

ARBITRATION UNDER ANNEX VII OF THE UNITED NATIONS  
CONVENTION ON THE LAW OF THE SEA



**PEOPLE'S REPUBLIC OF BANGLADESH**

v.

**REPUBLIC OF INDIA**

**REPLY OF BANGLADESH**

**VOLUME I**

**31 JANUARY 2013**



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## CHAPTER 1 INTRODUCTION

1.1 These proceedings were initiated by Bangladesh on 8 October 2009 with a Notification and Statement of Claim under Article 287 of the 1982 United Nations Convention on the Law of the Sea (“UNCLOS” or “the 1982 Convention”). In accordance with Article 9(1) of the *Rules of Procedure for the Arbitral Tribunal Constituted under Annex VII*, Bangladesh submitted its Memorial comprising five volumes on 31 May 2011. India submitted its Counter-Memorial comprising two volumes 14 months later, on 31 July 2012, pursuant to a two-month time extension granted by the Tribunal in a letter to the Parties dated 9 January 2012. As a consequence of this time extension, the Tribunal has modified the timetable set out in Article 9 of the *Rules of Procedure*. Bangladesh submits this Reply comprising three volumes in accordance with the updated schedule set out in a letter to the Parties dated 14 September 2012.

1.2 This Reply supplements the arguments of law and fact presented by Bangladesh in the Memorial and fully responds to the arguments of India set out in the Counter-Memorial. Since Bangladesh filed its Memorial, the International Tribunal for the Law of the Sea (“ITLOS”) has given its Judgment in the *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)* on 14 March 2012. Like India, which sought a delay in the filing of its Counter-Memorial in order to take account of that Judgment, and has made significant references to it, Bangladesh has benefited from the opportunity the Judgment has afforded to clarify some of the arguments set out in the Memorial. None of the arguments advanced by India, however, have caused Bangladesh to change its approach to this case. The initial round of written submissions has revealed that the Parties remain deeply divided on the delimitation of the territorial sea, exclusive economic zone (“EEZ”) and continental shelf within 200 nautical miles (“M”) and on the delimitation of the continental shelf beyond 200 M.

1.3 With respect to the location of the land boundary terminus, the Bangladesh Memorial showed that the Radcliffe Award had determined the land boundary between Bangladesh and India and provided a fixed location for the land boundary terminus, at the point where the main channel of the Hariabhanga River met the Bay of Bengal in 1947. By reference to the 1931 edition of British Admiralty Chart 859, Bangladesh demonstrated that the land boundary terminus is located at 21°38’14”N and 89°06’39”E (WGS84).

1.4 Bangladesh notes that India does not dispute that the Radcliffe Award authoritatively defines the location of the land boundary terminus, and that it agrees with Ban-

gladesh that “the land boundary terminus ... was determined at the time of the independence of India and Pakistan in August 1947, and has not subsequently changed”.<sup>1</sup> Bangladesh and India agree that, as stated by India in its Counter-Memorial, the precise location of the land boundary terminus was where the “vertical axis” (the midstream of the main channel of the Hariabhanga River) met the “horizontal axis” (the closing line drawn from headland to headland across the mouth of the Raimangal Estuary). However, the Parties disagree as to where that fixed location was to be found.

1.5 In the Counter-Memorial, India contends that Bangladesh has erroneously used a “secondary channel” of the Hariabhanga River to plot the “vertical axis”. Rather than relying on a contemporaneous chart, however, the Counter-Memorial relies on a modern sketch-map of unknown provenance to argue that the land boundary terminus is located at 21°38’40.4” N, 89°10’13.8” E. As set out in this Reply, there is nothing in India’s argument that has caused Bangladesh to revise the conclusion set out in the Memorial. The fact that India has declined to make use of contemporaneous or established charts strongly supports the conclusions of Bangladesh.

1.6 With respect to the delimitation of the territorial sea within 12 M, the Bangladesh Memorial identified Article 15 of UNCLOS as the law applicable to the delimitation of the territorial sea and noted that the equidistance method does not apply when there are special circumstances. The Memorial determined that special circumstances do present themselves in this case. Most importantly, Bangladesh is situated entirely within a coastal concavity at the northern end of the Bay of Bengal, and its relevant coastline is concave, as recognised by ITLOS in its March 2102 Judgment and India in its Counter-Memorial. Because of Bangladesh’s concave coast, the equidistance method produces a cut-off effect that is highly inequitable to Bangladesh. Moreover, the coastlines of Bangladesh and India are characterised by a highly active morpho-dynamism, and this makes the use of equidistance inappropriate as it is not possible to establish stable base points. As such, the maritime boundary in the territorial sea between Bangladesh and India should be delimited by the application of an angle bisector.

1.7 India’s Counter-Memorial concurs that Article 15 is the law applicable to the delimitation within 12 M, but it disputes the existence of special circumstances necessitating the use of the angle-bisector methodology. According to India, a median line should be used to delimit the territorial sea and the Counter-Memorial proposes five base points for the construction of such a line. In this regard, Bangladesh has noted the propensity of India to fix base points in areas that are entirely inappropriate, including on insignificant

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<sup>1</sup> Counter-Memorial of India (hereinafter “CMI”) at para. 5.31.

and highly unstable low-tide elevations, and out at sea where there are no features above water even at low tide.

1.8 With respect to the EEZ and continental shelf within 200 M, the Bangladesh Memorial showed that because of the unusual geographic circumstances pertaining to the Bay of Bengal, equidistance does not produce the equitable solution required by the 1982 Convention. The relevant circumstances in this case, namely the cut-off effect resulting from the concave configuration of Bangladesh's coast and the instability of the coastline of the Bengal Delta, call for an alternative method of delimitation. In conformity with established judicial practice, Bangladesh considers that the angle-bisector method is the most appropriate alternative. The EEZ and continental shelf within 200 M should be delimited by means of a line following a geodesic azimuth of N180°E. This leads to a result that is consistent with the geographic realities of the Bay of Bengal and is equitable to both Parties.

1.9 India does not dispute the concave configuration of Bangladesh's coast. Instead, it argues that it is not a relevant circumstance in this case. India therefore proposes that the EEZ and continental shelf within 200 M should be delimited by means of an equidistance line, ignoring entirely the line's cut-off effect on Bangladesh.

1.10 With respect to the continental shelf beyond 200 M, the Memorial and Counter-Memorial showed that each Party accepts that the other Party is entitled to claim an outer continental shelf by virtue of the natural prolongation of its land territories and the application of Article 76(4) of the 1982 Convention. The Parties dispute how the area beyond 200 M should be delimited. In its Counter-Memorial, India argues that the equidistance line that it proposes for the EEZ and continental shelf within 200 M should simply be extended through the outer shelf area claimed by both Parties, ignoring not only the cut-off effect produced by the equidistance line but also the fact that the cut-off effect – and inequity to Bangladesh – becomes increasingly severe in direct proportion to increase in distance from the coast.

1.11 On this basis, Bangladesh maintains its position, expressed in its Memorial, that equidistance cannot result in an equitable solution and is an inappropriate method for delimitation of the area beyond 200 M. Bangladesh does, however, modify the views it expressed in its Memorial in two respects. *First*, in light of ITLOS's ruling that entitlement beyond 200 M is based entirely on application of the criteria expressed in Article 76(4), it no longer bases its claim in these proceedings on the fact that its landmass is more strongly and more directly connected to the seabed in the Bay of Bengal than India's. *Second*,

and relatedly, it no longer contends, on the basis of its superior geological and geomorphological connection to the continental shelf, that it is entitled to *all* of the disputed shelf area claimed by both Parties. Instead, in this Reply, taking account of ITLOS's March 2012 Judgment, Bangladesh proposes that the disputed area beyond 200 M be equitably divided by means of an azimuth parallel to the line of delimitation of 215° fixed by ITLOS as the boundary between Bangladesh and Myanmar. As demonstrated within, this would establish a modest corridor for Bangladesh extending to the outer limit of its claim, abate the cut-off effect of Bangladesh's concave coast beyond 200 M, and divide the disputed outer shelf area proportionately between the Parties. It would thereby constitute the equitable solution required by Article 83 of the Convention.

\* \* \*

1.12 In the time since Bangladesh submitted its Memorial on 31 May 2012 the body of maritime delimitation case law has developed with the handing down of two important judgments: as noted above, ITLOS rendered its decision in *Bangladesh/Myanmar* on 14 March 2012.<sup>2</sup> In addition, the International Court of Justice delivered its Judgment in *Territorial and Maritime Dispute (Nicaragua v. Columbia)* on 19 November 2012.<sup>3</sup> Bangladesh has carefully studied both of these decisions. Both are directly relevant to these proceedings and both substantially strengthen Bangladesh's case. They also serve to underscore that India's stubborn insistence on equidistance is misguided.

1.13 It is striking and somewhat puzzling that India should have chosen to adopt an approach in this case that is so plainly at odds with the decision in *Bangladesh/Myanmar* – the very decision that caused India to delay its Counter-Memorial by two months in order to study its implications. The Counter-Memorial adopts a markedly selective reading of the ITLOS decision. It appears to embrace certain parts of the Judgment that it finds attractive, whilst choosing to ignore significant parts that are so obviously unhelpful to its arguments. With respect to the delimitation of the territorial sea, India makes much of the equidistance line adopted by ITLOS in the territorial sea between Bangladesh and Myanmar. However, India fails to consider the relevance of the obvious and widely recognised instability of the Bengal Delta coastline which distinguishes this case from that of *Bangladesh/Myanmar*. Unlike the proceedings before ITLOS, it is not possible in this case to identify stable and reliable base points. The Counter-Memorial also fails to grasp the

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<sup>2</sup> *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment of 14 March 2012, ITLOS Reports 2012 (hereinafter "*Bangladesh/ Myanmar*").

<sup>3</sup> *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Judgment, I.C.J. Reports 2012 (hereinafter "*Nicaragua v. Colombia*").

overriding effect that St. Martin's Island played in the Tribunal's delimitation within 12 M. Because of the location of St. Martin's Island, Bangladesh's concave coastline produced no cut off within 12 M.

1.14 With respect to the delimitation of the EEZ and continental shelf within 200 M, India relies heavily on the fact that ITLOS elected not to make use of the angle-bisector methodology. Yet, India fails to recognise that ITLOS adopted a significant adjustment to the provisional equidistance line in light of the concavity of the Bangladesh coast that made it, in most of the area within 200 M, identical to the angle bisector proposed by Bangladesh.

1.15 As to the delimitation beyond 200 M, India proposes an extension of the equidistance line relying on ITLOS's continuation of the 215° line in *Bangladesh/Myanmar*. However, India has ignored the fact that there is no requirement for a delimitation line in one maritime zone to be extended to all zones, or for one single method of delimitation to be employed in all zones. India's approach to the delimitation beyond 200 M only serves to exacerbate the extent to which Bangladesh is cut off beyond 200 M.

1.16 In contrast to the selective approach in the Counter-Memorial, Bangladesh's Reply adopts an approach that is fully consistent with the ITLOS Judgment in the companion case. The critical point overlooked by India is that the solution adopted by ITLOS is rooted in a methodology that achieves an equitable result other than by some sort of mechanical application of an equidistance line. The Tribunal determined that a very substantial departure from the provisional equidistance line was warranted. This finding should apply with equal force in this case.

1.17 Bangladesh's position has been further reinforced by the ICJ's Judgment in *Nicaragua v. Colombia*. In that case, the Court employed three different delimitation methodologies in the EEZ/continental shelf within 200 M – none of which was equidistance. The Court rejected Colombia's equidistance proposal, because of the cut-off effect it would have had on Nicaragua's mainland coast. In place of equidistance, it delimited the boundary: *first*, by means of a line drawn on the basis of the equiratio method, giving three times as much weight to Nicaragua's valid base points as to Colombia's; *second*, by extending the portion of the boundary so drawn so as to enclave Colombia's small islands and cays within 12 M radii; and *third*, by extending the ends of the line eastward to the 200 M limit along parallels of latitude, so as to create a Colombian corridor within Nicaragua's EEZ/continental shelf. The Court's Judgment belies India's arguments on the need to rely automatically on equidistance – even where relevant circumstances make it inequitable – and

on the wooden use of the same inappropriate methodology not only in all parts of a single maritime zone but across all the others.

1.18 The chapters that follow address the arguments in the Counter-Memorial in detail. For the purposes of this Introduction, there are two particular shortcomings in the Counter-Memorial that merit special attention. First, in its Counter-Memorial, India completely ignores the fundamental geographic realities in this case: Bangladesh is obviously sandwiched within a concave coastline between Myanmar and India, lying within a deep and broad concavity in the north-eastern portion of the Bay of Bengal. A delimitation based on equidistance will necessarily lead to an inequitable result. ITLOS accepted this argument in its Judgment in *Bangladesh/Myanmar*, and will have been aware of the simultaneous proceedings before this Annex VII Arbitral Tribunal. Curiously, despite recognizing that the coast of Bangladesh is concave, India chooses to ignore the relevance of this geographic reality. The entirety of India's proposed delimitation line, from the terminus of the land boundary, through the territorial sea, the EEZ and beyond 200 M produces a severe cut off of Bangladesh's coastal and seaward projection.

1.19 The other geographic reality that is disregarded by India is the instability of the Bengal Delta coastline. The Bangladesh Memorial went to considerable lengths to describe the highly unstable and marked deltaic features pertaining to the coastline from India's Hooghly River in the west to the Meghna Estuary in the east. Put simply, it is one of the most unstable coastlines in the world, even more unstable than the mouth of the River Coco, as determined by the International Court of Justice in *Nicaragua v. Honduras*<sup>4</sup>, and this is confirmed by studies carried out by reputable and independent institutions and researchers in Bangladesh, India and elsewhere.<sup>5</sup>

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4 *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007 (hereinafter "*Nicaragua v. Honduras*").

5 S. Bandyopadhyay, "Natural Environmental Hazards and their Management: A Case Study of Sagar Island, India", *Singapore Journal of Tropical Geography*, Vol. 18, No. 1 (1997). Reply of Bangladesh (hereinafter "RB"), Vol. III, Annex BR7; Mead A. Allison, "Historical Changes in the Ganges-Brahmaputra Delta Front", *Journal of Coastal Research*, Vol. 14, No. 4 (1998). MB, Vol. IV, Annex B61; S. Kuehl et al., "The Ganges-Brahmaputra Delta", in *River Deltas – Concepts, Models, and Examples* (L. Giosan & J. Bhattacharya eds., 2005). MB, Vol. IV, Annex B71; D. Ganguly et al., "Geomorphological Study of Sundarban Deltaic Estuary", *Journal of the Indian Society of Remote Sensing*, Vol. 34, No. 4 (2006). RB, Vol. III, Annex BR8; Chandra Giri, "Monitoring Mangrove Forest Dynamics of the Sundarbans in Bangladesh and India using Multi-Temporal Satellite Data from 1973 to 2000", *Estuarine, Coastal and Shelf Science*, Vol. 73, No. 1 (2007). RB, Vol. III, Annex BR9; A. Z. Md. Zahedul Islam, "Study of the Morphology of the South Talpatti Landmass, Mandarbaria Island and Bhangaduni Island in the Northern Bay of Bengal using Remote Sensing and GIS Techniques", Bangladesh Space Research and Remote Sensing Organization (SPARRSO), (April 2008). RB, Vol. III, Annex BR11; G. Gopinath, "Critical Coastal Issues of Sagar Island, east coast of India", *Environmental Monitoring and Assessment*, Vol. 160 (2010). RB, Vol. III, Annex BR13; Abdullah F. Rahman et al., "Response of

1.20 A second failing in the Counter-Memorial that merits special attention is India's persistence in insisting on a dispositive effect for an artificial and inequitable strict equidistance line. The Counter-Memorial argues that in the *Black Sea* case the ICJ made clear that "equity" and "relevant circumstances" may call for an adjustment of a provisional equidistance line, but "never its abandonment."<sup>6</sup> This is plainly wrong. Of the four most recent maritime delimitation cases (the *Black Sea* case,<sup>7</sup> *Nicaragua v. Honduras*, *Bangladesh/Myanmar* and *Nicaragua v. Colombia*) only one (the *Black Sea* case) has been decided largely by reference to equidistance. The other three were decided expressly or impliedly by reference to a range of different methods.

1.21 In light of the decision of ITLOS in *Bangladesh/ Myanmar* and that of the ICJ in *Nicaragua v. Colombia*, Bangladesh accepts that one way to approach this delimitation is to try to draw a provisional equidistance line, assuming that to be possible having regard to the instability of the coastlines. However, as affirmed by the ICJ, this approach does not prejudice the methodology to be adopted and does not preclude recourse to a different delimitation methodology altogether. Nowhere in the Counter-Memorial does India dispute that the alternative methodology most relied upon is the angle bisector. Although India argues against the use of that methodology in this case, it is telling that nowhere in the 257 pages of the Counter-Memorial does India state that Bangladesh's proposed 180° line results in a delimitation that is inequitable. By contrast, India's proposed equidistance line is plainly inequitable to Bangladesh. It does not constitute a valid starting point for the delimitation; it is inconsistent with international judicial and arbitral practice; and it ignores the fundamental geographic realities in this case.

## I. Points of Agreement

1.22 Despite the issues that divide the Parties to this dispute, there are a number of important general points of agreement between Bangladesh and India. More specific points of agreement are identified in the relevant chapters that follow.

- *First*, Bangladesh and India agree that the applicable law for the delimitation in this case is the 1982 Convention and other rules of law not incompatible with it;

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the Sundarbans Coastline to Sea Level Rise and Decreased Sediment Flow: A Remote Sensing Assessment", *Remote Sensing of Environment*, Vol. 115, No. 12 (2011). RB, Vol. III, Annex BR14; Geological Survey of India, "Endangered Sundarbans" (available at <[http://www.portal.gsi.gov.in/portal/page?\\_pageid=127,723790&\\_dad=portal&\\_schema=PORTAL&linkId=1216](http://www.portal.gsi.gov.in/portal/page?_pageid=127,723790&_dad=portal&_schema=PORTAL&linkId=1216)>). RB, Vol. III, Annex BR15.

6 CMI at para. 6.11.

7 *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009 (hereinafter "*Romania v. Ukraine*" or "*the Black Sea case*").

- *Second*, they agree that there is no reason why the Annex VII Tribunal cannot issue a judgment on the merits of this dispute, and that the Tribunal has jurisdiction to effect the delimitation both within 200 M and beyond 200 M, notwithstanding submissions made by Bangladesh and India to the Commission on the Limits of the Continental Shelf (“CLCS”);
- *Third*, India agrees with Bangladesh that “the Bangladesh coast is concave”;<sup>8</sup>
- *Fourth*, it is not disputed that the land boundary terminus was “authoritatively defined” located in a fixed position by the Radcliffe Award in August 1947, based on “pre-partition” boundaries.<sup>9</sup> The Parties further agree that the land boundary terminus is located at the point where the midstream of the main channel of the Hariabhanga River meets the *intra fauces terrae* closing line across the Raimangal Estuary, and that the location of the land boundary terminus has remained unchanged since the time of the Radcliffe Award;<sup>10</sup>
- *Fifth*, the Parties agree that the feature known to Bangladesh as South Talpatty and India as New Moore is not an island within the meaning of UNCLOS and constitutes no more than a low-tide elevation;<sup>11</sup>
- *Sixth*, it is not disputed that both Bangladesh and India are entitled to claim a continental shelf beyond 200 M;
- *Seventh*, Bangladesh and India agree that the final step in the delimitation process is for the Tribunal to conduct a disproportionality test to confirm that the delimitation line provisionally drawn does not yield a disproportionate result.

## II. Structure of the Reply and Summary of Arguments

1.23 This Reply consists of three volumes. Volume I comprises the main text of the Reply and includes selected maps and figures. Volume II contains a full set of maps and figures. Volume III contains documentary annexes arranged in the following order: government documents, books and articles and scientific articles and manuscripts.

1.24 Volume I contains five chapters, followed by Bangladesh’s Submissions. Following this Introduction, **Chapter 2** responds to the Counter-Memorial’s arguments concerning

8 CMI at paras. 2.4 and 6.72.

9 *Ibid.* at paras. 4.1 and 4.6.

10 *Ibid.* at paras. 4.25 and 5.31.

11 *Ibid.* at paras. 2.7 and 5.54.

geography and supplements Bangladesh's arguments on the concave configuration of the Bengal Delta. The coastline of Bangladesh is doubly concave: not only is Bangladesh sandwiched between India to the west and Myanmar to the east but the coastline of Bangladesh is itself deeply concave. Bangladesh also describes in detail the instability of the relevant coastline, especially in the areas where India has proposed base points for the construction of an equidistance line. Chapter 2 rebuts India's arguments by showing that the mangroves of the Sundarbans Forest provide only a very limited defence, if any, against rampant erosion and coastal instability.

1.25 **Chapter 3** responds to India's arguments on the location of the land boundary terminus and the delimitation of the territorial sea. It begins by setting out the location of the terminus of the land boundary which was fixed by the Radcliffe Award in 1947. By reference to contemporaneous charts, Bangladesh identifies the location of the land boundary terminus as the point where the channel of the Hariabhanga River meets the Bay of Bengal as of 15 August 1947. Chapter 3 also supplements Bangladesh's arguments on the delimitation of the territorial sea and addresses the special circumstances pertaining to the coastlines of Bangladesh and, in relevant parts, of India. It explains why India's proposed base points for the construction of its purported equidistance line are incorrectly situated, and manifestly so.

1.26 **Chapter 4** addresses the delimitation of the EEZ and the continental shelf within 200 M, and exposes the flawed character of India's proposed equidistance line. It demonstrates that, by reference to relevant judicial decisions and State practice, a properly constructed equidistance line would be manifestly inequitable in its effect as a result of the concave configuration of the northern Bay of Bengal. The relevant provisions of UNCLOS expressly require that an equitable solution be achieved. Bangladesh here explains that the angle-bisector method is a viable alternative in the circumstances of this case, and applied correctly, this methodology results in a line following a geodesic azimuth of N180°E. Bangladesh's proposed angle-bisector line has the effect of partially abating, but not completely eliminating, the effects of the concavity, and produces an equitable solution.

1.27 **Chapter 5** addresses the delimitation of the continental shelf beyond 200 M and responds to India's proposed equidistance "solution". Bangladesh demonstrates that India's proposed equidistance line beyond 200 M is not equitable and is plainly inconsistent with the approach taken by ITLOS in its Judgment of 14 March 2012. Chapter 5 shows that equidistance becomes even more inequitable beyond 200 M because the concavity not only continues to be a relevant circumstance but exercises an even more prejudicial effect as the distance from shore increases, such that even a accurately drawn equidistance line prema-

turely cuts off Bangladesh's entitlement to a continental shelf beyond 200 M. Equidistance does not achieve the equitable solution required by Article 83 of UNCLOS because it takes no account of the concavity.

1.28 Chapter 5 goes on to show that the proposed 180° line gives Bangladesh a modest outlet beyond 200 M but that continuing this line is inequitable because it only offers Bangladesh a small and ever-narrowing wedge of continental shelf beyond 200 M. As such, the delimitation should be adjusted in a reasonable and balanced way beyond 200 M to ensure an equitable result. Bangladesh proposes that an azimuth line should be adopted beyond 200 M, running parallel to the delimitation line effected by ITLOS in the companion case. This line beyond 200 M equitably divides the disputed outer shelf area between Bangladesh and India. Chapter 5 also applies the disproportionality test and confirms that the overall boundary solution Bangladesh proposes constitutes an equitable solution.

1.29 Volume I concludes by setting out Bangladesh's Submissions.

## CHAPTER 2 THE GEOGRAPHIC SETTING

2.1 Bangladesh's Memorial highlighted two essential facts about the coastal geography of the delimitation area. *First*, the Bangladesh coast is concave. Indeed, it is doubly so. Not only is it sandwiched between the protruding coasts of India and Myanmar, but the middle portion of the Bangladesh coast (corresponding to the mouth of the Meghna Estuary) is itself deeply concave.<sup>1</sup> *Second*, most of the Bangladesh coast, as well as a substantial portion of the coast of the Indian state of West Bengal, is deltaic, indented and deeply cut into. It is also subject to constant erosion and accretion, rendering it among the most unstable coastlines in the world.<sup>2</sup>

2.2 India's Counter-Memorial concedes the first point. At several junctures, it admits that the coast of Bangladesh is concave. The Counter-Memorial disputes the second point, however. India attempts instead to portray the Bengal Delta coast as not being "affected by any kind of instability."<sup>3</sup> As will be shown below, India's argument does not withstand scrutiny. Indeed, it is categorically refuted by India's own scientists at the Geological Survey of India ("GSI").

2.3 Before addressing these points in greater detail, an introductory observation is in order. In its Memorial, Bangladesh provided a detailed description of the geological history, tectonic structure and geomorphology of the Bay of Bengal region.<sup>4</sup> It did so for two purposes: (a) to demonstrate its entitlement to a continental shelf beyond 200 M in the Bay of Bengal, and (b) to show the greater degree of continuity between the Bangladesh landmass and the Bay's seafloor beyond 200 M than between the Indian landmass and the seafloor. In Bangladesh's view, that greater degree of continuity was a critical equitable factor that rendered the continental shelf beyond 200 M the most natural prolongation of Bangladesh, not India, and thus a reason to award Bangladesh a larger share of the area.<sup>5</sup>

2.4 Bangladesh submitted its Memorial in May 2011. Since then, ITLOS rendered its decision in the companion case to this one: *Bangladesh/Myanmar*. In its March 2012 Judgment, ITLOS did not accept Bangladesh's "most natural prolongation" theory. It decided instead that entitlement in the continental shelf beyond 200 M should be determined

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1 Memorial of Bangladesh (hereinafter "MB") at para. 2.72.

2 *Ibid.* at para. 2.72.

3 Counter-Memorial of India (hereinafter "CMI") at para. 2.25.

4 MB at paras. 2.31-2.71.

5 *Ibid.* at paras. 7.17-7.23.

strictly by application of the criteria laid down in Article 76(4) concerning the establishment of the outer edge of the continental margin.<sup>6</sup>

2.5 Bangladesh accepts the ITLOS Judgment and embraces its implications for this case. It therefore need not revisit the evidence concerning the geological and geomorphological characteristics of the Bay in this Reply. It will confine itself to noting one critical point: India nowhere denies any of the facts demonstrating the existence and extent of Bangladesh's potential entitlement in the continental shelf beyond 200 M in the Bay of Bengal. The existence of that entitlement being admitted, the area is a proper subject of delimitation between the Parties (as addressed in Chapter 5 of this Reply).

### I. Concavity of the Coast

2.6 In its Memorial, Bangladesh explained that the “fundamental geographic reality of this case” is that it “sits in a broad and deep concavity at the northern limit of the Bay of Bengal, with India to its west and Myanmar to its east”.<sup>7</sup> As elaborated further in Chapters 3, 4 and 5 below, the relevance of this fact is that equidistance lines drawn between Bangladesh and each of its neighbours converge a short distance in front of the coast, cutting off Bangladesh's maritime projection into the Bay.<sup>8</sup>

2.7 ITLOS recognized both the concave nature of Bangladesh's coast and its implications for the delimitation of maritime boundaries between Bangladesh and its neighbours in its March 2012 Judgment. The Tribunal stated: “[T]he coast of Bangladesh, seen as a whole, is manifestly concave”. Later in the same paragraph, ITLOS observed: “Bangladesh's coast has been portrayed as a classic example of a concave coast.”<sup>9</sup> ITLOS further held that “the concavity of the coast of Bangladesh is a relevant circumstance in the present case, because the provisional equidistance line as drawn produces a cut-off effect on that coast requiring an adjustment of that line.”<sup>10</sup>

2.8 India sensibly follows ITLOS's lead, at least in part. The Counter-Memorial recognizes the fact of concavity at multiple junctures. Paragraphs 2.4 and 6.72, for example,

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6 *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment of 14 March 2012*, ITLOS Reports 2012 (hereinafter “*Bangladesh/ Myanmar*”) at para. 437.

7 MB at para. 1.13.

8 *Ibid.*

9 *Bangladesh/Myanmar* at para. 291.

10 *Ibid.* at para. 297.

acknowledge that “Bangladesh’s coast ... is concave.”<sup>11</sup> India even depicts this concavity visually. Counter-Memorial sketch-map no. 2.1 (at page 15) shows the entire coast of Bangladesh – from the land boundary terminus with Myanmar in the east to the terminus with India in the west – to be located within the concavity at the head of the Bay of Bengal. Sketch-map no. 6.16 (at page 175) goes a step further. It depicts not only this general concavity but also the secondary ‘concavity within a concavity’ in the Bangladesh coast created by the Meghna Estuary.

2.9 Even as it admits – as it must – that the coast of Bangladesh is concave, India makes two factual arguments that appear intended to minimize the significance of the concavity.<sup>12</sup> *First*, India asserts that “in the present case, the starting point of the maritime delimitation is not located in the concavity but in an area where the coasts of the Parties are straight and even slightly convex.”<sup>13</sup> Bangladesh confesses that it is not entirely clear what point India is trying to make. Whatever the localized geographic circumstances may be in the area where the Parties’ land boundaries meet, they do not change the macro-geographic fact of concavity, which India itself recognizes on multiple occasions, or the cut-off effect it produces on Bangladesh.

2.10 In this respect, Bangladesh notes that during the oral proceedings in *Bangladesh/Myanmar*, Myanmar made precisely the same argument as India. In particular, Myanmar argued that the “delimitation line does not start from the concavity in our case, but several hundreds of kilometres further to the south, from a place where the coasts of the Parties are adjacent, straight or even slightly convex.”<sup>14</sup> ITLOS had no difficulty rejecting this argument, finding instead that the Bangladesh coast seen “as a whole” is “manifestly concave.”<sup>15</sup> It also had no difficulty finding that that concavity was a relevant circumstance in that case.<sup>16</sup> The same conclusions apply in this case.

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11 CMI at paras. 2.4 and 6.72.

12 India also makes several legal arguments that the concavity is not relevant to this delimitation. Those arguments are addressed and refuted in Chapter 4 of this Reply.

13 CMI at para. 6.75.

14 See ITLOS PV.11/10 (2011-09-19, afternoon session) at p. 3, lines 15-18 (Forteau). See also ITLOS PV.11/9 (2011-09-19, morning session) at p. 13, lines 31-33 (Forteau) (stating that while the “coastal configuration which, as regards the [Bay of Bengal] as a whole, is completely concave, ... the coasts of Bangladesh and Myanmar themselves, which determine this delimitation line, are ‘essentially’ directly adjacent or even slightly convex...”).

15 *Bangladesh/Myanmar* at para. 291.

16 *Ibid.* at para. 297.

2.11 *Second*, India also argues that Bangladesh is not the only State with a concave coast. According to India, it too has a concave coast.<sup>17</sup> Indeed, India even claims also to have a concavity within a concavity in the area in the Bay of Balasore.<sup>18</sup> Bangladesh does not dispute that India's coast changes direction between the Bengal Delta and peninsular India. There are, however, two critical facts that make this change in direction unlike the concavity of the Bangladesh coast: (a) in contrast to Bangladesh, India has only one land boundary terminus located in the concavity described by the Bay of Bengal's north coast (namely, that with Bangladesh); and (b) the broader geographic reality that defines the Indian coast as a whole is that it is manifestly convex, not concave.

2.12 With respect to point (a), the mere fact that a section of coast may be described as concave is not *per se* relevant. As explained in Chapter 4, what makes a concavity prejudicial is when a coastal State is pinched between two other States in the middle of a concavity. That is the geographical situation Bangladesh confronts. India, in contrast, has only one foot in the concavity. Beyond the maritime boundary with Bangladesh in the northeast, India's next maritime boundary to the southwest is that with Sri Lanka some 550 M away. Thus, even if some portions of the Indian coast might accurately be described as concave, that concavity exerts no prejudicial effect on India's maritime boundaries.

2.13 With respect to point (b), the dominant fact that defines the geography of India is that the subcontinent is, in fact, a massive peninsula. Seen as a whole, it is, inevitably, convex not concave. Between the land boundary terminus with Bangladesh in the east and the land boundary terminus with Pakistan in the west, the Indian coast bends outwards first southwest through the Bay of Bengal, then west through the Laccadive Sea and finally northwest through the Arabian Sea. This larger reality is depicted in **Figure R2.1** (in Volume II only).

2.14 For both of these reasons, the bend in India's coast cannot be compared to the concavity of the Bangladesh coast.

## II. Instability of the Bengal Delta

2.15 In its Memorial, Bangladesh also showed that an unusual combination of factors renders the coast of the Bengal Delta, which extends from the Hooghly River in India to

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17 See, e.g., CMI at paras. 2.4, 2.21 and 6.60.

18 *Ibid.* at para. 6.75.

the Meghna Estuary in Bangladesh, “one of the most dynamic and unstable coastlines anywhere in the world.”<sup>19</sup> These factors include:

- the transport of vast quantities of sediment carried down from the Himalayan mountains by the Ganges-Brahmaputra river system, and the deposition of these sediments throughout the exposed (“subaerial”) and submerged (“subaqueous”) Bengal Delta;
- the mostly erosive, but occasionally accretionary, action of waves (including storm surges caused by the frequent cyclones in the region);
- subsidence caused by the subduction of the Indian tectonic plate beneath the Burma tectonic plate; and
- rising sea levels in the Bay of Bengal caused by global climate change.

The combination of these four factors is working to constantly reshape both the subaerial and subaqueous Bengal Delta (which extends to the 80 m isobath in the Bay of Bengal).<sup>20</sup>

2.16 The Counter-Memorial offers only a thin response to these facts. India does not dispute the consequences of the transport of sediment; it does not dispute the erosive effects of cyclones; it does not dispute the effects of subsidence; and it does not dispute the effects of sea level rise caused by climate change. The response it offers – indeed, the only response it offers – is that the portion of the Bengal Delta coast currently covered in mangrove forests known as the Sundarbans is not affected by “any kind of instability.”<sup>21</sup> This is because, according to India:

Mangroves ... help to consolidate these recent sediments and promote further sedimentation. While they do not completely prevent coastal erosion, their elaborate root structures are likely to slow that process down considerably. ... The mangrove forest characterizing the deltaic area of Bangladesh and India therefore plays a role in stabilizing the coasts of both States in the area.<sup>22</sup>

2.17 There are several flaws in this argument. *First*, it will be noted that even taken on its own terms, the argument does not apply to considerable portions of the Bengal Delta coast. India concedes that the Meghna Estuary region of Bangladesh lying east of

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19 MB at para. 2.22.

20 See *Ibid.* at paras. 2.11-2.22.

21 CMI at para. 2.25.

22 *Ibid.* at para. 2.26.

the Sundarbans is characterised by an unstable coastline.<sup>23</sup> The nature of that instability is, however, different than in other portions of the Delta. This area corresponds to what is known as the “active” delta through which most of the current sediment supply passes. Here, there is substantially more accretion than erosion. On average 7 sq km of new land are being formed every year, most of it in and around a series of mud and sand shoals known as the Meghna flats.<sup>24</sup>

2.18 To the west of the Sundarbans there is also a considerable stretch of India’s Bengal Delta coast (between the Hooghly and Thakuran Rivers) that may once have been, but is no longer, covered by mangroves.<sup>25</sup> Here, cultivated land has replaced forest. Erosion is dominant. Indeed, so powerful are the forces of erosion in this area that India’s densely-populated and heavily-cultivated Sagar Island, located near the mouth of India’s Hooghly River, lost 20.8 sq km – nearly ten per cent – of its land area in just the three-year period between 1996 and 1999.<sup>26</sup> The nearby agricultural island of Lohachara, once home to nearly 10,000 people, suffered an even more dramatic fate and disappeared entirely.<sup>27</sup>

2.19 *Second*, and again taking it on its own terms, India’s argument is qualified and uncertain. The Arbitral Tribunal will note that India does not state that the mangroves prevent erosion. It does not even state definitively that they slow the process down. It asserts only that they “are *likely* to slow that process down”.<sup>28</sup> This is an exceedingly weak basis on which to contest the instability of the Bengal Delta coast.

2.20 *Third*, the evident caution in the manner in which India has presented the point is well-justified. No less an authority than India’s own Geological Survey of India (“GSI”) has publicly voiced concern over the rapid erosion taking place in the Sundarbans region. On a webpage entitled “Endangered Sundarbans”, the GSI writes:

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23 *Ibid.* at para. 2.25.

24 MB at para. 2.21.

25 S. Bandyopadhyay, “Natural Environmental Hazards and their Management: A Case Study of Sagar Island, India”, *Singapore Journal of Tropical Geography*, Vol. 18, No. 1 (1997) at pp. 20-21. Reply of Bangladesh (hereinafter “RB”), Vol. III, Annex BR7. *See also* S. Kuehl et al., “The Ganges-Brahmaputra Delta”, in *River Deltas – Concepts, Models, and Examples* (L. Giosan & J. Bhattacharya eds., 2005) (hereinafter “Kuehl et al. (2005)”) at p. 422. MB, Vol. IV, Annex B71.

26 G. Gopinath, “Critical Coastal Issues of Sagar Island, east coast of India”, *Environmental Monitoring and Assessment*, Vol. 160 (2010) at pp.557-558. RB, Vol. III, Annex BR13.

27 MB at para. 2.20. *See also* G. Lean, “Disappearing world: Global warming claims tropical island”, *The Independent*, 24 December 2006 (available at <<http://www.independent.co.uk/environment/climate-change/disappearing-world-global-warming-claims-tropical-island-429764.html>>). MB, Vol. III, Annex B49.

28 CMI at para. 2.26 (emphasis added).

Nearly half of the 102 Sundarban islands in India spreading over 9.5 sq km area are uninhabited due to an abnormal rise in the sea level and massive erosion in the last four decades. About a fifth of the southern part of this delta complex, the heart of the Tiger Reserve, is already submerged. At the current rate of erosion a loss of 15% of farmlands and >250 sq km of the National Park in the next two decades is expected.<sup>29</sup>

2.21 Beneath the quoted language, the GSI provides the following photographs and caption to illustrate the problem:



India's own scientists thus refute its argument.

2.22 In the same vein, a recent study by scientists from the United States Geological Survey and the United Nations Environment Program quantifies just how limited a defence mangroves provide against the erosive forces acting on the Bengal Delta. The study finds that 41 sq km of mangroves were lost to erosion in the Sundarbans in just the decade between 1990 and 2000.<sup>30</sup> More than half of this loss occurred “at the extreme southern edge of the Sundarbans” along “the land-water interface with the Bay of Bengal.”<sup>31</sup> The loss of mangrove cover is, in other words, concentrated precisely along the coast relevant to this delimitation.

2.23 The inability of mangroves to provide meaningful protection against erosion in the Bengal Delta is typified by the case of India's Bhangaduni Island, located just 25 km west of the land boundary terminus with Bangladesh. The fate of Bhangaduni Island is particu-

29 Geological Survey of India, “Endangered Sundarbans” (available at <[http://www.portal.gsi.gov.in/portal/page?\\_pageid=127,723790&\\_dad=portal&\\_schema=PORTAL&linkId=1216](http://www.portal.gsi.gov.in/portal/page?_pageid=127,723790&_dad=portal&_schema=PORTAL&linkId=1216)>) at [p./ para.]. RB, Vol. III, Annex BR15.

30 Chandra Giri, “Monitoring Mangrove Forest Dynamics of the Sundarbans in Bangladesh and India using Multi-Temporal Satellite Data from 1973 to 2000”, *Estuarine, Coastal and Shelf Science*, Vol. 73, No. 1 (2007) at p. 95. RB, Vol. III, Annex BR9.

31 *Ibid.*

larly appropriate for examination because, as described in Chapter 4, it is the location of a base point for drawing an accurate provisional equidistance line that controls a substantial portion of that line (between distances of approximately 75 and 220 M from the coast).

2.24 Despite being located in the Sundarbans and covered almost entirely by mangrove forests, Bhangaduni Island lost some 25% of its surface area in just the period between 1975 and 2000.<sup>32</sup> The erosion was particularly dramatic in the 11 years between 1989 and 2000.<sup>33</sup> The changes in the island over time are depicted in **Figure R2.2** (following this page). As the Arbitral Tribunal can see, the overwhelming majority of this land loss occurred on the southern side of the island that faces onto the Bay of Bengal; i.e., the portion of the island that controls the direction of an equidistance line.

