bay of Bengal," *Myanmar Times*, Feb. 15, 2016, accessed Aug. 24, 2017, http://www.mmtimes.com/index.php/business/18976-second-gas-column-discovered-in-the-bay-of-bengal.html.

[66] Bharadwaj Sharma, "India Drops Claim to Bay of Bengal Oil Blocks Ending Dispute with Bangladesh," *International Business Times*, Jul. 31, 2014, accessed Aug. 24, 2017, http://www.ibtimes.co.in/india-surrenders-part-bay-bengal-bangladesh-china-contrast-605748. See also: "This verdict also helped Bangladesh to gain ownership of all the 10 hydrocarbon blocks in the Bay, also claimed by India." Joyeeta Bhattacharjee, "Maritime dispute resolved, Delhi and Dhaka should work for turning Bay into economic hub," Observer Research Foundation, Jul. 16, 2014, accessed Aug. 24, 2017, http://www.orfonline.org/research/maritime-dispute-resolved-delhi-and-dhaka-should-work-for-turning-bay-into-economic-hub/.

[67] Jack Detsch, "Bangladesh: Asia's New Energy Superpower?" *The Diplomat*, Nov. 14, 2014, accessed Aug. 24, 2017, http://thediplomat.com/2014/11/bangladesh-asias-new-energy-superpower/.

prices, which the government had avoided.[68] More recently, there have been some indications that Bangladesh may be turning a corner in attracting private-sector development of its offshore oil and gas resources. In October 2016, three companies expressed interest in the exploration and development of three offshore blocks.[69] In March 2017, Posco Daewoo announced that it would invest $112 million to explore a deep-water block with Bangladesh's state-owned Petrobangla.[70]

Maritime Security

The ruling also has significant maritime security implications. The resolution of the dispute opens the way for potential cooperation between India and Bangladesh on maritime security to combat growing transnational threats in the Bay of Bengal, including piracy, terrorism and trafficking.[71] Furthermore, the ruling will strengthen security by clarifying maritime boundaries. Coastal law enforcement authorities are restricted to enforcing fishing laws exclusively within their established EEZ boundaries, unless an offending vessel is of the same flag as the coastal state. If boundary lines are imprecise, it can lead to timid enforcement measures. Worse, if one country believes that another in is encroaching on its territory, it can lead to violent clashes, since states jealously guard their enforcement prerogatives inside their territorial seas. Simply put, clear boundaries make for clearer enforcement powers.

[68] Detsch, "Bangladesh." For a more recent example, according to industry reports, after the government rejected its request to raise prices, Chevron dropped plans to invest $650 million in improvements to infrastructure in the producing Bibiyana field and to drill new wells in the Jalalabad field. M Azizur Rahman and Mriganka Jaipuriyar, "Petrobangla eyes Chevron's Bangladesh gas assets as US major mulls exit," *S&P Global Platts*, Mar. 2, 2017, accessed Aug. 24, 2017, https://www.platts.com/latest-news/natural-gas/dhaka/petrobangla-eyes-chevrons-bangladesh-gas-assets-27780904. For more on the pricing issue, see also Sharier Khan, "Higher gas prices key to woo IOCs," *Daily Star*, Aug. 1, 2014, accessed Aug. 24, 2017, http://www.thedailystar.net/higher-gas-prices-key-to-woo-iocs-35326.

[69] "Blocks off Bangladesh draw interest," *Oil & Gas Journal*, Oct. 20, 2016, accessed Aug. 24, 2017, http://www.ogj.com/articles/2016/10/blocks-off-bangladesh-draw-interest.html.

[70] "Posco Daewoo to invest US$112m in Bangladesh gas field," *Business Times*, Mar. 15, 2017, accessed Aug. 24, 2017, http://www.businesstimes.com.sg/energy-commodities/posco-daewoo-to-invest-us112m-in-bangladesh-gas-field-0.

[71] Chattopadhyay, "International Tribunal's Verdict." Recent conversations between the authors and current and former members of the Indian Navy, at least, confirmed this.

The South China Sea

Many scholars have expressed great disappointment with China's behavior in response to the July 2016 ruling against it regarding its claims in the South China Sea.[72] A few other analysts have labelled the arbitration a great strategic blunder that will do very serious harm to international law,[73] since an international legal construct that does not include China's participation is incomplete. It is still too early to tell whether China's rejectionist stance is a permanent condition, because there are benefits to China in the ruling[74] in terms of providing it precedent to attack other

[72] For example, see: Caitlin Campbell and Nargiza Salidjanova, *South China Sea Arbitration Ruling: What Happened and What's Next?*, U.S-China Economic and Security Review Commission, Jul. 12, 2016, accessed Aug. 27, 2017, https://www.uscc.gov/sites/default/files/Research/Issue%20Brief_South%20China%20Sea%20Arbitration%20Ruling%20What%20Happened%20and%20What's%20Next071216.pdf. Lynn Kuok, *Assessing the rule of law after the South China Sea arbitration: Will the G-20 be a turning point in China's behavior?*, Brookings, Sept. 1, 2016, accessed Aug. 27, 2017, https://www.brookings.edu/opinions/assessing-the-rule-of-law-after-the-south-china-sea-arbitration-will-the-g-20-be-a-turning-point-in-chinas-behavior/. James Kraska ,"Tillerson Channels Reagan on South China Sea," *Lawfare*, Jan. 12, 2017, accessed Aug. 27, 2017, https://www.lawfareblog.com/tillerson-channels-reagan-south-china-sea. Mark E. Rosen, "How China is Setting the Stage for War with Japan in the East China Sea," *National Interest*, Aug. 10, 2016, accessed Aug. 27, 2017, http://nationalinterest.org/feature/how-china-setting-the-stage-war-japan-the-east-china-sea-17311. For a summary of the arbitration case between the Philippines and China, see, Congressional Research Service, *Arbitration Case Between the Philippines and China Under the United Nations Convention on the Law of the Sea (UNCLOS)*, Jul. 6, 2016, accessed Aug. 27, 2017, https://www.everycrsreport.com/reports/R44555.html. See also, Mark Rosen, *Philippine Claims in the South China Sea: A Legal Analysis*, CNA, Aug. 2014, accessed Aug. 27. 2017, https://www.cna.org/cna_files/pdf/IOP-2014-U-008435.pdf.

[73] Joseph Klein, "South China Sea: UN Law of the Sea Arbitration Tribunal Sinks the Rule of Law," *Foreign Policy Journal,* Aug. 20, 2016, accessed Aug. 27, 2017, http://www.foreignpolicyjournal.com/2016/08/20/south-china-sea-un-law-of-the-sea-arbitration-tribunal-sinks-the-rule-of-law/. Klein argues that the tribunal acted irresponsibly in terms of their interpretation of the law and in their decision to accept the case in the first place. The highly respected scholar Robert Beckman from the Centre for International Law, National University of Singapore, generally endorsed the findings of the tribunal and opined that the court functioned as advertised, i.e., that any state, regardless of power, could get a fair hearing in which rules of law versus large power politics determined the outcome. Beckman did express understandable concern for China's political future (and by inference the future of international law in that region) so long as China remained outside of its reach. See, Robert Beckman and Christine Sim, *Implications of the Philippines v. China Decision on Jurisdiction and Admissibility*. Center for Int'l Law, National University of Singapore, Jun. 16, 2016, accessed Aug. 27, 2017, https://cil.nus.edu.sg/wp/wp-content/uploads/2016/06/Beckman-Sim-Hanoi-EU-DAV-16-June-2016.pdf.

[74] Mark E. Rosen, "China Has Much to Gain From the South China Sea Ruling," *The Diplomat*, Jul. 18, 2016, accessed Aug. 27, 2017, http://thediplomat.com/2016/07/china-has-much-to-gain-from-the-south-china-sea-ruling/.

excessive EEZ claims of Japan and other states which deprive it of access to rich fishing areas.

It is worth noting that China has begun to talk with the Philippines and Vietnam about the South China Sea in general, though not the PCA finding.[75] This has led some to believe that China may be coming to the realization that it cannot eschew international law and international tribunals, since those same laws protect its access to minerals and fisheries and other sets of international law protect its access to foreign markets for trading. Given all of the legal "churn" associated with the South China Sea case, where does *Bangladesh v. India* fit in?

Even though this particular decision is technical in scope and does not have any legal findings that significantly advance the "state of the art" in Law of the Sea matters,[76] the decision is another UNCLOS triumph in the sense that it completed the process of delimitation in the Bay of Bengal and demonstrated that a smaller state could have its day in court against a larger state. The fact that India has chosen to put its faith in UNCLOS and its dispute-settlement mechanisms is also important because India is the leader of the Group of 77.[77] India's participation in the arbitration sends an important message to this loose coalition of 134 developing nations—originally 77—where both observance and acceptance of international norms and international law is a continuing challenge. This is important from an oceans governance perspective. Although India's continuing acceptance of the result has been characterized by some

[75] Reuters, "China: Iron Out South China Sea Disputes Ourselves," *Voice of America*, Nov. 19, 2016, accessed Aug. 27, 2017, http://www.voanews.com/a/china-south-china-sea-disputes/3604234.html. Mark E. Rosen, "Elements of a South China Sea Deal: Saving Face and Making Money," *IPP Review* (Singapore), Oct. 21, 2016, accessed Aug. 27, 2017, http://www.ippreview.com/index.php/Home/Blog/single/id/260.html.