2.25 Similarly, Bangladesh's Mandarbaria Island (also known as Clump Island), which forms the eastern jaw of the Raimangal Estuary, the estuary at the mouth of which the Parties' land boundary terminus is located, lost 22% of its land area in the period between 1975 and 2005.<sup>34</sup> Like Bhangaduni Island, the fate of Mandarbaria Island is particularly relevant because it is the location of two of the five base points on the Bangladesh side that control the direction of the provisional equidistance line.

2.26 As with Bhangaduni, the southern flank of Mandarbaria that fronts the Bay has been eroding disproportionately. Between 1975 and 2005 the southern coast retreated in some areas by a full 1.25 km.<sup>35</sup> These changes over time can be seen in **Figure R2.3** (in Volume II only.) Here again, this erosion occurred despite the fact that Mandarbaria is almost completely covered by mangroves.

2.27 All told, erosion along the coast of the Sundarbans now claims an average of 4.6 sq km of land *every year*.<sup>36</sup> The reality is, however, that this figure actually *understates* the amount of erosion taking place along the Sundarbans sea coast. Each year, a small fraction of the sediments washed through the Delta are deposited in the Sundarbans where they

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32 *Ibid.* at p. 97.

33 *Ibid.*

34 A. Z. Md. Zahedul Islam, "Study of the Morphology of the South Talpatti Landmass, Mandarbaria Island and Bhangaduni Island in the Northern Bay of Bengal using Remote Sensing and GIS Techniques", Bangladesh Space Research and Remote Sensing Organization (SPARRSO), (April 2008) (hereinafter "SPARRSO (2008)") at p. 15. RB, Vol. III, Annex BR11.

35 *Ibid.* at 14.

36 This is an average rate for the period 1973-2000. See Abdullah F. Rahman et al., "Response of the Sundarbans Coastline to Sea Level Rise and Decreased Sediment Flow: A Remote Sensing Assessment", *Remote Sensing of Environment*, Vol. 115, No. 12 (2011) (hereinafter "Rahman et al. (2011)") at p. 3126. RB, Vol. III, Annex BR14.

# THE EROSION OF BHANGADUNI ISLAND, INDIA: 1975-2010

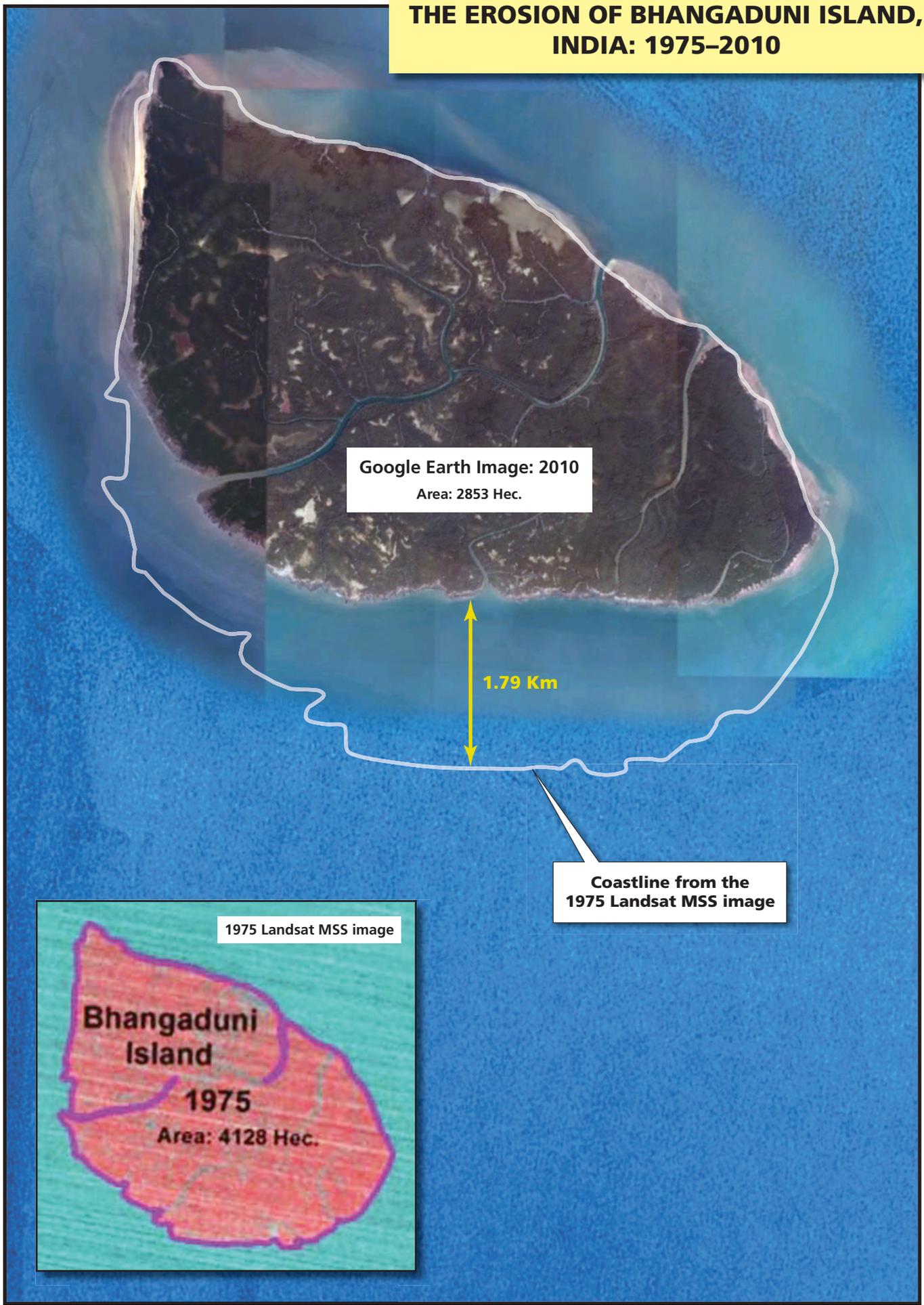


Figure R2.2



accrete and give rise to an average of 2.4 sq km of new land per year. **Figure R2.4** (in Volume II only) graphically details how most of this new land is forming along the northern, landward-facing shores of the unstable sedimentary islands that make up the southern tier of the Bengal Delta.<sup>37</sup> As a result, it does little to stabilize the southern, seaward coast of these islands. Were it not for this modest amount of accretion, the true erosion rate along the Sundarbans coast would actually be 7 sq km per year, not 4.6 sq km.<sup>38</sup>

2.28 Moreover, the current erosion rate is more than double the historic rate over the last two centuries of 1.9 sq km per year,<sup>39</sup> and it continues to increase. The accelerating erosion is largely attributable to rising sea levels caused by global climate change.<sup>40</sup> Combined with the steady subsidence of the Bengal Delta caused by tectonic factors,<sup>41</sup> sea levels along the northern coast of the Bay of Bengal are now rising at the alarming rate of 10 mm per year – the highest rate in the world.<sup>42</sup>

2.29 Given the low-lying nature of the Bengal Delta, dramatic changes to the coast are expected within the lifetime of many present Bangladeshi and Indian citizens. Since the average height above sea-level of the Indian portions of the Delta are generally lower than on the Bangladesh side, more of India's land territory will be inundated than Bangladesh's.<sup>43</sup> The consequence will be a major reorientation of the Bengal Delta coast to the direction depicted in Memorial Figure 6.14 and reproduced in this Reply as **Figure R2.5** (in Volume II only).

2.30 The instability of the Bengal Delta extends well beyond the subaerial delta to the subaqueous delta as well. As Bangladesh explained in its Memorial, two-thirds of the sediment brought down by the Ganges-Brahmaputra river system washes out to sea where it is deposited either in the submerged Bengal Delta or further afield on the shelf, slope and rise of the Bay.<sup>44</sup> The result is a constant reconfiguring of the Bay's bathymetry, with sand banks, low-tide elevations and other minor sedimentary features coming and going literally on a day-to-day basis. These rapidly shifting shoals make it impossible for ships

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37 *Ibid.* at p. 3127.

38 *Ibid.* at p. 3126.

39 Mead A. Allison, "Historical Changes in the Ganges-Brahmaputra Delta Front", *Journal of Coastal Research*, Vol. 14, No. 4 (1998) (hereinafter "Allison (1998a)") at p. 1270. MB, Vol. IV, Annex B61.

40 Rahman et al. (2011) at p. 3122. RB, Vol. III, Annex BR14.

41 *Ibid.*

42 *Ibid.*

43 Katherine J. Houghton et al., "Maritime boundaries in a rising sea", *Nature Geoscience*, Vol. 3, No. 12 (2010) at p. 815. MB, Vol. IV, Annex B79.

44 MB at paras. 2.13-2.14 and 2.48-2.58.

to navigate along the Bengal Delta coast landward of the 10 fathom isobath in the Bay of Bengal

2.31 The frequent cyclones that strike the Bay further exacerbate these effects by forcing sedimentary materials deposited in the submerged Bengal Delta back towards shore, where they give rise to transient deposits of sand and mud that can sometimes rise above water.<sup>45</sup>

2.32 The former island known as South Talpatty (which India calls “New Moore Island”) is a case in point. It is a vivid demonstration of the natural forces at work offshore in the Bay, which have turned it into a completely submerged feature. As described in the next Chapter, India nevertheless purports to place on it two of the three base points it uses for the drawing of a provisional equidistance line from the land boundary terminus out to 200 M. The brief, unstable and itinerant existence of this underwater feature demonstrates the volatility of the coast on which India purports to impose a strict equidistance solution.

2.33 Like any number of other features along the Bengal Delta coast, South Talpatty emerged from the sea following a major cyclone that struck the northern Bay of Bengal in the fall of 1970.<sup>46</sup> The cyclone is thought to have forced millions of tons of sediment deposited on the submerged Bengal Delta back towards the coast, where some of it coalesced around an existing shoal to form a new island.<sup>47</sup>

2.34 In 2008, the Bangladesh Space Research and Remote Sensing Organization (“SPARRSO”) conducted a detailed study of satellite imagery taken of South Talpatty between 1973 and 2006.<sup>48</sup> At the ‘height’ of its brief existence around 1976, the evidence suggests that South Talpatty had an area of some 3.1 sq km.<sup>49</sup> Composed as it was of unconsolidated sediment, however, it very quickly began to erode back into the sea. After 1976, it shrank quickly, undergoing significant changes in shape in the process. 1990 marks the last year in which it is visible in the satellite imagery. **Figure R2.6** (on the next page) is taken

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45 Mead A. Allison, “Geologic Framework and Environmental Status of the Ganges-Brahmaputra Delta”, *Journal of Coastal Research*, Vol. 14, No. 3 (1998) (hereinafter “Allison (1998)”) at p. 828. MB, Vol. IV, Annex B60. See also Kuehl et al. (2005) at p. 416. MB, Vol. IV, Annex B71.

46 M. Shah Alam and A. Al Faruque, “The Problem of Delimitation of Bangladesh’s Maritime Boundaries with India and Myanmar: Prospects for a Solution”, *International Journal of Marine and Coastal Law*, Vol. 25, No. 3 (2010) at p. 415. MB, Vol. III, Annex B51.

47 Allison (1998) at p. 828. MB, Vol. IV, Annex B60. Kuehl et al. (2005), at p. 416. MB, Vol. IV, Annex B71.

48 SPARRSO (2008). RB, Vol. III, Annex BR11.

49 *Ibid.* at p. 12.

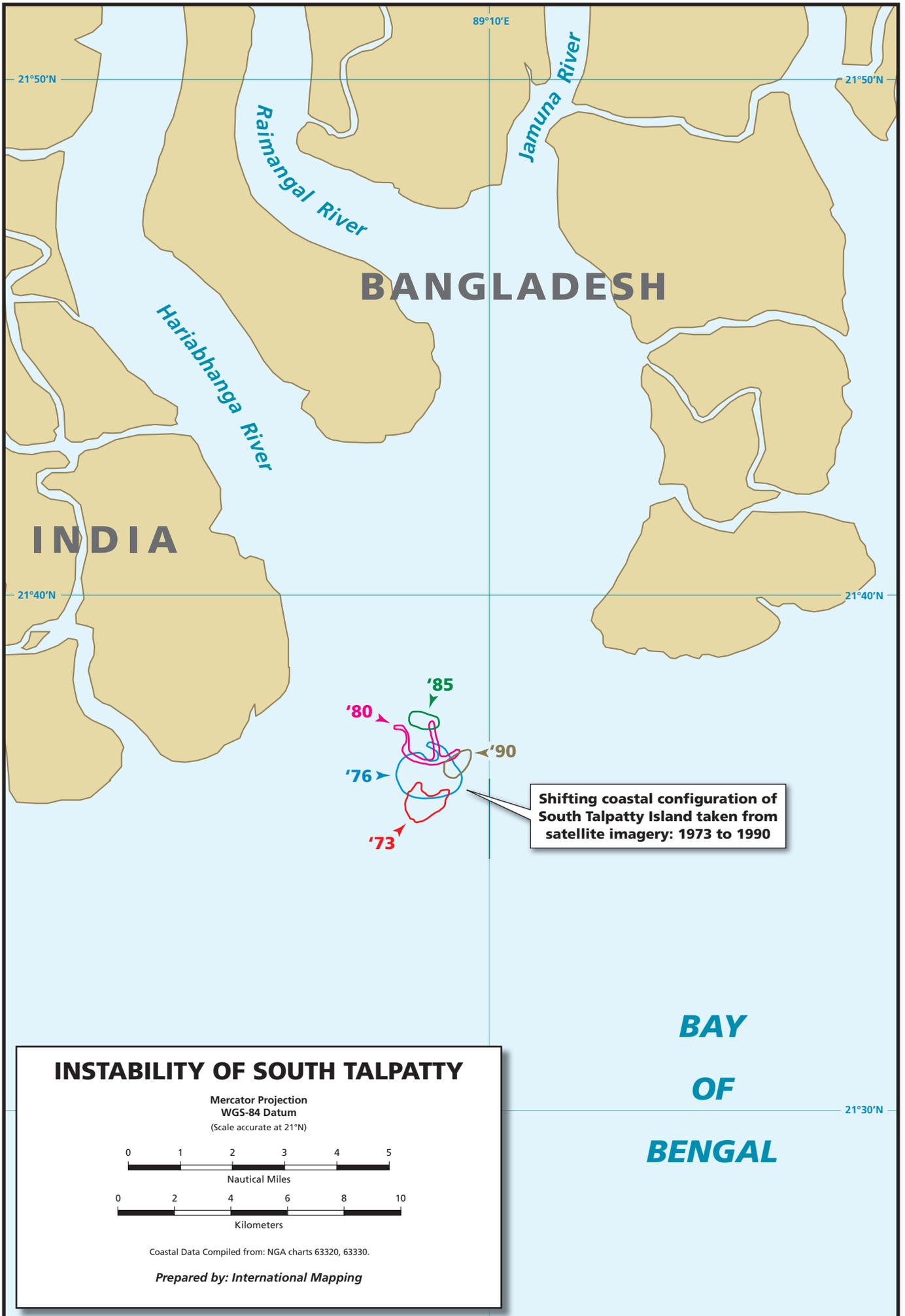


Figure R2.6



from the SPARRSO study and depicts the rapid evolution of South Talpatty over time. Since 1990, it has been, at best, a low-tide elevation. Indeed, Bangladesh notes that in 2010, the Indian media reported that scientists had suggested that it ceased to exist altogether.<sup>50</sup>

2.35 India takes a somewhat different view of South Talpatty's past and current status. According to the Counter-Memorial: "New Moore [South Talpatty] Island is known to have existed as an island from the 1970's. ... Recent charts show it as a significant low-tide elevation. The feature has thus shown a degree of stability over the years."<sup>51</sup> There are several problems with these statements, however. As an initial matter, Bangladesh notes the oxymoronic character of India's assertions. An "island" is, of course, a feature that is permanently above water at high tide. A low-tide elevation is therefore incapable of bearing that label. Moreover, a low-tide elevation is, by definition, a minor feature that spends much of its life under water. To label South Talpatty/New Moore a "significant low-tide elevation" is as much a misuse of language as it is of geography.

2.36 In addition, the facts demonstrated just above, in particular in Figure 2.6, directly refute India's assertion that South Talpatty has shown "a degree of stability over the years". Exactly the opposite is true. Not only did it go from shoal to island to low-tide elevation in the span of some 20 years, its existence has also been rather itinerant; its precise location has varied considerably through the years, as Figure 2.6 amply reveals. Whatever adjectives might validly be used to describe it, "stable" is not one of them.

## Conclusions

2.37 The geographical evidence establishes that:

- (1) The coast of Bangladesh is doubly concave. Not only is it sandwiched between the protruding coasts of India and Myanmar, but the middle portion of the Bangladesh coast (corresponding to the mouth of the Meghna Estuary) is itself deeply concave;
- (2) The coast of India exhibits no similar concavity. Indeed, the broader geographical reality that describes the Indian coast as a whole is convexity, not concavity;

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50 "New Moore isle no more, expert blames warming", *Times of India*, 25 March 2010, (available at < [http://articles.timesofindia.indiatimes.com/2010-03-25/global-warming/28119002\\_1\\_ghoramaraglobal-warming-rise-in-sea-levels](http://articles.timesofindia.indiatimes.com/2010-03-25/global-warming/28119002_1_ghoramaraglobal-warming-rise-in-sea-levels)>). RB, Vol. III, Annex BR5.

51 CMI at para. 2.8.

- (3) The coast of the Bengal Delta stretching across India and Bangladesh is deltaic, indented and cut into, and subject to constant processes of erosion and accretion, rendering it among the most unstable coastlines in the world;
- (4) The erosion rate is accelerating due in large part to sea-level rise caused by global climate change;
- (5) The presence of the Sundarban mangrove forests in the central part of the Delta do little, if anything, to slow down these processes of change;
- (6) The instability of the Bengal Delta extends equally to the submerged portions of the Delta known as the subaqueous delta, which extends out to the 80 m isobath;
- (7) The changeable, unstable nature of the coast in the area is demonstrated by the fate of the feature formerly known as South Talpatty/New Moore which went from a shoal in one place to an island in another to a low-tide elevation in a third location in the span of some 20 years.

**CHAPTER 3**  
**LOCATION OF THE LAND BOUNDARY TERMINUS AND THE**  
**DELIMITATION OF THE TERRITORIAL SEA**

3.1 This Chapter sets out Bangladesh’s arguments on the delimitation of the territorial sea beginning with the location of the land boundary terminus, building upon the approach adopted in Chapter 5 of the Memorial and responding to the arguments in Chapters 4 and 5 of India’s Counter-Memorial. None of the arguments advanced by India have caused Bangladesh to change its approach from that set out in the Memorial.

3.2 There are four significant points of agreement between the Parties. *First*, India agrees with Bangladesh that the land boundary terminus was “authoritatively defined” by the Radcliffe Award in August 1947 based on “pre-partition” boundaries.<sup>1</sup> *Second*, the Parties agree that this was the point where “the midstream of the main channel” of the Hariabhanga River (India has termed this the “vertical axis”) “meets the Bay of Bengal” at the *intra fauces terrae* closing line across the Raimangal Estuary (India has labeled this the “horizontal axis”).<sup>2</sup> *Third*, they also agree that the location of the land boundary terminus has remained unchanged since the time of the Radcliffe Award.<sup>3</sup> *Fourth*, the Parties agree that UNCLOS Article 15 is the law applicable to the delimitation of the territorial sea in this case, and that South Talpatty is not an island and, at best, constitutes a low-tide elevation within the meaning of UNCLOS.<sup>4</sup>

3.3 Notwithstanding these points of agreement, the Parties disagree on the precise location of the land boundary terminus and on the application of Article 15 to the facts of this case. As set out below, India’s approach in the Counter-Memorial to both the location of the land boundary terminus and the delimitation of the territorial sea is deeply flawed. With regard to location of the land boundary terminus, it is notable that India has failed to use an authoritative contemporaneous chart that accurately reflects the boundary as it was fixed by the Radcliffe Award on 15 August 1947, even though such charts exist. Instead, India relies on the illustrative and roughly-drawn map attached to the Radcliffe Award, and a “sketch map” of its own, prepared on the basis of a more recent chart of unknown provenance, to argue that the “bathymetric data of the estuary [measured some 65 years later] confirm the location of the main channel *consistent with pre-partition government documents.*”<sup>5</sup> India also relies on a satellite image from January 2011 to shift the closing line

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1 See Counter-Memorial of India (hereinafter “CMI”) at paras. 4.1 and 4.6.

2 See *Ibid.* at para. 4.5.

3 See *Ibid.* at paras. 4.25 and 5.31.

4 See *Ibid.* at paras. 2.9 and 5.2.

5 *Ibid.* at para. 4.7 (emphasis added).

across the Raimangal Estuary to its advantage, again in disregard of the contemporaneous charts available at the time of the 1947 Radcliffe Award.<sup>6</sup>

3.4 Consequently, India has fallen into serious error in plotting its “vertical axis” and “horizontal axis”, both of which have been incorrectly plotted on the basis of modern charts, rather than contemporaneous ones. Because of this error, India’s proposed land boundary terminus is situated 3.36 M from the correct location. India’s failure to use a chart from the period of the Radcliffe Award, opting instead for a sketch-map based on recent charts, is all the more curious since India explicitly agrees with Bangladesh that “the land boundary terminus ... was determined at the time of the independence of India and Pakistan in August 1947, and has not subsequently changed.”<sup>7</sup>

3.5 Equally significantly, with regard to the delimitation of the territorial sea, India has not correctly applied Article 15. In particular, it has ignored the special circumstances relevant in this case which render an equidistance line impractical and inappropriate. Moreover, India has proposed an equidistance line constructed on the basis of five putative base points, each of which has been inappropriately sited.

3.6 Against this introductory background, this Chapter is divided into four sections. **Section I** sets out the location of the land boundary terminus, which the Radcliffe Award established at the point where the channel in the Hariabhangra River “meets the Bay of Bengal”. It is divided into two parts: **Part A** addresses the applicable law, namely the Radcliffe Award, which established a fixed river boundary; **Part B** sets out the precise location of the land boundary terminus as of 15 August 1947 by reference to contemporaneous charts. **Section II** describes the law applicable to the delimitation of the territorial sea: Article 15 of the 1982 UNCLOS Convention. This Section addresses two special circumstances pertaining to the coastlines of Bangladesh and, in relevant parts, of India. **Section III** focuses on India’s proposed base points for the construction of its purported equidistance line and explains why these are incorrectly situated. **Section IV** addresses Bangladesh’s proposed angle-bisector line.

## I. Location of the Land Boundary Terminus

3.7 Bangladesh and India agree that the location of the land boundary terminus was authoritatively established by the Radcliffe Award of 15 August 1947.<sup>8</sup> They also agree that,

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6 *Ibid.* at Figure No. 4.4.

7 *Ibid.* at para. 5.31.

8 *See Ibid.* at paras. 4.1 and 5.31.

within the area of the land boundary terminus, the Radcliffe Award adopted the pre-partition district boundary between Khulna and 24 Parganas established in Notification No. 964.<sup>9</sup> The Tribunal will recall that the relevant sections of the Award and Notification provide as follows:

*Radcliffe Award*

“The line shall then run southwards along the boundary between the Districts of Khulna and 24 Parganas, to the point where that boundary meets the Bay of Bengal.”<sup>10</sup>

*Notification No. 964*

“[T]he Western boundary of district Khulna passes along the south-western boundary of Chandanpur ... till it meets the midstream of the main channel of the river Ichhamati, then along the midstream of the main channel for the time being of the rivers Ichhamati and Kalindi, Raimangal and Hari[a]bhanga till it meets the Bay.”<sup>11</sup>

It is not in dispute that the Radcliffe Award, as informed by Notification No. 964, is the applicable law for determining the land boundary terminus.

3.8 The Parties further agree that the land boundary terminus is located at the intersection of the midstream of the main channel of the Hariabhanga River and the closing line across the mouth of the estuary, where the river meets the Bay of Bengal.<sup>12</sup> Finally, the Parties agree that the location of the land boundary terminus has remained unchanged since 15 August 1947.<sup>13</sup>

3.9 Where the Parties are in significant disagreement is with regard to the precise location of the midstream of the main channel of the Hariabhanga River in the Raimangal Estuary, and the precise location of the closing line. As set out in more detail below, this discrepancy is due to India’s failure to use a contemporaneous chart of the relevant area.

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9 See *Ibid.* at paras. 4.2, 4.7 and 4.26.

10 Bengal Boundary Commission, Report to His Excellency the Governor General of British India (12 August 1947) (hereinafter “Radcliffe Award”) at Annexure A, p. 3 (emphasis added). MB, Vol. III, Annex B12.

11 Government of Bengal, Notification 964 Jur. (24 January 1925), reprinted in *The Calcutta Gazette* (29 January 1925) (hereinafter “Notification 964 Jur (1925)”) at p. 178 (emphasis added). MB, Vol. III, Annex B9.

12 CMI at paras. 4.5, 4.11-4.22.

13 See *e.g., Ibid.* at paras. 4.3-4.4, 4.7, 4.11-4.16 and 5.31.

Consequently, the points proposed by each Party for the land boundary terminus are 3.36 M apart, as shown in **Figure R3.1** (in Volume II only).

3.10 The arguments advanced by India in Chapter 4 of the Counter-Memorial on the location of the land boundary terminus are without merit and are based on a wholly artificial construction of the Radcliffe Award and Notification No. 964. By way of example, India makes much of the word “it” in the last relevant clause of Notification No. 964 establishing the district boundary:

[T]he Western boundary of district Khulna passes along the south-western boundary of Chandanpur to . . . till it meets the midstream of the main channel of the river Ichhamati, then along the midstream of the main channel of the rivers Ichhamati and Kalindi, Raimangal and Hari[a]bhanga till it meets the Bay.<sup>14</sup>

3.11 India criticises Bangladesh for assimilating the word “it” in the last line of the passage above with “the boundary”, arguing that the word “it” refers instead to the “midstream of the main channel”.<sup>15</sup> Bangladesh has some difficulty appreciating the significance of the distinction that India seeks to derive from this argument. The point of agreement between the Parties is that the boundary is the midstream of the main channel of the Hariabhanga River, and the midstream of the main channel of the river is the boundary. The distinction that India therefore seeks to draw is one that is without any significance.<sup>16</sup>

3.12 Bangladesh’s position is straightforward: the Radcliffe Award must be treated as an authoritative and binding text. The Award definitively established a fixed boundary between India and Pakistan with effect from 15 August 1947, on which date the two countries were established as two separate sovereign States. The land boundary terminus is located where the midstream of the main channel of the Hariabhanga River as of 15 August 1947 met the closing line across the mouth of the Raimangal Estuary. The location of this intersection can only be determined by recourse to an authoritative *contemporaneous* chart, including those in existence in 1947.

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14 Notification 964 Jur (1925) at p. 178 (emphasis added). MB, Vol. III, Annex B9.

15 CMI at paras. 4.26-4.28.

16 Moreover, Bangladesh’s assimilation of “it” with the “boundary” is firmly established in the text of Notification No. 964. The Notification provides that “the western boundary of district Khulna passes along” a series of village boundaries, “then the boundary passes along” further village boundaries “till *it* meets the midstream of the main channel of the river Ichhamati and Kalindi, Raimangal and Hari[a]bhanga till *it* meets the Bay.” The series of references to “it” refer to the boundary – which is the midstream of the main channel of the Hariabhanga River within the area in question.

3.13 In its Memorial, Bangladesh identified the 1931 edition of British Admiralty Chart 859 as the most authoritative chart of the Raimangal Estuary which was current as of 15 August 1947, and it sees no reason to depart from that chart.<sup>17</sup> Taking the two elements together, the midstream of the main channel of the Hariabhangha River and the closing line across the mouth of the Raimangal Estuary by reference to the 1931 edition of Admiralty Chart 859, the land boundary terminus is located at 21°38'09.8"N – 89°06'45.2"E. This is depicted in **Figure R3.2** (following page 32). This location, referenced to WGS84, is 21°38'14"N – 89°06'39"E. That was the land boundary terminus on 15 August 1947, and it is the land boundary terminus today. India itself agrees that “the land boundary terminus ... was determined *at the time of the independence of India and Pakistan in August 1947, and has not subsequently changed.*”<sup>18</sup>

#### A. The Law Applicable to the Determination of the Location of the Land Boundary Terminus

3.14 The Radcliffe Award fixed the international boundary between India and Pakistan by means of both a written description (Annexure A) and an illustrative map (Annexure B). The Award, however, explicitly states that the description in Annexure A is authoritative and that the map in Annexure B is for illustrative purposes only.<sup>19</sup>

3.15 In order to determine the location of the land boundary terminus, it is necessary to look to the Award itself and determine the boundary as it was on 15 August 1947. As stated in the Memorial, and as agreed by India, the land boundary terminus established in 1947 has remained unchanged since that date.<sup>20</sup>

3.16 The fundamental purpose of the Radcliffe Award was to create a fixed, permanent and clear border between the newly independent States of Pakistan and India. The International Court of Justice has observed that “one of the primary objects” of a boundary settlement “is to achieve stability and finality.”<sup>21</sup> What is true of boundary settlements

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17 See Memorial of Bangladesh (hereinafter “MB”) at paras. 5.9-5.11.

18 CMI at para. 5.31 (emphasis added).

19 See MB at para. 5.7. Paragraph 7 of the Award states: “[t]he map is annexed for purposes of illustration, and if there should be any divergence between the boundary as described in Annexure A and as delineated in Annexure B, the description in Annexure A is to prevail”. Bangladesh submitted two versions of the Radcliffe map (Figures 5.1 and 5.2 in MB Vol. II). India has produced what it claims to be a “certified copy” of the Radcliffe map in CMI, Vol. II, Annex IN-2. See *infra* at paras. 3.27-3.28.

20 MB at para. 5.6; CMI at para. 5.31.

21 *Case Concerning the Temple of Preah Vihear (Cambodia v. Thailand)*, Merits, Judgment, I.C.J. Reports 1962 (hereinafter “*Temple Case*”) at p. 34.

generally is all the more resonant for the division of India and Pakistan. The consequences of Partition are well known: 14 million people abandoned their homes to move across the new border<sup>22</sup> and an estimated one million people suffered violent death in the process.<sup>23</sup>

3.17 The purpose of the Award – consistent with the principle of *uti possidetis* discussed below – was to create a definitive solution that would avoid further conflict and bloodshed over the location of boundaries. The fixed and final nature of the borders of the newly created States is reflected throughout the Indian Independence Act of 1947, declaring the terms of India and Pakistan’s hard-fought independence and mandating the creation of the Boundary Commission, led by Sir Cyril Radcliffe. At the outset, the Act established that as from 15 August 1947 “two *independent* Dominions shall be set up in India, to be known respectively as India and Pakistan.”<sup>24</sup> As of 15 August 1947, the two territories were established as separate, integral and sovereign States. Also, as of that date, Section 3(1) of the Act established that the Province of Bengal would cease to exist and would be divided into East and West Bengal. The Act specifically mandated that the territories of Pakistan “shall be” the territories which “on the appointed day” included the Province of East Bengal (now Bangladesh) and India would include the adjoining Province of West Bengal.<sup>25</sup> Section 3(3) of the Act established that the permanent boundaries of the newly independent countries “shall be” decided by a Boundary Commission and that the final boundaries “of the new Provinces ... *shall be* such as may be determined ... by the award of a boundary commission appointed or to be appointed by the Governor-General in that behalf ...”<sup>26</sup> The Boundary Commission reached this final determination, in the form of the Radcliffe Award, on 13 August 1947 – two days before the “appointed day”.

3.18 The governments of both new countries “pledged themselves to accept the awards of the Boundary Commissions whatever these might be; and as soon as these awards were announced to enforce them impartially.”<sup>27</sup>

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22 A. Read & D. Fischer, *The Proudest Day: India’s Long Road to Independence* (1998) at p. 497. RB, Vol. III, Annex BR3.

23 See *Ibid.*, at pp. 497-499. RB, Vol. III, Annex BR3; See also A. Von Tunzelmann, *Indian Summer: The Secret History of the End of an Empire* (2007) at pp. 273-275. RB, Vol. III, Annex BR4.

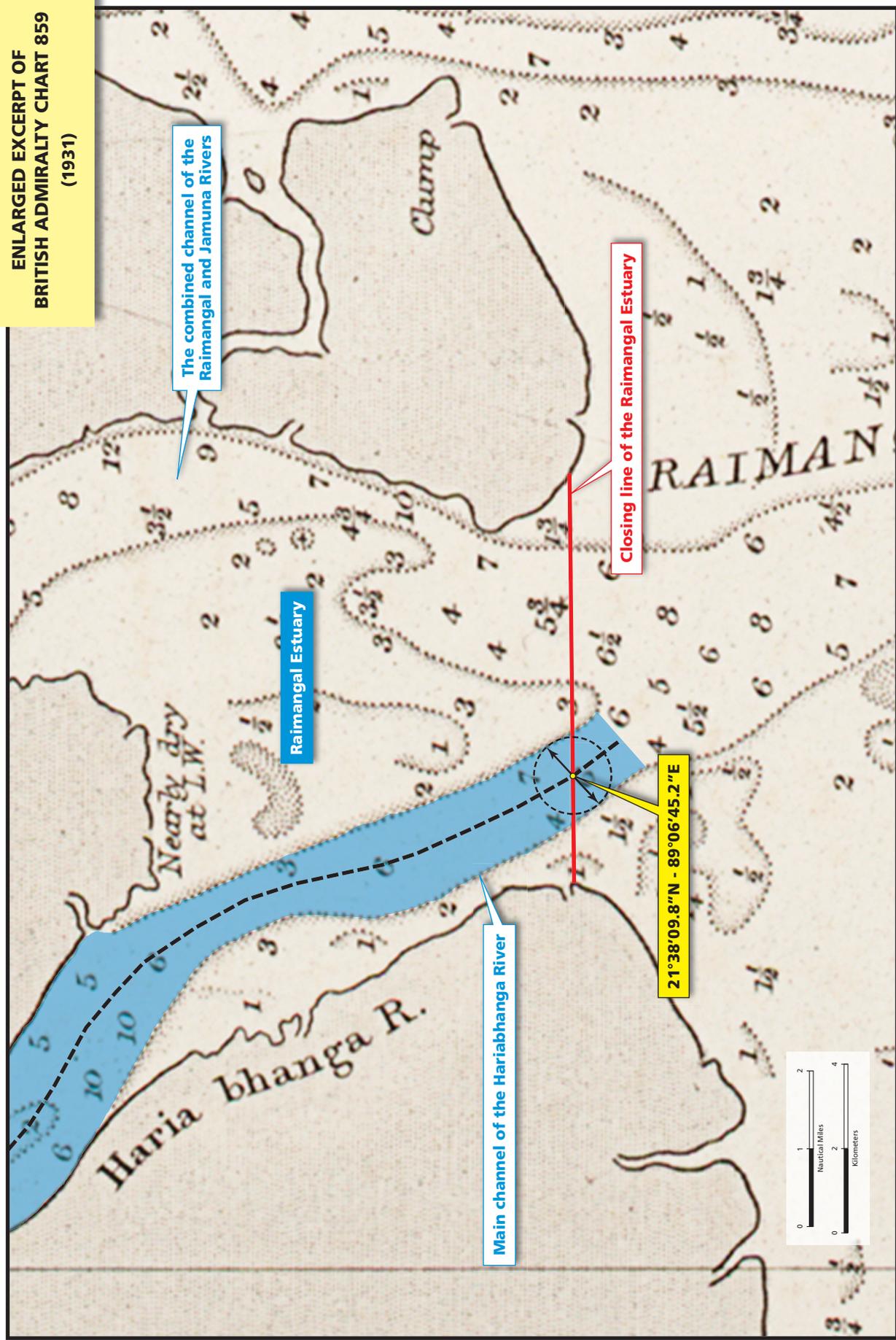
24 Indian Independence Act (U.K.), 1947 (10 & 11 Geo. 6 Ch. 30) (18 July 1947) (hereinafter “Indian Independence Act of 1947”) at Sec. 1(emphasis added). MB, Vol. III, Annex B11.

25 *Ibid.* at Sec. 2(2)(a) (emphasis added).

26 *Ibid.* at Sec. 3 (emphasis added). Its terms of reference assigned the commission to “demarcate the boundaries of the two parts of Bengal.”

27 Earl Mountbatten of Burma, *Mountbatten’s Report on the Last Viceroyalty, 22 March-15 August 1947*, (Lionel Carter ed., 2003), at pp. 272-273. MB, Vol. III, Annex B15.

**ENLARGED EXCERPT OF  
BRITISH ADMIRALTY CHART 859  
(1931)**



The combined channel of the Raimangal and Jamuna Rivers

Closing line of the Raimangal Estuary

Raimangal Estuary

Main channel of the Hariabhanga River

21°38'09.8\"/>

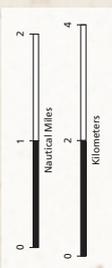


Figure R3.2



3.19 Thus, the Indian Independence Act and the Radcliffe Award were designed to avoid an uncertain boundary and the resulting tensions it would create. In essence, the Radcliffe Award established territorial stability by adopting the pre-colonial district boundary between Khulna and 24 Parganas, and converted it into an international boundary upon Pakistan and India's independence. In doing so, the Award upheld the well-established principles of *uti possidetis juris*, which respects and perpetuates pre-colonial boundaries as the international border following independence.<sup>28</sup>

3.20 *Uti possidetis juris* is a “firmly established principle of international law where decolonisation is concerned.”<sup>29</sup> Like the Radcliffe Award, the doctrine’s “obvious purpose is to prevent the independence and stability of new States being endangered by fratricidal struggles provoked by the challenging of frontiers...”<sup>30</sup> Consequently, the effect is to “freeze the territorial title” at the critical date,<sup>31</sup> taking a “‘photograph’ of the territorial situation then existing.”<sup>32</sup> In this case, the critical date is 15 August 1947.<sup>33</sup>

3.21 The International Court of Justice has adopted the principle of freezing the colonial borders at the moment of independence when determining the boundary along international river channels. In the *Case Concerning the Frontier Dispute (Benin/Niger)*, for example, the Chamber of the ICJ established the boundary along the course of the Mekrou and Niger Rivers by determining the colonial boundary as of the date of independence. In reviewing the evidence, the Chamber sought to determine the physical situation of the course of the river at independence.<sup>34</sup> Applying the *uti possidetis juris* principle to the evidence before it, the Chamber determined that the boundary followed the “main navigable

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28 See R. Jennings and A. Watts (eds.), *Oppenheim's International Law*, Vol. I (9<sup>th</sup> ed. 1996) at p. 669. RB, Vol. III, Annex BR2; *Frontier Dispute (Burkina Faso/Mali)*, Judgment, I.C.J. Reports 1986 (hereinafter “*Burkina Faso/Mali*”), at para. 23 (“The essence of the principle lies in its primary aim of securing respect for the territorial boundaries at the moment when independence is achieved.”).

29 *Ibid.* at para. 20 (“...firmly established principle of international law where decolonisation is concerned ... It is a general principle, which is logically connected with the phenomenon of the obtaining of independence, wherever it occurs.”); *Ibid.* at para. 23.

30 *Ibid.* at para. 20.

31 *Case Concerning the Frontier Dispute (Benin/Niger)*, Judgment, I.C.J. Reports 2005, p. 109 (hereinafter “*Benin/Niger*”) at para. 26; See also *Burkina Faso/Mali* at para. 30.

32 *Ibid.*

33 The Radcliffe Award was completed on 13 August 1947. Pakistan achieved Independence on 14 August 1947 and India achieved Independence on 15 August 1947. See MB at para. 3.6.