[76] The tribunal's finding that the 1951 Exchange of Letters between India and Bangladesh (in which the respondent for India was neither identified nor signed) did not meet the standards of a boundary agreement may, in the long run, be relevant to upcoming litigation over who has title to certain features in the South China Sea or East China Sea. For the most part, evidence of title to most of the features in these two areas is based on very slender evidence of title. See The Award, Paragraphs 104-112. One could also argue that the tribunal's decision to "hold the line" on climate change, could be regarded as important because had the tribunal decided another way, it could have injected considerable uncertainty into the legal standing of existing maritime boundaries around the world.

[77] The G-77 was established on June 15, 1964, via the signature of the "Joint Declaration of Seventy-Seven Developing Countries" at the end of the first session of the United Nations Conference on Trade and Development in Geneva. The Group of 77, "About the Group of 77," Website of the Group of 77 at the United Nations, undated, accessed Aug. 27, 2017. http://www.g77.org/doc/. The G-77 remains an important intergovernmental organization within the United Nations structure and tends to operate a "block vote" in international negotiations.

as adherence to the ruling despite defeat,[78] the case arguably demonstrates to other countries that both sides received enough in the award to accept it as fair. Indeed, there is no evidence that any of the parties to the Bay of Bengal litigation regard the decisions as anything other than binding and authoritative, or question the applicability of UNCLOS to these sort of disputes.[79] The amicable and equitable resolution of an UNCLOS arbitration involving two countries in its vicinity may send an important signal to China as it questions the value of UNCLOS in the wake of the South China Sea ruling.

Other Maritime Disputes

This decision is also important in a broader sense, in that it is one more demonstrable case in which countries were able to take a complex and politically charged matter (over 400,000 square kilometers of ocean territory were involved) to an UNCLOS tribunal and get a politically acceptable decision from a third party. Like the companion case involving Myanmar and Bangladesh, the use of a third party dispute body took the "heat" off political leaders in the two countries, who may have been precluded from reaching an agreement with their neighbors through negotiations.

Despite the criticism discussed above (gray areas, unconventional legal analysis), the decision is practical and allowed each side to claim victory and to further bilateral relations, without creating harmful precedent or opening up past decisions to future challenges. A winner-take-all decision might have discouraged future parties to a dispute from agreeing to arbitration under UNCLOS. In this sense, the overall equitable result may be more important than the sum of its parts.

[78] Iskander Rehman, "India, China and differing conceptions of the maritime order," *Project on International Order and Strategy*, Brookings, Jun. 2017, accessed Aug. 27, 2017, https://www.brookings.edu/wp-content/uploads/2017/06/rehman-india_china_and_differing_conceptions_of_the_maritime_order.pdf.

[79] One of the fundamental problems with China's rejection of the South China Sea ruling is that it asserted in its official position papers that UNCLOS was not the controlling body of law that was to be applied in adjudicating the dispute. Instead, they made reference to ancient and historic principles. UNCLOS was expressly designed to be all-encompassing and not, with very few exceptions, to be subject to past laws or agreements. China signed UNCLOS in 1996 and legally accepted this important principle.

U.S. Oceans Policy

The United States has major interests in the rules codified in UNCLOS governing use and access to fisheries, oil and gas, oceanic trade, undersea cables, and navigation and overflight. But, regrettably, the United States is not a party to UNCLOS. This does not mean that all U.S. government officials and thought leaders are uncommitted to the success of the treaty. In 1983 President Ronald Reagan reaffirmed U.S. interests in concluding a satisfactory law of the sea convention and stated that the view of the United States was that UNCLOS, for the most part, reflected customary international law. Reagan also made this important statement concerning the role of international law in ocean governance:

> The United States has long been a leader in developing customary and conventional law of the sea. Our objectives have consistently been to provide a legal order that will, among other things, facilitate peaceful, international uses of the oceans and provide for equitable and effective management and conservation of marine resources. The United States also recognizes that all nations have an interest in these issues. [80]

Oceans policymakers in the United States have never deviated from this basic principle, which has direct implications for U.S. global interests, since the United States relies upon access to the seas for a wide range of military and commercial purposes. The United States has the most capable Navy in the world and in most circumstances could, if necessary, use force to ensure that its military and commercial mobility interests are respected. However, legal means are preferable to the use of force in keeping the sea lanes open.

Reaffirmation of a rules-based order at sea is important for the United States and its allies that lack the naval forces necessary to maintain access to the seas for fisheries, mineral resources, and mobility. The case of the Philippines is a perfect example. China is contesting, both legally and militarily, the right of the Philippines to use the resources that are within its continental shelf and EEZ, for example by declaring a fishing moratorium in contested waters in the South China Sea.[81] Were China to respect the recent arbitration decision, the Philippines would be better able to

[80] Ronald Reagan, "Statement on United States Oceans Policy," Mar. 10, 1983, accessed Aug. 27, 2017, http://www.reagan.utexas.edu/archives/speeches/1983/31083c.htm.

[81] Ralph Jennings, "China Fishing Moratorium Likely to Anger Neighbors," *Voice of America*, Mar. 10, 2017, accessed Aug. 27, 2017, https://www.voanews.com/a/china-fishing-moratorium-south-china-sea/3758397.html.

sustain itself as a nation using its own resources. In that sense, having a rules-based order at sea is important, and the arbitration decision in *Bangladesh v. India* helps to advance that goal. This case advanced the U.S. interests in a rules-based order at sea by demonstrating that two nations, one of them a major power, opted to use the approach spelled out in UNCLOS to successfully resolve a long-standing dispute.

Conclusion

Ultimately, the ruling has been generally accepted as fair, as evidenced by the commitment of the parties to abide by it. The tribunal rejected and accepted arguments by each side, resulting in a ruling in which both sides "won" in certain respects; certainly there was no clear loser.

The court rejected India's argument that South Talpatty/New Moore Island—the land feature that sparked the dispute—should be a base point in the calculation of the maritime boundary, but that area, which it is speculated contains oil and gas deposits, was awarded to India. While the ruling provided Bangladesh with additional ocean territory, India retains a greater proportion of EEZ relative to its coastline. To the extent that this is a measure of how equitable the delimitation is, it can hardly be said that India "lost" the ruling.

The tribunal rejected Bangladesh's arguments regarding what constitutes "special circumstances" to deviate from delimitation standards, and held firm on the equidistance method for determining the territorial sea. In the end, the tribunal sided with India on the 12 nm territorial sea delimitation line, although it altered the base points, resulting in a final 12 nm boundary line farther to the west, which favors Bangladesh.

Notably, the panel rejected Bangladesh's argument that the impact of climate change on its coast line constituted a special circumstance to deviate from the standard equidistance method of delimiting territorial seas. As a result, the panel avoided opening up past boundary decisions to future adjustment on these grounds.

Although the tribunal ruled that the concavity of a boundary line and the resulting cut-off of maritime access did not constitute a special circumstance to deviate from the equidistance method of delimiting a maritime boundary close to shore, it did agree with Bangladesh that the cut-off in areas beyond the territorial sea affected outbound navigation and access to traditional fishing areas, and adjusted the provisional equidistance line accordingly.

The tribunal rejected Bangladesh's angle-bisector method of delimitation but ultimately, in practice, favored it over the equidistance test. This aspect of the ruling is confounding, since the tribunal rejected several of Bangladesh's claims of "special circumstances" to deviate from the equidistance process, creating a higher bar to establish such circumstances in future litigation.

The ruling also created an additional "gray area" in the Bay of Bengal, in which one state holds rights to an EEZ and another holds rights to an extended continental shelf. In doing so, the panel called into question one of the main purposes of UNCLOS and opened up the possibility of future legal and practical issues in the development of resources in this area.

To their credit, India and Bangladesh have been content to accept the ruling and have agreed that the resolution of the longstanding dispute is in itself a good thing for bilateral relations. Both countries are eager to be able to develop and effectively manage the resources in their maritime frontier. The ruling removes uncertainty that has impeded investment in the Bay of Bengal by international oil companies. Since the ruling, state-owned enterprises and private companies have made a series of discoveries in the Bay of Bengal, and Bangladesh has secured an investment in one of its blocks and attracted interest in three others. Clarity of the maritime boundaries will also improve law enforcement and could lead to greater bilateral cooperation in maritime security.

The ruling also has broader implications for other maritime disputes, including the South China Sea, by demonstrating that a smaller country can have its day in court against a much larger neighbor. While the United States is not a party to UNCLOS, the ruling benefits U.S. oceans policy by reaffirming a rules-based order at sea. The arbitrary nature by which the tribunal reached some aspects of the ruling may underscore Chinese skepticism of UNCLOS as a fair mechanism to resolve disputes, but the overall equitable result may in fact encourage parties to future disputes to agree to arbitration.

Despite the broader sense that justice was done, the legal arguments underpinning the ruling in *Bangladesh v. India* resulted in two issues of some concern. The first issue is that the tribunal was ambiguous in its legal commitment to the equidistance method and did not show how they computed the ultimate award of the maritime boundary. The second issue is the "gray area" in which the water column and sea bed are controlled by different countries, which may lead to future disputes. One can easily imagine that Indian fisherman might oppose offshore gas platforms in Indian waters drilling into the seabed to which Bangladesh is entitled.

In the end, however, both sides came away with an equitable delimitation of their boundaries and associated maritime space, and both now are free to exercise their sovereign rights in their maritime frontier. Beyond that, the decision helps to legally stabilize an important region of the world where access to the seas is important for sustainable economic development.

In that sense, this arbitration represents another victory for UNCLOS and its dispute settlement procedures. In terms of its contributions to the corpus juris of international maritime law, the tribunal's reluctance to deviate from mainstream legal doctrine as regards to invoking exceptions to the delimitation rules and proof

of an international agreement is useful in the way it promotes stability, predicable legal outcomes, and high evidentiary standards.

In 2010, the year after Bangladesh and India submitted their dispute, South Talpatty/New Moore, the sandbar that had been a key cause of tension over their territorial waters, disappeared beneath the waves of the Bay of Bengal and is now visible only at low tide. Some attributed the submergence of the 2-mile-long island to sea-level rise.[82] It is also true that river deltas are places where geomorphology is ephemeral and constantly shifting. The recent history in the Bay of Bengal seems to suggest that compared to sandbar islands, international law is considerably more steadfast and dependable.

[82] Associated Press, "Island claimed by India and Bangladesh sinks below waves," *Guardian*, Mar. 24, 2010, accessed Aug. 27, 2017, https://www.theguardian.com/world/cif-green/2010/mar/24/india-bangladesh-sea-levels.

Appendix: A Detailed Explanation of the Ruling

It is instructive that the some of the world's leading Western Law of the Sea scholars (law professors and former ministry of foreign affairs officials) were involved in the case. This included Michael Reisman from Yale University, Paul Reichler (counsel for the Philippines in its litigation versus China), Michael Wood (formerly of the U.K. Foreign and Commonwealth Office), Robert Smith (formerly of the U.S. Department of State), and a large number of naval professionals drawn from the state hydrographic offices. The arbitrators included three jurists from ITLOS and two highly experienced international lawyers with extensive diplomatic and arbitration experience.

The boundary dispute has its roots in the partition of British India into the two states of India and Pakistan via the Indian Independence Act of 1947, which specified *inter alia* that the newly formed province of East Bengal/Pakistan (modern day Bangladesh) became part of Pakistan. Sir Cyril Radcliffe was appointed by the pro-independence Government of India to chair the Bengal Boundary Commission, which was tasked to draw the boundaries between India and what would become East Pakistan, including that point of the land boundary which enters the Bay of Bengal and its general direction into the bay. [83]

There was general agreement between both parties in *Bangladesh v. India* that the Radcliffe boundary was the correct geographic reference point to delimit the two countries' boundary at the coastline. However, there was disagreement over the actual direction of the boundary moving seaward because the actual course of the three named rivers did not conform with the wording used in the boundary decree or the map that was produced in 1947 by Lord Radcliffe (and confirmed in a later boundary commission) (Figure 11). Also, the course of the rivers had physically changed since 1947 due to erosion and inundation. The notion of "shifting" boundaries was reinforced by some diplomatic communications in 1951 and a British

[83] The Commission decreed that the boundary would be the "the main channel … of the rivers Ichhamati and Kalindi, Raimangal and Haribhanga till it meets the Bay [of Bengal]"

Admiralty chart dated 1931 (BA 859), which showed the physical mid-point of the river channel to be in a different location—one that favored India because the shipping channel moved to the east of the low-tide elevations of South Talpatty/New Moore Island[84]

The practical effect of the Radcliffe decision (favored by India) is that the boundary projection would move in an easterly direction that cut off part of Bangladesh's territorial sea because of the direction of the river course (Figure 11, red line). Another positive effect was that to the extent that the British Admiralty Charts were admitted into evidence to explain the meaning of the mid-point of the channel (such as it existed in 1947), they would favor India's acquisition of the now mostly-submerged and uninhabited South Talpatty/New Moore low-tide elevation.

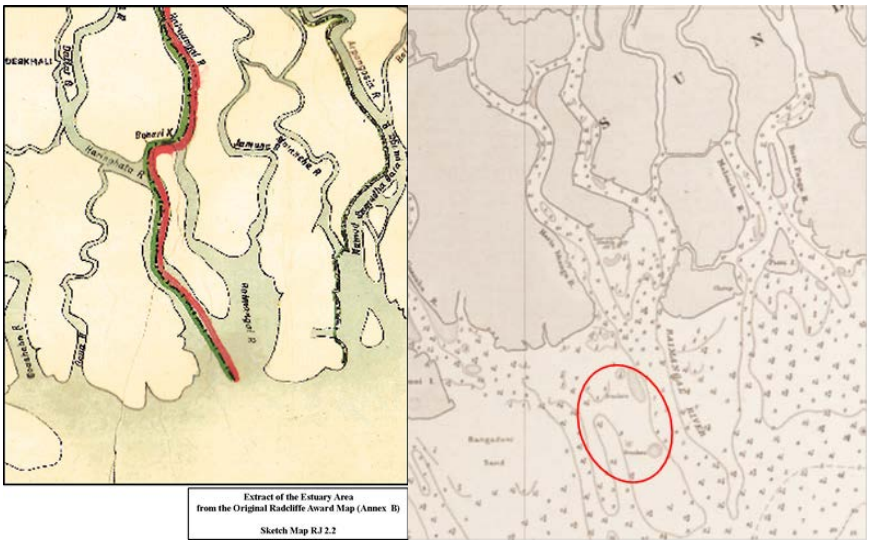
In the end, the tribunal endorsed the Radcliffe decision (Figure 11), citing past case law[85] that contemporaneous maps and charts are strong evidence of boundaries and should be respected to the maximum extent possible. The tribunal, in the same vein, also rejected attempts by India to argue for more flexibility in finding the mid-point based on changed physical conditions and a 1951 exchange of notes between low level official as to the point where the "boundary meets the Bay of Bengal" which purported to establish that the boundary should be "fluid." In the tribunal's words, an exchange of letters involving an "anonymous unknown Indian civil servant" enjoys little legal weight since agreements to modify a boundary are of "grave importance" and that evidence to establish a boundary will not be easily "presumed."[86]

[84] The location of the main channel of the Haribhanga and Raimangal as they pass South Talpatty/New Moore Island is the important geographic "turn point."

[85] *Frontier Dispute (Benin/Niger), Judgment, 2005 I.C.J. Reports*, p. 109, paragraph 26

[86] The Award, Paragraphs 105-108.

Figure 11. Extract of the Estuary Area from the Original Radcliffe Award Map (left) and British Admiralty Chart 859 Printed in 1931 (right)

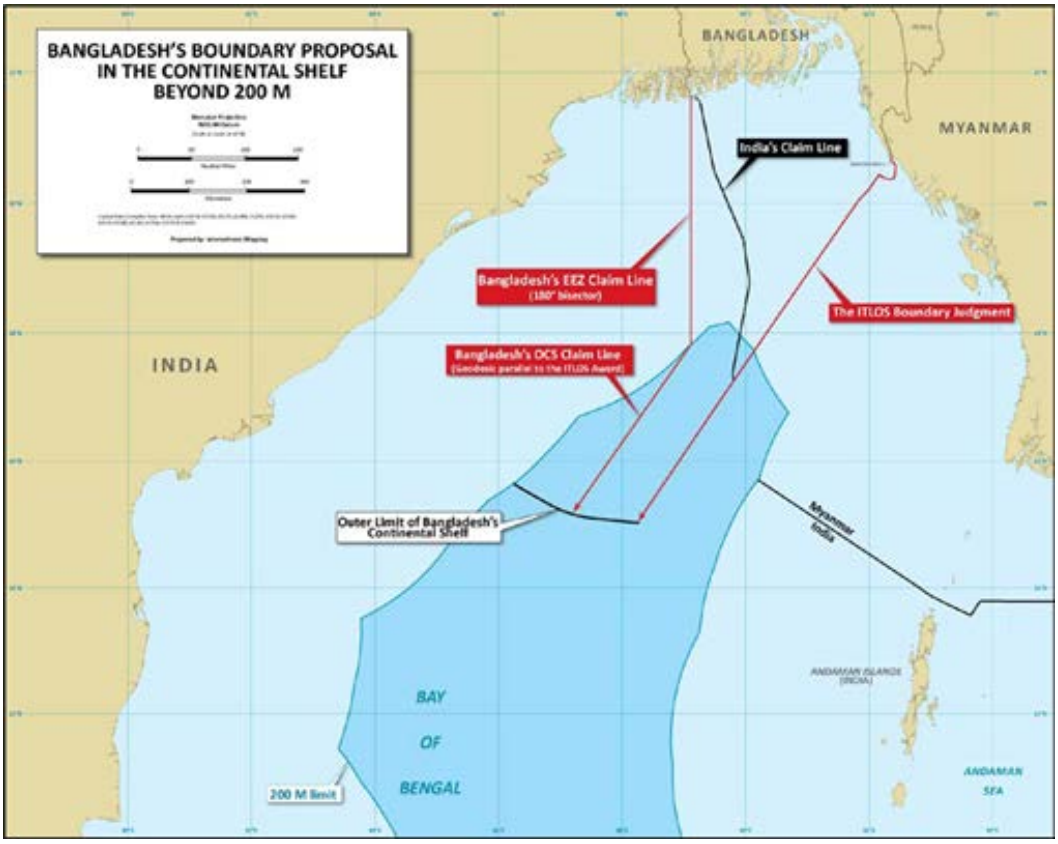


Source: The Award, p. 32, 38. The map was submitted by India in its Counter-Memorial in the case, and was referenced in the Award. Chart 859 Depicts the Haribhanga main river channel and the location of South Talpatty/New Moore Island (marked by the notation "breakers," circled by CNA).