34 *Benin/Niger* at para. 26.

channel of the River Niger as it existed at the dates of independence<sup>35</sup> and the median line of the River Mekrou.<sup>36</sup>

3.22 In the *Case Concerning Kasikili/Sedudu Island (Botswana/Namibia)*, the Court used as its reference point the Chobe River as it existed at the time of the 1890 Treaty establishing the river boundary, although it ultimately looked to modern documents because the parties agreed that the hydrological situation of the river had not changed since then.<sup>37</sup>

3.23 Similarly, in *El Salvador/Honduras*, the ICJ determined the final section of the international boundary on the Goascorán River by identifying the location of the river at the time of independence in 1821.<sup>38</sup> To reach its final determination, the Court looked to the contemporaneous evidence of the river's course at that time, "[s]ince what is important is the course of the river in 1821, more significance must be attached to evidence nearer to that date."<sup>39</sup>

3.24 This reasoning applies with particular force to the issue before this Annex VII Tribunal. If the boundary were understood to shift over time with the shifting river channel, the location of the land boundary terminus would also continually shift over time, causing a continuously evolving and unreliable maritime boundary between the Parties. This would cause a state of perpetual flux and uncertainty in relations between Bangladesh and India, and would be a source of tension over the location of the land boundary terminus and the entire maritime boundary.

3.25 Consequently, and as recognised by India in the Counter-Memorial, the land boundary terminus has remained unchanged since the Radcliffe Award established the international boundary in August 1947. In this regard, it is striking that India agrees that

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35 *Ibid.* at paras. 103-104 ("The Chamber will now proceed to determine the precise location of the boundary line in the main navigable channel, namely the line of deepest soundings, as it existed at the dates of independence.").

36 *Ibid.* at paras. 127 and 143. *See also Ibid.* at para. 126 ("According to Benin, the boundary follows the median line of the River Mekrou. That is said to result, on the one hand, from the application of the *uti possidetis juris* principle ...").

37 *Case Concerning Kasikili/Sedudu Island (Botswana/Namibia)*, Judgment, I.C.J. Reports 1999, p. 1065 (hereinafter "*Botswana/Namibia*") at para. 31 ("In short, the present hydrological situation of the Chobe around Kasikili/Sedudu Island may be presumed to be essentially the same as that which existed when the 1890 Treaty was concluded.").

38 "The Chamber will therefore now consider the evidence made available to it concerning the course of the river Goascorán in 1821." *Land, Island and Maritime Frontier Dispute (El Salvador/Honduras: Nicaragua Intervening)*, Judgment, I.C.J. Reports 1993 (hereinafter "*Gulf of Fonseca case*") at para. 313.

39 *Ibid.*

the point was permanently fixed in 1947 but then avoids any use of contemporaneous charts in depicting it.

#### B. Determination of the Location of the Land Boundary Terminus

3.26 As noted above, the Parties agree that the land boundary terminus is located at the point where the midstream of the main channel of the Hariabhanga River meets the *intra fauces terrae* closing line where the river channel meets the Bay of Bengal *as at the time of the Radcliffe Award*.<sup>40</sup>

3.27 In support of its putative location, India invokes the rough Radcliffe sketch-map but then jumps forward some 65 years to use only modern charts to fix the exact point of the land boundary terminus. The Radcliffe Map is important and instructive, but was plainly not intended to be authoritative. Moreover, it is of such a small scale that it clearly cannot define the precise location of the midstream of the main channel of the Hariabhanga River. It is merely an imprecise and general sketch map that is not intended to be anything more than generally illustrative. Indeed, the Award itself states that the map is not intended to be authoritative.<sup>41</sup> Despite exhaustive efforts, Bangladesh has been unable to locate the original map. It did manage to locate a map entitled Annexure B published in the Gazette of Pakistan on 17 August 1947<sup>42</sup> – the same day that India published the Radcliffe Award in its official gazette, although it was unaccompanied by any maps.<sup>43</sup> Bangladesh also located a second map showing “the boundaries as finally demarcated by the Boundary Commission” published by the British Foreign Office in September 1948. Both maps were included in the Memorial.<sup>44</sup> The Gazette of Pakistan map is reproduced in this Reply as **Figure R3.3** (in Volume II only). The British Foreign Office Map is reproduced in this Reply as **Figure R3.4** (in Volume II only).

3.28 In the Counter-Memorial, India claims to present a copy of the original map included as Annexure B of the Radcliffe Award, reproduced at **Figure R3.5** (in Volume II

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40 CMI at paras. 4.5 and 5.31.

41 See MB at para. 5.7. Paragraph 7 of the Award states: “[t]he map is annexed for purposes of illustration, and if there should be any divergence between the boundary as described in Annexure A and as delineated in Annexure B, the description in Annexure A is to prevail”.

42 “Report by the Chairman of the Bengal Boundary Commission”, reprinted in *The Gazette of Pakistan* (extraordinary) (17 August 1947). MB, Vol. III, Annex B13.

43 See Government of India, Legislative Department, “Report of the Bengal Boundary Commission”, Notification No. F 68/47-R, reprinted in *The Gazette of India* (extraordinary) (17 August 1947). MB, Vol. III, Annex B14.

44 *Ibid.* at para. 5.7; Vol. II, Figures 5.1 & 5.2.

only).<sup>45</sup> There are several reasons to question the authority and effect of this map. *First*, as clearly set out in the Award, the map was provided “for purposes of illustration” only and, “should there be any divergence”, the text would prevail.<sup>46</sup> *Second*, historical records confirm that the boundary line on the Radcliffe Map was drawn in red ink.<sup>47</sup> The boundary line drawn on India’s map, however, is a distinctive black line paralleled by red dots (which, it is apparent, were not on the original map and have been added after the event).<sup>48</sup>

3.29 In any event, even if the original map were produced, it would lack the sufficient scale and level of detail necessary to determine the exact location of the boundary along the midstream of the main channel of the Hariabhanga River. Not even India attempts to use its map to identify the location of the midstream of the main channel of the Hariabhanga River. Indeed, drawn to scale the boundary line depicted on the map is more than a mile wide – covering some 20 percent of the estuary opening.<sup>49</sup>

3.30 Contemporaneous charts, including those existing at the time of the Radcliffe Award, clearly provide the appropriate scale and level of detail needed to define with precision the midstream of the main channel of the Hariabhanga River and the *intra fauces terrae* closing line.<sup>50</sup> These charts, shown in the following pages, confirm two points. *First*, at the time of the Radcliffe Award there was only one channel of the Hariabhanga River as it meets the Bay of Bengal. *Second*, the location of the midstream of that channel is the one provided by Bangladesh in its Memorial. India appears to have disregarded the contemporaneous charts because they do not assist its case.

3.31 Bangladesh has identified the 1931 edition of British Admiralty Chart 859 as the most authoritative chart to determine the location of the land boundary terminus.<sup>51</sup> This edition of Chart 859 was available and current at the time of the Radcliffe Award in August 1947. As reflected in **Figure R3.6** (following this page), it clearly shows two distinct channels in the Raimangal Estuary: the channel of the Hariabhanga River (on the western

45 See CMI at paras. 3.9, 4.4 and Annex IN-2.

46 Radcliffe Award at para. 10. MB, Vol. III, Annex B12.

47 See e.g., *Case concerning boundary disputes between India and Pakistan relating to the interpretation of the report of the Bengal Boundary Commission, 12 and 13 August 1947*, Decision, 26 January 1950, reprinted in 21 RIAA 1, at p. 17. (“The boundary line is also shown in red in the map annexure B.”). MB, Vol. III, Annex B16.

48 Notably, the boundary line in the Annexure B map in the 17 August 1947 Pakistan Gazette was drawn in red ink. MB, Vol. II, Figure 5.1. India concedes that the dotted red line on this chart does not represent the boundary: see CMI at p. 54, fn. 76.

49 Drawn to scale the estuary opening on the map is 5.4 M wide.

50 The scale of contemporaneous chart 859 is 1:360,000 (1 cm 3.6 km). Chart 829 (1959) is 1:1,500,000 (1cm 15 km).

51 See MB at paras. 5.9-5.11.





side of the estuary), and the channel formed by the Raimangal and Jamuna Rivers (on the eastern side of the estuary). It is clear from this edition of British Admiralty Chart 859 that within the Raimangal Estuary these two channels were independent of each other.

3.32 This separation of channels within the Raimangal Estuary is also evident from the 1953 edition of British Admiralty Chart 859, and the 1959 edition of British Admiralty Chart 829 (compiled from surveys by the Indian Navy in 1928). These two latter maps, although post-dating the Radcliffe Award by six and twelve years respectively, confirm the authority and accuracy of the 1931 edition of British Admiralty Chart 859. They are presented as **Figures R3.7** and **R3.8**, respectively (in Volume II only),

3.33 With respect to the first point, the detailed contemporaneous charts show that there is only one channel in the Hariabhanga River as it reaches the Bay of Bengal. India's Counter-Memorial is therefore factually incorrect in stating that there was more than one channel. India erroneously argues that Bangladesh has identified a "secondary channel" of the Hariabhanga River and that India has identified a different main channel.<sup>52</sup> This is simply not the case. India demonstrates some confusion and may be relying on the channel created by the combination of the Raimangal and Jamuna Rivers. This is not the midstream of the main channel of the Hariabhanga River. The detailed charts depict two separate channels in the estuary, but it is beyond doubt that only one of these (on the western side of the estuary) is the channel of the Hariabhanga River. The entirely separate and distinct channel on the eastern side of the estuary is the confluence of two rivers, which are both purely national rivers within the territory of Bangladesh. These national rivers cannot form the basis for the international boundary established by the Radcliffe Award, particularly when the Jamuna River is not even mentioned in the Award or the Notification forming the district boundary on which the Award is based. These charts also demonstrate that the separation between the two channels within the estuary is quite distinct: the area between the Hariabhanga River channel and the Raimangal/Jamuna channel is so shallow that charts 859 of 1931 and 859 of 1953 state that it was "nearly dry at L.W. [low water]."

3.34 It is noteworthy that India at no point actually identifies the location of its preferred "alternative" channel. Instead, India provides a present-day and modern satellite image unrelated to the Radcliffe Award and without an indication of the alleged midstream of the main channel.<sup>53</sup> It also provides two sketch-maps that appear to have been produced

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52 CMI at paras. 4.31-4.32.

53 *Ibid.* at Figure 4.4.

for the purposes of this arbitration, neither of which has any identifiable source or date.<sup>54</sup> These illustrations contradict India's articulated position that the "vertical axis" is located on the midstream of the main channel of the Hariabhanga River, as distinguished from the main channel of the combined Raimangal and Jamuna Rivers.<sup>55</sup> India's sketch-map No. 4.3 on page 67 of the Counter-Memorial shows the main channel of the Hariabhanga River flowing into the channel of the combined Raimangal and Jamuna Rivers. India uses this sketch map as the basis for plotting the land boundary terminus 3.36 M to the east of its correct location. This is despite the fact that its own satellite image, Figure 4.4, which is reproduced on the very next page of the Counter-Memorial, clearly shows the channel of the Hariabhanga River lying to the west and entirely separate from the combined Raimangal/Jamuna channel. India's argument appears to be premised on the idea that the channel of the Hariabhanga River somehow merges with the combined channel of the Raimangal and Jamuna Rivers, before it meets the *intra fauces terrae* closing line. However, this approach is directly contradicted by the clear language of Notification 964, which states that the boundary runs along the midstream of the main channel of the Hariabhanga up to the point where "it meets the bay", not where *it meets the combined channel of the Raimangal and Jamuna Rivers*.

3.35 The Indian sketches ultimately raise more questions than they answer. In addition to the fundamental flaws raised above, they appear to ignore entirely the channel of the Hariabhanga River, located to the west of South Talpatty, which despite a depth of up to 8.6 and 9.6 meters, is coloured in blue instead of the white dedicated to other channels, including depths of 10.4 meters. Perhaps more importantly, the sketch-maps relied upon by India provide no information as to source data or date. Were these sketch-maps created by India solely for this arbitration? Their labels appear to so indicate. Are they based on data from 1911 or 2011 (well after this arbitration began)? And where did the source data supporting the sketch-maps come from? The Government of India? If the sketches depict "coastal and maritime features ... in simplified form" and were "prepared for illustrative purpose only", then how can they form the basis for India's claim as stated in paragraph

54 *Ibid.* at Figures 4.2 and 4.3.

55 See *e.g.*, *Ibid.* at para. 4.5 ("As is apparent from its terms, the Radcliffe Award locates the land boundary terminus between the two States where the midstream of the *main channel of the Hariabhanga* in the estuary (the vertical axis) intersects a closing line drawn from 'headland to headland' across the mouth of the estuary (the horizontal axis)"); para. 4.8 ("The Award's map confirms what follows from the express language of the Award, that the boundary follows the *midstream of the main channel of the Hariabhanga*"); para. 4.18 ("There are, however, *two* cumulative criteria for determining the vertical axis of the land termination: in addition to meeting the Bay of Bengal, the vertical axis must be the '*midstream of the main channel*' (*emphasis added*) of the *Hariabhanga*.").

4.32 of its Counter-Memorial?<sup>56</sup> Yet, India makes clear that the bases for its position are these sketch-maps and the 2011 satellite image, providing no further explanation or indication of where its alleged “main” channel is located. Moreover, the 2011 satellite image does not depict the depth of water, but merely its colour.

3.36 Thus, India has yet to provide any authoritative basis supporting its claim regarding the location of the midstream of the main channel of the Hariabhanga River at the time of the 1947 Award. It has provided no sources that are contemporaneous with the Radcliffe Award; the sketch-map it purports to use is not properly identified and does not support its contentions; and the 2011 satellite image does not show the existence of a “main” channel of the Hariabhanga River where India places it.

3.37 India’s additional argument – that the separate channel it has identified to the east of the midstream of the main channel of the Hariabhanga River channel is the correct “vertical axis” because it is continuously navigable – is also irrelevant and without merit.<sup>57</sup> There is no evidence that navigability was important to the Radcliffe Award, let alone in the area of the land boundary terminus. India notes Radcliffe’s explanation that: “I have done what I can in drawing the line to eliminate any avoidable cutting of railway communications and of river systems.”<sup>58</sup> Radcliffe makes no mention of navigability. River systems are not always navigable and they have important functions that are not related to transport. Nor is there any danger of a river system being cut off in the area of the land boundary terminus.

3.38 India’s invocation of the ICJ’s jurisprudence determining the main channel of the Chobe River in *Botswana/Namibia* is also unhelpful to its argument. In that case, the Court was faced with two competing channels on the same river that was split into a northern and a southern channel by Kasikili/Sedudu Island, which lay in the middle of the river.<sup>59</sup> The Court was asked to determine which of the two alternative channels was the “main” channel.<sup>60</sup> This analysis is inapposite in the present case, where there is plainly only one channel in the Hariabhanga River.

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56 *Ibid.* at para. 4.32 (“The attached satellite image (see figure No. 4.4 at page 69) and bathymetric charts (see sketch-map No. 4.2 and sketch-map No. 4.3 at pages 59 and 67) demonstrate conclusively that the main channel of the Hariabhanga which meets the Bay of Bengal is the channel which descends south-easterly to the east of the low-tide elevation known as New Moore Island.”).

57 *Ibid.* at para. 4.29.

58 “Report by the Chairman of the Bengal Boundary Commission”, reprinted in *The Gazette of Pakistan (extraordinary)* (17 August 1947) at p. 8, para. 11. MB, Vol. III, Annex B13.

59 *Botswana/Namibia* at para. 11.

60 *Ibid.* at para. 27.

3.39 In summary, the contemporaneous charts show that the midstream of the main channel of the Hariabhanga River consistently appears in the same location, as illustrated in the sketch-map below.

3.40 With regard to the closing line across the estuary, marking the entrance to the Bay of Bengal, Bangladesh and India agree that the *intra fauces terrae* principle is to be applied to determine the location of the land boundary terminus. However, rather than using contemporaneous charts, India has chosen to rely on the same sketch-maps it used to determine the course of the midstream of the main channel of the Hariabhanga River to plot its proposed *intra fauces terrae* closing line. For the reasons set out above, these maps are without any authority or merit.

3.41 India criticises Bangladesh's closing line on the basis that there is allegedly a "slight cartographic error in the construction of the headland closing line" because, according to India, "the land turns to face the sea at a point slightly south of Bangladesh's headland closing line, hence the simple latitudinal drawn in the Memorial is erroneous."<sup>61</sup> This argument is misguided. To begin, India is basing its closing line solely on an undated and un-sourced sketch-map that Bangladesh is unable to verify in the absence of any source data or other information provided by India. Second, India's own proposed line validates that put forward by Bangladesh in the Memorial. As can be seen in sketch-map No. 4.3 at page 67 of the Counter-Memorial, India's proposed closing line meets the Indian headland at a distinct inlet. This inlet is also visible on Bangladesh's more authoritative contemporaneous chart (the 1931 edition of Admiralty Chart 859). Bangladesh's closing line, depicted in Figure 5.4A of Volume II of the Memorial and in **Figure R3.9A** (in Volume II only), meets the Indian headland at this same inlet. The discrepancy in the angle of the two closing lines advanced by Bangladesh and India in the Memorial and Counter-Memorial is therefore related to the disparity between the two charts relied upon by the Parties.

3.42 India's maps are not authoritative. By contrast, the 1931 edition of Admiralty Chart 859 is of obvious authority because it was current as of 15 August 1947. It is therefore the most appropriate chart with which to determine and depict the closing line (*i.e.* the point at which the midstream of the channel of the Hariabhanga River "meets the Bay").

3.43 For the foregoing reasons, the land boundary terminus is that which is depicted in Figure R3.9. It is not disputed that the intersection of the mainstream of the main channel of the Hariabhanga River with the *intra fauces terrae* closing line across the Raimangal Estuary is the location of the land boundary terminus. It is also not disputed that the location

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61 CMI at paras. 4.23-4.24.

of this point has not changed since the time of the Radcliffe Award. This intersection is located at 21°38'09.8"N – 89°06'45.2"E. This location, referenced to WGS84, is 21°38'14"N – 89°06'39"E.

## II. The Law Applicable to the Delimitation of the Territorial Sea

3.44 It is not in dispute between the Parties that Article 15 of UNCLOS is the law applicable for the delimitation of the territorial sea in this case. However Bangladesh and India are in dispute as to the application of Article 15 to the facts of this case, and in particular the applicability of special circumstances necessitating a departure from the strict equidistance method of delimitation.

3.45 Article 15 of UNCLOS provides:

*Delimitation of the territorial sea between States with opposite or adjacent coasts*

Where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial seas of each of the two States is measured. The above provision does not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance therewith.

Article 15 is a codification of the equidistance/special circumstances rule first established in Article 12(1) of the 1958 Convention on the Territorial Sea and the Contiguous Zone.<sup>62</sup>

3.46 The Parties agree that the delimitation of the territorial sea between them is to be effected on the basis of the equidistance/special circumstances rule, as provided for in Article 15. The rule is that in the absence of agreement, historic title or other special circumstances, the median line method of delimitation is applicable. It is not disputed that there is no agreement between the Parties on the delimitation of the territorial sea and neither Party has made any claims of historic title within the meaning of Article 15.<sup>63</sup>

3.47 Although the median line method is accorded primacy under UNCLOS, it is not a mandatory rule. In the Counter-Memorial, India suggests that the median line method

<sup>62</sup> See MB at paras. 5.12-5.16.

<sup>63</sup> CMI at para. 5.5.

is “in preference to other options”.<sup>64</sup> However, the language of Article 15 makes clear that in the event of agreement, historic title or other special circumstances the median line method “does not apply” at all. The recent decision of ITLOS in *Bangladesh/Myanmar* confirms that “before the equidistance principle is applied, consideration should be given to the possible existence of historic title or other special circumstances relevant to the area to be delimited.”<sup>65</sup>

3.48 India’s interpretation of Article 15 in the Counter-Memorial does not accord with international judicial and arbitral practice, and is also self-contradictory. On the one hand, India criticises Bangladesh for assimilating “the delimitation of the territorial sea with the delimitation of maritime areas beyond the territorial sea” and states that “cases pertaining to the treatment of ‘relevant circumstances’ in the exclusive economic zone and continental shelf ‘are ... not directly relevant to the delimitation of the territorial sea’”.<sup>66</sup> Yet, on the very next page of its Counter-Memorial, India contradicts itself and asserts that “[t]he modern law concerning relevant circumstances in the context of delimitation of the continental shelf and exclusive economic zones and special circumstances in the context of delimitation of the territorial sea are closely related.”<sup>67</sup>

3.49 India seeks to avoid the special circumstances exception to equidistance in Article 15 by arguing that that “[u]nlike articles 74(1) and 83(1), there is no reference in article 15 to achieving an equitable solution”.<sup>68</sup> However, as stated in Bangladesh’s Memorial, the very *raison d’être* of the equidistance/special circumstances method of delimitation in Article 15 is the achievement of an equitable result.<sup>69</sup> Article 15 recognises exceptions to the median line method within the territorial sea where, due to special circumstances, its application would lead to an inequitable result.

3.50 The link between the equidistance/special circumstances rule and equitable principles was recognised by the International Court of Justice in *Qatar v. Bahrain* where it was held that:

the equidistance/special circumstances rule, which is applicable in particular to the delimitation of the territorial sea, and the equitable principles/

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64 *Ibid.* at para. 5.3.

65 *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment of 14 March 2012*, ITLOS Reports 2012 (hereinafter “*Bangladesh/Myanmar*”) at para. 129.

66 CMI at para. 5.4 (citing *Bangladesh/Myanmar* at para. 150).

67 *Ibid.* at para. 5.6 (internal citation omitted).

68 *Ibid.* at para. 5.4.

69 MB at para. 5.29.

relevant circumstances rule, as it has been developed since 1958 in case-law and State practice with regard to the delimitation of the continental shelf and the exclusive economic zone, are closely interrelated.<sup>70</sup>

3.51 Moreover India's assertion at paragraph 5.6 of the Counter-Memorial on the judicial and arbitral practice under Article 15 is inaccurate. India states:

One similarity in the understanding of the concepts of relevant circumstances and special circumstances is telling: the modern case law regarding the territorial sea shows the same move away from an expansive understanding of "special circumstances" that once permitted Parties to plead any and all equities to justify shifting their entitlements. Instead, the application of the equidistance method and UNCLOS rules regarding equidistance and the selection of base points determine the delimitation in the territorial sea.<sup>71</sup>

Bangladesh notes that this sweeping statement of a general character is unsubstantiated. India provides no support or evidence for its proposition that the special circumstances regime has fallen away. The only authority India relies on does not provide any assistance.

3.52 Paragraph 5.6 of the Counter-Memorial continues with:

Notably, Bangladesh was forced to argue for precisely the opposite construction of article 15. While in the present case Bangladesh argues that "equidistance does not have an automatic *a priori* character requiring a provisional equidistance line to be drawn and then adjusted to take special circumstances into consideration", in *Bangladesh/Myanmar* it opposed the same claim by its opponent.<sup>72</sup>

This statement is unfortunate in mischaracterising Bangladesh's arguments in the recent case against Myanmar. At no point in the written pleadings before ITLOS, or at any point during the oral hearings, did Bangladesh argue that the equidistance method of delimitation set out in Article 15 is of an "automatic *a priori* character".

3.53 India's characterisation of the arguments advanced by the parties in *Bangladesh/Myanmar* is misconstrued. In *Bangladesh/Myanmar*, Myanmar argued that St. Martin's Island (with a surface area of 8 sq km, a population of 7,000 people and located only 4.5

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70 *Case Concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain)*, Merits, Judgment, I.C.J. Reports 2001 (hereinafter "*Qatar v. Bahrain*") at para. 231.

71 CMI at para. 5.6.

72 *Ibid.* (internal citation omitted).

M from the coast of Bangladesh) constituted a special circumstance within the meaning of Article 15 and therefore proposed that it be enclaved and deprived of a 12 M territorial sea. ITLOS noted that “St. Martin’s Island is a significant maritime feature by virtue of its size and population and the extent of economic and other activities” and therefore did not treat St. Martin’s Island as a special circumstance.<sup>73</sup>

3.54 The situation in *Bangladesh/Myanmar* is wholly distinguishable and does not assist India. The allegation of a “*volte-face*” by Bangladesh is simply wrong.<sup>74</sup> *First*, the coastline of Bangladesh and Myanmar in the vicinity of the land boundary terminus is stable. Neither party argued before ITLOS that it was impossible to establish reliable base points near the land boundary terminus. This is in stark contrast to the highly active morpho-dynamism pertaining to the coastlines of Bangladesh and, in the relevant portion, of India. *Second*, the concave configuration of Bangladesh was not a relevant factor in the delimitation of the territorial sea with Myanmar due to the presence of St. Martin’s Island. As can be seen in **Figure R3.10** (in Volume II only), the Article 15 equidistance line plotted by ITLOS runs between the coastline of Bangladesh’s St. Martin’s Island and Myanmar’s mainland coastline, which lies directly opposite. As a result of the location of St. Martin’s Island, the markedly concave nature of Bangladesh’s coastline did not begin to impact the line of delimitation until 29 M beyond the 12 M territorial sea at Point 11, due south of Kutubdia Island.<sup>75</sup> This is not comparable to the situation between Bangladesh and India. The delimitation of the territorial sea in this case features adjacent coastlines. The markedly concave configuration pertaining to Bangladesh’s coastline impacts the line of delimitation within 12 M and therefore, unlike in the case with Myanmar, constitutes a special circumstance within the meaning of Article 15.

#### A. Special Circumstances in the Bay of Bengal in the Area to be Delimited

3.55 As set out in Bangladesh’s Memorial, the present case plainly raises a circumstance, envisaged by Article 15, which renders an equidistance line inappropriate due to the special circumstances pertaining to the coastlines of Bangladesh and of India between the Meghna and Hooghly estuaries. The highly unstable deltaic nature of the relevant coastlines makes it extremely difficult, if not impossible, to establish stable and reliable base points on which to construct a meaningful equidistance line. Moreover, the concavity that characterises Bangladesh’s coastline renders an equidistance line inequitable.

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73 *Bangladesh/Myanmar* at paras. 151-152.

74 CMI at para. 5.8.

75 *Bangladesh/Myanmar* at para. 331 *et seq.*

## 1. Coastal Instability

3.56 The coast between India's Hooghly River 120 km to the west of the land boundary terminus and the Meghna Estuary 230 km to the east is highly unstable with marked deltaic features. The morpho-dynamism and instability of the relevant coastlines makes it impractical to identify reliable base points for the construction of an equidistance line.

3.57 The extremely active morpho-dynamism of the Bengal Delta is described in detail in the Memorial and Chapter 2 above.<sup>76</sup> The Bengal Delta is known to be among the most unstable coastlines in the world, as it stretches some 430 km from the mouth of the Meghna Estuary in the east of Bangladesh to the mouth of India's Hooghly River in the west. India unconvincingly argues that "the coast of the Bay of Bengal does not present an unusual case of coastal fluctuation and, on the contrary, has demonstrated relative stability over the years, maintaining the general configuration of the coast".<sup>77</sup> India advances four arguments on coastal instability in the Counter-Memorial.<sup>78</sup> Each is surprising; none is persuasive.

3.58 *First*, India argues that Figure 2.3 in Volume II of the Bangladesh Memorial "illustrates the stability of the deltaic coast."<sup>79</sup> This statement is inaccurate. Figure 2.3 comprises two satellite images of the Raimangal Estuary, one is dated 1973, the second dated 1989. A number of important differences are immediately apparent. Notably, South Talpatty is no longer visible in the second image. The mere fact that a coastal feature once measuring some 3 sq km has completely disappeared from view within just a few short years surely provides clear evidence of a highly unstable coastline. It is also evident that in the course of only 16 years Mandarbaria Island suffered from considerable erosion on its southern shores. Rather than supporting India's claim that the coastline is relatively stable, Memorial Figure 2.3 reveals that between 1973 and 1989 Mandarbaria Island had noticeably shrunk in size.<sup>80</sup>

3.59 India acknowledges that levels of accretion and erosion in the Bay Bengal are not uniform.<sup>81</sup> However, Bangladesh disagrees that "only the Meghna estuary region is affected

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76 MB at paras. 2.12-2.22.

77 CMI at para. 5.35.

78 *Ibid.* at paras. 5.35-5.39.

79 *Ibid.* at para. 5.36.

80 A study in 2008 has revealed that Mandarbaria Island has lost 22 per cent of land mass between 1975 and 2005. See *infra* at para 3.80.

81 CMI at para. 2.25.

by any kind of instability”.<sup>82</sup> The western two-thirds of the Bengal Delta (from Bangladesh’s Haringhata River to the mouth of India’s Hooghly River) has been eroding for at least two centuries now.<sup>83</sup> Moreover, erosion of this deltaic front is now well above the long-term historic rate, due to sea level rise.<sup>84</sup> It is surprising again that India feels able to question the “[a]lleged ‘[i]nstability’” of the coast between the Haringhata and Hooghly Rivers, given the multitude of studies which have revealed rapid coastal erosion, degradation of coastal vegetation, tidal ingression, and the highly dynamic nature at India’s Sagar Island, near the mouth of the Hooghly River.<sup>85</sup>

3.60 *Second*, India denies that the coastline in the vicinity of the land boundary terminus is unstable, as a result of the “stabilizing effect” of the Sundarbans mangrove forest.<sup>86</sup> Yet, elsewhere India acknowledges that mangroves “do not completely prevent coastal erosion”, merely that “their elaborate root structures are likely to slow that process down”.<sup>87</sup> A study of the Sundarbans on the Indian side of the boundary, in the southern portion of 24 Parganas, reveals that despite the mangrove forest, it is “one of the most dynamic estuarine deltas in the world” and “a huge amount of land area of coastal Sundarbans is subject to erosion”.<sup>88</sup> In addition, mangroves can be “degraded by environmental stress factors”<sup>89</sup> such as cyclones and disease. The Sundarbans are suffering disproportionately from both. Some 20% of the mangroves in Bangladesh have been damaged by a condition known as “top

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82 *Ibid.*

83 M. A. Allison, “Historical Changes in the Ganges-Brahmaputra Delta Front”, *Journal of Coastal Research*, Vol. 14, No. 4 (1998) at p. 1270. MB, Vol. IV, Annex B61 (“West of the Haringhata River and away from the active river mouths, the delta front is undergoing net land loss. Erosion rates of the islands and peninsulas that form the western delta are progressive over the period (1792-1984); land loss over this area averages 1.9 km<sup>2</sup>/yr.”).

84 RB at para. 2.28.

85 See, e.g., S. Bandyopadhyay, “Natural Environmental Hazards and their Management: A Case Study of Sagar Island, India”, *Singapore Journal of Tropical Geography*, Vol. 18, No. 1 (1997) at pp. 20-25. RB, Vol. III, Annex BR7; G. Gopinath, “Critical Coastal Issues of Sagar Island, east coast of India”, *Environmental Monitoring and Assessment*, Vol. 160 (2010) at pp. 555-561. RB, Vol. III, Annex BR13; Abdullah F. Rahman et al., “Response of the Sundarbans Coastline to Sea Level Rise and Decreased Sediment Flow: A Remote Sensing Assessment”, *Remote Sensing of Environment*, Vol. 115, No. 12 (2011). RB, Vol. III, Annex BR14; Chandra Giri, “Monitoring Mangrove Forest Dynamics of the Sundarbans in Bangladesh and India using Multi-Temporal Satellite Data from 1973 to 2000”, *Estuarine, Coastal and Shelf Science*, Vol. 73, No. 1 (2007). RB, Vol. III, Annex BR9.

86 CMI at paras. 2.26 and 5.36.

87 *Ibid.* at para. 2.26.

88 D. Ganguly et al., “Geomorphological Study of Sundarban Deltaic Estuary”, *Journal of the Indian Society of Remote Sensing*, Vol. 34, No. 4 (2006) at pp. 431-435. RB, Vol. III, Annex BR8.

89 K. Kathiresan, “Threats to Mangroves - Denigration and Destruction of Mangroves”, *Centre of Advanced Study in Marine Biology, Annamalai University* (available at <<http://ocw.unu.edu/international-network-on-water-environment-and-health/unu-inweh-course-1-mangroves/Degradation-and-destruction-of-mangroves.pdf>>) at p. 476. RB, Vol. III, Annex BR10.

dying” that is caused in part by an increase in salinity and a reduction in fresh water flow in the Sundarbans.<sup>90</sup>

3.61 *Third*, India argues that the relevant coastline in this case is not one “that renders the selection of appropriate base points unfeasible.”<sup>91</sup> India seeks support for this contention in the recent ITLOS judgment in *Bangladesh/Myanmar* and the Tribunal’s use of Myanmar’s point  $\beta_2$ . Point  $\beta_2$  in that case is the same as point B-2 proposed by India in these proceedings. India explains that:

The ITLOS noted, in its discussion of “Point  $\beta_2$ ,” Bangladesh’s protestations that the coast was “characterized by a very active morpho-dynamism” such that “the location of base point  $\beta_2$  this year might be very different from its location next year”. The ITLOS was “satisfied that the five base points selected by Myanmar are the appropriate base points on the coasts of the Parties for constructing the provisional equidistance line”.<sup>92</sup>

3.62 India’s line of reasoning is not well-founded. The Tribunal in *Bangladesh/Myanmar* did not reject Bangladesh’s arguments on the instability of the coastline in the vicinity of the Bangladesh/India land boundary terminus. Rather, it considered that Bangladesh had no reason to dispute that base point because, as the Tribunal noted, Myanmar did not use it to construct its equidistance line. As such, the location of Myanmar’s Point  $\beta_2$  in *Bangladesh/Myanmar* was not in dispute between the parties. As ITLOS observed:

The Tribunal notes Bangladesh’s contentions that Myanmar does not show the effect on its proposed delimitation line of base point  $\beta_2$ , located on the southern tip of Mandarbaria Island, near the land boundary between Bangladesh and India, because that point has none, and that base point  $\beta_2$  never actually comes into play in Myanmar’s proposed delimitation.

The Tribunal further notes that the observation made by Bangladesh concerning Myanmar’s  $\beta_2$  base point does not amount to a disagreement with the selection of that point; rather, it is a criticism by Bangladesh that Myanmar does not use that base point in its construction of the equidistance line.<sup>93</sup>

It is to be noted, therefore, that the Tribunal in *Bangladesh/Myanmar* accorded point  $\beta_2$  very little weight.

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90 *Ibid.* at pp. 478-479.

91 CMI at para. 5.37.

92 *Ibid.* (internal citation omitted).

93 *Bangladesh/Myanmar* at paras. 261-262.

3.63 India's *fourth* and final argument with regard to coastal instability is that, unlike the case of *Nicaragua v. Honduras*, there is no "needle-like' protrusion into the sea at the land-boundary terminus between Bangladesh and India".<sup>94</sup> This is a poor argument that has no merit. The ICJ's Judgment in *Nicaragua v. Honduras* does not purport to state that it is *only* in situations of "needle-like' protrusions" that the use of base points will not be feasible by reason of a highly active morpho-dynamism.<sup>95</sup> To the contrary, the point was both simpler and of broader application: when the instability of the relevant coastlines makes it impractical to identify reliable base points, recourse to the equidistance method is inappropriate.

3.64 In this respect, Bangladesh notes that the documented rate of change in the area immediately adjacent to the Bangladesh-India land boundary terminus in the Raimangal Estuary is virtually identical to the rate of change at the mouth of the River Coco, the area at issue in *Nicaragua v. Honduras*. According to the Counter-Memorial, the "morpho-dynamism" in *Nicaragua v. Honduras* "was, in fact, *so active* that the point fixed as the land boundary terminus at the mouth of the River Coco in 1962 was located *as far as one mile* inland from the mouth of the river by the time of the pleadings less than 40 years later."<sup>96</sup> As noted in Chapter 2, the coast of Bangladesh's Mandarbaria Island, which forms the eastern jaw of the Raimangal Estuary, has retreated by 1.25 km in the 30-year period between 1975 and 2005.<sup>97</sup> The two rates of change are nearly the same: 42 m/year in the case of Mandarbaria Island vs. 40 m/year in the case of the mouth of the River Coco. If equidistance was rejected as unreliable in the latter case, so too it must be rejected in this case.

## 2. Concavity

3.65 The second feature that is plainly relevant in this case is the markedly concave nature of Bangladesh's coastline.<sup>98</sup> Bangladesh lies within a deep and broad concavity in the north-eastern portion of the Bay of Bengal. Bangladesh is severely prejudiced by its unique coastal geography. The concave configuration of the coastline at the north-eastern corner of the Bay of Bengal produces a severe cut off of Bangladesh's coastal projection. The application of the equidistance line proposed by India blocks the seaward projection of Bangladesh's coast and deprives Bangladesh of a significant part of its maritime entitlement, even within the territorial sea. In its Judgment of 14 March 2012, ITLOS recognized

94 CMI at para. 5.39. India's erroneous interpretation of the ICJ's judgment in *Nicaragua v. Honduras* is addressed in more detail below at paras. 3.63-3.64.

95 See *Ibid.*: "[t]hus the *Nicaragua v. Honduras* 'unfeasibility' exception...".

96 *Ibid.* at para. 5.15 (emphasis added).

97 RB at paras. 2.25-2.26 and Figure R2.3.

98 MB at paras. 1.13; 2.2; 2.10-2.12; 5.45-5.47.

that “the configuration of the coasts of the parties in relation to each other may render an equidistance line inequitable in certain situations.”<sup>99</sup>

3.66 Like the arguments it has put forward on coastal instability, India’s arguments on concavity in the Counter-Memorial are not persuasive. India argues that “[a]ny argument based on ‘concavity’ is likely to be at most of limited significance when it relates to a narrow belt such as the 12 nautical mile territorial sea.”<sup>100</sup> However, the application of an equidistance line in the territorial sea will invariably have an impact on the entire course of the maritime boundary, up to and beyond 200 M. Moreover, coastal geographic configurations such as concavity are among the recognised special circumstances where equidistance does not provide for an equitable result. Bangladesh’s situation was explicitly invoked by the Federal Republic of Germany in its pleadings as long ago as the landmark *North Sea Cases* as the paradigm example of where an equidistance line results in inequity.<sup>101</sup>

3.67 India’s contention that “the starting point of the delimitation is not, in fact, located in a concavity” is erroneous. *Guinea/Guinea Bissau* makes clear that a macro-geographic approach is appropriate:

In the Tribunal’s view, a valid method consists of looking at the whole of West Africa and of seeking a solution which would take overall account of the shape of its coastline. This would mean no longer restricting considerations to a *short coastline* but to a *long coastline*.<sup>102</sup>

Approaching the question of concavity by reference to the macro-geographic circumstances was confirmed by ITLOS in its recent judgment:

The Tribunal observes that the coast of Bangladesh, *seen as a whole*, is manifestly concave. In fact, Bangladesh’s coast has been portrayed as a classic example of a concave coast. In the *North Sea cases*, the Federal Republic of Germany specifically invoked the geographical situation of Bangladesh (then East Pakistan) to illustrate the effect of a concave coast on the equidistance line (*I.C.J. Pleadings, North Sea Continental Shelf, Vol. I p. 42*).<sup>103</sup>

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99 *Bangladesh/Myanmar* at para. 227.

100 CMI at para. 5.40.

101 MB at paras. 1.15-1.17 and Figure 1.2.

102 *Delimitation of Maritime Boundary between Guinea and Guinea-Bissau*, Award, 14 February 1985, reprinted in 25 ILM 252 (hereinafter “*Guinea/Guinea-Bissau*”) at para. 108 (emphasis in the original). Reproduced in MB, Vol. V.

103 *Bangladesh/Myanmar* at para. 291.

3.68 Bangladesh agrees with India's statement at paragraph 5.40 of the Counter-Memorial that "concavity is not a special circumstance in maritime delimitation *per se*". ITLOS made a finding to the same effect in its Judgment of 14 March 2012. However, the Tribunal further held that concavity is a special circumstance where, as is the case in the present proceedings, it produces a cut-off effect:

The Tribunal notes that in the delimitation of the exclusive economic zone and the continental shelf, concavity *per se* is not necessarily a relevant circumstance. However, when an equidistance line drawn between two States produces a cut-off effect on the maritime entitlement of one of those States, as a result of the concavity of the coast, then an adjustment of that line may be necessary in order to reach an equitable result.<sup>104</sup>

The inequitableness of India's proposed equidistance line and the resulting cut-off effect of Bangladesh's seaward projection in the territorial sea is readily apparent from **Figure R3.11** (following this page).<sup>105</sup>

### III. The Equidistance Line Claimed by India and the Selection of Base Points

3.69 In its Counter-Memorial, India has sought to identify five base points on the basis of which it has purported to construct an equidistance line. This section addresses India's proposal, and explains why these base points are wrongly located and should be discarded. For the reasons stated above, the application of the equidistance method is not practical in the present case and recourse to an alternative method of delimitation, namely the angle-bisector method, is more appropriate. The application of the angle-bisector method is summarised in Section IV below and set out in detail in the following chapter.