After having determined the boundary division at the coastline (midstream of the main channel of the Haribhanga River), the next major task was to determine whether the boundary line that projects into the sea follows the same general direction of the river's water course or whether the equidistance method of boundary delimitation was to be used i.e., a provisional line is drawn 12 nm using the coastal base points regardless of the direction of the river as it approaches the coastline. Figure 12 depicts the positions of the parties (Bangladesh's claim line is red; India's claim line is black). Because the coastline of Bangladesh is a river delta and highly irregular, UNCLOS provides that straight baselines can be used to establish the coastline from which the territorial sea, EEZ, and continental shelf are measured. But, in this case, the parties jockeyed over the correct points to use to draw the straight baseline that encompasses the Bangladesh coast and are used in drawing the equidistant boundary between the two adjacent territorial seas and EEZs.[87]

[87] Heretofore, the parties were adhering to a provisional boundary that had been drawn by the British in the Indian Independence Act of 1947. However, the tribunal did not interpret this as title, and there were no historic agreements between the countries that could constitute title.

Figure 12. Bangladesh's Boundary Proposal in the Continental Shelf Beyond 200 NM



Source: The Award, p. 134. The map was originally Figure R5.7 in Bangladesh's Reply, and was cited in the Award.

Delimitation of the Territorial Sea

As can be seen in Figure 12, Bangladesh was seeking to get the territorial sea boundary delimited due south from the current political boundary at the coastline into the exclusive economic zone (see red line).[88] India, on the other hand, was

[88] Bangladesh was technically claiming an "angle-bisector" line from an east-west coastal baseline.

seeking to have the boundary pushed farther east (black line) to conform to the equidistance method of boundary delimitation.[89]

The other major issue—discussed in detail below—was whether Bangladesh would be essentially cut off from an extended continental shelf area (blue shaded area) or whether the line would angle west as it reached the extended continental shelf area.[90] Lastly, the arbitral panel was asked that their judgment take into account the ITLOS Boundary Judgement line (seen in red) as adjudged in the *Bangladesh v Myanmar* case. The arbitral panel, with little fanfare, agreed to conform its ruling to the ITLOS decision, i.e., the maritime boundary between Bangladesh and India would confirm to the ITLOS boundary for Myanmar and Bangladesh especially as regards the areas that intersected beyond the limits of the extended continental shelf of Bangladesh (Figure 13).

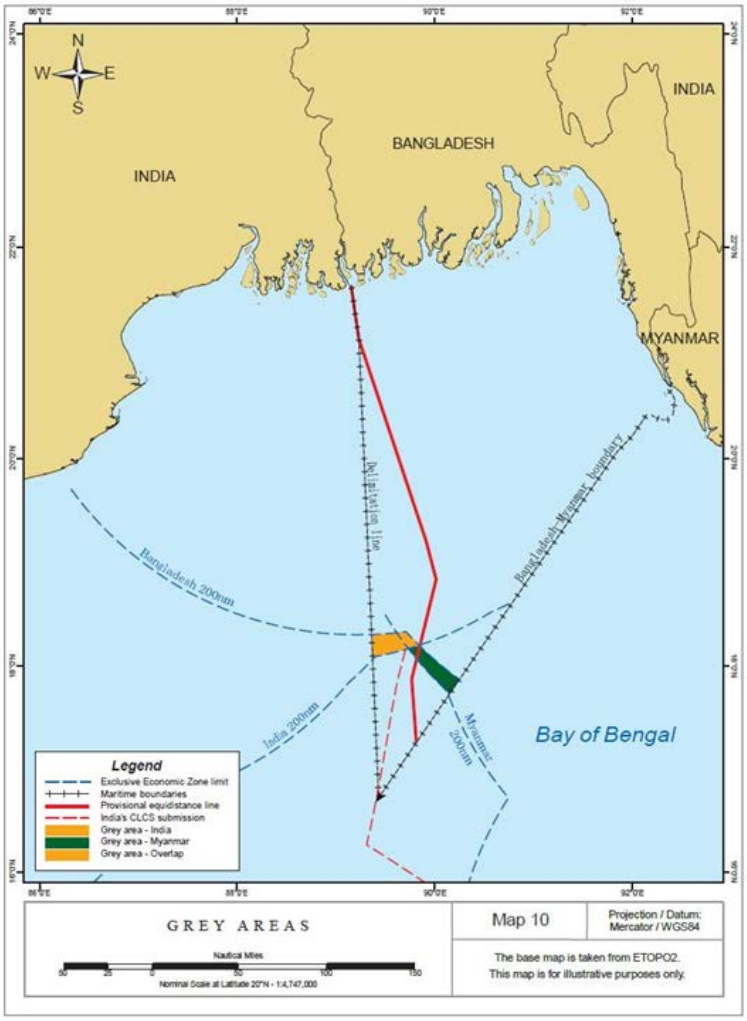
The process for delimitation of the territorial sea, established in the 2001 ICJ Case *Qatar v. Bahrain,*[91] consists of three steps. First, the tribunal draws a provisional equidistance line. Second, the tribunal considers if there is historic title, i.e., an existing agreement between the parties regarding the boundary, or long-standing acquiescence to a boundary, evident, for example, in customs and usage. Third, the tribunal considers whether there are special circumstances present. Such special circumstances might include the concavity of a coastline, traditional fishing areas, or, as argued in *Bangladesh v. India*, climate change.

[89] The equidistance method involves the use of a protractor that is placed at pairs of points along the coastlines of each country, equally distanced from the coastal boundary and then used to draw an arc in the water. The intersections of these arc pairs result in a line that closely resembles the contours of the coastline.

[90] Determining the technical outer limits of the continental shelf (beyond 200 nm) is the responsibility of the Commission for the Limits of the Continental Shelf (CLCS). India had made submission to the CLCS in 2009 and Bangladesh also did so in February of 2011. Since the instant legal dispute would affect the CLCS' work, the CLCS deferred consideration of both applications. However, to the extent that there was an extended continental shelf area that overlapped, the arbitral tribunal asserted that it has jurisdiction to decide that matter, (The Award, Paragraph 83) since failing to do so would frustrate the purpose of their decision regarding delimitation of the territorial sea and EEZ claims.

[91] 2001 ICJ Rep, paras. 176, 280, 281. A similar process is used in delimitation of the EEZ and continental shelf, although the ICJ case law employs more "flexible" language in applying this process in order to achieve an "equitable solution." The *Romania v. Ukraine,* 2009 ICJ Rep., paras 116-122 discusses the three-step process.

Figure 13. Provisional Equidistance Line and Gray Areas



Source: The Award, p. 159.

India's argument with regard to the direction of the territorial sea boundary was that the equidistance method of boundary delimitation is controlling. In this method, the adjacent boundary line (of the territorial sea, EEZ, etc.) needs to reflect the actual contours of the coastline versus the general direction of the political land boundary.[92] Bangladesh did not completely oppose the underpinnings of this

[92] Under Article 7(2) of UNCLOS, a coastal state may use straight baselines to "smooth out" and encompass their legal shoreline if the coastline is unstable due to the presence of a delta or other natural conditions. That was unquestionably the case here given the presence of the

methodology, but they argued that the base points that India was using to draw the straight baselines along the southern Bangladesh coast were incorrect and that there were special circumstances requiring an adjustment in the mathematical method as it moved seaward. In general terms, Bangladesh argued that only high-tide elevations should be used as base points in the establishment of the straight baseline. India, on the other hand, sought to include some low-tide elevations since it favored its position on where the north-south line would be drawn. The red line in Figure 13 reflects delimitation using the equidistance method.

Bangladesh argued two equitable principles in support of their claim that the boundary line should move in essentially a true north-south direction to avoid "cut-off" of their seaward claims, and that the equidistance calculation should only use high tide elevations. Bangladesh cited a string of cases including the 1984 *Gulf of Maine* case and the 2009 *Romania v. Ukraine* case for the proposition that India's proposal to use minor geographic features (low-tide elevations) should not be used as the basis for delimiting a maritime boundary because it would result in cut-off.[93] Bangladesh also argued that the instability of the coastline is another major factor weighing against the use of a strict equidistance approach given the potential effect of climate change and sea level rise in the Bay of Bengal that may cause the coastline (and any low-tide elevations) to either shift of become totally submerged.

The tribunal sided with Bangladesh's argument that only high tide elevations were to be used as basepoints for calculating the equidistance line that separated the two countries.[94] The tribunal did not endorse India's argument that South Talpatty/New Moore Island, in particular,[95] should be a base point in the equidistance calculation.

Ganges River delta. How the land border terminus was established by the PCA involved a lengthy discussion of past agreements dating back to colonial times and a chart that was produced by the British Admiralty. The tribunal was rather adamant that maritime boundaries, like land boundaries, are intended to be fixed as opposed to flexible. The tribunal also was adamant that compelling written evidence is required to establish a bilateral agreement between sovereign states to change a boundary.

[93] The Award, Paragraphs 199-200.

[94] Even though Bangladesh is entitled under UNCLOS to use straight baselines to "smooth out" the land boundary along its deeply indented coastline, the actual land features (not the straight baseline that forms the origin of the territorial sea) are the reference point for establishing an equidistance line. There was no legal argument over this settled point of law. The Award, Paragraph 250.