3.70 India's purported equidistance line is inadequate because none of the five base points are appropriately located. Bangladesh considers that the coastal geography is so unstable in this area that no base points can be reliable. The particular base points selected by India demonstrate that Bangladesh is correct. Indeed, as depicted in **Figure R3.12** (following Figure R3.11), when plotted on Bangladesh Nautical Chart 40001, all of India's proposed base points are, in fact, under water.

3.71 India refers to the approach in *Romania v. Ukraine* where the ICJ proceeded to "identify the appropriate points on the Parties' relevant coast or coasts which mark a significant change in the direction of the coast, in such a way that the geometrical fig-

<sup>104</sup> *Ibid.* at para. 292.

<sup>105</sup> The inequitableness of India's proposed equidistance line is further addressed in Chapter 4 at paras.4.60-4.108.

**CUT-OFF OF BANGLADESH'S SEAWARD PROJECTION IN THE TERRITORIAL SEA**

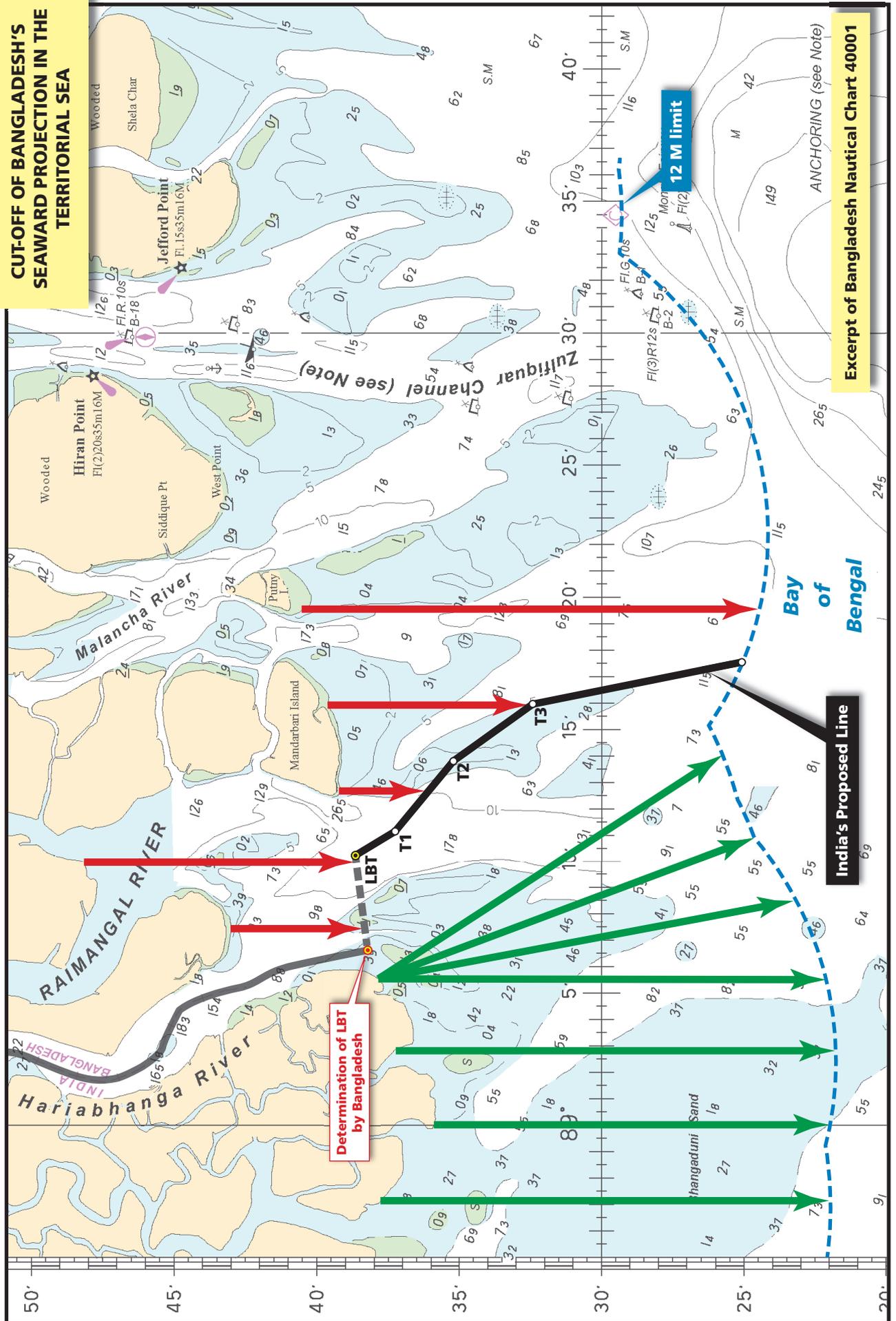


Figure R3.11



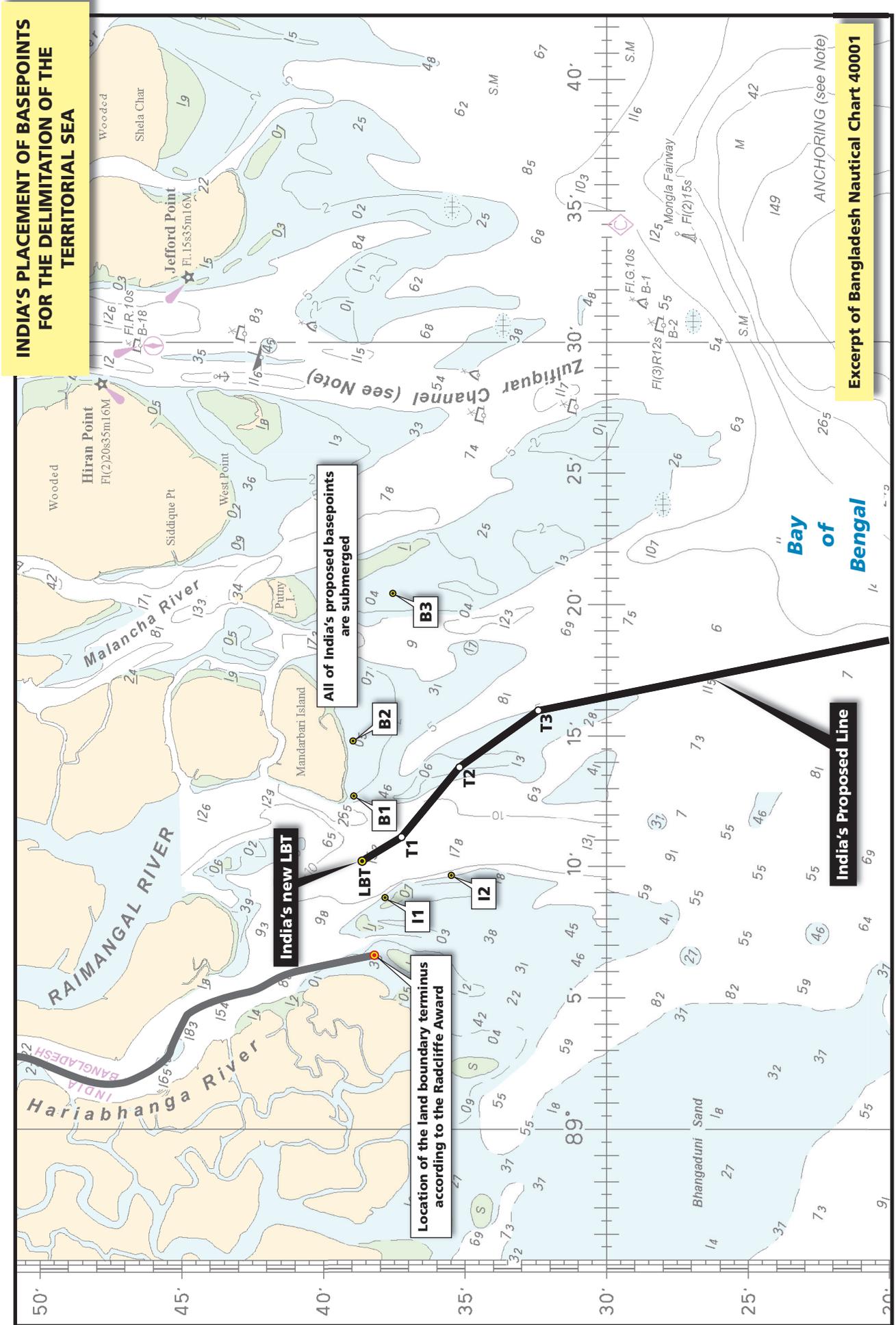


Figure R3.12



ure formed by the line connecting all these points reflects the general direction of the coastlines.”<sup>106</sup> However, despite quoting this passage, India proceeds to plot an equidistance line that manifestly fails to reflect the direction of the coastlines of Bangladesh and India. As a result of the five incorrectly plotted base points, India’s proposed equidistance line skews dramatically in a south-easterly direction, cutting across the mainland coastal front of Bangladesh. This line is plainly inequitable in its effects on Bangladesh.

#### A. India’s Base Points I-1 and I-2

3.72 India has identified two base points purportedly “within India’s territorial waters”, both located on South Talpatty, or as India refers to it, “New Moore Island”. This is one of India’s more surprising arguments. Rather than locate base points on the low-water line of its own coastline, India has elected to locate its base points I-1 and I-2 on a contested low-tide elevation situated 2 and 4 M respectively to the east and southeast of the land boundary terminus. As explained above, South Talpatty is indisputably located to the east of the midstream of the main channel of the Hariabhanga River.<sup>107</sup> Thus, the locations of India’s base points I-1 and I-2 are incorrect because they are situated on a low-tide elevation that is on the Bangladesh side of any conceivable boundary line.

3.73 India’s argument on base points I-1 and I-2 is thin, to say the least. It cites the following passage from the *Qatar v. Bahrain* case, in which the ICJ held that there was:

no ground for recognizing the right of Bahrain to use as a base-line the low-water line of those low-tide elevations which are situated in the zone of overlapping claims, or for recognizing Qatar as having such a right. The Court accordingly concludes that for the purposes of drawing the equidistance line, such low-tide elevations must be disregarded.<sup>108</sup>

However, India tries to create a distinction between the situation in *Qatar v. Bahrain* and the circumstances of this case, claiming that:

[t]he decision in *Qatar v. Bahrain* was based on the specific facts of that case, and in particular on the location of the low-tide elevations at issue and the disputed sovereignty over them. There is nothing comparable in the present case.<sup>109</sup>

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106 *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009 (hereinafter “*Romania v. Ukraine*” or “the Black Sea case”) at para. 127 (cited in CMI at para. 5.49).

107 See Figure R3.12.

108 *Qatar v. Bahrain* at para. 209 (quoted in CMI at para. 5.51).

109 CMI at para. 5.52.

This is plainly wrong. *First*, as was the case in *Qatar v. Bahrain*, South Talpatty is a disputed area. *Second*, the Court in *Qatar v. Bahrain* disregarded a low-tide elevation, Fasht al Jarim – “of which at most a minute part is above water at high tide” – despite the fact that it was held to be “a sizeable maritime feature partly situated in the territorial sea of Bahrain.”<sup>110</sup>

3.74 In *Bangladesh/Myanmar*, both parties elected not to use low-tide elevations for the location of base points in the territorial sea. During the oral hearings before ITLOS, counsel for Myanmar explained that:

Neither Party used base points on those low-tide elevations, despite the fact that they are legitimate sources of base points for measuring the breadth of the territorial sea and are nearer to the territorial sea equidistance line than the base points on the mainland coasts. These low-tide elevations are also nearer the provisional equidistance line than either base point  $\beta_1$  or  $\mu_1$ . Why, then, did neither Party make use of the technically relevant base points on these prominent features to construct their lines? The reason is that they cannot be used, as a legal matter, for that purpose. The International Court in *Qatar v Bahrain* noted that “low-tide elevation[s] ... situated in the overlapping area of the territorial sea of two States” “*must* be disregarded” for the purpose of drawing the equidistance line.<sup>111</sup>

3.75 India’s approach in locating base points I-1 and I-2 on South Talpatty ignores well-established practice, as well as case law. The proper approach is to effect the maritime delimitation without regard to low-tide elevations situated near the land boundary terminus. Sovereignty over such low-tide elevations can only be determined by reference to the course of the line delimiting the territorial sea. In *Qatar v. Bahrain* the ICJ held that “a coastal State has sovereignty over low-tide elevations which are situated within its territorial sea, since it has sovereignty over the territorial sea itself.”<sup>112</sup> The Court went on to state that:

International treaty law is silent on the question whether low-tide elevations can be considered to be “territory”. Nor is the Court aware of a uniform and widespread State practice which might have given rise to a customary rule which unequivocally permits or excludes appropriation of low-tide elevations. It is only in the context of the law of the sea that a number of permissive rules have been established with regard to low-tide elevations which are situated at a relatively short distance from a coast.

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110 *Qatar v. Bahrain* at para. 245.

111 ITLOS/PV/11/9/Rev.1 (2011-09-19) at p. 32, lines 29-39 (Lathrop) (internal citations omitted) (emphasis in the original).

112 *Qatar v. Bahrain* at para. 204.

The few existing rules do not justify a general assumption that low-tide elevations are territory in the same sense as islands. It has never been disputed that islands constitute terra firma, and are subject to the rules and principles of territorial acquisition; the difference in effects which the law of the sea attributes to islands and low-tide elevations is considerable. It is thus not established that in the absence of other rules and legal principles, low-tide elevations can, from the viewpoint of the acquisition of sovereignty, be fully assimilated with islands or other land territory.<sup>113</sup>

3.76 In its Judgment of 19 November 2012 in *Nicaragua v. Colombia*, the ICJ held that: “low-tide elevations cannot be appropriated”.<sup>114</sup> In line with this approach, in the case of *Malaysia v. Singapore* the Court did not make any determination on sovereignty over South Ledge, a low-tide elevation situated in the overlapping territorial waters generated by Malaysia and Singapore.<sup>115</sup> Likewise, in *Nicaragua v. Honduras* the ICJ decided that it was “not in a position to make a determinative finding” in relation to low-tide elevations and other features,<sup>116</sup> and the Court also elected not to determine sovereignty over an island located near the mouth of the River Coco. The Court explained that:

A claim was also made during the oral proceedings by each Party to an island in an entirely different location, namely, the island in the mouth of the River Coco. For the last century the unstable nature of the river mouth has meant that larger islands are liable to join their nearer bank and the future of smaller islands is uncertain. Because of the changing conditions of the area, the Court makes no finding as to sovereign title over islands in the mouth of the River Coco.<sup>117</sup>

India’s siting of base points I-1 and I-2 on a contested maritime feature which is not an island, and which is located (if it even exists) 2 M to the east of the midstream of the main channel of the Hariabhangha River – that is, on Bangladesh’s side of the boundary – is not in accordance with the law and practice set out above.

3.77 India’s choice of base points I-1 and I-2 is remarkable for another reason: it cannot be in dispute that South Talpatty is highly unstable. After emerging in the early 1970s,

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113 *Ibid.* at paras. 205-206.

114 *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Judgment, I.C.J. Reports 2012 (hereinafter “*Nicaragua v. Colombia*”) at para. 26.

115 *Case Concerning Sovereignty Over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore)*, Judgment, I.C.J. Reports 2008 (hereinafter “*Malaysia v. Singapore*”) at paras. 291-299.

116 *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007 (hereinafter “*Nicaragua v. Honduras*”) at para. 144.

117 *Ibid.* at para. 145.

South Talpatty disappeared in the late 1980's or early 1990's. Both parties agree that at most it is a low-tide elevation within the meaning of UNCLOS and does not meet the requirements of Article 121. New islands and low-tide elevations emerge, and old ones disappear, literally every year off the coast of Bangladesh after monsoon floods, especially at estuary mouths. India asserts in its Counter-Memorial that "the stability of the low tide elevation known as New Moore Island is apparent from both from recent satellite imagery which clearly shows New Moore above sea level and its appearance on maps of the area for decades."<sup>118</sup> However the satellite imagery India refers to is unhelpful and does not provide a clear indication of the existence of South Talpatty. On what basis is India able to locate both of its base points on this feature? No answer is provided to this question.

3.78 In 2008, the Bangladesh Space Research and Remote Sensing Organization (SPARRSO) conducted a study of South Talpatty. It showed that South Talpatty is no longer visible on any satellite images after 1989.<sup>119</sup> The claim by India that South Talpatty is not visible on Bangladesh's satellite imagery after 1989 because of the "state of the tide"<sup>120</sup> is untenable: South Talpatty is clearly visible in a satellite photo of 3 January 1989, where the tidal height of 1.18m was recorded, but is absent from a satellite image dated 17 November 2000, when a lower tidal height of 1.05m was recorded.<sup>121</sup> Moreover, a comparison of multi-temporal satellite images reveals that South Talpatty has not shown the "degree of stability over the years" that India claims.<sup>122</sup> The Bangladesh study reveals that South Talpatty is highly unstable and has changed shape and location, moving generally north from 1973 to 1985, then generally south east until 1990 after which time it has no longer been visible.<sup>123</sup>

3.79 It is evident that South Talpatty – which Bangladesh claims as its own – is so unstable as to render it manifestly unreliable as the location of any base point. The unfeasibility of India's approach, and its resulting equidistance line, is underscored by the fact that base points I-1 and I-2 are the *only* base points India attributes to itself, and the only ones on India's "coast" that India uses to construct that line.

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118 CMI at para. 5.56.

119 A. Z. Md. Zahedul Islam, "Study of the Morphology of the South Talpatti Landmass, Mandarbaria Island and Bhangaduni Island in the Northern Bay of Bengal using Remote Sensing and GIS Techniques", Bangladesh Space Research and Remote Sensing Organization (SPARRSO), (April 2008) (hereinafter "SPARRSO (2008)"). RB, Vol. III, Annex BR11.

120 CMI at para. 2.9.

121 SPARRSO (2008) at pp. 8-9.

122 CMI at para. 2.8.

123 SPARRSO (2008) at pp. 7-9.

## B. India's Base Points B-1, B-2 and B-3

3.80 With regard to base points B-1 and B-2, the instability and highly active morphodynamism of the coastline of Mandarbaria Island make it an unsuitable site for the location of reliable base points. Mandarbaria Island suffers from constant and extensive erosion, particularly to its southern shoreline, where India's proposed base points B-1 and B-2 are situated.<sup>124</sup> Because of coastal erosion, Mandarbaria Island decreased dramatically in size between 1975 and 2005, shrinking from 3,786 hectares to only 2,962 hectares, losing almost one quarter of its surface to the sea. Despite being thickly wooded, the coastline in this area (where India has located base points B-1 and B-2) receded up to 1.25 km in only 30 years.<sup>125</sup>

3.81 The location of base point B-3 is also problematic. India has located this base point 13 M to the east of the land boundary terminus, purportedly on a low-tide elevation nearly 4 M from the coast of Bangladesh. The arguments made above in relation to the instability of South Talpatty and its unsuitability for the location of base points is equally applicable to base point B-3. The maritime feature on which India has sited B-3 is inherently unstable and is not an appropriate location for a base point. However, and even more problematically, plotted on a current chart, India's proposed base point B-3 is located in open water, far from any low-tide elevation. As shown in **Figure R3.13A** (in Volume II only), when plotted on British Admiralty Chart 90 from 2012, India's base point B-3 is located 1 M from the nearest maritime feature, and in water depth of 0.6 m at low tide. India faces the same problem when its proposed base point B-3 is plotted on Bangladesh Chart 7501 from 2011, as **Figure 3.13B** reflects. The base point would be located 0.96 M from the nearest low-tide elevation and in water 0.8 m deep. This confirms the inappropriateness of siting base points on low-tide elevations, and it also underscores the highly unstable nature of the coastal geography in the vicinity of the land boundary terminus.

3.82 As set out above, the special circumstances in this part of the Bay of Bengal – the unstable coastline and the concave configuration of the coast producing a severe cut off of Bangladesh's coastal projection – make it necessary to delimit the territorial sea by a method other than equidistance. Bangladesh submits that the most appropriate method of delimitation in this case is the angle-bisector method, an approach that is fully consistent with – and even required by – Article 15 of the Convention.

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124 *Ibid.* at p. 14.

125 *Ibid.* See also Reply of Bangladesh (hereinafter "RB") at Figure R2.3 (in Vol. II only).

3.83 The equidistance line in the territorial sea as proposed by India is erroneous in two significant respects. *First*, the starting point of India's proposed equidistance line is incorrect; and *second*, the course of that line is incorrect. India has fallen into error by siting the land boundary terminus 3.36 M from its correct location. Any properly constructed equidistance line must have as a starting point the land boundary terminus identified by Bangladesh in Section I above.<sup>126</sup> Moreover, as explained above, India's proposed equidistance line is constructed on the basis of base points that are inappropriately located. Three of India's five proposed base points are situated on highly unstable low-tide elevations which disappear and reappear from year to year. If the Annex VII Tribunal were to seek to plot an equidistance line in the territorial sea (contrary to Bangladesh's position), it would have to be constructed on the basis of the most stable base points possible.

3.84 A strict equidistance line in the territorial sea – plotted in disregard of the special circumstances described above – would have to be constructed on the basis of base points along the low-water line on the shoreline of Bangladesh's Mandarbaria Island and the Indian island which is unnamed but described as "thickly wooded" on sketch map no. 4.2 of India's Counter-Memorial (on page 59). None of the offshore low-tide elevations should be used for the location of base points because they are too unstable.

3.85 The location of the land boundary terminus is the termination of the riverine boundary. This is located at the place where, as at 15 August 1947, the main channel of the Hariabhangra met the *intra fauces* closing line. This point is not equidistant to the banks of the Raimangal Estuary. The land boundary terminus is located 5.5 M from the (present day) low-water line on Bangladesh's coastline and 0.7 M from the low-water line on India's coastline. In this circumstance, the land boundary terminus should function as a notional base point for both Bangladesh and India. By giving this point full weight to both Parties, neither would be disadvantaged by its use.

3.86 The next step is to find the first control point on either coast that would signal the first turning point on the equidistance line. The search for successive control points on either side of the equidistance line then continues so as to extend the line in a seaward direction until it would meet up with the 12 M territorial sea. To connect the land boundary terminus with the first turning point on the equidistance line, a bridging line must be

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126 The correct location of the land boundary terminus is at 21°38'14"N and 89°06'39"E (referred to WGS84).

constructed. **Figure R3.14** (following page 66) depicts an accurately plotted equidistance line in the territorial sea, subject to the limitations described in this section.<sup>127</sup>

#### IV. Application of the Angle-Bisector Methodology

3.87 Bangladesh reiterates the position set out in the Memorial: namely, that the highly unstable coastlines of Bangladesh and India (in the parts relevant to this case) make any reliance on an equidistance line in the territorial sea impractical and inappropriate. This is all the more so when coupled with the concave configuration of Bangladesh's coastlines. The most appropriate method of delimitation in this case, having regard to relevant judicial and arbitral practice, is the angle-bisector method, as was adopted in the *Nicaragua v. Honduras*, *Guinea/Guinea Bissau* and *Gulf of Maine* cases.

3.88 As explained in the Memorial, whereas an equidistance line is affected by every irregular or anomalous feature however insignificant, the angle-bisector method is based on a macro-geographic depiction of the coastline and therefore results in a boundary line that is in keeping with the overall geographic reality and more likely to result in an equitable solution. This is particularly so in the case of adjacent States. Applying the angle-bisector method in this case has the distinct advantages of minimizing, though not entirely eliminating, the distorting effects of the concavity within which Bangladesh is located, and producing a boundary in the territorial sea that is equitable to both Parties. The basis for drawing an angle-bisector line in this case is addressed in detail in the following Chapter.

#### Conclusions

3.89 In conclusion, the following points may be made to set out the position of Bangladesh as to the location of the land boundary terminus and the delimitation of the territorial sea:

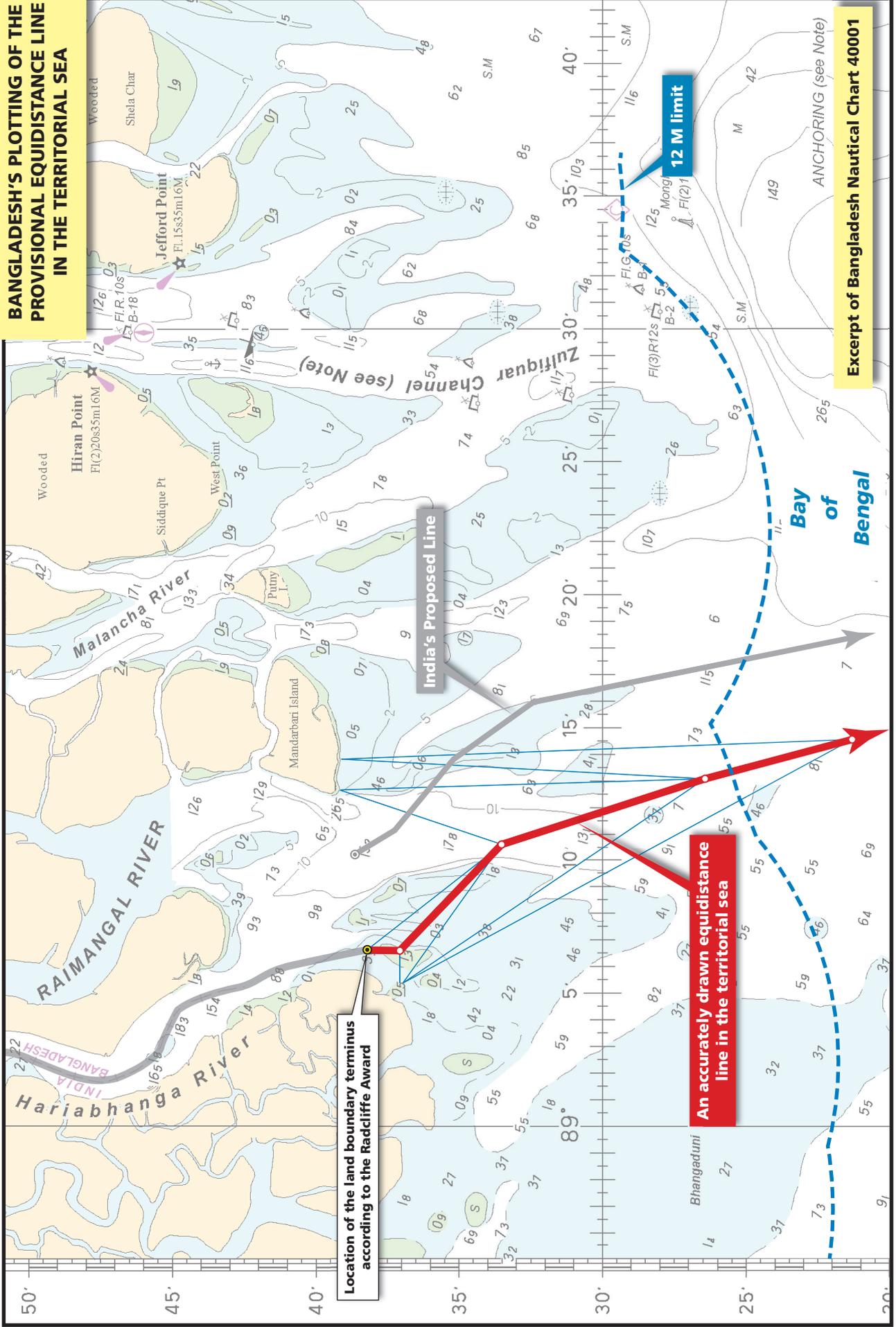
- *First*, the 1947 Radcliffe Award determines the land boundary between India and Bangladesh, and provides that the land boundary terminus is located where the midstream of the main channel of the Hariabhanga River intersects the *intra fauces terrae* closing line across the Raimangal Estuary;

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127 For the avoidance of doubt, Bangladesh submits that in light of the special circumstances described at paras. 3.55-3.68 above, it is inappropriate and inequitable for an equidistance line to be used to delimit the territorial sea between Bangladesh and India. Figure 3.11 serves only to demonstrate that India's proposed equidistance line has not been properly constructed.

- *Second*, the location of the land boundary terminus was at 21°38'14" N – 89°06'39"E on 15 August 1947 (referred to WGS84);
- *Third*, the land boundary terminus has remained fixed at that exact location ever since that date;
- *Fourth*, India has incorrectly situated the land boundary terminus 3.36 M from its correct location because it has failed to use an authoritative contemporaneous chart, resorting instead to a sketch-map seemingly prepared for the purpose of these arbitration proceedings;
- *Fifth*, the law applicable to the delimitation of the territorial sea in this case is UNCLOS Article 15;
- *Sixth*, the relevant coastlines of Bangladesh and India in the vicinity of the land boundary terminus are characterised by a highly active morpho-dynamism which means that it is impractical to identify stable and reliable baselines and base points for the construction of a meaningful equidistance line;
- *Seventh*, all five of India's proposed base points for the construction of its purported Article 15 equidistance line are inappropriately located and should be disregarded;
- *Eighth*, the markedly concave configuration of Bangladesh's coastline renders an equidistance line inequitable to Bangladesh;
- *Ninth*, because of the special circumstances within the meaning of Article 15 pertinent to the coastline of Bangladesh, and in the relevant part of India, an equidistance line is inappropriate in this case, and is manifestly inequitable to Bangladesh because it cuts across Bangladesh's coastline and blocks the seaward projection of that coastline;
- *Tenth*, judicial and arbitral practice provides support for the position that where an equidistance line is impractical or inappropriate, the angle-bisector method can be applied;
- *Eleventh*, the angle bisector proposed by Bangladesh in the territorial sea is equitable to both Parties.

**BANGLADESH'S PLOTTING OF THE PROVISIONAL EQUIDISTANCE LINE IN THE TERRITORIAL SEA**



**Excerpt of Bangladesh Nautical Chart 40001**

Figure R3.14



## CHAPTER 4 DELIMITATION OF THE EEZ AND THE CONTINENTAL SHELF WITHIN 200 M

4.1 In this Chapter, Bangladesh responds to the arguments presented in Chapter 6 of India's Counter-Memorial concerning the delimitation of the EEZ and the continental shelf within 200 M.

4.2 In the period since Bangladesh submitted its Memorial on 31 May 2011, there have been intervening legal developments of material consequence. In particular, the existing body of delimitation jurisprudence has grown by two cases. In March 2012, ITLOS delivered its Judgment in *Bangladesh/Myanmar*,<sup>1</sup> the companion case to this one; and in November 2012, the ICJ rendered its Judgment in the *Territorial and Maritime Dispute (Nicaragua v. Colombia)*.<sup>2</sup> Both decisions are of direct relevance to the issues in dispute in this case.

4.3 Bangladesh has analysed the two Judgments at length. For the reasons discussed below, they substantially strengthen Bangladesh's case. Both underscore the truth of Bangladesh's core argument: equidistance is not now, and never has been, the alpha and omega of the delimitation process. To the contrary, taken individually and together, the two decisions make clear that recourse to other delimitation methods is entirely appropriate when the circumstances of a given case so warrant. They thus stand as a stark rebuttal to India's arguments about the centrality of equidistance in the delimitation process.

4.4 Both *Bangladesh/Myanmar* and *Nicaragua v. Colombia* formally adopted the now-conventional equidistance/relevant circumstances approach. Bangladesh not only accepts that fact, it embraces it. The critical point about both cases lies below the surface: the solution adopted in each was rooted on a methodology – or combination of methodologies – other than equidistance. That is the primary proposition for which they each stand.

4.5 The Arbitral Tribunal will be aware that in *Bangladesh/Myanmar* Bangladesh argued against the use of an equidistance line, even at the first stage of the delimitation process. Due to the concavity of its coast, Bangladesh considered that equidistance was incapable of yielding the equitable solution for which Articles 74 and 83 of UNCLOS call. In place of equidistance, Bangladesh advocated the use of the angle-bisector method, the

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1 *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment of 14 March 2012, ITLOS Reports 2012 (hereinafter "*Bangladesh/ Myanmar*").

2 *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Judgment, I.C.J. Reports 2012 (hereinafter "*Nicaragua v. Colombia*").

application of which yielded a proposed delimitation of N215°E drawn from the end of the Parties' territorial sea boundary.

4.6 In its March 2012 Judgment, ITLOS declined to adopt the angle-bisector method. At a formal level, it opted instead for the equidistance/relevant circumstances approach. In so doing, however, ITLOS underscored the essential point at the heart of Bangladesh's pleadings:

The Tribunal observes that the issue of which method should be followed in drawing the maritime delimitation line should be considered in light of the circumstances of each case. The goal of achieving an equitable result must be the paramount consideration guiding the action of the Tribunal in this connection. Therefore the method to be followed should be one that, under the prevailing geographic realities and the particular circumstances of each case, can lead to an equitable result.<sup>3</sup>

4.7 Toward that end, the Tribunal determined that a substantial adjustment to the provisional equidistance line was warranted in light of the concavity of the Bangladesh coast and the cut-off effect the line produced on Bangladesh.<sup>4</sup> In determining the extent of the adjustment, the Tribunal returned to the 215° line proposed by Bangladesh. The only meaningful difference between the boundary proposed by Bangladesh and the boundary as adjudged by ITLOS was that instead of being drawn from the end of the territorial sea boundary as Bangladesh had argued, the 215° line was drawn from a point on the provisional equidistance line a short distance off the Bangladesh coast.

4.8 ITLOS did not explain its reasoning in deciding on the 215° line. It observed only that “[t]here are no magic formulas”<sup>5</sup> for determining the extent of the adjustment, and that “the direction of any plausible adjustment of the provisional equidistance line would not differ substantially from a geodetic line starting at an azimuth of 215°.”<sup>6</sup> Nevertheless, the correspondence between the azimuth resulting from the angle-bisector method proposed by Bangladesh and the adjustment to equidistance effected by the Tribunal to achieve an equitable solution is notable. Even as ITLOS formally rejected the direct application of the angle-bisector method, it appears to have found it useful in indicating the extent of the adjustment to the equidistance line that was warranted by the relevant cir-

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3 *Bangladesh/Myanmar* at para. 235.

4 *Ibid.* at para. 297.

5 *Ibid.* at para. 327 (citing *Delimitation of Maritime Boundary between Barbados and Trinidad & Tobago*, Award, 11 April 2006, reprinted in 27 RIAA 147 (hereinafter “*Barbados/Trinidad and Tobago*”) at para. 373. Reproduced in MB, Vol. V).

6 *Ibid.* at para. 334.

cumstances in that case; namely, the concavity of Bangladesh's coast and the cut-off effect produced by an equidistance line.

4.9 India adopts a conspicuously selective view of the ITLOS Judgment. The Counter-Memorial embraces those parts it prefers and ignores the rest. In particular, India celebrates the Tribunal's formal reliance on the equidistance/relevant circumstances approach. Indeed, if one were to characterise the obvious thematic goal of the Counter-Memorial, it would be to self-servingly portray India as a faithful servant of the ITLOS Judgment.

4.10 At the same time, however, India rather obviously chooses to overlook those parts of the Judgment that are not helpful to it; namely, the very significant adjustment to the provisional equidistance line ITLOS made in light of the concavity of the Bangladesh coast. India works mightily to fashion arguments that what was a relevant circumstance in that case is not in this companion case. The reasons India's arguments fail are elaborated in Section II below.

4.11 In the end, only one Party is true to both the letter and the spirit of the ITLOS Judgment as a whole: Bangladesh. Only Bangladesh accepts both the fact that ITLOS (1) adopted the equidistance/relevant circumstances approach *and* (2) determined that a very substantial departure from the provisional equidistance line was required to achieve an equitable solution.

4.12 The ICJ's more recent Judgment in *Nicaragua v. Colombia*, delivered on 19 November 2012, is equally instructive on the issue of methodology. The case involved an unusual geographic situation. Several comparatively small Colombian islands lay a short distance off Nicaragua's mainland coast in the western Caribbean Sea. An equidistance line drawn between the mainland and Colombia's islands ran generally parallel to the mainland some 70 M offshore, forming a virtual wall that cut Nicaragua off from most of its potential entitlement east of the line. (The effect on Nicaragua of the Court's provisional equidistance line is depicted in **Figure R4.1** (in Volume II only).)

4.13 As did ITLOS in *Bangladesh/Myanmar*, the Court formally adopted the equidistance/relevant circumstances approach.<sup>7</sup> At the same time, however, it promptly discarded the equidistance line as inappropriate and adopted a combination of other methodologies selected to achieve an equitable result.<sup>8</sup>

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7 *Nicaragua v. Colombia* at paras. 190-199.

8 *Ibid.* at paras. 229-238.

4.14 Before describing the Court’s final delimitation line and the manner in which it was drawn, several of the Court’s introductory observations bear highlighting given their evident relevance to these proceedings. Concerning the first step in the standard approach – the drawing of a provisional equidistance line – for example, the ICJ stated:

The construction of a provisional median line in the method normally employed by the Court is nothing more than a first step and *in no way pre-judges the ultimate solution which must be designed to achieve an equitable result*.<sup>9</sup>

It also observed: “Following this approach does not preclude very substantial adjustment to, or shifting of, the provisional line in an appropriate case”.<sup>10</sup> As will be seen below, the Court in fact did not proceed by way of either an “adjustment to” or “shifting of” the equidistance line. It opted instead for a combination of different methodologies altogether.

4.15 Concerning the second step – the consideration of relevant circumstances – the Court stated that the “function [of relevant circumstances] is to verify that the provisional median line, drawn by the geometrical method from the determined base points on the coasts of the Parties is not, in light of the particular circumstances of the case, *perceived as inequitable*.”<sup>11</sup>

4.16 The Court’s use of the phrase “perceived as inequitable” bears note. Throughout its Counter-Memorial, India argues that the law has evolved away from subjective considerations of equity in favour of allegedly more objective criteria rooted rigidly in the equidistance method. It argues, for example, that “the three stage-approach, as developed in the most recent case law on the subject’ reflects the authoritative development of the open-textured language of UNCLOS into a reliable and objective three-stage methodology.”<sup>12</sup> It also repeatedly inveighs against Bangladesh’s allegedly “emotional pleas for ‘relevant circumstances’”<sup>13</sup>, and claims that Bangladesh is making “an appeal to equity *contra legem* which neglects the fact that this Tribunal is not called upon by the Parties to decide *ex aequo et bono*”.<sup>14</sup>

9 *Ibid.* at para. 196 (emphasis added).

10 *Ibid.* at para. 197.

11 *Ibid.* at para. 205 (citing *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009 (hereinafter “*Romania v. Ukraine*” or “the *Black Sea case*”) at para. 155) (emphasis added).

12 CMI at para. 6.12.

13 *Ibid.* at para. 6.10.

14 *Ibid.* at para. 6.76.

4.17 India has, however, thoroughly misunderstood the law and mischaracterised Bangladesh's argument. By their express terms, Article 74 and 83 call for an "equitable solution". Equity is thus required by the law. This is not equity in a generalised sense but rather equity reckoned through the lens of the law of the sea: equity *infra legem*, as it were. As the ICJ first stated in the *North Sea Cases*: "it is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles".<sup>15</sup> In Bangladesh's view, this remains as true now as it did then.

4.18 In this respect, the Court's use of the phrase "perceived as inequitable" is illuminating. *First*, it reaffirms the central and indisputable requirement that any solution must be equitable. *Second*, the term "perceived" underscores the fact that delimitation, by design, has a significant margin for appreciation built into it. The 'perceiver' here is, of course, the judge or arbitrator called upon to effect the delimitation. Reduced to its essence, the point is simply that UNCLOS trusts that judges and arbitrators will know inequity when they see it and act accordingly to prevent it.