[95] The Award, Paragraph 263. South Talpatty/New Moore Island is South East of the center channel of the Haribhanga River which was determined to be the political boundary between the two countries (consistent with the Radcliffe ruling). This feature is a low-tide elevation. Had the feature not disappeared, its offshore location could have affected the location of the maritime boundary further offshore – mostly to Bangladesh's favor. The fact that it was a low-tide elevation in this particular case favored India.

However, the area that was once South Talpatty/New Moore Island is in the zone that was awarded to India.

The panel first found no evidence of a political agreement[96] that determined the seaward direction of the north-south line, established a provisional equidistance line (Figure 13, in red), and then began work to determine if relief from the equidistance method was appropriate. The panel was not persuaded that that the prospect of climate change *per se* necessitated that it use an alternative method to adjust the existing basepoints for a boundary because of future erosion.[97] Bangladesh also made the argument that the equidistance line should be abandoned because it would cut off their seaward access. On the question of whether the equidistance method should either be abandoned or adjusted to recognize special circumstances, including the cut-off (concavity) of Bangladesh's seaward projection and its extreme coastal instability,[98] the panel was unsympathetic to Bangladesh's arguments. The tribunal ruled that coastal instability was not a basis for using something other than the equidistance method of boundary delimitation (using revised basepoints). In support of this, the tribunal cited the famous 2001 International Court of Justice decision of *Qatar v. Bahrain* which both established the three-step process for assessing a provision equidistance line and delineating the sort of special circumstances would permit a deviation from the equidistance rule.[99] The panel similarly ruled that concavity and cut-off were not a consideration close to shore. In the end, the tribunal said that they sided with India on the 12 nm territorial sea delimitation line (Figure 13, also seen in Figure 19), although they went farther inland to find the correct base points to make the equidistance calculations. These revised base points pushed the final 12 nm boundary line farther to the west and gave Bangladesh a suitable outbound channel for its shipping.

[96] Under UNCLOS Arctic 15, countries that have adjacent or opposite territorial seas which overlap one another may make a political delimitation agreement.

[97] The Award, Paragraphs 214, 217 and 226.

[98] For Bangladesh's argument that coastal erosion would almost certainly change the delimitation line and likely become "arbitrary or unreasonable" in the future, see The Award, Paragraph 237. Article 15 of UNCLOS provides that either historic title or special circumstances are a basis for deviating from the equidistance method.

[99] Under the 2001 decision by the International Court of Justice in the *Qatar v. Bahrain* case, the "practiced" approach is for the court to first draw a provisional equidistance line and then consider whether that line must be adjusted in light of special circumstances *Qatar v. Bahrain, Judgment of 16 March 2001, I.C.J. Reports 2001*, p. 94, paragraph 176. See also, The Award, Paragraph 246. There was some press reporting that the elimination of South Talpatty/New Moore Island as a proper basepoints in the calculation of the equidistance line from the coast was a "loss" for India. See The Award, Paragraph 263. The selection of other high tide elevation basepoints was both supported by the case law and, in the last analysis, had very little effect on the actual allocation of ocean territory/ocean resources.

Delimitation of Areas beyond the Territorial Sea

After determining the 12 nm territorial sea boundary line, the tribunal made an entirely separate determination of the direction of the boundary as it projected from the outer limit of the territorial sea and moved seaward to the 200 nm outer limits of the continental shelf and EEZ, and beyond. In this phase of the case, Bangladesh gained substantial relief.

As was the case with the territorial sea equidistance line, Bangladesh argued that the equidistance line was too far east and this resulted in a "cut-off" of Bangladesh's EEZ projection (Figures 14 and 15).[100] Bangladesh argued that this "cut-off" would deprive Bangladeshi fisherman of access to traditional fishing areas important to their way of life and harm coastal economies. They similarly argued that the cut-off affected normal outbound navigation. India, by contrast, urged that the only circumstance in which access to marine resources is a relevant factor is when the denial will have "catastrophic" repercussions.[101] On this argument, the panel sided with Bangladesh[102] and adjusted the provisional equidistance line further west for a number of technical reasons. First, they found that the land boundary terminus established by Lord Radcliffe was not a "fixed point" or a high tide elevation that was used in the equidistance line calculation; rather, the Radcliffe "line" was the mid-point in the Haribhanga River channel. Accordingly, that "political" boundary needed to be the origin point for the equidistance line[103] to be extended in the form of a 12 nm geodetic line in a "generally southerly direction."

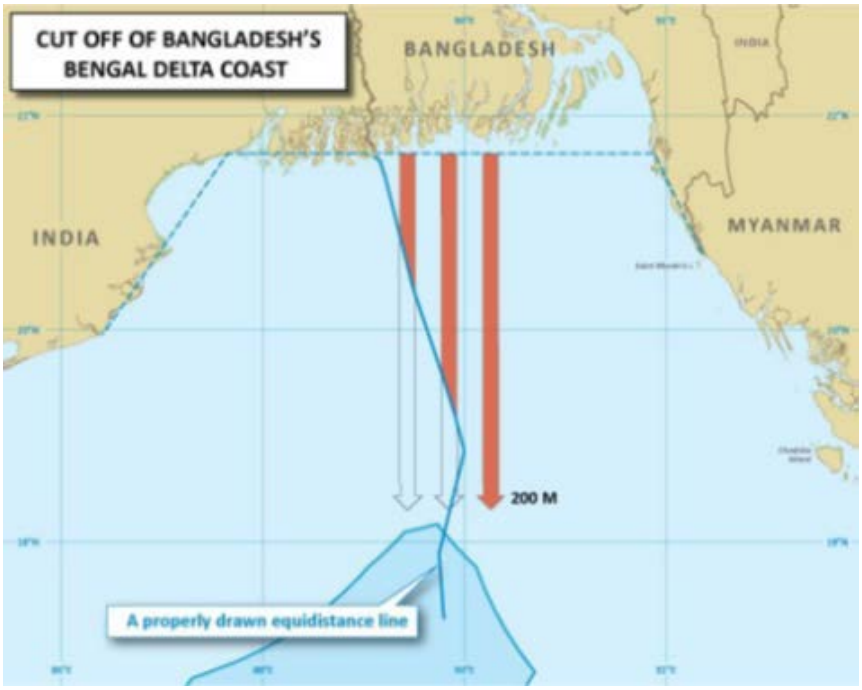
[100] The cut-off effect was given legal effect in the North Sea Continental Shelf Cases. A major bone of contention was South Talpatty/New Moore Island (an uninhabited low-tide elevation), which has been claimed both by India and Bangladesh. India made the case that the Radcliffe Award fixes the boundary in this sector as the midstream of the main channel of the rivers Haribhanga and Raimangal until it meets the Bay of Bengal. On this basis, India argued that the Land Boundary Terminus should lie to the east of New Moore Island. Bangladesh argued that the terminus should lie to the west of the island.

[101] The Award, Paragraph 394.

[102] The Award, Paragraph 408.

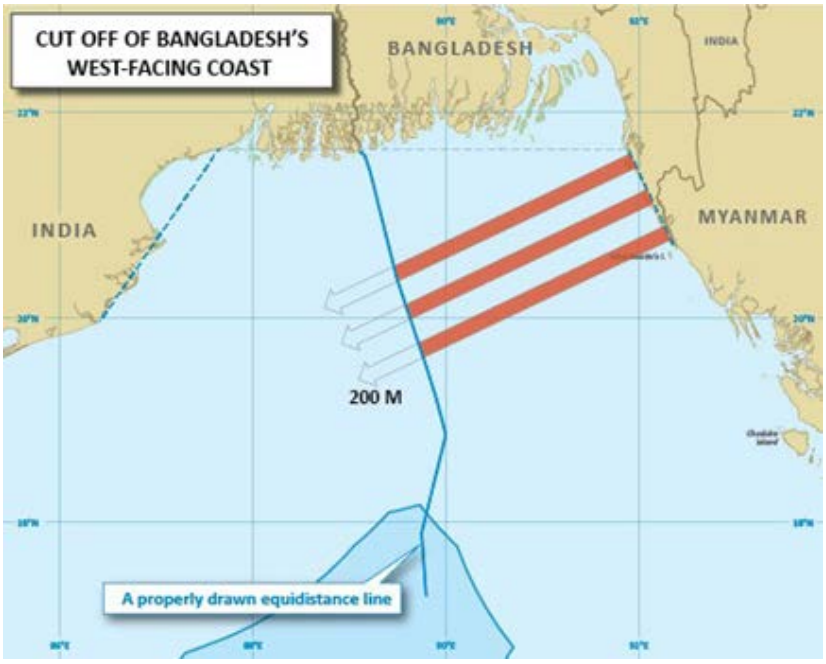
[103] The Award, Paragraphs 273-274.

Figure 14. Cut-Off of Bangladesh's Bengal Delta Coast



Source: The Award, p. 111. The map was originally part of Figure R4.16A-D in Bangladesh's Reply, and was cited in the award.

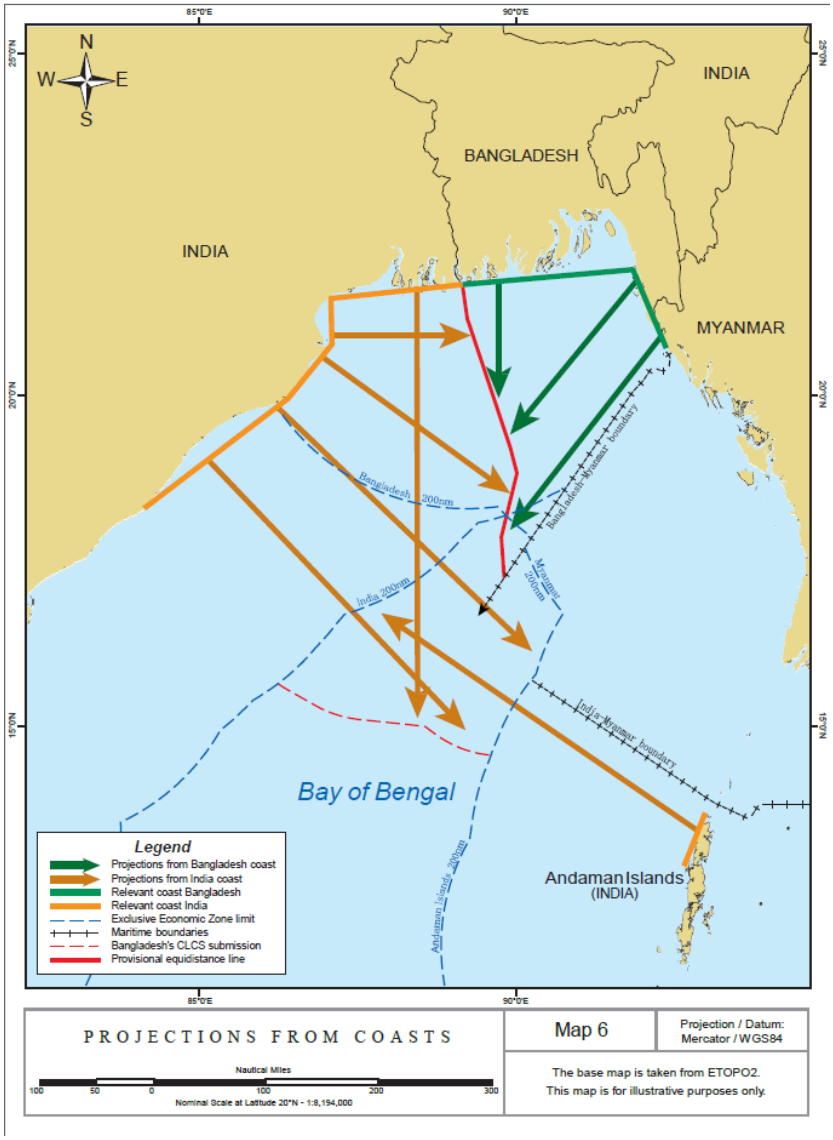
Figure 15. Cut-Off of Bangladesh's West-Facing Coast



Source: The Award, p. 111. The map was originally part of Figure R4.16A-D in Bangladesh's Reply, and was cited in the Award.

Another important factor that the tribunal considered was the effects the boundary would have on the maritime zones of Myanmar that were adjudicated a year earlier by ITLOS (the line extending from the land boundary between Bangladesh and Myanmar shown in Figure 12). The tribunal also considered the relative sizes of the coastline to the EEZs of India and Bangladesh. Because of the concave shape of Bangladesh's coastline, an equidistance method of delimitation would greatly favor India by "pulling" the boundary toward Bangladesh unless some relief was granted. The end result of this "concavity" effect is that the EEZ projection would be distorted in India's favor if the line that delimited the territorial seas was simply extended in exactly the same direction into the Bay of Bengal. Figures 15 and 16 depict this "cut-off" phenomenon.

Figure 16. Projections from Coasts



Source: The Award, p. 119.

Bangladesh argued that that the case law[104] requires a comparison of the ratio of the length of the two coastlines adjacent to the "relevant EEZ areas" to the ratio of each EEZ to ensure that there is a proportional relationship. The court found the ratio to

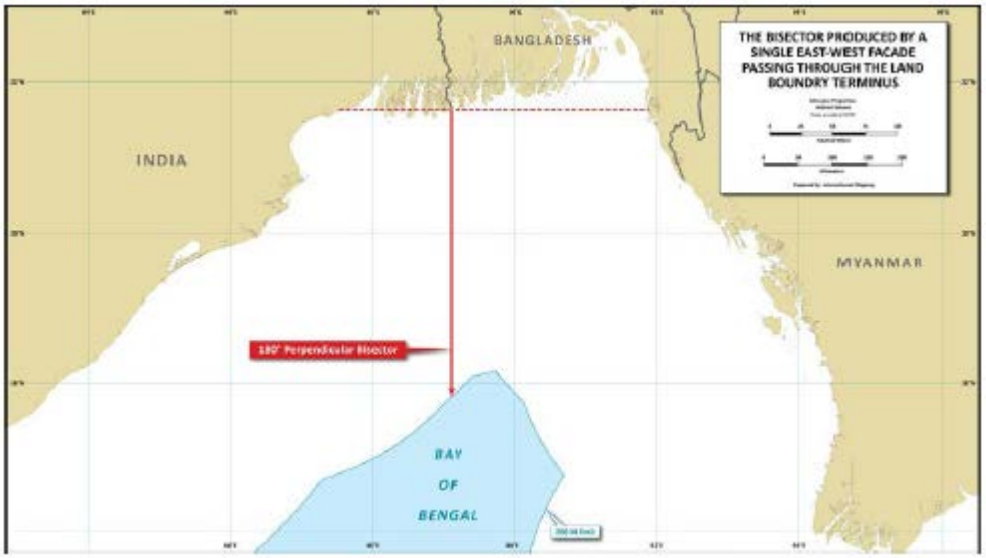
[104] The Award, Paragraphs 278 and 279.

be 1:1.92 in India's favor; i.e., India's relevant coastline is 92 percent longer (this includes comparison of the coastline of the Andaman Islands since it generates a projection as shown in Figure 16). In the end, the tribunal found that the block of ocean space out to 200 nm adjacent to the coastlines of both countries was approximately 400,000 square kilometers. They also found that UNCLOS 74(1) and 83(1) requires that delimitations of EEZ and continental shelf areas within 200 nm shall be done in such a way as to achieve an "equitable solution."

Because of this cut-off effect and a disproportionate award of EEZ area in India's favor, Bangladesh asked that the tribunal apply the angle-bisector method of delimitation in the form of a line that went 180-degrees due south from the territorial sea boundary limit (this was the same request they had unsuccessfully made for the territorial sea boundary).[105] This particular method is depicted in Figure 17. Bangladesh argued that aside from giving them much more ocean space, this method was most consistent with Bangladesh's domestic Territorial Sea Maritime Zones Act of 1974 and how it has enforced their EEZ claim. It would also make the EEZ easier to administer, particularly with regard to fisheries enforcement. Bangladesh also argued that the angle-bisector method was more or less used in the companion *Bangladesh v. Myanmar* case (to Myanmar's favor vis-à-vis Bangladesh).

[105] This method was used most recently by the International Court of Justice in the *Nicaragua v. Honduras* territorial dispute. In that decision, the court ruled that because of very active "morpho dynamism of the relevant area" that would render any equidistance line moot, they determined that this was a special circumstance for deviating from the equidistance method which they said reflected an equitable division based on the "macro-geography" of the coastline. In support of that decision, the ICJ noted various other instances in which some variant of the angle-bisector method was used. For an excellent discussion of the *Nicaragua* decision, see Yoshifumi Tanaka, *Reflections on Maritime Delimitation in the Nicaragua/Honduras Case,* Max-Planck Institute, 2008, accessed Aug. 27, 2017, http://www.zaoerv.de/68_2008/68_2008_4_a_903_938.pdf. See also, *Romania v. Ukraine,* 2009 ICJ Rep., paras 116-122.

Figure 17. The Angle-Bisector Method



Source: The Award, p. 126.

On the question of the size of the 200 nm entitlements, the tribunal said that while the equidistance method is the default method for adjudicating the delimitation of a territorial sea, UNCLOS does not have such a black letter rule when it comes to the delimitation of an EEZ and continental shelf within 200 nm. The tribunal instead ruled that since it was not hampered by a specific rule, it would rely upon past jurisprudence to arrive at a solution that produced an "equitable result."[106] Under the *Bangladesh v Myanmar* case and recent International Court of Justice cases of *Romania v. Ukraine* and *Nicaragua v. Colombia*, a three-step process is required. That process first begins with the establishment of a provisional equidistance line. Second, if the court determines that special circumstances require an adjustment, the provisional line should be adjusted. The last step involves an *ex post facto* assessment of whether the adjustments in the demarcation line in step two resulted in a disproportionate impact ("marked disparity") by comparing the ratio of the length of the coastlines with the ratio of the areas in dispute.

[106] The Award, Paragraphs 339 and 397.