4.19 In its Judgment in *Nicaragua v. Colombia*, the ICJ decided that there were two "relevant circumstances" rendering the provisional median line inequitable. *First* was the substantial disparity in relevant coastal lengths. The Court determined that the relevant mainland coast of Nicaragua was longer than the coasts of Colombia's islands by a ratio of 8.2 to 1.<sup>16</sup> The Court stated: "This is undoubtedly a substantial disparity and the Court considers that it requires an adjustment or shifting of the provisional line".<sup>17</sup>

4.20 *Second* was the cut-off effect of an equidistance line on Nicaragua. According to the ICJ:

The effect of the provisional median line is to cut Nicaragua off from some three quarters of the area into which its coast projects. Moreover, the cut-off effect is produced by a few small islands which are many nautical miles apart. ... The Court therefore concludes that the cut-off effect is a relevant consideration which requires adjustment or shifting of the provisional median line in order to produce an equitable result.<sup>18</sup>

4.21 At both the first and second stages, the Court wrote of the possibility of making an "adjustment" to or "shifting" of the provisional equidistance line. Nevertheless, that is not

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15 *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)*, Judgment, I.C.J. Reports 1969 (hereinafter "*North Sea Cases*") at para. 85.

16 *Nicaragua v. Colombia* at para. 211.

17 *Ibid.*

18 *Ibid.* at para. 215.

in fact what it did in drawing the final delimitation line. It turned instead to a mixture of three different methodologies, which it employed in three different sectors of the boundary.

4.22 *First*, in the area directly between the Nicaraguan mainland and Colombia's islands, it employed what is known in the literature as the "equiratio" method (although it did not formally label it as such).<sup>19</sup> This entails assigning differential weight to the base points on either side of a proposed delimitation so that the line is always closer to one side than the other.<sup>20</sup> To account for the relevant circumstances, the Court accorded Nicaragua's base points three times the weight of Colombia's. In practical terms, this means that the line in this area is everywhere three times closer to Colombia than to Nicaragua. (The Court's delimitation of this first sector of the boundary is depicted in **Figure R4.2** (in Volume II only).)

4.23 *Second*, in the southernmost sector of the boundary, the Court enclaved certain of Colombia's insular features (Alburquerque and East-Southeast Cays) within a 12 M territorial sea. The delimitation in this area thus followed the 12 M envelope of arcs around the features in question, much like the approach ITLOS adopted with respect to Bangladesh's St. Martin's Islands in the *Bangladesh/Myanmar* case. (The Court also enclaved two isolated Colombian features in the north: Quitasueño and Serrana.)

4.24 *Third*, and finally, in both the northern and southern zones, the ICJ employed parallels of latitude that ran due east to the 200 M limit drawn from the Nicaraguan coast. The complete delimitation as effected by the Court is depicted in **Figure R4.3** (following this page). As the Arbitral Tribunal can see, the effect of this third and final piece of the delimitation was to accord Colombia's islands a parallel corridor of maritime space out to the 200 M limit. In this respect, the result is reminiscent of the Award in the *St. Pierre et Miquelon*<sup>21</sup> case, and of the various agreed delimitations described in Bangladesh's Memorial that accorded States pinched in the middle of a concavity an access corridor out to their 200 M limit (about which, see below<sup>22</sup>).

4.25 The Court's mixing of different methodologies, *none of them equidistance*, starkly refutes India's argument according to which the ICJ supposedly made clear in the *Black Sea*

19 *Ibid.* at para. 234.

20 *Ibid.*

21 *Case Concerning Delimitation of Maritime Areas between Canada and France (St. Pierre et Miquelon)*, Decision, 10 June 1992, reprinted in 31 ILM 1149 (hereinafter "*St. Pierre & Miquelon*"). Reproduced in MB, Vol. V.

22 See *infra* paras. 4.89-4.96.

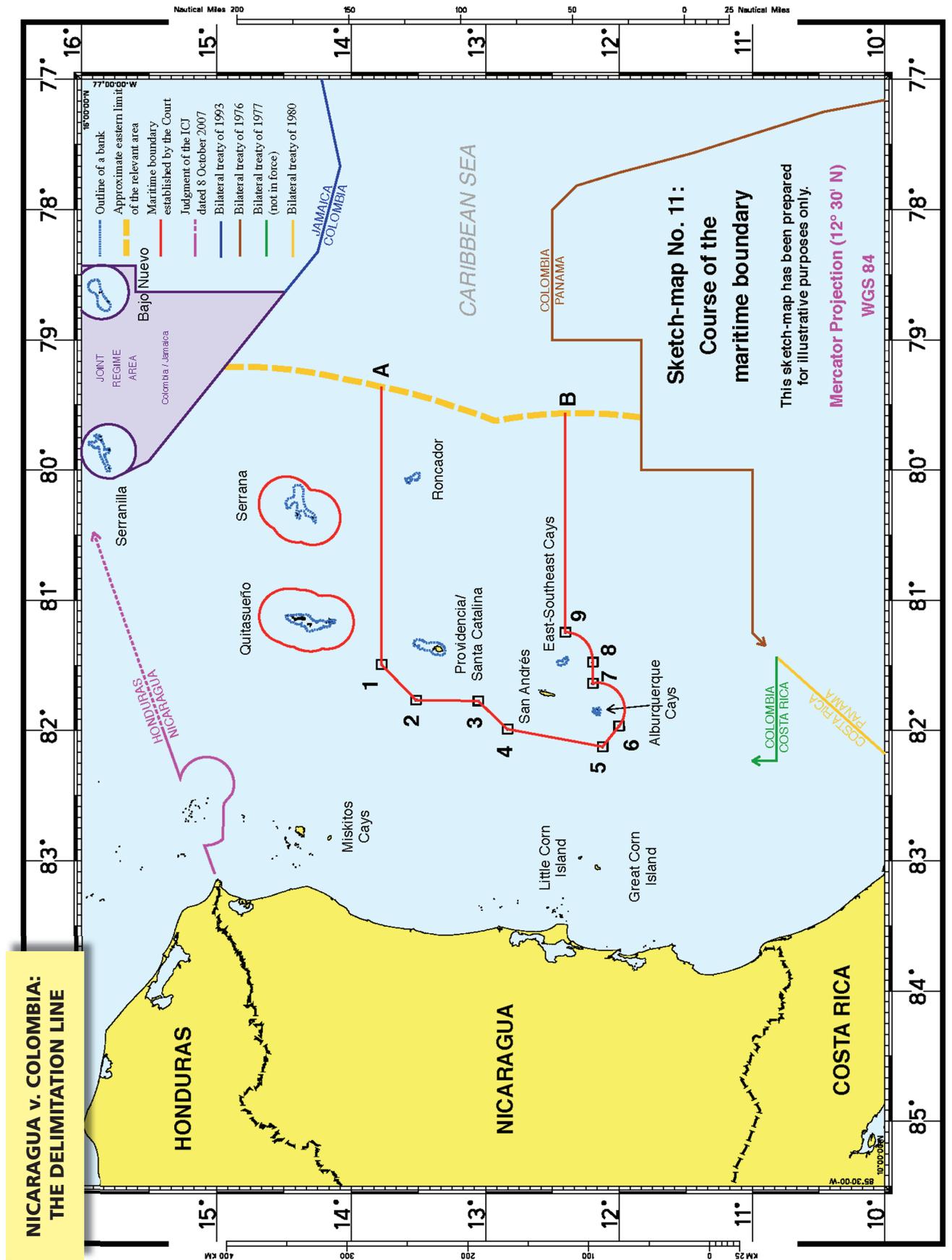


Figure R4.3



case that “equity” and “relevant circumstances” may, “in appropriate circumstances, call for the *adjustment* or *shift* of a provisional equidistance line, but *never* its abandonment.”<sup>23</sup>

4.26 In fact, the reality is that of the last four adjudicated delimitations, only one has been decided by meaningful reliance on equidistance (*Black Sea*). The other three were either expressly or impliedly decided by reference to a different method. In one (*Nicaragua v. Honduras*<sup>24</sup>), the conventional three-step approach was abandoned entirely in favour of the angle-bisector method. In another (*Bangladesh/Myanmar*), equidistance gave way to a very substantial adjustment to a line that was largely coincident with the angle-bisector as argued by one of the parties. And in the third (*Nicaragua v. Colombia*), equidistance was formally invoked at the first stage, but then promptly discarded and replaced by a combination of three very different methodologies.

4.27 In light of this most recent jurisprudence, and in particular in light of the decisions of ITLOS and the ICJ in *Bangladesh/Myanmar* and *Nicaragua v. Colombia*, respectively, Bangladesh has carefully reconsidered the views presented in its Memorial. It will no longer insist that it is inappropriate to draw an equidistance line, even as a first step. It accepts that the starting point for this delimitation may be an equidistance line provisionally drawn.

4.28 That said, as the ICJ most recently stated, the construction of such a line “in no way prejudices the ultimate solution which must be designed to achieve an equitable result.”<sup>25</sup> It does not “preclude very substantial adjustment to, or shifting of, the provisional line.”<sup>26</sup> Neither does it preclude recourse to a different delimitation methodology (or methodologies) altogether.

4.29 For the reasons first articulated in Bangladesh’s Memorial, discussed again in Chapter 2 above and explored further below, equidistance does not, indeed cannot, achieve an equitable result in this case. The unparalleled instability of the Bengal Delta coast makes any equidistance line inherently unreliable. Moreover, the concavity of the Bangladesh coast means that any equidistance line inequitably cuts it off from a substantial portion of its potential entitlements in the exclusive economic zone and the continental shelf within 200 M, as well as the continental shelf beyond 200 M. Recourse to another delimitation

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23 CMI at para. 6.11 (first two emphases in original; third emphasis added).

24 *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea* (*Nicaragua v. Honduras*), Judgment, I.C.J. Reports 2007 (hereinafter “*Nicaragua v. Honduras*”).

25 *Nicaragua v. Colombia* at para. 196.

26 *Ibid.* at para. 197.

method “designed to achieve an equitable result” is therefore both appropriate and consistent with the most recent case law.

4.30 The balance of this Chapter is divided into four Sections. **Section I** addresses the construction of the provisional equidistance line. Among other things, it exposes the deeply flawed character of India’s proposed line. **Section II** shows that even an appropriately constructed provisional equidistance line is rendered unreliable by the instability of the coast and inequitable by the concavity of the Bangladesh coast. **Section III** presents the angle-bisector method as a viable alternative in the circumstances of this case, and responds to India’s criticisms of the manner in which Bangladesh has employed that method here. Lastly, **Section IV** addresses the issue of disproportionality.

### I. The Construction of the Provisional Equidistance Line

4.31 It is now common ground between the Parties that the appropriate first step in this delimitation is the construction of a provisional equidistance line. Unfortunately, that is as far as the agreement between the Parties extends. The ‘equidistance’ claim line India has presented in its Counter-Memorial does not even constitute a valid starting point. It has been drawn in a manner so plainly inconsistent with jurisprudence concerning the weight – or not – to be given minor maritime features that it must be discarded.

4.32 The full course of India’s proposed equidistance line out to 200 M (and considerably beyond) is controlled by just five base points, two on the Indian side and three on the Bangladesh side. Of these five base points, four, including both on the Indian side, are located on what India claims are detached low-tide elevations. In Bangladesh’s view, there can be no justification for drawing even a provisional delimitation line from any such features, let alone entirely from them, especially considering the ever-shifting nature of the coast in the region.

4.33 The first proposed base point on the Indian side controlling the delimitation beyond 12 M, base point I-2, is located at what India plots as the southern tip of South Talpatty (New Moore) ‘Island’. Setting aside (1) the oxymoronic nature of labelling a low-tide elevation an island; (2) the uncertainty about whether or not the feature continues to exist even as a low-tide elevation<sup>27</sup>; and (3) the Parties’ dispute about in whose waters it lies, the fact remains that even if there were really a feature there, it would not be an appropriate base point for the delimitation of the EEZ and continental shelf for either State. It is far

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27 See *infra* para. 4.37.

too insignificant, and its stability far too suspect, to be accorded such importance in this delimitation.

4.34 In this respect, Bangladesh recalls the treatment the ICJ accorded Ukraine's Serpents' Island in the *Black Sea* case. Unlike South Talpatty (New Moore), Serpents' Island is in fact an island, is of modest size and has been stable over the course of many centuries. Ukraine argued before the Court that given its size and significance in the history of the region, it should be accorded full weight in the drawing of the boundary in the continental shelf and EEZ. (An aerial photograph of Serpents' Island is included as **Figure R4.4** (in Volume II only).) The Court disagreed, stating:

To count Serpents' Island as a relevant part of the coast would amount to grafting an extraneous element onto Ukraine's coastline; the consequence would be a judicial refashioning of geography, which neither the law nor practice of maritime delimitation authorizes. The Court is thus of the view that Serpents' Island cannot be taken to form part of Ukraine's coastal configuration (cf. the islet of Filfla in the case concerning *Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, I.C.J. Reports 1985, p. 13).

For this reason, the Court considers it inappropriate to select any base points on Serpents' Island for the construction of a provisional equidistance line between the coasts of Romania and Ukraine.<sup>28</sup>

4.35 As this quotation itself indicates, the Court's decision to ignore Serpents' Island in the construction of the provisional equidistance line in *Romania v. Ukraine* followed its treatment of the islet of Filfla in the earlier *Case Concerning the Continental Shelf (Libya/Malta)*.<sup>29</sup> There, this small rock measuring 0.06 sq km in area and lying less than 5 km off the Maltese coast was ignored in the construction of the provisional median line between Malta and Libya. The Court stated:

In this case, the equitableness of an equidistance line depends on whether the precaution is taken of eliminating the disproportionate effect of certain "islets, rocks and minor coastal projections", to use the language of the Court in its 1969 Judgment [in the *North Sea Cases*], quoted above. The Court thus finds it equitable not to take account of Filfla in the calculation of the provisional median line between Malta and Libya.<sup>30</sup>

(Photographs of Filfla appear at **Figure R4.5** (in Volume II only).)

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28 *Romania v. Ukraine* at para. 149.

29 *Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, I.C.J. Reports 1985 (hereinafter "*Libya/Malta*").

30 *Ibid.* at para. 64.

4.36 The trend of discounting minor features in the construction even of a provisional equidistance line continued in the ICJ's most recent Judgment in *Nicaragua v. Colombia*. As it did with Filfla and Serpents' Island, the Court decided to ignore Colombia's very minor Serrana Cay in drawing its provisional line at the first stage. (A photograph of Serrana included with Colombia's pleadings in the case is presented at **Figure R4.6** (in Volume II only).) It did so because "placing a base point upon it would have a marked effect upon the course of the provisional median line which would be out of all proportion to its size and importance."<sup>31</sup>

4.37 This same reasoning applies *a fortiori* to India's base point I-2. In comparison to Serpents' Island, Filfla and even Serrana, South Talpatty (New Moore) 'Island' is vanishingly minor. It existed as an island in the true sense of the word for only a few years between approximately 1970 and 1989 at the very latest. After that, it sank back into the sea as a low-tide elevation. If it even exists at all today, it spends a considerable portion of the time completely under water. To count it as a base point for the calculation of an equidistance line between Bangladesh and India would be to give disproportionate effect to a feature that merits no weight at all in the delimitation of the boundary. This is all the more true considering the fact that the Parties actively dispute in whose waters the feature lies. India's base point I-2 therefore must be disregarded in any appropriately constructed provisional equidistance line.

4.38 The same applies with even greater force to the only other base point India uses on its side of the boundary for the calculation of its equidistance line within 200 M, base point I-3. This too is a detached low-tide elevation situated at a considerable remove from the mainland coast (approximately 11 M). According to the 2011 version of Indian Chart 351, this feature is labelled "West Spit" and bears the annotation "[d]ries in patches". In other words, it does not even dry fully at low-tide, the only time any of it is above water.

4.39 Notably, India does not make any meaningful effort to justify placing an equidistant base point on West Spit. It claims only that it refers "to the physical geography of the relevant coasts" and therefore "correspond[s] to the guidelines laid down by the ICJ" in the *Black Sea* case.<sup>32</sup> Yet, as discussed just above in connection with the Court's treatment of Serpents' Island in the *Romania v. Ukraine*, India is very much mistaken. Counting West Spit as a base point on the Indian side would constitute far more of a "grafting" of "an extraneous element onto" India's coastline than would using Serpents' Island as part of the Ukrainian coastline.

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31 *Nicaragua v. Colombia* at para. 202.

32 CMI at para. 6.53.

4.40 The same observations can be made about the base points for the delimitation of the maritime boundary beyond 12 M that India identifies on the Bangladesh side. Base point B-3, for example, is, like the features on the Indian side of the proposed boundary, a low-tide elevation located about 4 M south of Bangladesh's Putney Island. For all of the reasons stated with respect to India's proposed base points I-2 and I-3, Bangladesh does not consider India's proposed base point B-3 an appropriate point from which to draw the boundary beyond the territorial sea.

4.41 India's proposed base point B-4 is even less appropriate for the placement of a base point. Although some outdated nautical charts suggest the presence of a low-tide elevation in the location India identifies, the most recent charting shows that any such feature that may formerly have been there has ceased to exist. This is not at all surprising considering the ever-changing nature of the coast in the region. Included as **Figure R4.7** (in Volume II only) is an excerpt of British Admiralty Chart 90, updated as of 2012. The location of India's base point B-4 is now shown as being approximately 5 m in depth and nearly 3 M from the nearest extant low-tide elevation.

4.42 Lastly, India's choice of Bangladesh's final base point, B-5, shows the haphazard and inconsistent manner in which India has approached the selection of base points. In so doing, it goes a long way towards disproving its own claims about the allegedly "objective"<sup>33</sup> and "reliable"<sup>34</sup> nature of the equidistance method. India's proposed base point B-5 is located at the southern end of Bangladesh's mainland coast in the vicinity of Shahpuri Point near the land boundary terminus with Myanmar. What is notable about India's choice of Shahpuri Point for base point B-5 is that India has entirely ignored Bangladesh's St. Martin Island, which is measurably closer to the area to be delimited than Shahpuri Point.

4.43 India does not even attempt to justify its choice of Shahpuri Point instead of St. Martin's Island. Bangladesh is therefore left to assume that India has chosen to ignore St. Martin's in light of ITLOS's decision in the Myanmar case to ignore it in the construction of the provisional equidistance line there.<sup>35</sup> Bangladesh does not dispute ITLOS's decision. Nor, in light of that decision, does it argue that it would be appropriate to place a base point on St. Martin's Island in this case. What Bangladesh does dispute, however, is the capricious and subjective manner in which India has approached the task of selecting base points. As discussed in the preceding paragraphs, all of India's other proposed base points I-2, I-3, B-3 and B-4 are located on shifting low-tide elevations, the continued existence

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33 *Ibid.* at para. 6.12.

34 *Ibid.*

35 *Bangladesh/Myanmar* at para. 265.

of which is in doubt. St. Martin's Island, in contrast, is a true island permanently above water at high tide that has a sizable permanent population and substantial economic life of its own. To ignore it, even as India otherwise constructs its proposed equidistance line on features that, if they exist at all, are under water most of the time, is inconsistent to say the least.

4.44 In Bangladesh's view, all of the problems discussed above render the purported equidistance line India identifies facially untenable and inconsistent with the authorities on which India itself claims to rely. An accurately drawn provisional equidistance line would look measurably different. It is that task to which Bangladesh will now turn. In so doing, however, Bangladesh maintains in full its position as stated in Chapters 2 and 3. The extremely unstable nature of the Bengal Delta coast renders even a more appropriately drawn equidistance line intrinsically suspect and unreliable.

4.45 On the Bangladesh side, an accurate provisional equidistance line beyond 12 M would be drawn from five base points, the first four of which are located on the low-water line of Bangladesh's Bengal Delta coast. Base points B-1 and B-2 are located on the low-water line of Bangladesh's Mandarbaria (Clump) Island, the first comparatively solid land feature immediately east of the land boundary terminus in the Raimangal Estuary. Bangladesh uses the phrase "comparatively solid" advisedly. As discussed in Chapter 2, Mandarbaria Island has, in fact, experienced dramatic erosion in the last 35 years, regressing landward by as much as 1.25 km in places.<sup>36</sup> The location of any base points plotted today is therefore likely to be very different a few short years from now.

4.46 Base point B-1 controls the course of the provisional equidistance line between 5 M and 17 M from shore; base point B-2 takes over at 17 M and controls the course of the line to a distance of 130 M.

4.47 Base point B-3 is located on the low-water line of Putney Island, some 23 km from the land boundary terminus and 9 km beyond base point B-2. It controls the provisional equidistance line between 130 and 154 M from the coast.

4.48 Base point B-4 is located 26 km further away at Pussur Point, and controls the course of the line between 154 and 173 M from the Bangladesh coast.

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36 See Reply of Bangladesh (hereinafter "RB") at paras. 2.25-2.26 and Figure R2.3.

4.49 Base points B-1 through B-4 have been plotted on the current version of British Admiralty Chart 90 (2012). Their locations are as depicted in **Figure R4.8** (in Volume II only).

4.50 The final base point on the Bangladesh side, B-5, is situated at a considerable remove from the others on the far side of the Bangladesh coast near the land boundary terminus with Myanmar. Unlike base points B-1 through B-4, which are located on the Bengal Delta coast, base point B-5 is located along Bangladesh's Chittagong coast. The distance from base point B-4 to base point B-5 is 305 km (165 M) as measured from point to point. The absence of base points between the two is due to the concave nature of the Bangladesh coast. In the areas immediately east of base point B-4, the receding character of Bangladesh's deltaic coast means that there are no base points close enough to "push back" on the provisional equidistance line.

4.51 Because it is located at the extreme southeastern margin of the Bangladesh coast near the border with Myanmar, base point B-5 controls the entire course of the provisional equidistance line beyond a distance of 173 M. It directs the line first out to 200 M and thence beyond, all the way to the point where it meets the adjudged delimitation with Myanmar. That point is some 252 M from the Bangladesh coast.<sup>37</sup>

4.52 Base point B-5 is located at Shahpuri point, a feature on Bangladesh's mainland Chittagong coast abutting Myanmar. Bangladesh might have, but did not, choose to place B-5 on St. Martin's Island which is closer to the area to be delimited than Shahpuri point. It is substantially more significant than any of the features on which India purports to place the base points for the construction of its claim line. Nevertheless, Bangladesh has chosen not to argue that a base point should be placed on St. Martin's in light of the ITLOS Judgment in *Bangladesh/Myanmar*. The Arbitral Tribunal will recall that in that case, ITLOS decided not to place a base point on the island. Bangladesh is content to follow ITLOS's lead in that respect.

4.53 The location of base point B-5 as plotted on the current version of British Admiralty Chart 817 (2009) is depicted in **Figure R4.9** (in Volume II only).

4.54 On the Indian side, there are four base points that control the provisional equidistance line. The first two, base points I-1 and I-2, are located on India's Bengal Delta coast. They are 2.9 and 13.8 km from the land boundary terminus in the Raimangal Estuary, respectively. I-1 is situated on the low-water line of India's Moore Island; I-2 is located on

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37 The coordinates of this point are 17° 15' 18" N, 89° 48' 27" E.

the low-water line of Bhangaduni Island. The Arbitral Tribunal will recall from Chapter 2 that, like Bangladesh’s Mandarbaria Island, India’s Bhangaduni Island too has experienced massive and accelerating erosion.<sup>38</sup> In fact, its seacoast has retreated by a full 1.75 km since just 1975. The stability of this base point, as with all the others on the Bengal Delta coast, is therefore highly suspect.

4.55 Together, base points I-1 and I-2 control the course of the provisional equidistance line between 2 M and 223 M from the coast. In other words, the entire course of the provisional equidistance line within 200 M is controlled by just two base points along India’s unstable Bengal Delta coast. The locations of base points I-1 and I-2 as plotted on the current version of British Admiralty Chart 814 (1996 with updates to 2012) are depicted in **Figure R4.10** (in Volume II only).

4.56 The remaining two base points on the Indian side, I-3 and I-4, are located along the low-water line of the east coast of peninsular India. They are located at India’s False Point and Devi Point, respectively. Both only come into play in the area beyond 200 M. Base point I-3 first takes effect at a distance of 223 M from the Indian coast and directs the course of the line out to 255 M. There, base point I-4 takes over and controls the course of the provisional equidistance line to the meeting point with the adjudged delimitation with Myanmar. The locations of base points I-3 and I-4 as plotted on the current version of British Admiralty Chart 321 (2010) are depicted in **Figure R4.11** (in Volume II only).

4.57 The precise location of each of the base points described above as well as each of the ten turning points are listed in the tables appearing below (all referred to WGS84).

**Bangladesh’s Base points**

No.	Location	Latitude	Longitude
B1	Clump Island	21° 39’ 04”N	89° 12’ 40”E
B2	Clump Island	21° 39’ 08”N	89° 14’ 45”E
B3	Putney Island	21° 40’ 15”N	89° 19’ 56”E
B4	Pussur Point	21° 42’ 42”N	89° 35’ 00”E
B5	Shahpuri Point	20° 34’ 29”N	92° 19’ 33”E

**India’s Base points**

No	Location	Latitude	Longitude
I1	Moore Island	21° 37’ 00”N	89° 05’ 35”E
I2	Bhangaduni Island	21° 32’ 21”N	88° 53’ 13”E

38 RB at paras. 2.23-2.24 and Figure R2.2.

I3	False Point	20° 20' 29"N	86° 47' 07"E
I4	Devi Point	19° 57' 33"N	86° 24' 20"E

#### Turning points

No	Latitude	Longitude	Controlling points
1	21° 38' 14"N	89° 06' 39"E	LBT
2	21° 36' 21"N	89° 07' 48"E	LBT, I1
3	21° 34' 25"N	89° 10' 20"E	LBT, B1, I1
4	21° 22' 14"N	89° 14' 22"E	B1, B2, I1
5	20° 23' 53"N	89° 29' 40"E	B2, I1, I2
6	19° 31' 37"N	89° 48' 06"E	B2, B3, I2
7	19° 09' 14"N	89° 55' 26"E	B3, B4, I2
8	18° 51' 13"N	90° 00' 22"E	B4, B5, I2
9	17° 53' 57"N	89° 45' 32"E	B5, I2, I3
10	17° 15' 18"N	89° 48' 27"E	B5, I3, I4 (intersection with ITLOS judgment)

4.58 The resulting provisional equidistance line is depicted on **Figure R4.12** (following page 86). It is shown side-by-side with the claim line presented in India's Counter-Memorial. As the Arbitral Tribunal can see, the difference between the two lines is perceptible. By attempting to base a so-called equidistance line almost entirely on low-tide elevations, India has managed to push its proposed line measurably to the east (*i.e.*, to Bangladesh's disadvantage). The area between the two lines measures 5,800 sq km. That said, an accurately drawn provisional equidistance line remains every bit as inappropriate as India's haphazardly constructed one. Not only is its drawn from an inherently unstable coast on the basis of unreliable base points, it produces a result that is manifestly inequitable to Bangladesh

4.59 Bangladesh will now turn to the task of explaining why.

## II. The Concavity of the Bangladesh Coast Renders the Provisional Equidistance Line Inequitable

4.60 As noted above, the Counter-Memorial rather self-consciously attempts to portray India as the guardian of ITLOS's March 2012 Judgment in *Bangladesh/Myanmar*. Yet, India abandons its ostensible fidelity to the *Bangladesh/Myanmar* Judgment when it comes to the issue of the relevance of the concavity in the northern reaches of the Bay of Bengal. Whereas ITLOS determined that the concavity of the Bangladesh coast was unmistak-

ably a relevant circumstance to be taken into account in the delimitation process with Myanmar, India contends it is *not* relevant in the circumstances of this case. India's abrupt change of attitude concerning the force and significance of the Tribunal's Judgment is remarkable. The findings of ITLOS with respect to the relevance of the concavity were central to its Judgment. This aspect of the Judgment is therefore worth quoting *in extenso*. At paragraphs 290 through 297 ITLOS determined:

290. The Tribunal will now consider whether the concavity of the coast of Bangladesh constitutes a relevant circumstance warranting an adjustment of the provisional equidistance line.

291. The Tribunal observes that the coast of Bangladesh, seen as a whole, is manifestly concave. In fact, Bangladesh's coast has been portrayed as a classic example of a concave coast. In the *North Sea cases*, the Federal Republic of Germany specifically invoked the geographical situation of Bangladesh (then East Pakistan) to illustrate the effect of a concave coast on the equidistance line (*I.C.J. Pleadings, North Sea Continental Shelf, Vol. I, p. 42*).

292. The Tribunal notes that in the delimitation of the exclusive economic zone and the continental shelf, concavity *per se* is not necessarily a relevant circumstance. However, when an equidistance line drawn between two States produces a cut-off effect on the maritime entitlement of one of those States, as a result of the concavity of the coast, then an adjustment of that line may be necessary in order to reach an equitable result.

293. The Tribunal further notes that, on account of the concavity of the coast in question, the provisional equidistance line it constructed in the present case does produce a cut-off effect on the maritime projection of Bangladesh and that the line if not adjusted would not result in achieving an equitable solution, as required by articles 74 and 83 of the Convention.

294. This problem has been recognized since the decision in the *North Sea cases*, in which the ICJ explained that "it has been seen in the case of concave or convex coastlines that if the equidistance method is employed, then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced. So great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as far as possible, being of itself creative of inequity" (*North Sea Continental Shelf, Judgment, I.C.J. Reports 1969, p. 3, at p. 49, para. 89*).

295. In this regard, the ICJ observed that "in the case of a concave or recessing coast [...], the effect of the use of the equidistance method is to pull the line of the boundary inwards, in the direction of the concavity", causing the area enclosed by the equidistance lines "to take the form approximately of a triangle with its apex to seaward and, as it was put on behalf of the Federal

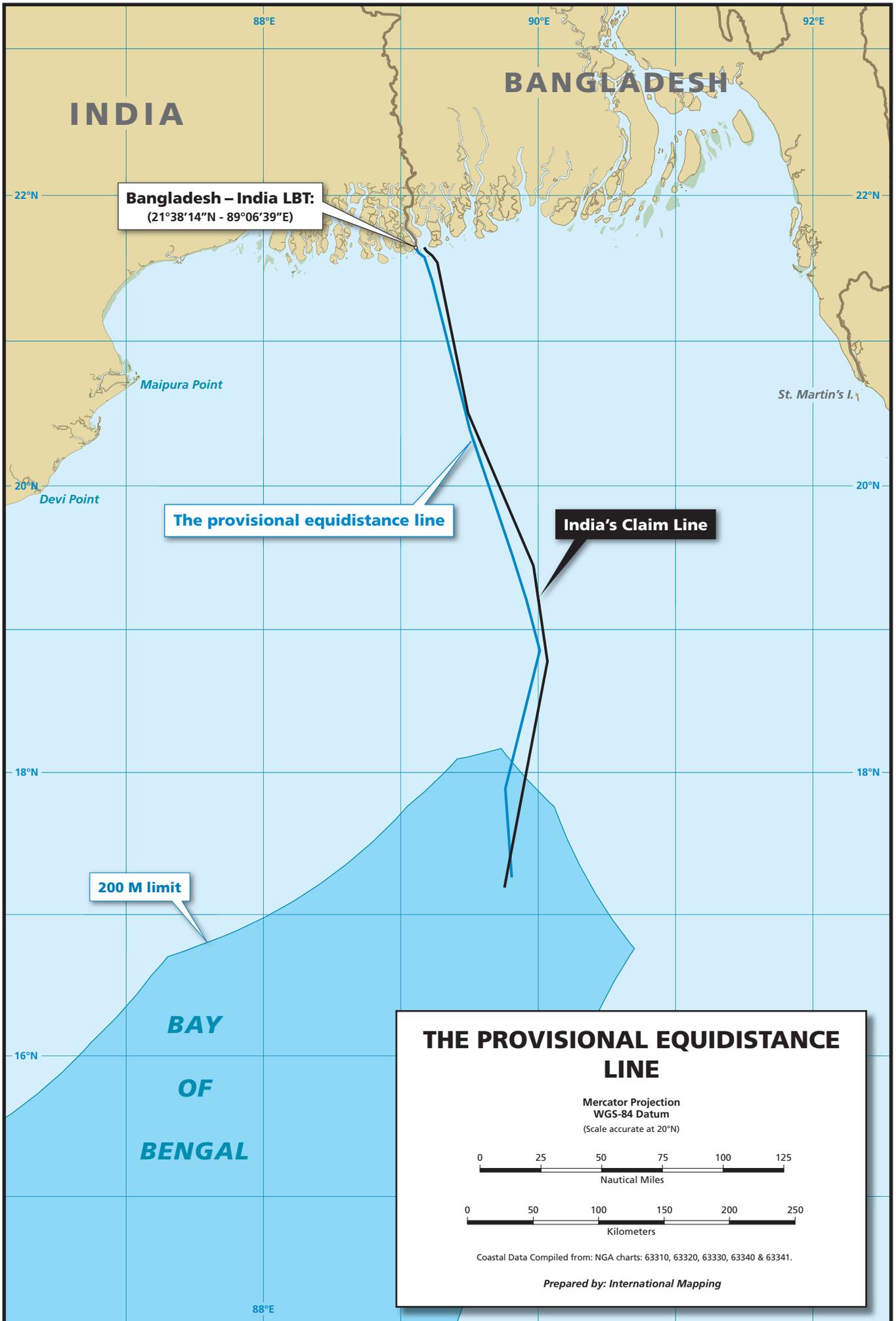


Figure R4.12



Republic, ‘cutting off’ the coastal State from the further areas of the continental shelf outside of and beyond this triangle” (*ibid.*, at p. 17, para. 8).

296. Likewise, in the case concerning the *Delimitation of the Maritime Boundary Between Guinea and Guinea-Bissau*, the Arbitral Tribunal stated that “[w]hen in fact [...] there are three adjacent States along a concave coastline, the equidistance method has the other drawback of resulting in the middle country being enclaved by the other two and thus prevented from extending its maritime territory as far seaward as international law permits”. (*Decision of 14 February 1985, ILR, Vol. 77, p. 635, at p. 682, para. 104*)

297. *The Tribunal finds that the concavity of the coast of Bangladesh is a relevant circumstance in the present case, because the provisional equidistance line as drawn produces a cut-off effect on that coast requiring an adjustment of that line.*<sup>39</sup>

4.61 India puts forth a number of arguments in an attempt to sustain its view that this case is different, and that what was true in the delimitation between Bangladesh and Myanmar is not true (or at least is no longer true) in the delimitation between Bangladesh and India. None of India’s arguments is persuasive.

4.62 India seizes, for example, on ITLOS’s statement that “concavity *per se* is not necessarily a relevant circumstance” and attempts to enlist it to make the ITLOS Judgment mean exactly the opposite of what it actually holds. According to India, ITLOS’s statement that “concavity *per se*” is not relevant is “based on the international case-law”<sup>40</sup>, evidently exemplified by the ICJ’s decision in *Cameroon v. Nigeria*<sup>41</sup>, which India appears to read to mean that concavity of the coast is virtually never a relevant circumstance.<sup>42</sup> This feat of argumentative acrobatics is not only inconsistent with the ITLOS Judgment, it is also inconsistent with the International Court’s decision in *Cameroon v. Nigeria*, a case that is materially different from the present one.

4.63 Cameroon did indeed argue – as India says – that the concavity of its coast constituted a relevant circumstance warranting a departure from equidistance. And the Court did indeed reject this argument – not, as India implies, because concavity is not a relevant

39 *Bangladesh/Myanmar* at paras. 290-297 (emphasis added).

40 CMI at para. 6.63.

41 *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea Intervening)*, Merits, Judgment, I.C.J. Reports 2002 (hereinafter “*Cameroon v. Nigeria*”).

42 See CMI at paras. 6.64-6.68.

circumstance but rather because the concavity Cameroon invoked did not lie within the very limited area to be delimited in that case.<sup>43</sup>

4.64 Due to the presence of Bioko Island (a possession of Equatorial Guinea, a non-party third-State) less than 20 M in front of Cameroon's coast, the Court considered itself constrained to effect the bilateral delimitation between Cameroon and Nigeria only along a small segment of the boundary, all of it within a short distance from the parties' coasts. Within this confined space, "the sectors of coastline relevant to the present delimitation exhibit no particular concavity."<sup>44</sup> Put simply, the concave portion of Cameroon's coast never came into play; it did not produce effects in the truncated area the Court decided to delimit. (The limited nature of the area in which the Court effected the delimitation in the context of the larger geographic configuration of the coast is depicted in **Figure R4.13** (in Volume II only).

4.65 As Figure R4.13 illustrates, in order for this case to be analogous to *Cameroon v. Nigeria*, Sri Lanka or another large third-State island would have to be picked up and transposed to a location immediately in front of the Bangladesh-India land boundary terminus, so that it would stand in place of Bioko. In such a hypothetical case, it might more plausibly be argued that the larger concavity of the Bangladesh coast was irrelevant because the Arbitral Tribunal would be limited to examining only the area immediately in front of the coast. But that, of course, is not the situation here. Unlike Cameroon, the maritime projection of which was blocked by Bioko, Bangladesh faces directly onto the open sea. The only landmass opposite it is Antarctica – more than 5,200 M to the south. India's attempt to enlist *Cameroon v. Nigeria* to its advantage is therefore unavailing.

4.66 It bears noting too that, contrary to India's errant intimations, the ICJ actually affirmed the potential relevance of coastal concavities in *Cameroon v. Nigeria*. Referring back to the *North Sea* and *Guinea/Guinea-Bissau*<sup>45</sup> cases, it stated:

The Court does not deny that the concavity of the coastline may be a circumstance relevant to delimitation, as it was held to be by the Court in the *North Sea Continental Shelf* cases and as was also so held by the Arbitral Tribunal in the case concerning the *Delimitation of the Maritime Boundary between Guinea and Guinea-Bissau*, decisions on which Cameroon relies.

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43 *Cameroon v. Nigeria* at para. 297.

44 *Ibid.*

45 *Delimitation of Maritime Boundary between Guinea and Guinea-Bissau*, Award, 14 February 1985, reprinted in 25 ILM 252 (hereinafter "*Guinea/Guinea-Bissau*"). Reproduced in MB, Vol. V.

Nevertheless the Court stresses that this can only be the case when such concavity lies within the area to be delimited.<sup>46</sup>

4.67 In the present case, there is no question that the Bay of Bengal concavity in which Bangladesh is situated “lies within the area to be delimited”. It is therefore very much a circumstance relevant to the delimitation. The most pertinent cases in the jurisprudence are and remain *North Sea* and *Guinea/Guinea-Bissau* cases, as well as *Bangladesh/Myanmar*.

4.68 Perhaps the most compelling indication that *Cameroon v. Nigeria* does not stand for the proposition for which India offers it is the fact that ITLOS has already rejected it. In proceedings in the *Bangladesh/Myanmar* case, Myanmar made much the same argument as India. In both its written and oral pleadings, Myanmar sought to use the *Cameroon* case to support the ostensible proposition that the *North Sea Cases* had effectively been superseded by subsequent case law, and that concavity was no longer recognised as a relevant circumstance.<sup>47</sup> ITLOS easily rejected the argument, expressly taking note of the language from the *Cameroon v. Nigeria* Judgment quoted just above in which the Court affirmed the relevance of coastal concavities in the delimitation process.<sup>48</sup>

4.69 Apart from its attempt to seek support in the *Cameroon v. Nigeria* case, India employs a number of alternative arguments of diminishing plausibility to portray the concavity of the Bangladesh coast as irrelevant. It contends, for instance, that Bangladesh is not the only Party that has a concave coast. India claims to have one too. According to the Counter-Memorial, “both Parties (and not Bangladesh alone) are situated at the top of the Bay of Bengal and have concave coasts”.<sup>49</sup> Indeed, according to India, “the coasts of both Parties (and not Bangladesh alone) have a ‘concavity within a concavity’”.<sup>50</sup> Although these statements may be accurate as a matter of descriptive geography, they are entirely beside the point in the circumstances of this case. The concavity of India’s coast does not create the potential for an inequitable maritime boundary. In contrast, the concavity of the Bangladesh coast does.

4.70 Exactly as ITLOS observed, “concavity *per se* is not necessarily a relevant circumstance.”<sup>51</sup> It is relevant when a State is pinched in the middle of a concavity between

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46 *Cameroon v. Nigeria* at para. 297.

47 *Bangladesh/Myanmar* at paras. 280-282.

48 *Ibid.* at para. 282 (citing *Cameroon v. Nigeria* at para. 297).

49 CMI at para. 6.60 (emphasis in original).

50 *Ibid.* (emphasis in original).