The tribunal once again rejected Bangladesh's argument that its instable coastline justified, as a matter of law, a deviation from the equidistance method.[107] The tribunal also rejected the angle-bisector method in favor of the above-described three-step equidistance process because the latter approach is more systematic and transparent. Similarly, the tribunal said that the concavity of Bangladesh's coast did not constitute a special circumstance in and of itself unless that concavity resulted in a "cut-off" when the provisional equidistance line was drawn—as was present in this case.[108]

The tribunal ultimately ruled that there was a cut-off in Bangladesh's case because the decision needs to take into account the whole area where there are competing claims, including the EEZ, continental shelf, and extended continental shelf. In the case of Bangladesh, the tribunal found that the coast is "manifestly" concave and there was cut-off as a result of the delta coast (Figure 14) as well as cut-off from Bangladesh's west-facing coast (Figure 15). These factors justified deviation from the provisional equidistance line that became increasingly severe as the line extended further seaward, especially in the vicinity of basepoints T4 and T5 (Figure 18).[109] The tribunal also found, citing a long list of cases,[110] that areas where there had been repetitive fishing should be given effect as well as ensuring equal access to fish stocks. Bangladesh urged that an equitable result would follow if a 180-degree bisector line from the land boundary terminus was used to ensure a roughly equivalent amount of ocean territory—in relation to the size of the coastlines—and was, as noted above, consistent with their domestic legislation.[111] This approach

[107] The Award, Paragraph 399.

[108] The Award, Paragraph 402. The tribunal cited the companion *Bangladesh v Myanmar* Case as support for this proposition. India argued that the *Bangladesh v Myanmar* decision had remedied the cut-off effect because in that case ITLOS ruled that Bangladesh was entitled to an extended continental shelf area (beyond 200 nm) and that should be taken as evidence that there was no cut-off. (The Award, Paragraphs 458-474). The delimitation is found at page 163. However, ITLOS only determined the location of the adjusted equidistance line separating Bangladesh and Myanmar and, in doing so, preserved a sliver of Bangladeshi access to an extended continental shelf area. The westerly boundary of Bangladesh's EEZ and continental shelf (including access to an area of extended continental shelf) was not decided by ITLOS in the other case.

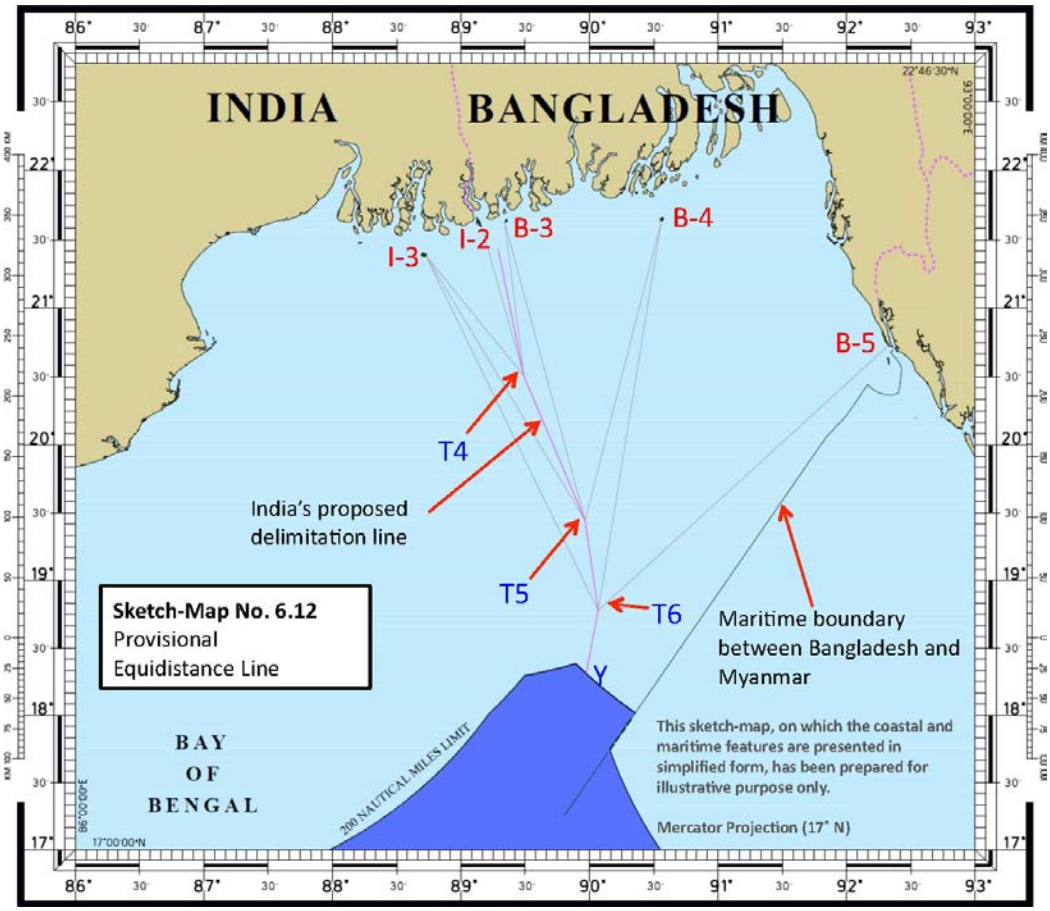
[109] The Award, Paragraph 414. The tribunal did not explicitly address what factors amount to cut-off but they noted in paragraph 418 that using the provisional equidistance line (1) the area allocated to Bangladesh narrowed into the shape of a triangle the further it was from the coast; and (2) that from point Prov 3, the "provisional equidistance line bends markedly eastward to the detriment of Bangladesh." Presumably, these factors amounted to cut-off in the tribunal's view.

[110] The Award, Paragraph 423.

[111] The angle-bisector method has been used, in part, by the International Court of Justice in the *Gulf of Maine* case and the *Nicaragua v. Honduras* case.

would also afford Bangladesh "equitable" access to an extended continental shelf. India, of course, argued that this 180-degree bisector line was disconnected from the actual direction of the coast and had no foundation in international law.

Figure 18. India's Provisional Equidistance Line



Source: The Award, p. 102. The map was originally part of Figure 6.12 in India's Counter-Memorial, and was cited in the Award.

In the face of these counter-arguments, the tribunal decided that it needed to adjust the provisional equidistance line both within 200 nm and beyond, relying upon the approach taken by ITLOS in the *Bangladesh v. Myanmar* case.[112] In doing so, the tribunal sought to ameliorate the effects of the provisional equidistance line cutting off Bangladesh's entitlements to the EEZ, continental shelf, and extended continental

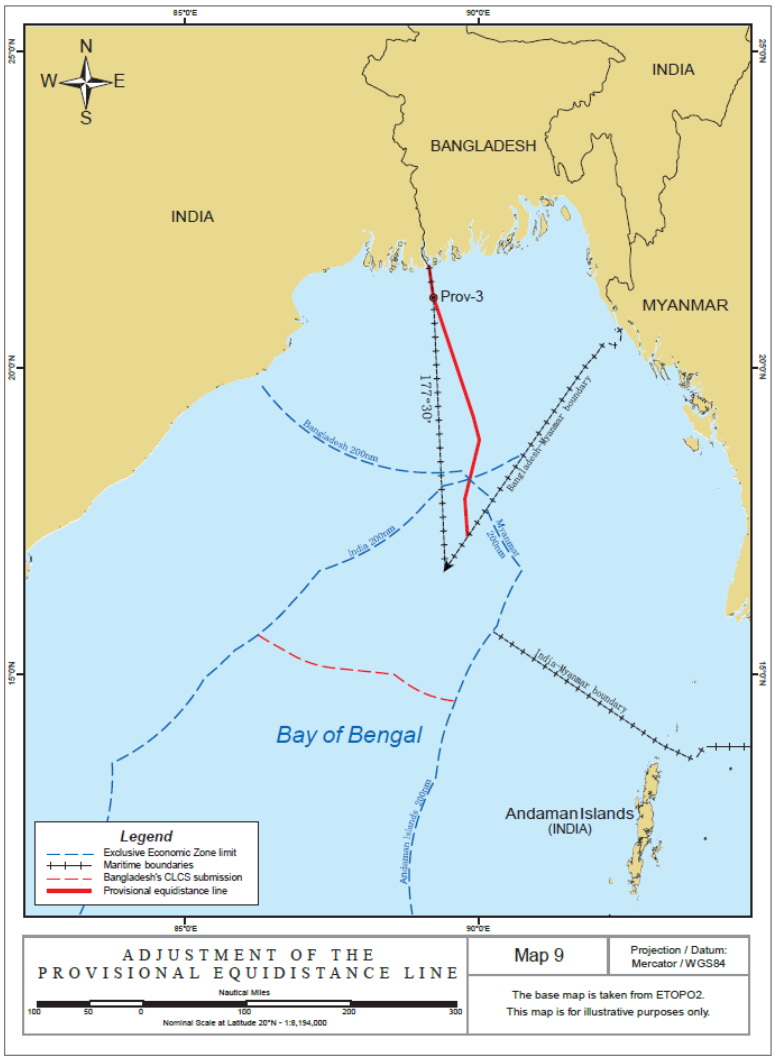
[112] The Award, Paragraphs 471-472.

shelf. The tribunal determined a geodetic boundary line with an azimuth of 177.5 degrees that commenced at the limits of the territorial sea and moved south to the point where it intersected with the boundary established by ITLOS in the *Bangladesh v Myanmar* case. The final line is depicted by the crosshatched line in Figure 19 alongside the red provisional equidistance line. The tribunal did not provide any reasoning to explain how it arrived at the 177.5-degree boundary line, contributing to the view by some that the award was arbitrary.