51 *Bangladesh/Myanmar* at para. 292.

two other States. In that situation, as the distinguished Arbitral Tribunal in *Guinea/Guinea-Bissau* observed, “the equidistance method has the other drawback of resulting in the middle country being enclaved by the other two”.<sup>52</sup> When one State has two land boundary termini located within the concavity, “the effect of the use of the equidistance method is to pull the line of the boundary inwards, in the direction of the concavity”.<sup>53</sup> This is the situation Bangladesh – and only Bangladesh – confronts. By contrast, India has only one foot in the concavity. It is not prejudiced by it.

4.71 The differential impact of the concavity of the Bay of Bengal on Bangladesh and India can perhaps most readily be appreciated visually. Figure 6.20 of the Bangladesh Memorial (reproduced as **Figure R4.14** (in Volume II only) captures the difference at a glance. As the Arbitral Tribunal can see, the effect of Bangladesh having two feet in the concavity is to cause the two unadjusted equidistance lines with India and with Myanmar to be pulled inward in the direction of the concavity. They meet and pinch off Bangladesh’s maritime entitlements short of the 200 M limit.

4.72 There is no similar effect on India. Because the only land boundary terminus India has within the concavity is the one with Bangladesh, its maritime space is not pinched off. To the contrary, India is able, in the words of the *Guinea/Guinea-Bissau* tribunal, to “extend[] its maritime territory as far seaward as international law permits” across an expansive area that reaches all the way to its maritime boundary with Sri Lanka at the southern end of the Bay of Bengal. There is, accordingly, no comparison to be made between the effect of the concavity on Bangladesh and the non-effect of the concavity on India.

4.73 Curiously, immediately after claiming that the coasts of both Parties are concave, India then reverses course and makes the rather inconsistent argument that “on each side of the land boundary terminus, the relevant coasts are not concave but, on the contrary, slightly convex”.<sup>54</sup> Bangladesh confesses that it is not entirely sure what the purpose of this argument is or how it is intended to advance India’s position. To the extent that India is suggesting that the relevant coasts of the Parties are not concave, it is obviously wrong. As just discussed, India itself admits elsewhere that the coasts in the area are concave. Lest there be any doubt in the matter, Bangladesh observes that at paragraph 2.21 of the Counter-Memorial, India says of the Bangladesh coast: “It is concave”.<sup>55</sup>

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52 *Guinea/Guinea-Bissau* at para. 104.

53 *Bangladesh/Myanmar* at para. 295.

54 CMI at para. 6.60.

55 *Ibid.* at para. 2.21.

4.74 ITLOS came to this same conclusion: “The Tribunal observes that the coast of Bangladesh, seen as a whole, is manifestly concave.”<sup>56</sup> Elsewhere it similarly observed: “the coast of Bangladesh between its land boundary terminus with Myanmar at the mouth of the Naaf River and its land boundary terminus with India is decidedly concave.”<sup>57</sup> By asking the Arbitral Tribunal to focus only on the area “on each side of the land boundary terminus”, India effectively invites the Arbitral Tribunal to focus on a single tree, not the obvious forest that surrounds it.

4.75 Perhaps India’s most serious – yet simultaneously most disingenuous – argument that the concavity of Bangladesh’s coast is not relevant, or at least is no longer relevant, is that Bangladesh is not cut off anymore as result of the Judgment in the *Bangladesh/Myanmar* case. According to the Counter-Memorial, the ITLOS “[J]udgment (together with India’s claim line) ensures Bangladesh an area of continental shelf beyond 200 nautical miles so that Bangladesh cannot complain ...”<sup>58</sup> India seems to be suggesting, in other words, that since Bangladesh has received some measure of relief on the Myanmar side, it has forfeited its claim to a commensurate degree of relief on the Indian side. One might call this India’s ‘thank Myanmar’ theory of the case.

4.76 Bangladesh rejects India’s argument and invites the Arbitral Tribunal to do the same. There are several flaws in it. Most obviously, Bangladesh remains appreciably cut off by the equidistance line notwithstanding the ITLOS Judgment in *Bangladesh/Myanmar*. The extent of the cut off is depicted in **Figure R4.15** (following page 94). The cut-off is most apparent in the continental shelf beyond 200 M where the equidistance line would allocate to Bangladesh only a small wedge of space, which comes entirely from areas also claimed by Myanmar but not India.

4.77 The subject of the delimitation of the continental shelf beyond 200 M is addressed more fully in Chapter 5. Bangladesh will therefore not engage in a lengthy exploration of the subject here. The very real cut off on Bangladesh’s maritime entitlements that India’s proposal would work is every bit as evident within 200 M as it is beyond 200 M. It can be demonstrated in at least two different ways.

4.78 *First*, it is apparent from the tapering, pie-slice configuration of the maritime space with which Bangladesh is left. Bangladesh is a significant coastal State that faces onto the open seas. It has a coastal opening measured point-to-point between land boundary ter-

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56 *Bangladesh/Myanmar* at para. 291.

57 *Ibid.* at para. 323.

58 CMI at para. 6.85. *See also Ibid.* at para. 6.60.

mini of approximately 188 M. But for the pinching effects of the concavity, there would be nothing to prevent it from “extending its maritime territory as far seaward as international law permits”<sup>59</sup> across the full breadth of this broad coastal opening. Given Bangladesh’s undisputed potential entitlement in the continental shelf beyond 200 M, that distance is 390 M from shore.

4.79 Yet, as reflected in Figure R4.15, the maritime space equidistance would leave to Bangladesh narrows rapidly the further off shore the proposed boundary goes. At just 75 M from shore, the breadth of Bangladesh’s maritime space has been reduced by nearly 40%, from 188 M to just 117 M. At 150 M from shore, it is far worse: the breadth has been reduced to a mere 45 M, only 24% of the near-shore figure. At 200 M, it is just 26 M, less than 1/7<sup>th</sup> as much as its original extent. And at approximately 235 M, it terminates completely.

4.80 *Second*, the cut off is also evident with the aid of a few simple diagrams showing how the provisional equidistance line juts across the seaward projection of the Bangladesh coast, while at the same time it opens up ever larger amounts of maritime space to India. **Figure R4.16A-D** (following Figure R4.15) shows these effects. Figure R4.16A shows how Bangladesh’s Bengal Delta coast projects southwards into the sea. As it does so, the provisional equidistance line cuts ever more deeply across the projection of the Bangladesh coast. Just as ITLOS said of the provisional equidistance line between Bangladesh and Myanmar, the “concavity causes the provisional equidistance line to cut across Bangladesh’s coastal front. This produces a pronounced cut-off effect on the southward maritime projection of Bangladesh’s coast that continues throughout much of the delimitation area.”<sup>60</sup>

4.81 This is equally true for Bangladesh’s west-facing coast on the north-eastern margins of the Bay. As shown in Figure R4.16B, the seaward projections of this portion of the Bangladesh coast are progressively shortened as the proposed boundary moves further and further out to sea.

4.82 Exactly the opposite is true for India, however. As is evident from Figure R4.16C, India’s south-facing coast on the Bengal Delta is the opposite of cut off. To the contrary, a progressively larger amount of maritime space opens to India the further from shore its proposed boundary travels. In contrast to what happens on the Bangladesh side, the breadth of India’s maritime space actually *increases* further out to sea.

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59 *Bangladesh/Myanmar* at para. 296 (citing *Guinea/Guinea-Bissau* at para. 104).

60 *Ibid.* at para. 323.

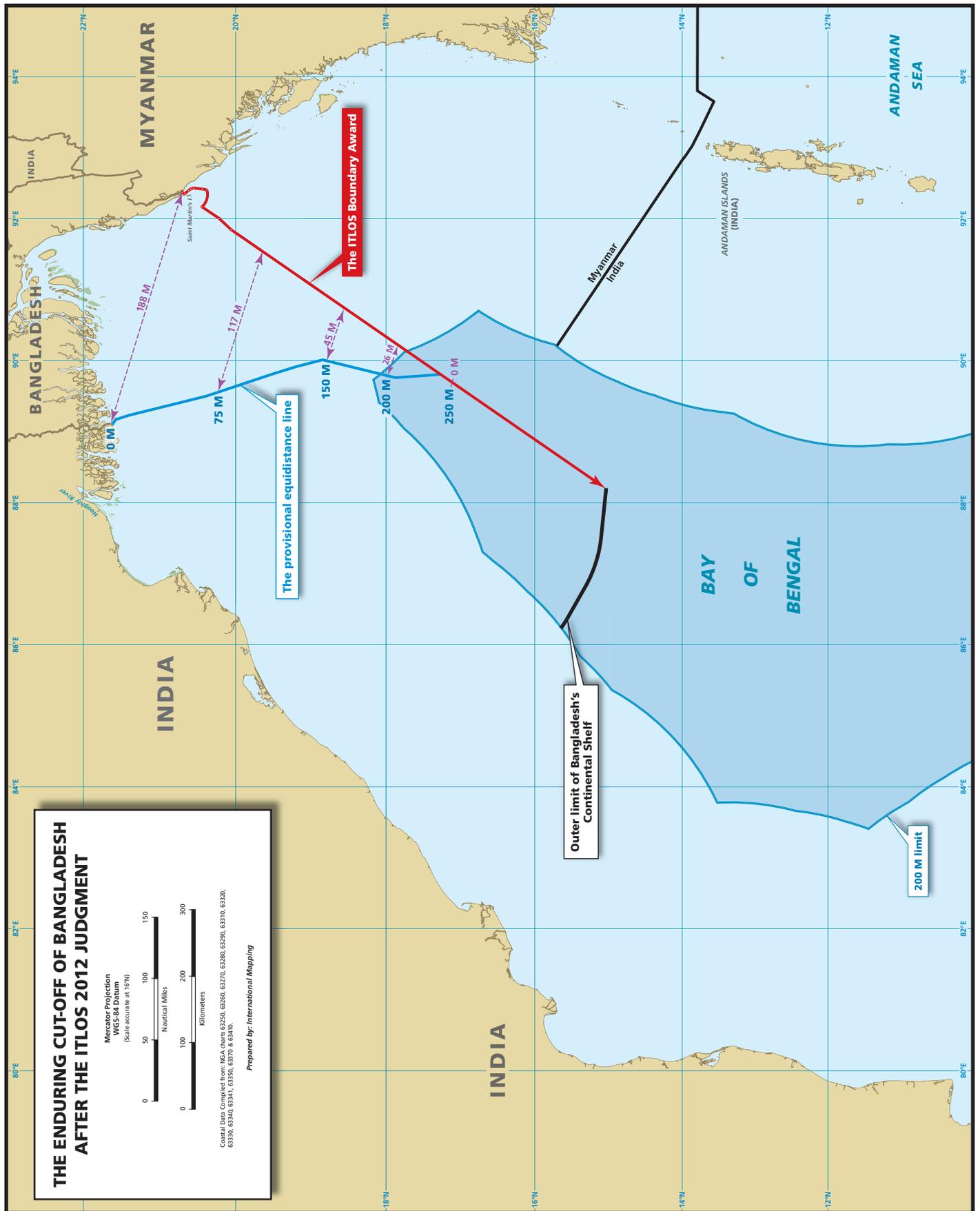
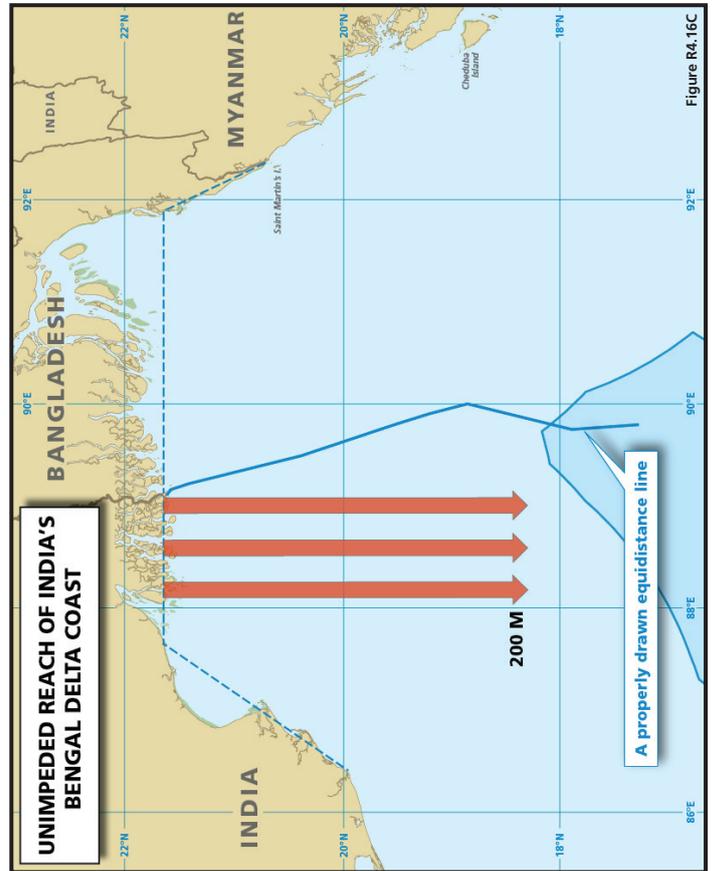
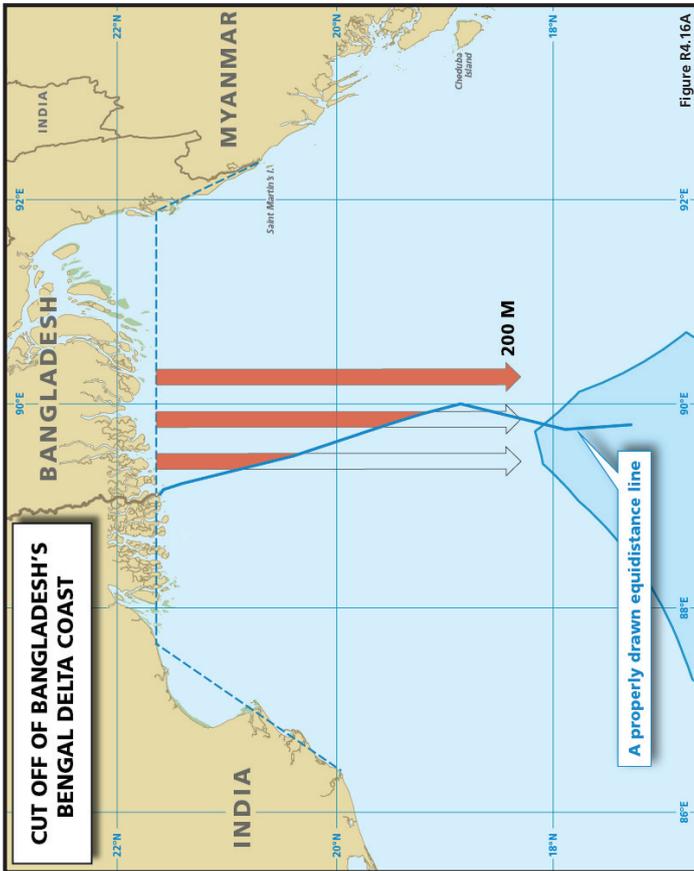
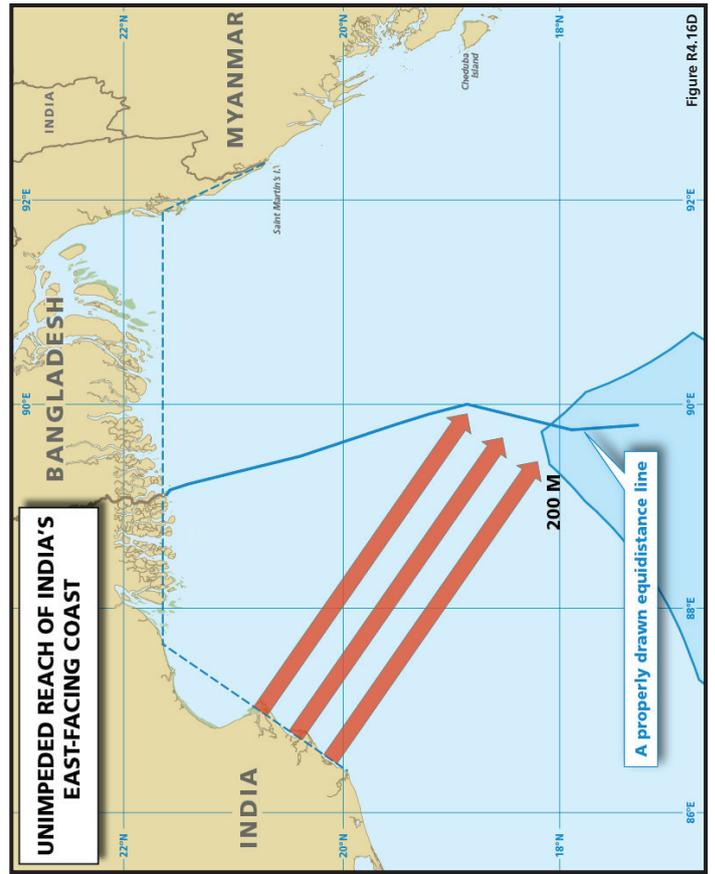
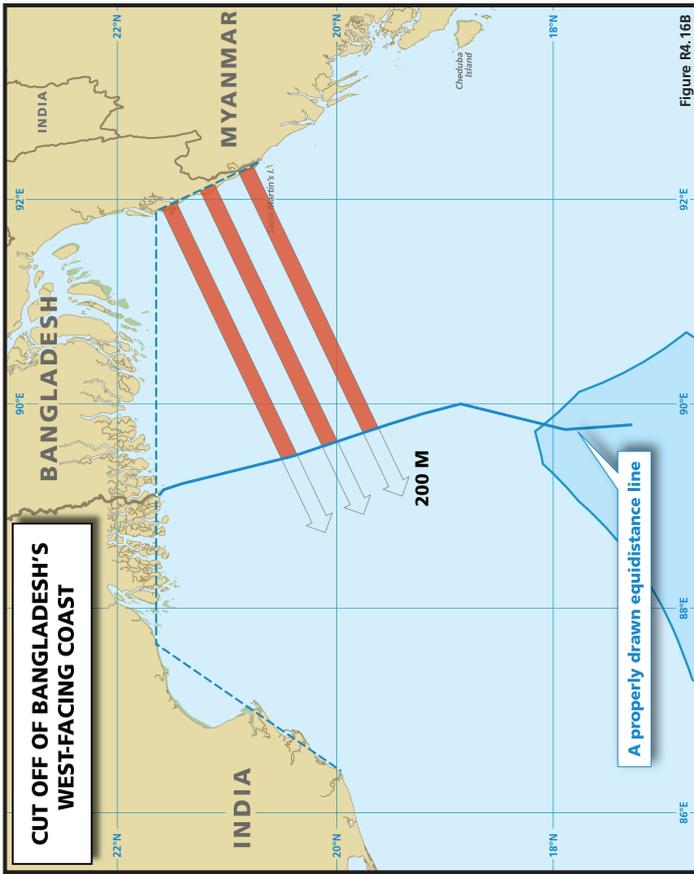


Figure R4.15





Figures R4.16A–D



4.83 The same is true for India's east-facing coast on the western edge of the Bay. Unlike what happens to Bangladesh's west-facing coast, the south-easterly projection of this portion of the Indian coast actually reaches ever further into the sea. This can be readily appreciated from Figure R4.16D.

4.84 India's 'thank Myanmar' theory of the case is also inconsistent with the spirit of the ITLOS Judgment. ITLOS was very much aware of the pendency of this case when it rendered its Judgment in *Bangladesh/Myanmar*. The two cases had been brought simultaneously. The President of ITLOS was called upon to exercise his role as appointing authority under the provisions of Article 3(e) of Annex VII to appoint the three neutral members of this Arbitral Tribunal, including the President of the Tribunal. Three members of this Arbitral Tribunal sat as judges in the Myanmar case. Bangladesh made its own and India's claims in this case known to ITLOS.<sup>61</sup> Under the circumstances, it is unlikely that ITLOS rendered its Judgment intending that the full measure of relief to be accorded Bangladesh would be extracted from Myanmar alone.

4.85 In this respect, the observations of the ICJ in the *North Sea Cases* are pertinent. At paragraph 7 of its Judgment, the Court stated:

It will be observed that neither of the lines in question, taken by itself, would produce this [cut-off] effect, but only both of them together—an element regarded by Denmark and the Netherlands as irrelevant to what they viewed as being two separate and self-contained delimitations, each of which should be carried out without reference to the other.<sup>62</sup>

The Court rejected the efforts of Denmark and the Netherlands to artificially separate the two cases. It stated:

Although the proceedings have thus been joined, the cases themselves remain separate, at least in the sense that they relate to different areas of the North Sea continental shelf, and that there is no *a priori* reason why the Court must reach identical conclusions in regard to them,—if for instance geographical features present in the one case were not present in the other. ... [I]t must be noted that although two separate delimitations are in question, they involve—indeed actually give rise to—a single situation. The fact

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61 See, e.g., Memorial of Bangladesh (*Bangladesh/Myanmar*) at paras. 4.34-4.39, 7.4 and 7.18 (available at <[http://www.itlos.org/fileadmin/itlos/documents/cases/case\\_no\\_16/Memorial\\_Bangladesh.pdf](http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/Memorial_Bangladesh.pdf)>; Reply of Bangladesh (*Bangladesh/Myanmar*) at paras. 3.36, 3.63, 3.184-3.186, 3.193 and Figures R3.2, R3.18, R3.19 and R4.1 (available at <[http://www.itlos.org/fileadmin/itlos/documents/cases/case\\_no\\_16/Reply\\_Bangladesh.pdf](http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/Reply_Bangladesh.pdf)>); and ITLOS PV.11/2/Rev.1 (2011-09-08, morning session) at p. 15, lines 1-10 (Reichler).

62 *North Sea Cases* at para. 7.

that the question of either of these delimitations might have arisen and called for settlement separately in point of time, does not alter the character of the problem with which the Court is actually faced, having regard to the manner in which the Parties themselves have brought the matter before it, as described in the two preceding paragraphs.<sup>63</sup>

4.86 It is the same in this case: “although two separate delimitations are in question, they involve—indeed actually give rise to—a single situation.” That being the case, it cannot be true that the equitable solution to be given to this ‘single situation’ is to be achieved at the expense of one State only.

4.87 Although the ultimate delimitations among Germany, on the one hand, and Denmark and the Netherlands, on the other, were not decided by the ICJ but rather were the subject of agreement among the parties, it is nonetheless instructive to have regard to the solution finally adopted in the North Sea. As depicted in **Figure R4.17** (in Volume II only), the agreed delimitations accorded Germany roughly equivalent measures of relief on either side. Although the agreed boundaries with Denmark and the Netherlands are not precisely symmetrical, they nonetheless depart from the equidistance lines and open up a larger share of the relevant maritime space to Germany in comparable proportions. In its agreement with Denmark, Germany received 6,790 sq km more maritime space than it would have with equidistance. In its agreement with the Netherlands, Germany received very nearly the same amount of additional space: 6,050 sq km.

4.88 The proposition that ITLOS could not have intended to accord Bangladesh the full measure of relief at Myanmar’s sole expense is supported by the facts detailed just above at paragraphs 4.78—4.81. Namely, even taking account of the Bangladesh-Myanmar maritime boundary as determined in the ITLOS Judgment, Bangladesh continues to be cut off, and severely. The maritime space with which India proposes to leave it is a tapering pie-slice that terminates a full 140 M short of the full reach of its potential entitlement.

4.89 In its Memorial, Bangladesh referred to a number of examples from the State practice that support the view that, where possible, maritime boundaries have been delimited so that the coastal State is “allotted some access to the areas approaching the maximum distance from the coast permitted for each one.”<sup>64</sup> This is Jonathan Charney’s principle of “maximum reach”. Bangladesh cited the examples of the maritime boundary agreements

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63 *Ibid.* at para. 11 (emphasis added).

64 Memorial of Bangladesh (hereinafter “MB”) at para. 6.52 (citing Jonathan I. Charney, “Progress in International Maritime Boundary Delimitation Law,” *American Journal of International Law*, Vol. 88, No. 227 (1994) (hereinafter “Charney (1994)”) at p. 247 *et seq.* MB, Vol. III, Annex B43).

between The Gambia and Senegal; Dominica and France; Monaco and France; and Germany and the Netherlands and Denmark.<sup>65</sup> In all these cases, a State that sits in the middle of a concavity was accorded a corridor virtually equal in breadth to the length of its coastal front out to the full extent of its natural limits.

4.90 To these agreements, another should be added: the 2009 memorandum of understanding between Malaysia and Brunei. As can be seen in **Figure R4.18** (in Volume II only), Brunei sits in the middle of a comparatively shallow concavity surrounded by Malaysia on both sides. The effect of this concavity is to pull the two equidistance lines drawn on either side together roughly 100 M in front of Brunei's coast. Official information concerning the 2009 memorandum of understanding is not available. Nonetheless, published accounts state that Malaysia agreed to accord Brunei jurisdiction over the areas formerly encompassed within Malaysia's oil blocks L and M.<sup>66</sup> The location of those blocks is also depicted in Figure R4.18. (The lines shown in red are the colonial maritime boundaries established by the United Kingdom in 1958.) Malaysia thus appears to have given Brunei a maritime corridor equal in breadth to its coastal frontage. The publicly available information does not indicate how far this corridor extends offshore.

4.91 India's Counter-Memorial argues that the "State practice invoked by Bangladesh does not assist it."<sup>67</sup> It suggests four ostensible reasons this is so: (1) in none of the cases cited was the disadvantaged party given access to an area beyond 200 M; (2) in each case, the disadvantaged State was surrounded by a single State; (3) there is no longer a cut-off effect in this case as a result of the ITLOS Judgment; and (4) the agreements cited were based on political considerations.<sup>68</sup> None of these arguments can diminish the force and significance of the examples of State practice cited.

4.92 With respect to India's first argument that none of the disadvantaged States was given access beyond 200 M, although this is technically accurate, it is largely misleading for reasons that vary from case to case. In the case of the Monaco-France agreement, for example, the corridor could extend no further than 48 M into the Mediterranean. The reason the agreed boundary stopped there was the presence of the large island of Corsica directly opposite Monaco's coast. In other words, 48 M was Monaco's 'natural limit'.

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65 *Ibid.* at paras. 6.54-6.61 and Figures 6.9-6.12.

66 N. Najib and S. Ali Bernama, "Oil Blocks 'Giveaway' to Brunei", *The Malay Mail* (30 April 2010) (available at <<http://http://stage2.mmail.com.my/node/35121>>). RB, Vol. III, Annex BR6.

67 CMI at para. 6.69.

68 *Ibid.*

4.93 Much the same can be said about the case of Germany and the Netherlands and Denmark. Due to the presence of the United Kingdom directly across the North Sea, none of the three States could extend their maritime jurisdictions beyond the location of the mid-sea median line, approximately 170 M from the German coast. The relevant point is that Germany was able to extend its maritime zones as far seaward in the direction of the U.K. as could both the Netherlands and Denmark.

4.94 Turning to the case of the 1975 Agreement between The Gambia and Senegal, the agreed boundary does indeed extend only to 200 M but there are two important points to note. *First*, the agreement dates to 1975: seven years prior to the adoption of the 1982 Convention establishing the regime of the continental shelf beyond 200 M. *Second*, The Gambia in fact claims an entitlement beyond 200 M and filed preliminary information to that effect with the CLCS in 2009. It therefore does not consider itself in any way limited to 200 M by its agreement with Senegal.

4.95 The only situation in which India's observations have any relevance is the 1987 Agreement between Dominica and France (Guadeloupe and Martinique). In that case, the corridor accorded Dominica extended out to and was limited to 200 M. No analogy can be drawn to this case, however. In the first place, Bangladesh and Dominica are not comparable coastal states. Dominica is a mere 26 M in breadth. Bangladesh, on the other hand, is vastly larger, with a coastline that measures 424 km (229 M) in length and a coastal opening facing onto the open seas that measures some 188 M (the difference between the two measurements is due, of course, to the concavity of the Bangladesh coast). Moreover, it is notable that the corridor France agreed to give Dominica is virtually as wide as Dominica's breadth throughout its entire length. It measures 28 M close to the island and 17 M at the 200 M limit. In contrast, even adopting the 180° boundary line advocated by Bangladesh in this case, Bangladesh would be left with a narrowing wedge of maritime space within 200 M. In other words, Dominica received a comparatively larger share of its potential entitlement within 200 M than Bangladesh would under even the best case scenario for it here.

4.96 India's argument that in each of these cases, the disadvantaged State was surrounded by a single State is, of course, not entirely true. Germany was surrounded by both Denmark and the Netherlands, yet that did not prevent the parties from coming to an agreement to enable Germany to extend its maritime jurisdiction all the way to the mid-sea median line with the U.K. Even in the other cases cited, the fact that the disadvantaged State was surrounded by only one other State does not undermine their significance. The fact that the middle State only had to negotiate with one other State, not two, undoubtedly

facilitated the task of reaching agreement. Nevertheless, the principle remains: coastal concavities make equidistance incapable of delivering the equitable solution international law requires.

4.97 India's third argument for distinguishing this State practice – that Bangladesh is no longer cut off as a result of the ITLOS Judgment – has already been addressed and refuted above. Bangladesh will therefore not belabour the point here other than to note that India's position recalls to mind the famous Zen koan: what is the sound of one hand clapping? India seems to suggest that since one hand has already moved into striking position, the other needn't bother. But, of course, without both hands there is no clap.

4.98 Finally, India's argument that each of these agreements was based on political considerations is also beside the point. In Bangladesh's view it is impossible *not* to draw the conclusion that these agreements, individually and collectively, evidence a broad recognition by States in Asia, in Africa, in the Caribbean and in Europe, that equidistance does not work in the case of States trapped in the middle of a concavity. This does not mean, as India so relentlessly argues, that Bangladesh is seeking a delimitation *ex aequo et bono*<sup>69</sup> or that it seeks equity *contra legem*. To the contrary, what Bangladesh seeks is equity *infra legem* as recognised in the practice of States throughout the world. By their express terms, Articles 74 and 83 call for an "equitable solution". Equity is therefore required by the law. This is not equity in an unbounded, generalised sense, but rather equity as mandated by the law of the sea. As the ICJ first stated in the *North Sea Cases*: "it is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles".<sup>70</sup>

4.99 India also seeks to turn the argument from State practice around and argue that "State practice in the region" actually runs contrary to Bangladesh's case.<sup>71</sup> According to the Counter-Memorial, Myanmar, Thailand and India have "resorted to equidistance" in the Andaman Sea even though Myanmar's Gulf of Martaban is "marked by a pronounced concavity".<sup>72</sup> Here again, India has misunderstood when a concavity is and is not relevant for delimitation purposes. Equidistance may have been an appropriate solution in the Andaman Sea because the concavity in the Gulf of Martaban had virtually no effect on the equidistance lines drawn with either India or Thailand, much less both of them. Unlike Bangladesh in this case, Myanmar does not have even one land boundary terminus

69 *Ibid.* at para. 6.76.

70 *North Sea Cases* at para. 85.

71 CMI at para. 6.70

72 *Ibid.*

situated in or near the concavity. There is therefore no cut-off effect that results from the use of equidistance. This simple fact is evident from the face of India's sketch-map no. 6.14 included in the Counter-Memorial (at page 169).<sup>73</sup> There is no analogy to be drawn with this case.

4.100 India tries to make the same argument about the maritime boundary agreement between it and Myanmar in the Bay of Bengal. According to the Counter-Memorial, the two States "applied the equidistance method" even where the "Myanmar coast is concave".<sup>74</sup> This argument is incorrect for exactly the same reason as that stated above; namely, the concavity of Myanmar's Rakhine coast is irrelevant for delimitation purposes. Equidistance yields an equitable solution in that case because Myanmar is not pinched in the middle of a concavity between two other States the way Bangladesh is here.

4.101 Bangladesh notes too that equidistance actually yields a singularly equitable solution for Myanmar in this example. The entire maritime boundary is drawn from Myanmar's Little Coco Island, a comparatively minor feature some 130 M away from Myanmar's mainland coast. The fact that it was accorded full effect in the drawing of the equidistance line with India represents a generous outcome for Myanmar that may, perhaps, represent more even than that to which a strict application of the law concerning the effect accorded islands in delimitations would have entitled it.

4.102 In addition to all the arguments discussed above, India attempts to caution the Arbitral Tribunal against what it calls "refashioning nature".<sup>75</sup> According to the Counter-Memorial, "the [International] Court has repeatedly confirmed its warning against using delimitation to refashion nature: the ICJ as well as international arbitral tribunals have constantly acted with the utmost care in this respect".<sup>76</sup> Bangladesh offers several observations about this aspect of the Indian argument.

4.103 *First*, it is more than a little ironic that the original source for the proposition that courts and tribunals should be cautious about refashioning nature is none other than the ICJ's Judgment in the *North Sea Cases*, in which the Court specifically rejected the equidistance method because of the concave shape of the German coast. The Court made clear exactly what it meant by "refashioning nature". It stated, for example:

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73 *Ibid.* at sketch-map No. 6.14, p. 169.

74 *Ibid.* at para. 6.70.

75 *Ibid.* at para. 6.99.

76 *Ibid.* at para. 6.100 (internal citations omitted).

equity does not require that a State without access to the sea should be allotted an area of continental shelf, any more than there could be a question of rendering the situation of a State with an extensive coastline similar to that of a State with a restricted coastline.<sup>77</sup>

4.104 By the same token, however, the Court made clear that equitable considerations *do* require “abating the effects of an incidental special feature from which an unjustifiable difference of treatment could result.”<sup>78</sup> On that basis, it ruled that equity required an abatement of the cut off resulting from Germany’s concave coastline. Evidently, the Court did not consider such a result to constitute “refashioning nature”.

4.105 Bangladesh notes further that India’s arguments set up a false equation between nature, on the one hand, and equidistance, on the other. In India’s view of things, a proper respect for nature would translate into a virtually uniform application of the equidistance method. In Bangladesh’s view, this fundamentally misunderstands the character of equidistance. The equidistance method is, at root, a mathematical construct. It is, in other words, a man-made device. Like any tool, it has utility in appropriate circumstances. But it is not itself ‘nature’. India is wrong to conflate the two.

4.106 Moreover, the truth is that nature has endowed human beings with judgment. In providing for an “equitable solution”, Articles 74 and 83 specifically and intentionally have a margin of appreciation built into them. The rote application of an artificial construct like equidistance would fly in the face of the express terms of the 1982 Convention, which not only permit, but affirmatively invite, the exercise of considered judgment by international judges and arbitrators.

4.107 Bangladesh observes still further that if India’s argument correlating equidistance with nature were accepted, it would mean that no court or tribunal could ever depart from equidistance, or give less than full weight to every feature, because any such departure necessarily involves adjusting the weight to be accorded different geographic features, all of which are endowed by nature in the sense India argues. That, of course, is not the case. As just discussed, a significant margin of appreciation is stitched into the very fabric of UNCLOS. Perhaps the easiest demonstration of this is the fact that of 19 international maritime boundary delimitation cases to date, only two (*Cameroon v. Nigeria* and *Guyana v. Suriname*<sup>79</sup>) have resulted in an unadjusted equidistance line beyond the territorial sea

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77 *North Sea Cases* at para. 91.

78 *Ibid.*

79 *Delimitation of Maritime Boundary between Guyana and Suriname*, Award, 17 September 2007, available at <<http://www.pca-cpa.org/upload/files/Guyana-Suriname%20Award.pdf>> (hereinaf-

that gave full weight to all features. Notably, the delimitation in the former case included only a 5 M-long segment in the continental shelf and EEZ, and the latter case involved coasts that can only be described as among the most unremarkable on earth. Also relevant is the fact, stated above, that of the four most recent maritime boundary decisions, only one has been decided by meaningful reliance on the equidistance method.

4.108 In accordance with the jurisprudence, what Bangladesh seeks in this case is the abatement of “the effects of an incidental special feature from which an unjustifiable difference of treatment could result.”<sup>80</sup> As discussed further in Section III below, the result for which Bangladesh advocates – the 180° line – would not entail a significant redrawing of the map. Instead, it would give Bangladesh only a very modest outlet to its 200 M limit that is several times smaller than its 188 M coastal frontage. It would still be left with a tapering wedge of maritime space that reflects the enduring effects of the Bay of Bengal concavity. India would retain the overwhelming majority both of its access to its own 200 M limit and its maritime space more generally.

### III. The Angle-Bisector Leads to an Equitable Solution in this Case

4.109 Since equidistance is rendered unreliable by the instability of the Bengal Delta coast and it does not lead to an equitable solution in this case, the jurisprudence suggests that “other methods should be employed.”<sup>81</sup> This is no less true merely because a provisional equidistance line has already been drawn, as the ICJ’s recent Judgment in *Nicaragua v. Colombia* makes clear.

4.110 As Bangladesh discussed in its Memorial, and India nowhere disputes, the alternative methodology most commonly relied upon is the angle-bisector method which has been utilized in more than one-fifth of the international maritime boundary cases decided to date (4 of 19).<sup>82</sup>

4.111 It bears emphasis that the angle-bisector method is in reality less an alternative to equidistance than a simplified variant of it. Whereas a conventional equidistance line is drawn so that it is always equally distant from designated base points on the low-water lines of the two States’ coasts, the angle-bisector is always exactly half-way between the

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ter “*Guyana/Suriname*”). Reproduced in MB, Vol. V.

80 *North Sea Cases* at para. 91.

81 *Continental Shelf (Tunisia/ Libyan Arab Jamahiriya)*, Judgment, I.C.J. Reports 1982, (hereinafter “*Tunisia/Libya*”) at para. 109.

82 MB at paras. 6.84-6.100. The four cases are: *Tunisia/Libya*; *Gulf of Maine*; *Guinea/Guinea-Bissau*; and *Nicaragua v. Honduras*.

straight-line representations of the general direction of those same coasts. As the ICJ stated in *Nicaragua v. Honduras*:

The equidistance method approximates the relationship between two Parties' relevant coasts by taking account of the relationships between designated pairs of base points. The bisector method comparably seeks to approximate the relevant coastal relationships, but does so on the basis of the macro-geography of a coastline as represented by a line drawn between two points on the coasts.<sup>83</sup>

4.112 As discussed and presented in Bangladesh's Memorial, employing the angle-bisector method in this case leads to a maritime boundary that follows an azimuth of 180° first through the territorial sea and then to the 200 M limit.

4.113 Adopting an azimuth of 180° as the boundary between Bangladesh and India – whether directly as an angle bisector or indirectly by using the angle bisector as a vehicle to determine the adjustment to the equidistance line that is required to produce an equitable solution – is especially appropriate in this case, given the particular coastal geography that is involved here.

4.114 In contrast with *Bangladesh/Myanmar*, the delimitation between Bangladesh and India within 200 M is dominated by the Parties' coasts along the Bengal Delta. As discussed above, the majority of the relevant base points – whether using India's claim line or an appropriately constructed provisional equidistance line – are located along the coast of the Delta. These deltaic base points control the line either out to 178 M from the coast (in the case of India's claim line) or 173 M (in the case of the true provisional equidistance line).

4.115 This is significant because of the inherent instability of the Bengal Delta coast. Although India's Counter-Memorial attempts to minimize this fact and claim that the coast is actually stabilized by the mangrove forests of the Sundarbans, the scientific evidence is to the contrary. As Chapter 2 shows, India's own scientists from the Geological Survey of India have undermined India's arguments before the Arbitral Tribunal by highlighting the ever-changing character of the Delta's coast, even in the Sundarbans.<sup>84</sup> These facts, combined with the irregular, deeply indented nature of the coast, make any equidistance line intrinsically unreliable and subject to change as the coast itself changes in both the near term and the long term.

83 *Nicaragua v. Honduras* at para. 289.

84 RB at paras. 2.20 *et seq.*

4.116 Indeed, as Bangladesh observed in its Memorial and India nowhere disputes, the profound instability of the Bengal Delta coast will only be exacerbated in the years ahead by the forces of global climate change.<sup>85</sup> As the planet warms and sea-levels rise, the face of the Bengal Delta is expected to change dramatically. The average height above sea-level on the Indian side of the Delta corresponding to the moribund (inactive) delta is lower than on the Bangladesh side where the Delta remains very active. The result is that as sea levels rise, a larger share of India's current coast will be submerged below sea-level than Bangladesh's. As graphically depicted in a recent commentary published in the journal *Nature Geoscience*, the direction of the Delta coastline will, in the near-term future, rotate in a clockwise direction to India's considerable disadvantage.<sup>86</sup>

4.117 India does not dispute these facts, but does dispute their relevance to these proceedings. The Counter-Memorial cites the ICJ's decision in *Tunisia/Libya* for the proposition that what matters in a delimitation is "the physical circumstances as they exist today" and "the geographical configuration of the present-day coast."<sup>87</sup> The Court's observations were, however, made in response to a very different set of arguments, which renders them inapposite here. In particular, in the *Tunisia/Libya* case, the parties argued at length about the significance of the geological and geographic circumstances prevailing in the ancient past, literally millions of years ago. In that context, the Court was understandably reluctant to draw dispositive conclusions from such remote facts. Here, in contrast, the question relates directly to the anticipated configuration of the coast line within the life span of Bangladeshi and Indian citizens now living. Indeed, although the *Nature Geoscience* prediction was originally made for the year 2100, the most recent studies show that sea-level rise is occurring substantially faster than predicted even just three years ago.<sup>88</sup>

4.118 As the ICJ observed in *Nicaragua v. Honduras*: "The establishment of a permanent maritime boundary is a matter of grave importance"<sup>89</sup> It would violate the dictates of equity, not to mention common sense, to base a boundary that is intended to effect a permanent delimitation of the maritime areas appertaining to the parties based on a tiny

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85 MB at paras. 2.14 and 6.77.

86 Katherine J. Houghton et al., "Maritime boundaries in a rising sea", *Nature Geoscience*, Vol. 3, No. 12 (2010). MB, Vol. IV, Annex B79. See also RB at Figure R2.5.

87 CMI at para. 5.24.

88 See C. Loucks et al., "Sea level rise and tigers: predicted impacts to Bangladesh's Sundarbans mangroves", *Climate Change*, Vol. 98, No. 1 (2010) at p. 294. RB, Vol. III, Annex BR12. See also "Sea Levels Rising Faster Than IPCC Projections" *Science Daily*, 27 November 2012 (available at <<http://www.sciencedaily.com/releases/2012/11/121128093911.htm>>).

89 *Nicaragua v. Honduras* at para. 253.

sampling of base points located on a coast that is guaranteed to look very different in the years immediately ahead.

4.119 In contrast to the case here, the provisional equidistance line drawn by ITLOS in *Bangladesh/Myanmar* was controlled virtually throughout its course by base points selected from the Chittagong coast of Bangladesh and the Rakhine coast of Myanmar. Unlike the Bengal Delta coast, the Chittagong/Rakhine coast exhibits no particular irregularity and no similar morpho-dynamism. Neither party made any argument to the contrary. The provisional equidistance line could therefore reasonably be expected to remain relatively stable through time, both near-term and long-term.

4.120 Finally, Bangladesh observes that this case shares commonalities with three of the four prior cases in which the angle-bisector method has been used to effect the delimitation. As in *Nicaragua v. Honduras*, the coastline is highly unstable and subject to rapid change. As in *Gulf of Maine*<sup>90</sup>, the coast of the Bengal Delta is deeply indented and irregular. And as in *Guinea/Guinea-Bissau*, Bangladesh sits in the middle of a concavity pinched between two other States. In short, if ever there were a case appropriate for the use of the angle-bisector method, this is it.

#### A. Bangladesh Applies the Angle-Bisector Method Correctly

4.121 India's Counter-Memorial criticises Bangladesh's reliance on the angle-bisector method in both principle and practice. According to India's reading of the law, the only time resort to an angle-bisector is permissible is when it is literally "unfeasible" to identify equidistance base points.<sup>91</sup> In Bangladesh's view, this is an overly restrictive reading of the jurisprudence that mischaracterises the case law, including *Bangladesh/Myanmar*. Indeed, Bangladesh notes that it is never truly unfeasible to identify equidistance base points. So long as one has a chart of the area, one can draw an equidistance line. In this respect, Bangladesh observes that even in *Nicaragua v. Honduras*, the case on which India relies to support its position, the fact is that Honduras actually presented an equidistance line to the Court.<sup>92</sup> The real issue is whether a given coastal configuration renders the identification of equidistance base points impractical or unreliable. As demonstrated in Chapter 2, that is clearly the case here.

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90 *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, Judgment, I.C.J. Reports 1984 (hereinafter "*Gulf of Maine Case*").

91 See CMI at para. 5.9.

92 Rejoinder of Honduras (13 August 2003) at paras. 8.16-8.17 and Plate 48 (available at <<http://www.icj-cij.org/docket/files/120/13725.pdf>>).

4.122 India also criticizes the manner in which Bangladesh has deployed the angle-bisector method in this case. In its Memorial, Bangladesh presented two complementary bisector models, both of which resulted in the same 180° bisector line. One model was based on a large-scale examination of the Bangladesh and Indian coasts, viewed separately on either side of the land boundary terminus.<sup>93</sup> The other was based on a smaller scale geographic picture of the Bengal Delta viewed as a whole.<sup>94</sup> The point of offering these twin perspectives was not, as India derisively portrays it, to offer the Arbitral Tribunal a “multiple choice” approach.<sup>95</sup> Rather, the purpose was to illustrate that no matter how one views the coasts of the Parties, whether on a larger or smaller scale, the solution suggested by the angle-bisector method is the same. In either case, the result is a line pointing due south. Bangladesh affirms its arguments in all respects.

4.123 The Arbitral Tribunal will recall that with respect to the larger scale analysis of each of the Parties’ coasts, Bangladesh determined the general direction of its own coast to be N87°E and that of India to be N273°E. The resulting bisector is 180°  $((87+273)÷2)$ .

4.124 The Counter-Memorial criticises these depictions of the coasts as somehow unfaithful to the “actual geographical situation.”<sup>96</sup> According to the Counter-Memorial, “Bangladesh moves the starting point of its claimed coastal façade northward and moves that of the Indian alleged coastline southward. As a result the two starting points do not coincide [with the land boundary terminus]”<sup>97</sup> India also complains that “Bangladesh artificially shifts the respective directions of the lines: northward in the case of the ‘India’s deltaic coast’ and southward in respect to the ‘Bangladesh’s deltaic coast.’”<sup>98</sup> Neither criticism is well-founded.

4.125 With respect to India’s argument that the two lines of general direction do not coincide at the location of the land boundary terminus, there is no requirement in the case law that they do so, and India identifies none. In *Gulf of Maine*, for example, the coastal façades drawn by the Chamber of the Court did not meet at the parties’ land boundary terminus. Instead, they were drawn starting several nautical miles seaward of the land boundary terminus. These facts are evident from **Figure R4.19** (in Volume II).

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93 MB at paras. 6.103-6.105 and Figure 6.17.

94 *Ibid.* at paras. 6.106-6.107 and Figure 6.18.

95 CMI at para. 6.31.

96 *Ibid.* at para. 6.26.

97 *Ibid.* at para. 5.42 (internal citation omitted).

98 *Ibid.*

4.126 Bangladesh also disagrees with India's complaint that it has mischaracterised the general direction of the Parties' coasts. As the ICJ stated in *Nicaragua v. Honduras*, identifying the general direction of a given coast "calls for the exercise of judgment in assessing the actual coastal geography."<sup>99</sup> Bangladesh has exercised that judgment properly in this case in a manner that is fully consistent with international case law.

4.127 In Bangladesh's view, the proper way to conduct a large-scale comparison of the two Parties' coasts is to evaluate the general direction of each in isolation from the other. In the case of Bangladesh, this means looking at the portion of its coast lying between the Raimangal Estuary near the land boundary terminus with India in the west and the western margins of the Meghna Estuary in the east. That portion of Bangladesh's coast is depicted at **Figure R4.20** (in Volume II only).

4.128 With such a highly indented and irregular coast, it is, of course, impossible to draw a valid line of general direction that leaves only water on one side and only land on the other. In fact, in no case in which the bisector method has been used has it been possible to do so.<sup>100</sup> Due to the inherent irregularities of a natural coast, there will almost always be some land seaward of the coastal façade, and some sea landward of it. Taking care to balance the two in this case, it is clear that the general direction of Bangladesh's deltaic coast inclines very slightly north of east. Bangladesh calculates the direction of this line as N87°E.

4.129 Applying the same balanced approach to the Indian side of the Delta yields a coastal façade line that inclines slightly north of west. That line is depicted in **Figure R4.21** (in Volume II only). As the Arbitral Tribunal can see, the line results in a comparable amount of land on its seaward side as there is water on its landward side. It is therefore an appropriate representation of the general direction of India's deltaic coast. Bangladesh calculates the direction of this line as N273°E.

4.130 To demonstrate the consistency of Bangladesh's proposed 180° bisector with the broader geographic circumstances prevailing between the Parties, Bangladesh's Memorial also presented a complementary, smaller-scale assessment of the situation drawing on the precedent of the *Guinea/Guinea-Bissau* case. In this second view, Bangladesh drew a perpendicular to a single straight line that depicts the general direction of the entire Bengal Delta coast viewed as a unit. That single straight line ran due east-west across the entirety

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99 *Nicaragua v. Honduras* at para. 289.

100 See RB at Figures R4.19 (*Gulf of Maine Case*) and R4.22 (*Guinea/Guinea-Bissau*); MB at Figure 6.16 (*Nicaragua v. Honduras*); and *Tunisia/Libya* at paras. 128-129 and Map 3.

of both Parties' Bengal Delta coasts, passing through the land boundary terminus at the mouth of the Raimangal Estuary, and connecting the west bank of the Hooghly River in India with the east bank of the Meghna Estuary in Bangladesh. The perpendicular bisector of the east-west line is the meridian of longitude running due south (*i.e.*, N180°E) from the land boundary terminus at the mouth of the Raimangal Estuary, where the Hariabhanga River meets the Bay of Bengal.

4.131 India objects that this smaller-scale bisector analysis results in a coastal façade on the Bangladesh side that “is a pure waterline”<sup>101</sup>. Bangladesh notes, however, that there is ample precedent for the approach it has taken. In particular, in the *Guinea/Guinea-Bissau* case the distinguished arbitral tribunal drew a coastal front line that cut almost entirely across land territory on the Guinea-Bissau side, while at the same time crossed almost exclusively water in front of the Guinean coast. Nonetheless, the arbitral tribunal considered this approach warranted in the circumstances of that case because it gave “more weight to the general direction of the coastline”<sup>102</sup> and because it appropriately “reduce[d] the risk of enclavement”<sup>103</sup> to Guinea created by the concavity in which it sits.

4.132 For the sake of comparison, the approach of the arbitral tribunal in the *Guinea/Guinea-Bissau* case can be seen side-by-side with the approach Bangladesh proposes in this case at **Figure R4.22** (in Volume II only).

4.133 The essential point is that whether the coast is viewed at a larger or a smaller scale, the result suggested by the angle-bisector method is the same. In either case, the delimitation line runs due south along an azimuth of 180° first through the territorial sea and then to the 200 M limit. Indeed, the appropriateness of the 180° line within 200 M can be appreciated by taking an even smaller scale view of the geography in the region.

4.134 Expanding the view beyond the Bengal Delta and taking into account the macro-geographic circumstances, the broader reality is this: the land territories of Bangladesh and India meet in the middle of the Bengal Delta. Both States have extensive deltaic coasts on either side of their land boundary. But they both also have coasts beyond the Delta on either side of the Bay. In the case of Bangladesh, its Chittagong coast runs south-southeast from the eastern margins of the Meghna Estuary to the land boundary terminus with Myanmar in the Naaf River. This portion of the Bangladesh coast is balanced on the opposite side of the Bay by India's peninsular coast, which runs generally south-southwest

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101 CMI at para. 6.34.

102 *Guinea/Guinea-Bissau* at para. 110. Reproduced in MB, Vol. V.

103 *Ibid.* at para. 111(b).

from the west bank of the Hooghly River to Devi Point and beyond. These two coasts, one trending generally south-southeast (Bangladesh) and the other trending south-southwest (India) effectively off-set each other. This is depicted graphically in **Figure R4.23** (in Volume II only). The balance between the two once again suggests that a maritime boundary following an azimuth of 180° first through the territorial sea and then out to 200 M would constitute a solution appropriate to the macro-geographic circumstances in the region.

B. The 180° Bisector Abates, But Does Not Eliminate, the Effect of the Concavity

4.135 The 180° boundary that Bangladesh proposes within 200 M partially abates, but by no means eliminates, the prejudicial effects of the concavity of its coast. Even with a 180° boundary line, Bangladesh is left with only a tapering wedge of maritime space that is the hallmark of a coastal concavity. This can be seen at **Figure R4.24** (following page 114) in which Bangladesh's 180° claim line is depicted together with the delimitation line with Myanmar as adjudicated by ITLOS. At the same time, however, the worst of the cut-off has been mitigated. As was demonstrated in the series of sketch-maps presented above,<sup>104</sup> the provisional equidistance line badly blocks the southward projection of Bangladesh's Bengal Delta coast and the westward projection of its Chittagong coast, while favouring India's maritime projections.

4.136 The 180° line ameliorates the worst of these blocking effects. This can be seen in the two sketch maps presented as **Figure R4.25A&B** (following Figure R4.24). Figure R4.25A shows the effects of the 180° azimuth on the maritime projections of both Bangladesh's and India's Bengal Delta coasts. As will be immediately apparent, the southwards projection of the Bangladesh coast is no longer so obviously impeded by the proposed boundary. At the same time, no meaningful blocking effect has been imposed on the southwards projection of the Indian coast. Although the potential entitlements of both Parties are curtailed, the cut off is shared in a balanced way.

4.137 Figure R4.25B shows the effects of the 180° line on the projections of Bangladesh's southwest-facing Chittagong coast and India's southeast-facing peninsular coasts. As is again apparent, the projection of the Bangladesh coast is no longer increasingly blocked by the proposed boundary as one moves further off shore. At the same time, although the peninsular coast of India is no longer able to reach ever larger shares of the sea in front of it the way it does with the provisional equidistance line,<sup>105</sup> it is not blocked in any significant

104 See Figure R4.16A-D.

105 See Figure R4.16D.

fashion, and certainly not to any greater extent than Bangladesh's opposing Chittagong coast. Here again, the cut off is shared in a balanced way.

4.138 The limited nature of the relief from the concavity-induced cut-off effect that Bangladesh seeks can be shown in a different fashion. **Figure R4.26A&B** (following Figure R4.25) is a modified version of Figure 6.20, previously presented in the Bangladesh Memorial, as adjusted to take account of the outcome in *Bangladesh/Myanmar*. This is a regional map of South Asia showing the maritime space appurtenant to India (in blue), Myanmar (in red), Sri Lanka (in violet) and Bangladesh (in green). In Figure R4.26A, the maritime areas shown as appertaining to Bangladesh reflect the combined effect of the adjudicated delimitation with Myanmar and India's proposed equidistance line in this case. Figure R4.26B is the same in every way except only that Bangladesh's maritime space has been modified to reflect the 180° bisector line it proposes.

4.139 As the Arbitral Tribunal can see, the difference is barely visible. Bangladesh's maritime space continues to narrow significantly from north to south. India's vast maritime spaces are 'diminished', if at all, in a manner that would only be of interest to statisticians. The 180° line leaves to India fully 98% of the maritime space its own claim in this case would give it in the Bay of Bengal.

4.140 By the same token, although the difference is minimal both in absolute terms and in its effect on India, it is a significant one for Bangladesh in two respects. First, the 25,100 sq km lying between India's proposed boundary and the 180° line would represent approximately 22% of Bangladesh's total maritime space within 200 M.

4.141 Bangladesh hastens to make clear that by citing these figures, it is not arguing, as India repeatedly asserts<sup>106</sup>, that this delimitation should be conducted on the basis of proportionality. Bangladesh readily accepts that the function of delimitation is not to "apportion equal shares of the area, nor indeed proportional shares."<sup>107</sup> Issues of proportionality are, nevertheless, integral to the delimitation process. As the Chamber of the ICJ stated in *Gulf of Maine*, "one should aim at an equal division of areas where the maritime projections of the coasts of the States between which delimitation is to be effected converge and overlap."<sup>108</sup>

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106 See, e.g., CMI at paras. 6.16, 6.86-6.88, 7.47.

107 *Romania v. Ukraine* at para. 110.

108 *Gulf of Maine Case* at para. 195.

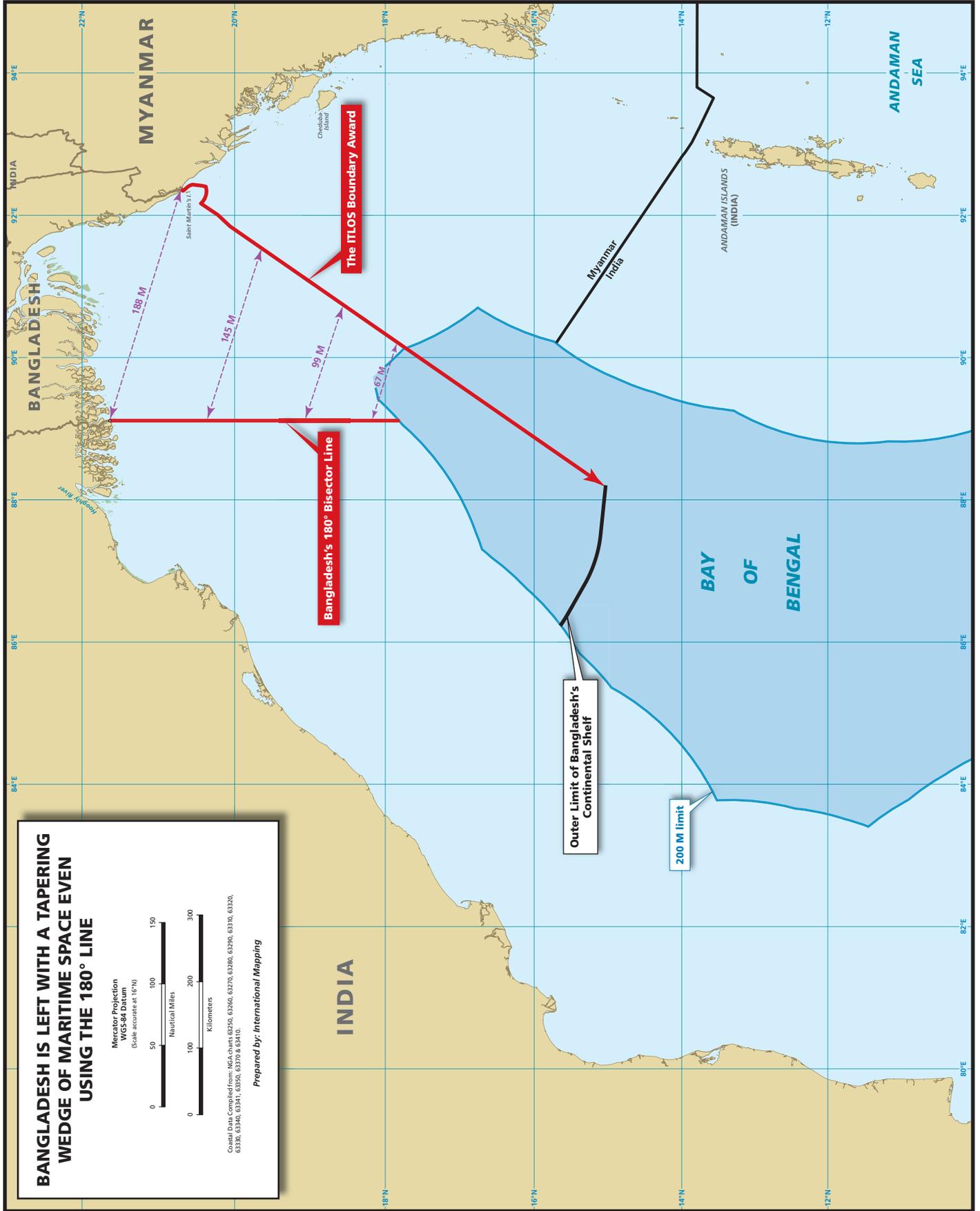
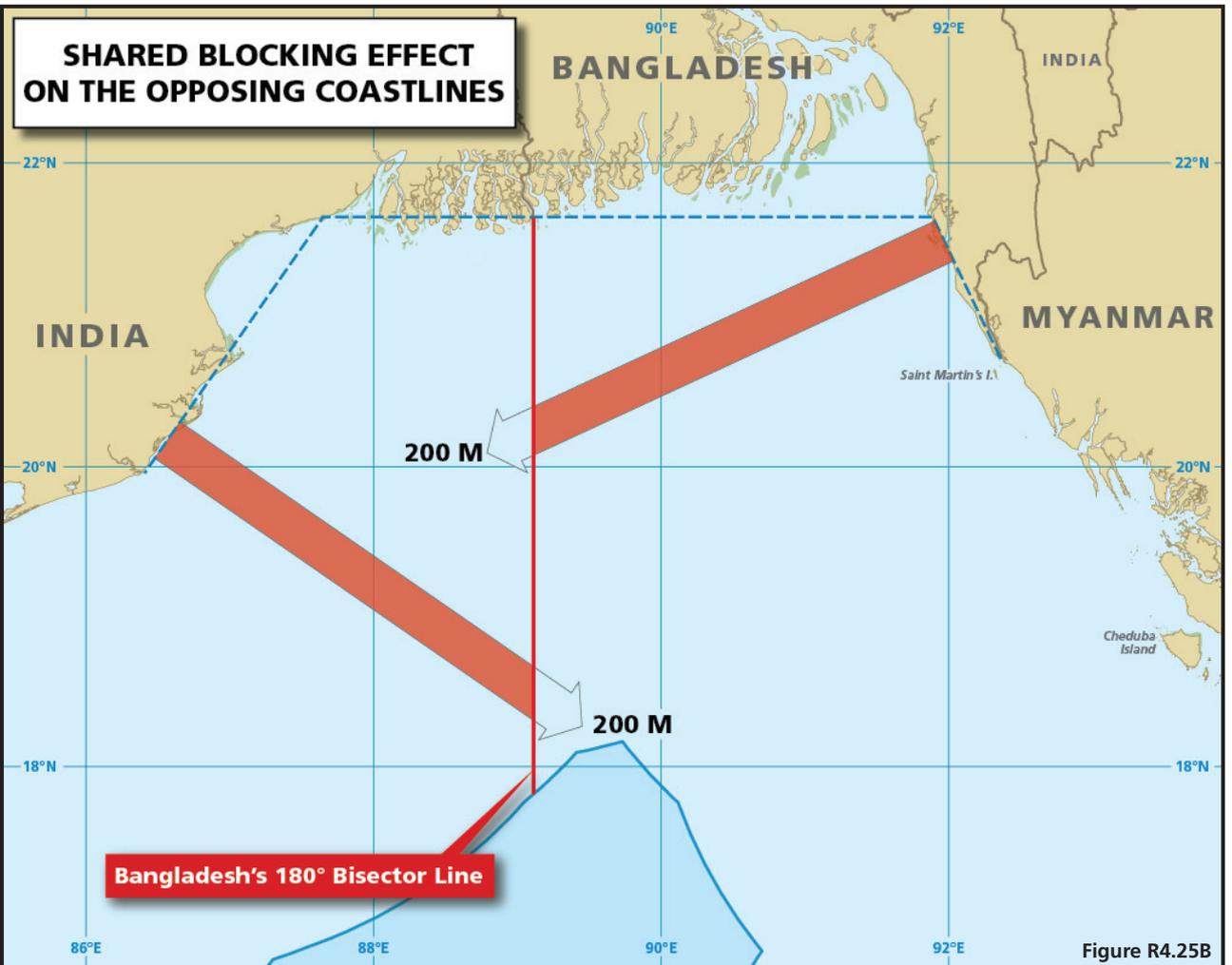
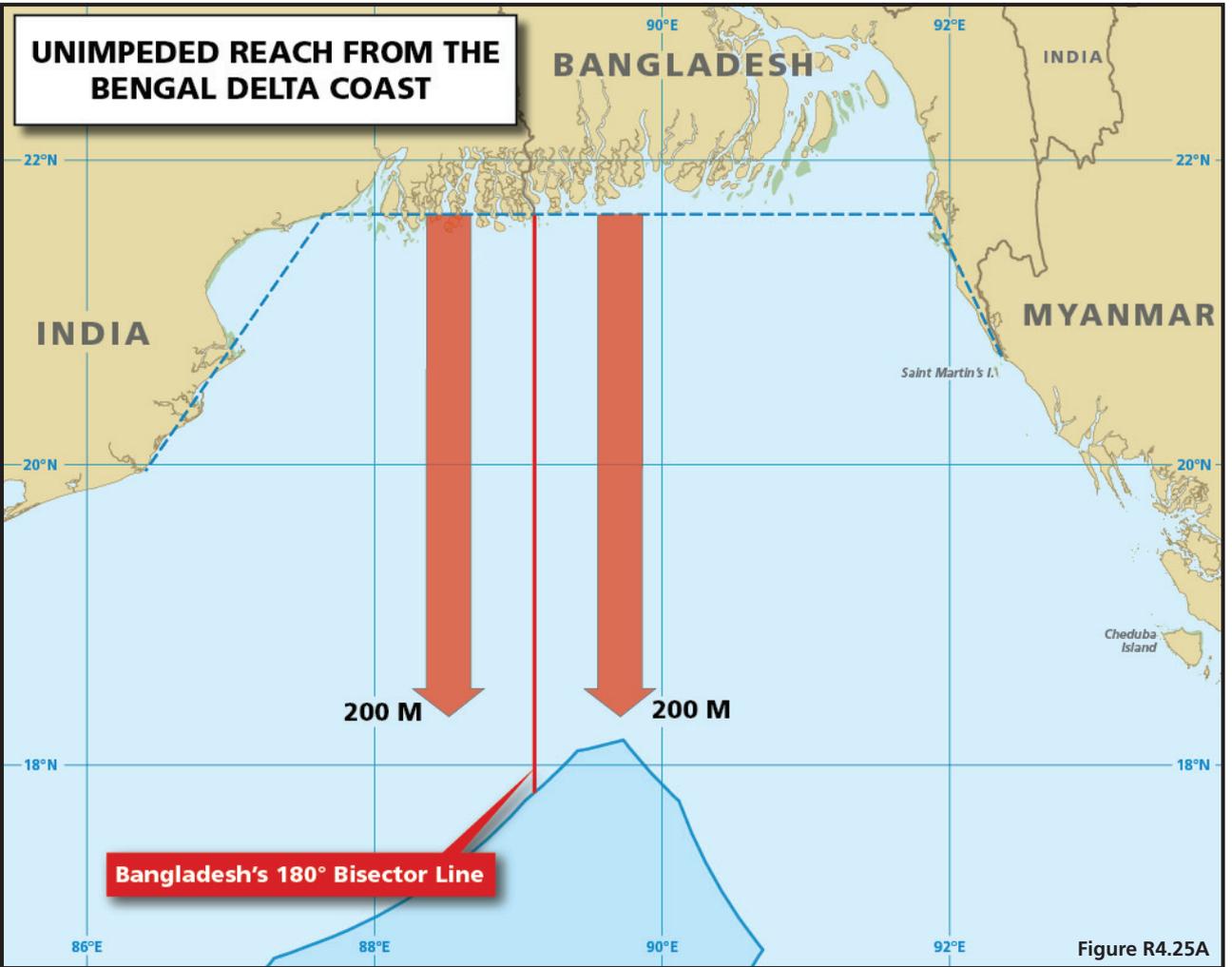


Figure R4.24







**BANGLADESH'S MARITIME AREA WITHIN 200 M BASED ON INDIA'S CLAIM LINE**

Mercator Projection  
WGS-84 Datum  
(Scale accurate at 16°N)

Coastal Data obtained from: (ESRI®) Global Self-consistent, Hierarchical, High-resolution Shoreline Database (HOSEA and the University of Hawaii), and supplemented with coastal information from NOAA charts 63210, 63220, 63230, 63240, 63250, 63260, 63270, 63280, 63290, 63300, 63310, 63320, 63330, 63340, 63341, 63350, 63370, 63380, 63390, 63400, 63420, 63430, 63440, 71040 & 71315.

Prepared by: International Mapping

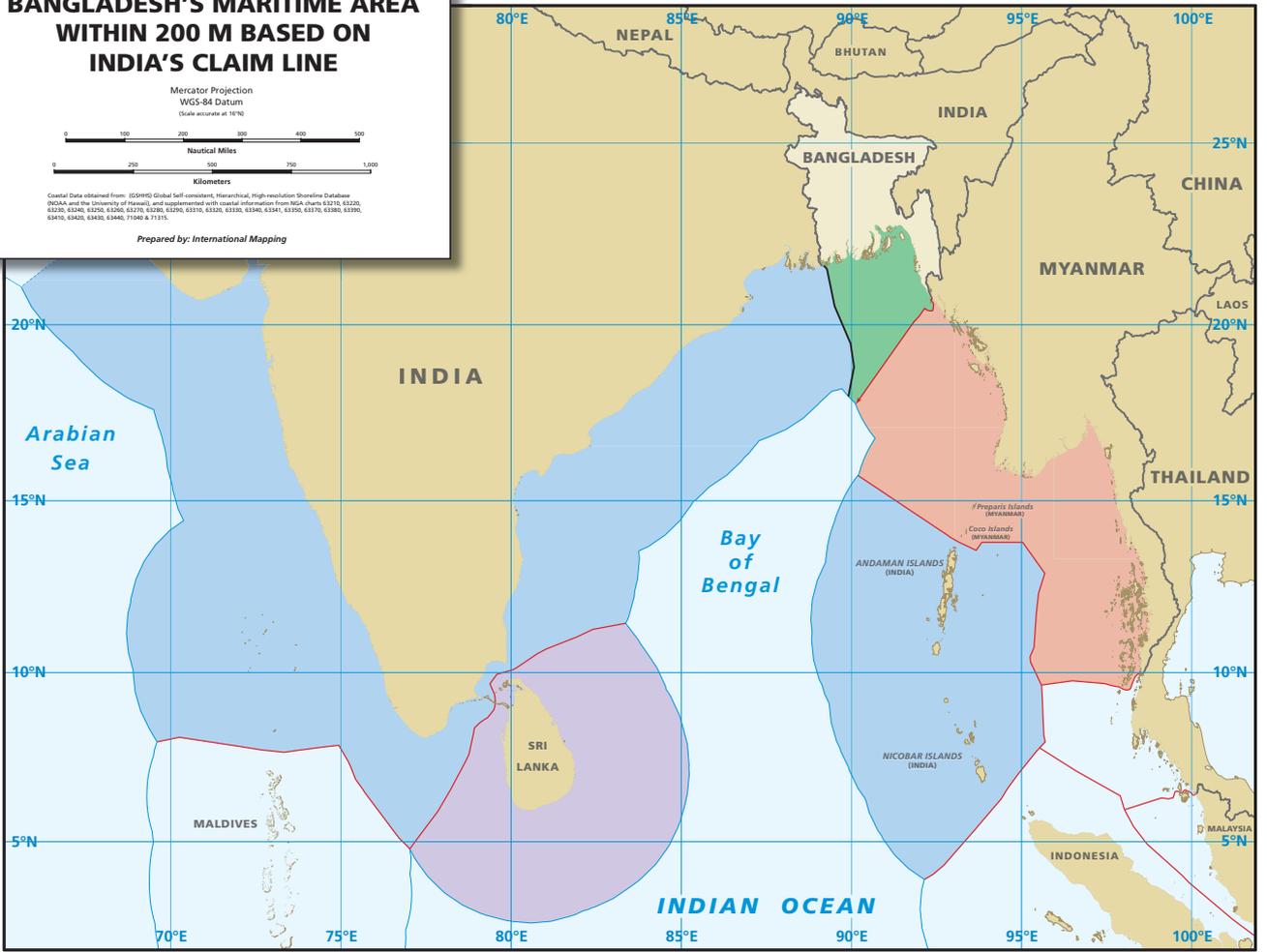


Figure R4.26A

**BANGLADESH'S MARITIME AREA WITHIN 200 M BASED ON BANGLADESH'S CLAIM LINE**

Mercator Projection  
WGS-84 Datum  
(Scale accurate at 16°N)

Coastal Data obtained from: (ESRI®) Global Self-consistent, Hierarchical, High-resolution Shoreline Database (HOSEA and the University of Hawaii), and supplemented with coastal information from NOAA charts 63210, 63220, 63230, 63240, 63250, 63260, 63270, 63280, 63290, 63300, 63310, 63320, 63330, 63340, 63341, 63350, 63370, 63380, 63390, 63400, 63420, 63430, 63440, 71040 & 71315.

Prepared by: International Mapping

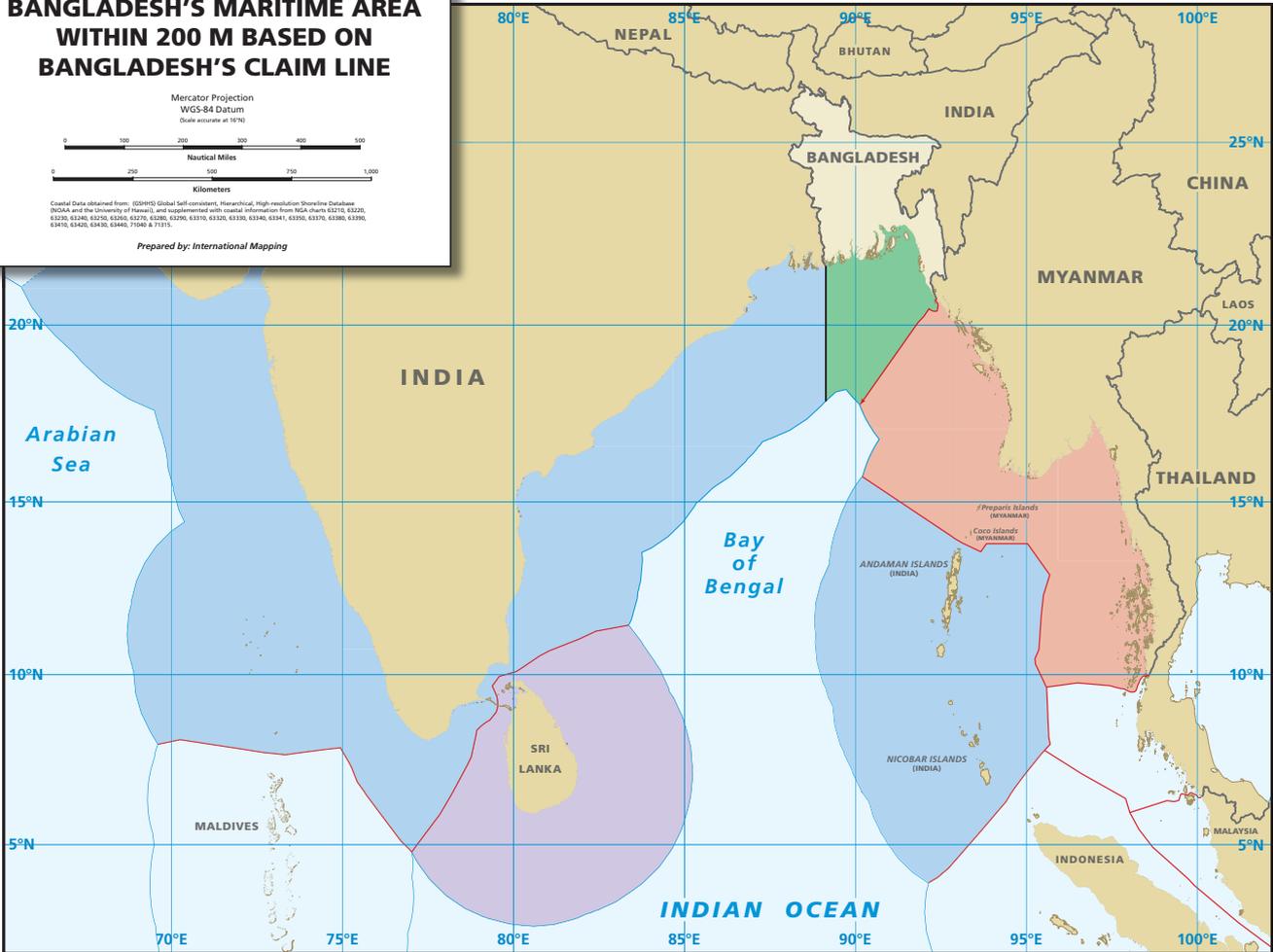


Figure R4.26B



4.142 The second reason that the difference between India's proposed 'equidistance' line and the 180° line is so significant for Bangladesh is that it gives Bangladesh a larger opening onto the 200 M limit, and from there access to its potential entitlement in the outer continental shelf. India's proposal gives Bangladesh just a 26 M wide outlet onto the 200 M limit, while the 180° bisector line gives it more than twice as much (67 M). This is important and relevant because by confining Bangladesh's outlet to 200 M and beyond, India's equidistance proposal by definition exacerbates the extent to which Bangladesh is cut off from a significant portion of its potential entitlement in the outer continental shelf, as shown in Chapter 5.

4.143 Bangladesh and India are agreed on at least this: any delimitation by definition deprives both Parties of some of the maritime space they would be able to claim but for the presence of the other. The goal of the delimitation must therefore be to "allow the adjacent coasts of the Parties to produce their effects, in terms of maritime entitlements, in a reasonable and mutually balanced way."<sup>109</sup> Yet, by limiting Bangladesh to an opening onto the 200 M limit of just 26 M, India's proposal effectively guarantees that the cut-off in the outer continental shelf will be borne predominantly – indeed entirely – by Bangladesh. As will be discussed in greater detail in Chapter 5, India's maritime boundary proposal would entail no sacrifice (i.e., no reduction) of its own potential entitlement in the outer continental shelf.<sup>110</sup>

4.144 In contrast, by giving Bangladesh access to its potential entitlement in the outer continental shelf across a broader area, Bangladesh's proposal ensures that it will receive an equitable share of that entitlement without materially reducing India's maritime space. In so doing, it facilitates the achievement of the mutually agreed goal of sharing the cut-off in the continental shelf beyond 200 M in a reasonable and mutually balanced fashion.

4.145 Among the more notable aspects of the Indian Counter-Memorial is an argument that India does *not* make. In particular, India nowhere argues that the 180° bisector line Bangladesh proposes would constitute an inequitable solution. To be sure, India argues that this case is not an appropriate case for the use of the angle-bisector method. It also argues that its own proposed equidistance line would be an equitable solution. Yet, nowhere in its 246 pages (not including the Appendix and Annexes) does the Counter-Memorial offer any argument or evidence that the 180° line would not be equitable to it.

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109 *Romania v. Ukraine* at para. 201.

110 See RB at paras. 5.5.

4.146 In Bangladesh's view, this omission is striking. Surely, if India had a serious argument that the 180° line was not an equitable solution, it would have made it. But it did not. And the fact that it did not must be viewed as an indication that the line is equitable to both Parties. The reason is clear. As just discussed, the difference between India's claim line and Bangladesh's 180° bisector is significant for Bangladesh but entirely *de minimis* for India.

4.147 Bangladesh considers that a boundary line following an azimuth that mirrors the angle bisector, as in *Bangladesh/Myanmar*, would be a particularly appropriate approach in this case for at least three reasons. *First*, a delimitation line following a single, specified azimuth would, in the words of the ICJ, be "practically satisfactory" and contribute to the "public order of the oceans"<sup>111</sup> in that it would provide a simple, clear and equitable boundary that would be easily implemented and respected. *Second*, by its consistency with *Bangladesh/Myanmar*, it would ensure harmony between these two very obviously related cases. And *third*, adjusting the provisional equidistance line to the 180° angle bisector would accord Bangladesh comparable measures of relief from the concavity on both sides: in the west with India and in the east with Myanmar.

4.148 As discussed above, one of the hallmarks of a coastal concavity is that reliance on equidistance yields a narrowing wedge-shaped zone of maritime jurisdiction. As earlier depicted in Figure 4.24 above, even when the maritime boundary with Myanmar as adjudged by ITLOS is combined with Bangladesh's 180° claim line, the result still shows a tapering effect that reflects the enduring effects of the Bay of Bengal concavity. Notably, the degree of 'pinching' on either side is almost precisely the same. **Figure R4.27** (following this page) depicts this reality. Using the 180° line and the 215° azimuth adopted by ITLOS to define Bangladesh's maritime boundaries within 200 M would accord Bangladesh an outlet to the international 200 M limit some 67 M in width. This is 122 M less than the width of Bangladesh's coastal opening as measured point-to-point between its land boundary termini with India and Myanmar, respectively. In both the west and the east there are triangular spaces that reflect the extent to which Bangladesh's maritime jurisdiction shrinks progressively to seaward. In the area to the east abutting Myanmar, that space measures 25,654 sq km. In the area to the west abutting India, that space measures 25,069 sq km. The essential point is simple: adopting the 180° line Bangladesh proposes would actually accord it *less* relief from the concavity on the Indian side than ITLOS accorded Bangladesh on the Myanmar side.