Had the provisional equidistance line method been followed, the area ratio of Bangladesh's EEZ to India's EEZ would have been 1:3.25. The decision of the tribunal to adjust the equidistance line resulted in a significant acquisition of EEZ territory by Bangladesh such that the resulting ratio was 1:2.81 in favor of India. The end result was a significant improvement in Bangladesh's position. Still, it was surprising that when the tribunal compared the 1:1.92 ratio of coastlines between Bangladesh and India with the 1:2.81 ratio of EEZ areas, it did not regard the relative sizes to be "disproportionate" as a matter of law.[113]

[113] The Award, Paragraph 478. After making this adjustment, the tribunal examined the ratio of the coastlines of the two countries to the area in dispute to ensure that there was no disproportionate result. The ratio of the relative lengths of the coastline was 1:1.92 in favor of India. The tribunal applied the disproportionality test by comparing the ratio of the relevant maritime space it accorded to each party to the ratio of the parties' relevant coastal lengths (Bangladesh's relevant coast is 418.6 kilometers and India's is 803.7 kilometers). Had the provisional equidistance-line method been followed, the EEZ area ratio would have been 1:3.25 in favor of India. The decision resulted in a ratio of 1:2.81 that was, in the tribunal's view, not a significant disproportion in the allocation of space.

Figure 19. Adjustment of the Provisional Equidistance Line



Source: The Award, p. 149.

The Resulting Gray Area

The tribunal's ruling created a "gray area" where Bangladesh had a potential entitlement to an extended continental shelf[114] but not an EEZ, since it was beyond 200 nm from the Bangladesh coastline but within India's mainland EEZ (the yellow areas shown in Figures 13 and 20).[115] The basis for this finding is the *Bangladesh v. Myanmar* case, in which the court held that "Article 76 of the Convention embodies the concept of a single continental shelf" and that "in accordance with Article 77, paragraphs 1 and 2 of the Convention, the coastal state exercises exclusive sovereign rights over the continental shelf in its entirety without any distinction being made between the shelf within 200 nm and the shelf beyond that limit."[116]

On the basis of that holding, ITLOS found a gray area between Myanmar and Bangladesh as depicted by the green shaded area in Figure 20, in which Myanmar enjoyed an area of EEZ that was on top of the continental shelf of Bangladesh. The tribunal acknowledged that both India and Bangladesh have submitted their extended continental shelf claims to the Commission on the Limits of the Continental Shelf (CLCS) (pursuant to Article 76 and Annex II of UNCLOS) for a legally binding technical assessment of whether their seabeds qualify for extension beyond 200 nm. Yet the tribunal still went forward and established a boundary line. The tribunal held that within the gray area, the boundary only delimited the parties' sovereign rights in respect of the continental shelf and did not otherwise limit India's sovereign rights to the EEZ in the superjacent waters—even though the entitlements are different (Figure 21).[117]

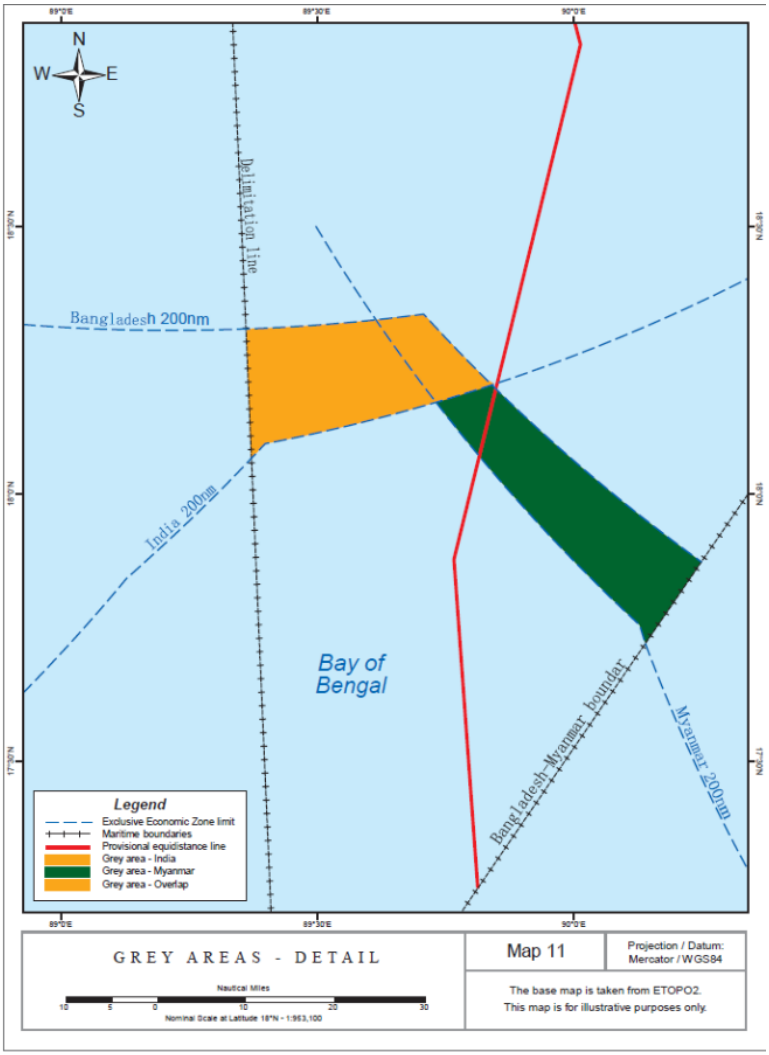
[114] Even though oil and gas exploration in ocean areas beyond 200 nm is modest, gas hydrates offer a potential resource opportunity for the future, including in areas of extended continental shelf. The International Energy Agency has opined that estimates of methane hydrate deposits are large. Keith Burnard, "How Resources Become Reserves Tapping into Plenty," *World Energy Agency Market and Security Report* (2014): 17, accessed Aug. 17, 2017, https://www.iea.org/media/etp/etp2014/R2Rarticle_IEA_ENERGY_Issue5.pdf.

[115] The Award, Paragraph 503. The Award creates a so-called "gray area" in which the EEZ of India subsumed an extended continental shelf area within Bangladesh's extended continental shelf entitlement. The tribunal did not determine any rights in this area but encouraged the parties to establish a cooperative arrangement.

[116] *Bangladesh v. Myanmar*, Paragraph 361.

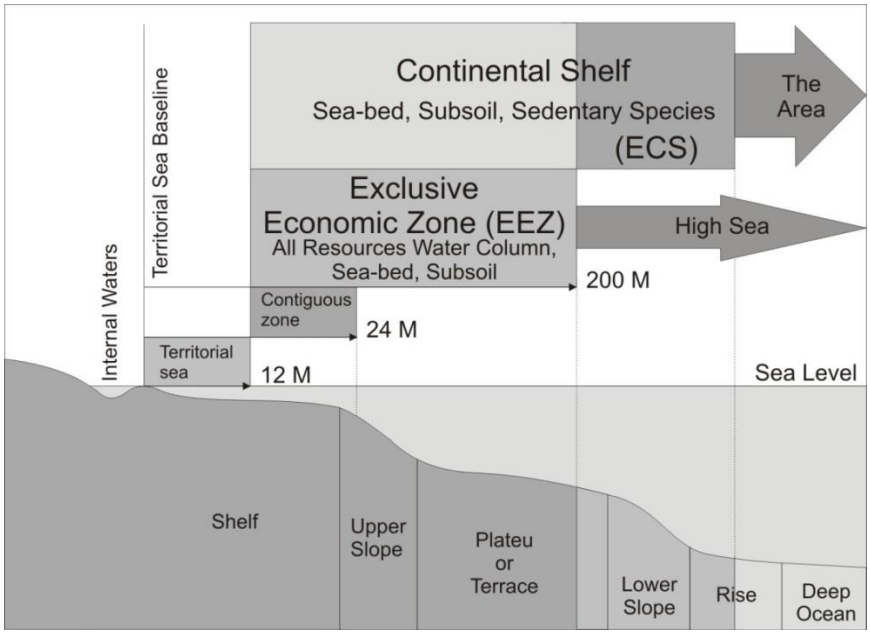
[117] Clive Schofield, "The Delimitation of Maritime Boundaries: An Incomplete Mosaic," in *The Ashgate Research Companion to Border Studies*, edited by Doris Wastl-Walter, (Surrey: Ashgate, 2011), 665 and 669.

Figure 20. Gray Areas Between India, Bangladesh and Myanmar



Source: The Award, p. 161.

Figure 21. UNCLOS Maritime Entitlements



Source: Clive Schofield, "Securing the Resources of the Deep: Dividing and Governing the Extended Continental Shelf," *Berkeley Journal of International Law*, 33, 1 (2015): 278, accessed Aug. 17, 2017, http://scholarship.law.berkeley.edu/bjil/vol33/iss1/7/.

This situation also arose in the *Bangladesh v Myanmar* case and is not, according to the tribunal, without precedent (in UNCLOS) where states would have shared rights in a single location in the same maritime area. The tribunal encouraged India and Bangladesh to conclude a cooperative arrangement respecting the management of the fisheries in the gray area.

This page intentionally left blank.

CNA
ANALYSIS & SOLUTIONS

DOP-2017-U-016081-Final

CNA is a not-for-profit research organization
That serves the public interest by providing
in-depth analysis and result-oriented solutions
to help government leaders choose
the best course of action
in setting policy and managing operations.

Nobody gets closer—
to the people, to the data, to the problem.

1942 CNA 2017
ANNIVERSARY
75 YEARS OF SERVICE TO OUR NATION

www.cna.org • 703-824-2000

3003 Washington Boulevard, Arlington, VA 22201