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111 *Nicaragua v. Colombia* at para. 244.





4.149 The equitableness of Bangladesh's proposed solution is further confirmed by reference to the ICJ's 2012 Judgment in *Nicaragua v. Colombia*. As discussed above, the ICJ used the equiratio method to determine a portion of the maritime boundary in that case. In particular, it accorded differential weight to the base points on the Nicaraguan and Colombia side by a factor of 3:1 in favour of Nicaragua. Accordingly, one plausible answer to the question of by how much the Arbitral Tribunal should adjust the equidistance line in this case would be to apply the equiratio method here, and accord the base points on the Bangladesh coast greater weight than those on the Indian coast. Putting a very light thumb on the scale and according Bangladesh's base points an additional weight of just 10% (*i.e.*, a ratio of 1.1:1 in favour of Bangladesh) yields the equiratio line depicted in **Figure R4.28** (in Volume II only). As the Arbitral Tribunal can see, the resulting line would be substantially more advantageous to Bangladesh than the 180° bisector it actually proposes. This then provides still further confirmation of the equitable nature of the angle bisector-based solution Bangladesh proposes in this case.

#### **IV. The Disproportionality Test Confirms That the 180° Line Is an Equitable Solution**

4.150 The Parties are agreed that the final step in the delimitation process is to conduct a disproportionality test in order to confirm that the delimitation line provisionally determined does not yield a disproportionate result.<sup>112</sup> This is done by comparing the ratio of the relevant maritime area accorded to each Party to the ratio of the Parties' relevant coastal lengths. Bangladesh and India are also agreed that "disproportionality" in this sense has a limited meaning. "[O]nly marked differences between the two ratios require the adjustment of the line."<sup>113</sup>

4.151 In light of the Judgment of ITLOS in *Bangladesh/Myanmar*, Bangladesh has reassessed its views concerning the relevant area and relevant coasts as expressed in the Memorial. In its Judgment, ITLOS defined the relevant area so as to extend well beyond 200 M into the area of the outer continental shelf where the parties had overlapping entitlements. Consistent with that approach, Bangladesh considers that the proportionality analysis in this case should include the *entire* maritime space at issue, including all of the territorial sea, the EEZ and the continental shelf beyond 200 M. It is therefore most appropriate to conduct only a single proportionality analysis.

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112 CMI at para. 6.108.

113 *Ibid.* at para. 6.112.

4.152 That being the case, Bangladesh considers it premature to present a (dis)proportionality assessment in this chapter before the issue of the delimitation of the continental shelf beyond 200 M has been fully addressed. For present purposes, it is enough to note that for the reasons more fully elaborated in Chapter 5, Bangladesh's boundary proposal produces a result that is not disproportionate.<sup>114</sup> Building on elements of the model India presented in its Counter-Memorial, but taking into account the need to include the outer continental shelf, the ratio of relevant coastal lengths is **1:1.67** in favour of India. In comparison, the relevant area ratio is **1:1.53** in favour of India. The numbers are very similar and certainly not in any way disproportionate, let alone manifestly so. Bangladesh's proposed maritime boundary easily passes the disproportionality test.

4.153 It is, nevertheless, appropriate here to respond to certain misleading elements of the Counter-Memorial's arguments concerning the nature and utility of proportionality considerations in the delimitation process. India takes a curiously inconsistent approach to the relevance of proportionality. On the one hand, it repeatedly underscores the three distinct steps of the now conventional delimitation process courts and tribunals employ: *first*, draw a provisional equidistance line; *second*, take account of any relevant circumstances calling for adjustment of that line; and *third*, check the proposed delimitation line to ensure that it does not yield a disproportionate result.<sup>115</sup> In so doing, India seems to acknowledge that the question of relevant circumstances and the issue of disproportion involve separate inquiries at different stages of the delimitation process.

4.154 Yet, on the other hand, India elsewhere seems to want to conflate the second and third steps into a single inquiry. The Counter-Memorial states, for example, that "equitable considerations are only to be taken into account ... mainly, during the third stage of the delimitation process, when the non-disproportionality is tested."<sup>116</sup> In other words, India appears to be suggesting that if there is no disproportion under the third step, there are no relevant circumstances under the second. But that, of course, is not how the standard approach works. As a matter of logic and as a matter of method, the second step always comes before the third.

4.155 The third-stage disproportionality test is by design a very blunt instrument. As the ICJ recently stated in *Nicaragua v. Colombia*, its purpose is merely as "a final check upon

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114 See RB at paras. 5.59 *et seq.*

115 See, e.g., CMI at paras. 1.24, 6.6 and 6.13.

116 *Ibid.* at para. 6.46; See also *ibid.* at para. 6.71 ("the fact that 'a coast is markedly irregular or markedly concave or convex' could be taken into account only *when* it leads to a 'disproportionate result'. As will be shown in Sub-Section C below, the delimitation line proposed by India easily meets the non-disproportionality test.") (emphasis in original; internal citations omitted).

the equity of a tentative delimitation to ensure that the result is not tainted by some form of *gross disproportion*.<sup>117</sup> This final check is performed on the basis of numbers that “do[] not purport to be precise but [are] only approximate”.<sup>118</sup> The third-stage disproportionality test is therefore not an all-purpose measure of equity that can or should inform the search for relevant circumstances at the second stage. It is only “to ensure that there is not a disproportion so gross as to ‘taint’ the result and render it inequitable.”<sup>119</sup>

4.156 That does not mean, however, that proportionality considerations are entirely irrelevant during the second stage of the delimitation process. But proportionality in this sense has a different flavour altogether. It is not a question of measuring relevant coasts and relevant areas and looking for gross disproportion in the numbers. It is instead a question that involves a margin of appreciation and ensuring that the equidistance line provisionally drawn in the first step enables “each State [to] enjoy reasonable entitlements in the areas into which its coasts project.”<sup>120</sup> It is also a question of making sure that “the line of delimitation should allow the coasts of the Parties to produce their effects in terms of maritime entitlements in a reasonable and mutually balanced way”.<sup>121</sup>

4.157 In its Judgment in *Nicaragua v. Colombia*, the ICJ made clear that this broader notion of proportionality comes into play at the second stage, during the evaluation of the issue of relevant circumstances. Thus, after constructing a provisional equidistance line, the Court concluded that it would produce an inequitable solution because the “effect of the provisional median line is to cut Nicaragua off from some three quarters of the area into which its coast projects.”<sup>122</sup> In other words, it disproportionately deprived Nicaragua of maritime areas to which it was potentially entitled.

4.158 Similarly, after deciding to draw the initial segment of the delimitation using the equiratio method, the Court determined that it could not simply extend the equiratio line to complete the boundary because doing so would “still leave Colombia with a significantly larger share of the relevant area than that accorded to Nicaragua”.<sup>123</sup> In other words, the result would not have been proportionate in light of the relevant circumstances of the case. The Court therefore decided to continue the delimitation line by means of a mix of enclaving islands and parallels of latitude.

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117 *Nicaragua v. Colombia* at para. 241 (citing *Barbados/Trinidad v. Tobago* at para. 238).

118 *Ibid.* at para.158.

119 *Ibid.* at para. 242.

120 *Ibid.* at para. 216.

121 *Ibid.* at para. 215 (citing the *Black Sea* case at para. 201).

122 *Ibid.*

123 *Ibid.* at para. 236.

4.159 For all these reasons, the Arbitral Tribunal should not allow itself to be lured into the confusion with which India tempts it. The mathematical ‘disproportionality test’, as such, is employed only at the very end of the delimitation process. It does not work backwards to inform the quest for relevant circumstances at the second stage. By the same token, more broadly defined considerations of proportionality are nevertheless relevant at the second stage and invite the exercise of learned judgment by judges and arbitrators.

### **Conclusions**

4.160 For all the foregoing reasons, Bangladesh submits that the Arbitral Tribunal should delimit the maritime boundary between it and India in the territorial sea, EEZ and continental shelf within 200 M by use of an angle bisector, with the resulting boundary line running along an azimuth of  $180^\circ$  from the land boundary terminus out to the 200 M limit from its coast (located at  $18^\circ 18' 18''$  N -  $89^\circ 06' 39''$  E).

4.161 The extension of this boundary into the outer continental shelf beyond 200 M is addressed in the next Chapter.

## CHAPTER 5 DELIMITATION OF THE CONTINENTAL SHELF BEYOND 200 M

5.1 This Chapter responds to India's arguments concerning equitable delimitation of the outer continental shelf beyond 200 M. Much of what is said here builds upon the previous Chapter concerning the delimitation of the EEZ and continental shelf within 200 M. The arguments made there apply *mutatis mutandis* to delimitation of the continental shelf beyond 200 M, save where otherwise indicated below.

5.2 The essential point of this Chapter is easily stated, and was aptly captured by ITLOS itself in its 14 March 2012 Judgment in *Bangladesh/Myanmar*.<sup>1</sup> The Tribunal held: "Having considered the concavity of the Bangladesh coast to be a relevant circumstance for the purpose of delimiting the exclusive economic zone and the continental shelf within 200 nm, the Tribunal finds that this relevant circumstance has a continuing effect beyond 200 nm."<sup>2</sup> The same is equally true in this case.

5.3 India's Counter-Memorial disagrees. It argues that the delimitation in the continental shelf beyond 200 M should simply be an extension of the so-called equidistance line it proposes as the boundary within 200 M. According to India, no account need be taken of the concavity of Bangladesh's coast, whether inside or outside 200 M.

5.4 Far from constituting an equitable solution, however, an equidistance line (whether the inappropriately drawn one claimed by India or an appropriately drawn one) impermissibly cuts Bangladesh off from the overwhelming majority of its potential entitlement in the continental shelf beyond 200 M. In either case, equidistance would merely give Bangladesh a small triangle of outer continental shelf, which terminates a full 140 M short of the outer limit of Bangladesh's claim before the CLCS.

5.5 The wholly inequitable nature of this solution can be demonstrated with a single fact: the small triangle of maritime space India's proposed equidistance line leaves for Bangladesh would involve *no diminution whatsoever* of India's claim beyond 200 M. Indeed, it would allocate to India areas in the outer continental shelf it has not even claimed before the CLCS. As can be seen in **Figure R5.1** (following page 130), India has not claimed before the CLCS any of the small area its proposed equidistance line would leave to Bangladesh. Only Myanmar and Bangladesh have claimed this area. Yet, by virtue of the *Bangladesh/*

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1 *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment of 14 March 2012, ITLOS Reports 2012 (hereinafter "Bangladesh/ Myanmar")*.

2 *Ibid.* at para. 461.

*Myanmar* Judgment, Myanmar can no longer have any valid claim there. Put simply, the equidistance solution India proposes in the outer continental shelf would allot to Bangladesh only what already belongs to it. Moreover, this space comes exclusively from areas previously claimed by Myanmar but not India. Here once again, India is trying to make Myanmar pay the entire price of achieving an equitable maritime boundary solution in the Bay of Bengal. And the solution India proposes is manifestly inequitable to Bangladesh.

5.6 As discussed in the previous Chapter, India's 'thank Myanmar' theory of this case cannot be right; it cannot be equitable; and it cannot be what ITLOS envisioned at the time it rendered its March 2012 Judgment. India's proposed non-solution in which it makes no accommodation in favour of Bangladesh is all the more remarkable when considered against the enormity of India's claims beyond 200 M not only in the Bay of Bengal but also the Arabian Sea.<sup>3</sup>

5.7 For these reasons, and for those more fully elaborated below, the solution advanced by India would not constitute an equitable delimitation. To the contrary, the achievement of an equitable solution entails bending the 180° line presented in the previous Chapter at the point where it meets India's 200 M limit, and from there extending it along an azimuth running parallel to the Bangladesh-Myanmar delimitation out to the outer limit of Bangladesh's continental shelf. Only in that manner can the cut-off in the continental shelf beyond 200 M truly be shared in a "reasonable and mutually balanced way",<sup>4</sup> as both Parties agree the law requires.<sup>5</sup>

### **I. Bangladesh Is Entitled to a Continental Shelf Beyond 200 M**

5.8 In its Memorial, Bangladesh argued that: (a) "natural prolongation" of the continental shelf beyond 200 M must be established by geological and geomorphological evidence; (b) the geology and geomorphology of the seabed and the seafloor are relevant factors to be taken into account in determining an equitable solution beyond 200 M; (c) India lacks the close geological and geomorphological continuity to the seabed that the

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3 Government of India, *Partial submission to the Commission on the Limits of the Continental Shelf, pursuant to article 76, paragraph 8 of the United Nations Convention on the Law of the Sea: Part I, Executive Summary* (May 2009) (available at < [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/ind48\\_09/ind2009executive\\_summary.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/ind48_09/ind2009executive_summary.pdf)>) at pp. 12-13.

4 *Bangladesh/Myanmar* at para. 326 (quoting *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009 (hereinafter "*Romania v. Ukraine*" or "the *Black Sea* case") at para. 201).

5 Counter-Memorial of India (hereinafter "CMI") at para. 6.13.

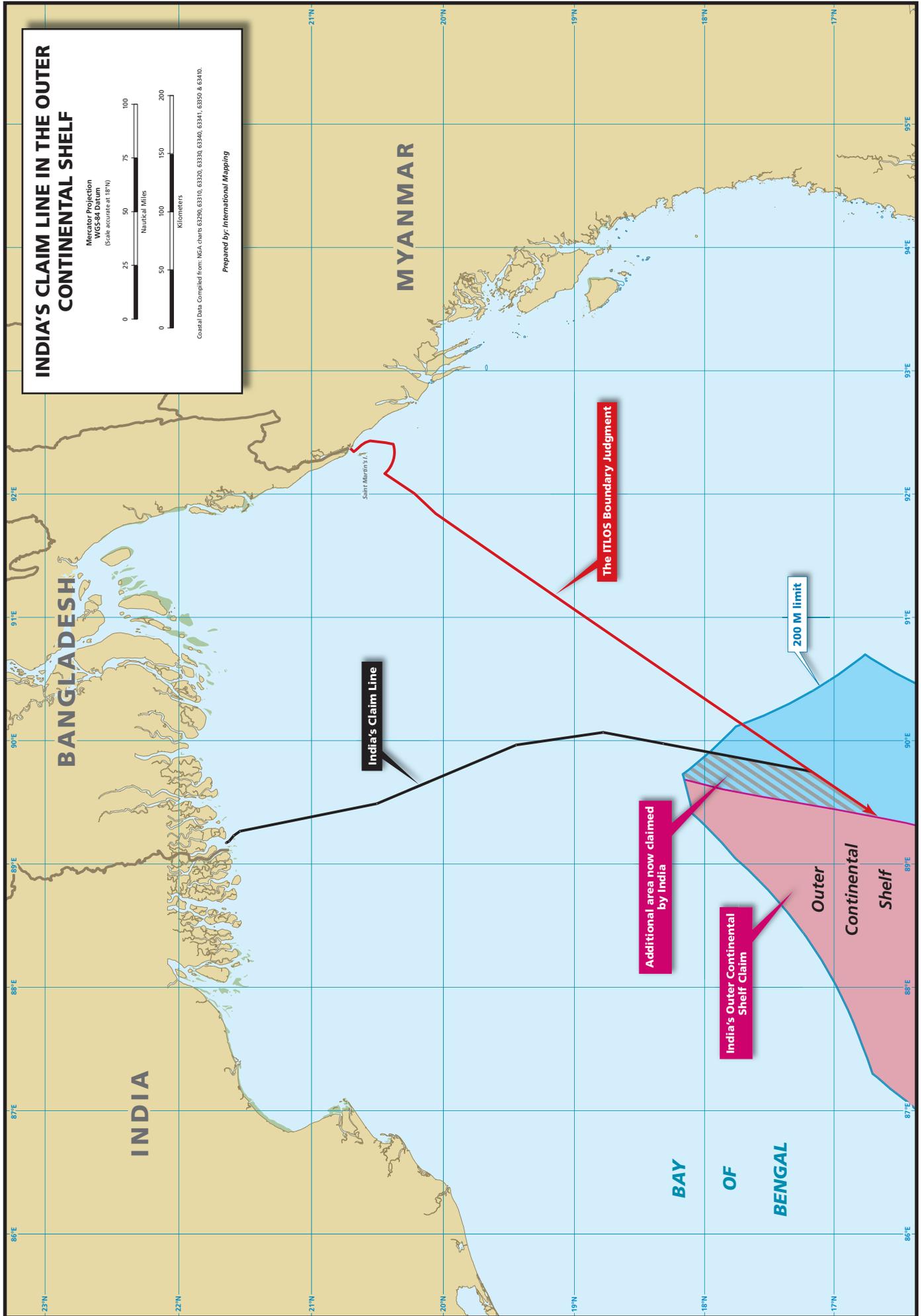


Figure R5.1



landmass of Bangladesh has; and (d) the seabed of the Bay of Bengal is therefore “the most natural extension of the land territory” of Bangladesh.<sup>6</sup>

5.9 In its Judgment in *Bangladesh/Myanmar*, ITLOS held that:

the reference to natural prolongation in article 76, paragraph 1, of the Convention, should be understood in light of the subsequent provisions of the article defining the continental shelf and the continental margin. Entitlement to a continental shelf beyond 200 nm should thus be determined by reference to the outer edge of the continental margin, to be ascertained in accordance with article 76, paragraph 4.<sup>7</sup>

It further held that “the most natural prolongation” argument made by Bangladesh had no relevance to the entitlement of the parties.<sup>8</sup>

5.10 Bangladesh accepts the Judgment of ITLOS as decisive in this respect. It therefore withdraws certain of the arguments previously advanced in its Memorial. In particular, it will no longer rely on scientific evidence of the greater geological or geomorphological continuity of its continental landmass beyond 200 M in relation to India’s. It will also no longer argue that it is entitled to a greater share of the shelf than India based on the greater degree of continuity between its continental landmass and the shelf beyond 200 M.

5.11 Bangladesh accepts that its entitlement beyond 200 M, as well as India’s, are determined by application of Article 76(4) of the 1982 Convention, and that, in the area where the Parties’ entitlements overlap, neither may claim that its entitlement is superior based on geological or geomorphological factors. Rather, the area of overlap must be delimited on the basis of equitable considerations – which do not include the greater “connectedness” of one Party’s landmass to the shelf beyond 200 M – as long as both Parties satisfy the criteria of Article 76(4).

5.12 Accordingly, in this Reply, the maritime boundary Bangladesh claims beyond 200 M is based strictly on equitable considerations, including and especially the concavity of its coast and the cut-off effect this produces. It thereby conforms its claims to the principles laid down in *Bangladesh/Myanmar*.

5.13 In its Judgment of 14 March 2012, ITLOS concluded that the criteria of Article 76(4) were met and that “both Bangladesh and Myanmar have entitlements to a con-

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6 Memorial of Bangladesh (hereinafter “MB”) at paras. 7.46-7.48.

7 *Bangladesh/Myanmar* at para. 437.

8 *Ibid.* at para. 460.

tinental shelf extending beyond 200 M. The submissions of Bangladesh and Myanmar to the Commission clearly indicate that their entitlements overlap in the area in dispute in this case.”<sup>9</sup> The same is true of Bangladesh and India in the present case. Both Parties have made full submissions to the CLCS; both meet the criteria of Article 76(4); and both therefore have entitlements beyond 200 M. India nowhere disputes any of these facts. Nor, following the Judgment in *Bangladesh/Myanmar*, does Bangladesh dispute that India is entitled to a continental shelf beyond 200 M in the same area as Bangladesh. It therefore follows that the continental shelves of the Parties overlap beyond 200 M and must be delimited in accordance with Article 83 of the Convention.

5.14 There is no jurisdictional impediment to delimiting the area beyond 200 M merely because the CLCS has yet to issue recommendations on the submissions of Bangladesh and India. India sensibly makes no argument to the contrary. Indeed, the Counter-Memorial correctly observes that in *Bangladesh/Myanmar* ITLOS:

considered that it could determine the existence of entitlement to the continental shelf – a question which it defined as “predominantly legal in nature” – and delimit the continental shelf between the Parties notwithstanding “the fact that the outer limits of the continental shelf beyond 200 nm have not been established”.<sup>10</sup>

The same is true of the Arbitral Tribunal in this case.

## II. The Delimitation Beyond 200 M

5.15 India’s proposed “equidistance” solution beyond 200 M has already been depicted in Figure R5.1 above. Bangladesh does not accept that it is appropriate to delimit its maritime boundary with India by drawing an equidistance line within 200 M.<sup>11</sup> The same is true with respect to the continental shelf beyond 200 M, where an equidistance boundary would be even more inappropriate. Such a boundary would neither be an equitable solution, nor would it be consistent with the approach taken by ITLOS when delimiting the *Bangladesh/Myanmar* continental shelf boundary beyond 200 M.

5.16 In the previous Chapter, the reasons for rejecting equidistance were explained. As shown there, the maritime space India seeks to attribute to Bangladesh narrows rapidly further offshore.<sup>12</sup> This narrowing is particularly dramatic in the area beyond 200 M, re-

9 *Ibid.* at para. 449.

10 CMI at para 73(iii) (internal citations omitted).

11 Reply of Bangladesh (hereinafter “RB”) at paras 4.60 *et seq.*

12 *Ibid.* at para. 4.79.

flecting the long-recognised reality that “in the case of concave or convex coastlines that if the equidistance method is employed, then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced.”<sup>13</sup> Equidistance is thus even more prejudicial to Bangladesh beyond 200 M than it is within that distance. Although Bangladesh’s Bengal Delta coast projects southwards into the Bay of Bengal, India’s claim line would limit it to just 2% of its potential entitlement beyond 200 M. India, by contrast, would be awarded fully 99.6% of its potential entitlement.

5.17 As discussed in the previous Chapter, India has not even managed to draw an equidistance line correctly. An accurately drawn equidistance line in the area beyond 200 M is depicted in **Figure R5.2** (following page 136). A proper provisional equidistance line would give Bangladesh a slightly greater area in the northwest corner beyond 200 M. But this area is still less than 5% of Bangladesh’s entitlement beyond 200 M, and it still terminates at virtually the same point on the Bangladesh-Myanmar boundary as India’s proposed “equidistance” line. Thus, even an accurately drawn equidistance line gives Bangladesh an inequitably small portion of the shelf beyond 200 M and prematurely cuts off that shelf a full 140 M short of the outer limit of Bangladesh’s entitlement (as reflected in its claim before the CLCS).

5.18 In addition, a “correct” equidistance line yields a solution in which India’s claim beyond 200 M is entirely undiminished. Indeed, as with India’s claim line, even an accurately drawn equidistance line would still give India areas in the outer continental shelf it has not claimed before the CLCS. All of the area allocated to Bangladesh would continue to come entirely from the Myanmar side of the ledger. An equidistance solution – any equidistance solution – is therefore one in which ‘Myanmar pays’ but India does not. Such a result would not achieve the equitable solution required by Article 83; nor would it be consistent with the *Bangladesh/Myanmar* Judgment.

5.19 The ITLOS Judgment gives guidance on the principles to be applied and the circumstances that are relevant to an equitable delimitation beyond 200 M. Two points are fundamental. *First*, there is in law only one continental shelf, not two.<sup>14</sup> *Second*, the con-

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13 *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)*, Judgment, I.C.J. Reports 1969 (hereinafter “*North Sea Cases*”) at para. 89.

14 *Bangladesh/Myanmar* at paras 361-362. See also *Delimitation of Maritime Boundary between Barbados and Trinidad & Tobago*, Award, 11 April 2006, reprinted in 27 RIAA 147 (hereinafter “*Barbados/Trinidad and Tobago*”) at para 213. Reproduced in MB, Vol. V; D. Colson, “The Delimitation of the Outer Continental Shelf between Neighboring States,” *American Journal of International Law*, Vol. 97, No. 91 (2003) at p. 102. MB, Vol. III, Annex B48.

cavity of Bangladesh's coastline is a relevant circumstance that requires, at a minimum, a substantial departure from the provisional equidistance line beyond 200 M.<sup>15</sup>

5.20 Sandwiched within a concave coastline between Myanmar in the East and India to the West, Bangladesh's most fundamental argument is, and has always been, that a delimitation with either party that is based on equidistance will necessarily lead to an inequitable outcome. In its Judgment in *Bangladesh/Myanmar*, ITLOS accepted that argument. It held:

The Tribunal further notes that, on account of the concavity of the coast in question, the provisional equidistance line it constructed in the present case does produce a cut-off effect on the maritime projection of Bangladesh and that the line if not adjusted would not result in achieving an equitable solution, as required by articles 74 and 83 of the Convention.<sup>16</sup>

5.21 With regard to the impact of coastal concavity in the area beyond 200 M, ITLOS observed that:

if the equidistance method is employed, then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced. So great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as far as possible, being of itself creative of inequity.<sup>17</sup>

5.22 Finally, the Tribunal held: "Having considered the concavity of the Bangladesh coast to be a relevant circumstance for the purpose of delimiting the exclusive economic zone and the continental shelf within 200 nm, the Tribunal finds that this relevant circumstance has a continuing effect beyond 200 nm."<sup>18</sup>

5.23 Chapter 7 of the Counter-Memorial concerning the delimitation of the continental shelf beyond 200 M nowhere addresses this aspect of the ITLOS Judgment, much less does it show why the Tribunal's findings are not directly applicable in this case as much as in the Myanmar case. Instead, it confines itself to arguing that the equidistance line within 200 M should simply be extended into the continental shelf beyond 200 M. According to India, this is because "the method applicable to the delimitation of the continental shelf is equally applicable to the entire shelf, whether within or beyond 200 nautical miles."<sup>19</sup>

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15 *Bangladesh/Myanmar* at para. 291.

16 *Ibid.* at para. 293.

17 *Ibid.* at para. 294 (citing *North Sea Cases* at para. 89).

18 *Ibid.* at para. 461.

19 CMI at para. 7.48.

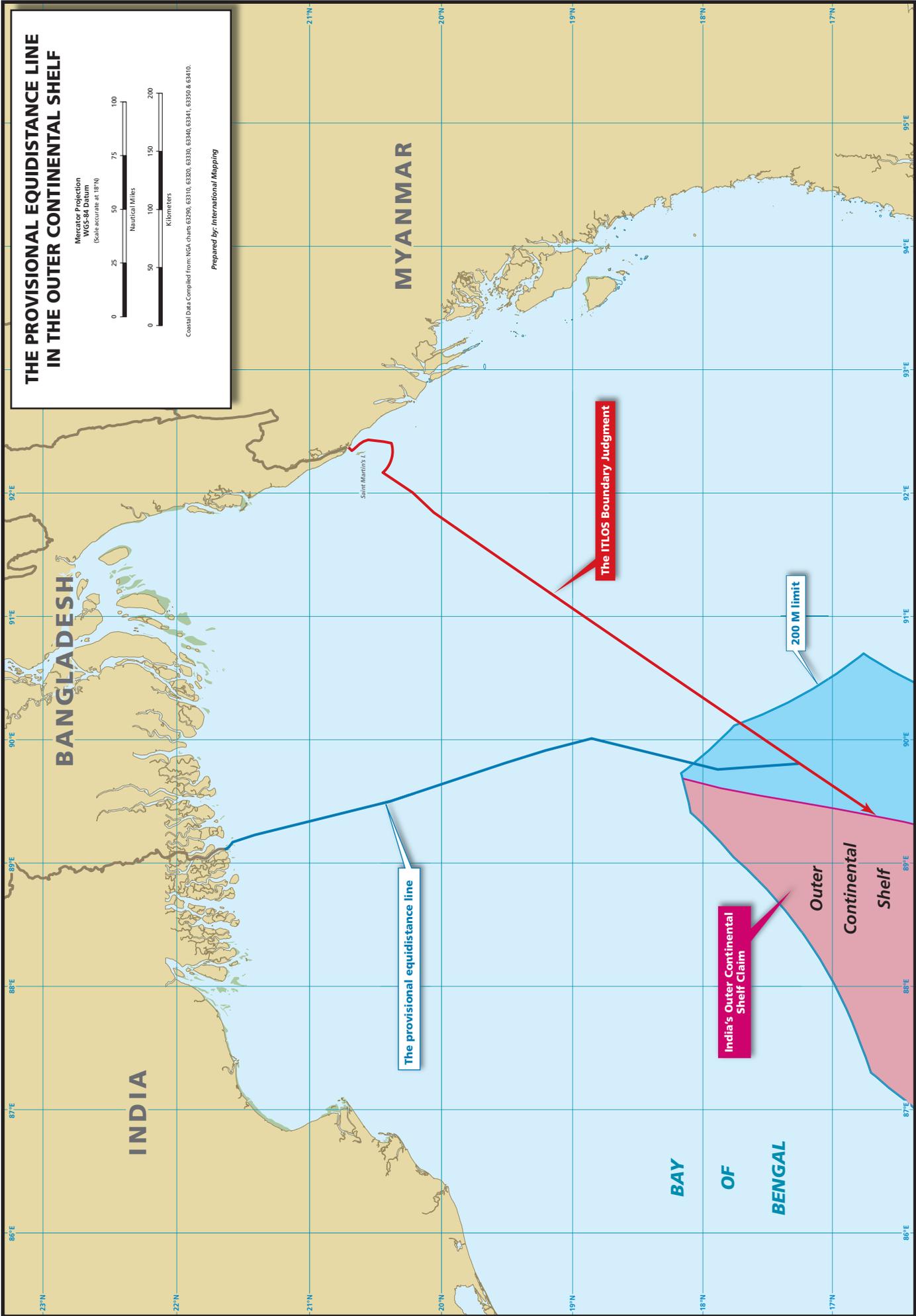


Figure R5.2



5.24 India bases its argument in part on the following statement from the *Bangladesh/Myanmar* Judgment:

In the view of the Tribunal, the delimitation method to be employed in the present case for the continental shelf beyond 200 nautical miles should not differ from that within 200 nm. Accordingly, the equidistance/relevant circumstances method continues to apply for the delimitation of the continental shelf beyond 200 nm.<sup>20</sup>

5.25 India has correctly quoted the language of the ITLOS Judgment, but it has drawn the wrong conclusion from it in at least two critical respects. *First*, the Tribunal did *not* state that the method applicable in the continental shelf beyond 200 M must be equidistance, as India contends. To the contrary, the Tribunal simply said that the appropriate analytical approach is the same equidistance/relevant circumstances method as used within 200 M. But that, of course, very much leaves open the possibility of making a substantial adjustment to, or even abandonment of, the provisional equidistance line in light of relevant circumstances.

5.26 *Second*, India rather conspicuously overlooks the fact that ITLOS did in fact make a substantial adjustment to the provisional equidistance line in the continental shelf beyond 200 M, as well as within 200 M. Indeed, it could hardly have been otherwise given the Tribunal's finding, quoted above, that the concavity of the Bangladesh coast continued to be a relevant circumstance in the area beyond 200 M.

5.27 Bangladesh certainly agrees that the core principles of maritime boundary delimitation law are applicable "irrespective of the nature of maritime zones to be delimited or the method applied to the delimitation."<sup>21</sup> What that means, however, is that in accordance with Article 83, the Arbitral Tribunal's task is to achieve a solution that is equitable both within 200 M and beyond 200 M.

5.28 Bangladesh also agrees that there is in law only one continental shelf, not two. But that does not mean that the line adopted in one area of the shelf must necessarily be extended unchanged through another area of the shelf. At first blush, there may be an appealing simplicity in extending the boundary adopted within 200 M through the shelf beyond 200 M. Yet, it remains fundamental to this and every other maritime boundary delimitation that an equitable solution will depend on the particular circumstances of each case. ITLOS emphasised the importance of this point:

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20 *Ibid.* at para. 7.49 (citing *Bangladesh/Myanmar* at para. 455).

21 *Ibid.* at para 7.48.

The Tribunal observes that the issue of which method should be followed in drawing the maritime delimitation line should be considered in light of the circumstances of each case. The goal of achieving an equitable result must be the paramount consideration guiding the action of the Tribunal in this connection. Therefore the method to be followed should be one that, under the prevailing geographic realities and the particular circumstances of each case, can lead to an equitable result.<sup>22</sup>

5.29 It would be inconsistent with such an approach to conclude that a delimitation line that is equitable in one part of the area to be delimited is *per se* also equitable in all other parts. In this respect it is telling that in *Bangladesh/Myanmar* ITLOS employed two different methods to delimit the area beyond the territorial sea: (a) equidistance from the point 12 M beyond St. Martin's Island (Point 9) to a point approximately 48 M from the coast (Point 11); and (b) an azimuth matching the direction of the angle bisector proposed by Bangladesh.

5.30 Even more instructive in this respect is the recent Judgment of the ICJ in *Nicaragua v. Colombia*.<sup>23</sup> As already discussed in the previous Chapter,<sup>24</sup> the Court in that case used three different delimitation methods to delimit different areas of the continental shelf/EEZ boundary between the parties. It began with an equiratio line in the area where Nicaragua's mainland coast and Colombia's islands faced each other; it then enclaved certain of Colombia's islands at the southern end of the equiratio line, and to the northeast of it; and it then delimited the area 'behind' the islands by means of parallels of latitude.

5.31 The methodology adopted varied from segment to segment *within the same maritime zone* depending on the Court's evaluation of how the relevant circumstances affected the balance of the equities in different areas. So, for example, the Court decided to move from the equiratio method in one area of the EEZ/continental shelf within 200 M to enclaves and parallels of latitude, finding that:

to extend that [equiratio] line into the parts of the relevant area north of point 1 or south of point 5 would not lead to an equitable result. While the simplified weighted line represents a shifting of the provisional median line which goes some way towards reflecting the disparity in coastal lengths, it would, if extended beyond points 1 and 5, still leave Colombia with a significantly larger share of the relevant area than that accorded to

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22 *Bangladesh/Myanmar* at para 235.

23 *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Judgment, I.C.J. Reports 2012 (hereinafter "*Nicaragua v. Colombia*").

24 RB at paras. 4.12-4.25.

Nicaragua, notwithstanding the fact that Nicaragua's relevant coast is more than eight times the length of Colombia's relevant coast.<sup>25</sup>

5.32 *Nicaragua v. Colombia* is not the only case in which different methodologies have been used in different parts of a continental shelf boundary. In *Tunisia/Libya*,<sup>26</sup> for instance, the ICJ used two different methods in two different parts of the continental shelf. In the areas closest to shore, the delimitation adjudged by the Court followed the line that had been consistently followed by both parties in their oil concession practice.<sup>27</sup> The Court treated this line as a tacit agreement or *modus vivendi* as to the location of the maritime boundary in that area.<sup>28</sup> In the area further from shore, however, the Court turned to the angle-bisector method to determine the course of the boundary.<sup>29</sup> **Figure R5.3** (in Volume II only) shows the two different approaches used by the Court in the same maritime zone.

5.33 Similarly, in the *Anglo/French Continental Shelf* case,<sup>30</sup> the Court of Arbitration used three different methods to delimit the continental shelf boundary between the parties. For much of its length, the adjudicated boundary followed an unadjusted median line between the United Kingdom and France.<sup>31</sup> In the region of the Channel Islands, however, the Court shifted to the enclaving method to take account of the unique geographic position of those islands vis-à-vis the mainland coast of France.<sup>32</sup> And in the region immediately west of the English Channel in the Celtic Sea, the Court of Arbitration adopted a modified equidistance line giving half effect to the U.K.'s Scilly Isles.<sup>33</sup> **Figure R5.4** (in Volume II only) depicts the various different methods adopted in the different parts of the continental shelf.<sup>34</sup>

25 *Nicaragua v. Colombia* at para. 236.

26 *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, Judgment, I.C.J. Reports 1982 (hereinafter "*Tunisia/Libya*").

27 *Ibid.* at paras. 96 and 121.

28 *Ibid.* at paras. 93-95.

29 *Ibid.* at paras. 126-129.

30 *Delimitation of the Continental Shelf between France and the United Kingdom*, Decision, 30 June 1977, reprinted in 18 RIAA 3 (hereinafter "*Anglo/French Continental Shelf Case*"). Reproduced in MB, Vol. V.

31 *Ibid.* at paras. 109-110.

32 *Ibid.* at paras. 198-203.

33 *Ibid.* at para. 251-255.

34 Other examples in which Courts or Tribunals have used multiple delimitation methodologies include: *Case Concerning Delimitation of Maritime Areas between Canada and France (St Pierre et Miquelon)*, Decision, 10 June 1992, reprinted in 31 ILM 1149 (hereinafter "*St. Pierre & Miquelon*"). Reproduced in MB, Vol. V (employing a median line in the northern sector, a 12 M EEZ enclave beyond the territorial sea in the western sector, and a narrow corridor to St. Pierre & Miquelon's 200 M limit in the southern sector); and *Maritime Delimitation in the Area between*

5.34 It is therefore clear that there is no rule of law requiring adherence to a single method of delimitation within the same maritime zone, whether the exclusive economic zone or the continental shelf. If equitable considerations can mandate a change in the continental shelf boundary, or the methodology for delimiting it, within 200 M – as in *Bangladesh/Myanmar*, *Nicaragua v. Colombia*, *Tunisia/Libya* and the *Anglo/French Continental Shelf* case – then they can certainly require a change in the direction of the boundary when it crosses the 200 M line.

5.35 In the previous Chapter, Bangladesh demonstrated that *within* 200 M the relevant circumstances (namely, the concavity of the Bangladesh coast and the instability of the Bengal Delta) warrant the adoption of 180° bisector line.<sup>35</sup> Merely extending that line through the area beyond 200 M would not, however, lead to an equitable solution in that area. That result is depicted in **Figure R5.5** (in Volume II only). As can be seen, Bangladesh would still be left with a tapering wedge of maritime space that reflects the continuing prejudice of the Bay of Bengal concavity. As explained in Chapter 5, the 180° line reduces, but does not come close to eliminating, the inequity resulting from the concavity of the coastline.<sup>36</sup> The inequity is particularly acute in the area beyond 200 M. At 200 M from the coast, Bangladesh's wedge has tapered to only 67 M (as compared to 188 M along the coast). Because this “pie slice” continues to narrow as it extends farther from the coast, it leaves Bangladesh with an area beyond 200 M that is only 20% of its potential entitlement.

5.36 Unlike an equidistance based solution, the 180° line would cross into areas of continental shelf beyond 200 M that India has claimed before the CLCS – but only just barely. India would give up only 7,000 sq km (2%) of the maritime space from the 345,000 sq km of potential entitlement it enjoys in the continental shelf beyond 200 M in the Bay of Bengal as a whole.

5.37 In its recent Judgment in *Nicaragua v. Colombia*, the ICJ stated the following principle of general application: “An equitable solution requires that each State enjoy reasonable entitlements in the areas into which its coasts project.”<sup>37</sup> In a similar vein, the Court elsewhere stated that “it must take proper account ... [of] the need to avoid cutting either

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*Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, I.C.J. Reports 1993 at p. 38 (employing three different geometric adjustments to the provisional equidistance line in three different sectors).

35 RB at paras. 4.109 *et seq.*

36 RB at para. 4.135.

37 *Nicaragua v. Colombia* at para. 216.

State off from the maritime spaces into which its coasts project.”<sup>38</sup> Both these statements are, of course, entirely consistent with the principle – with which both Bangladesh and India agree – that an equitable delimitation must allow the relevant coasts of the parties “to produce their effects, in terms of maritime entitlements, in a reasonable and mutually balanced way.”<sup>39</sup>

5.38 A result that would allot to Bangladesh only 20% of its potential entitlement beyond 200 M (while allotting India 98% of its entitlement) plainly does not represent a reasonable and mutually balanced sharing of the relevant area. Accordingly, the only way to ensure a truly equitable solution is by bending the 180° line at the point where it reaches the international 200 M limit so as to allow Bangladesh to “enjoy reasonable entitlements” in the area beyond 200 M.

5.39 The adjustment to the 180° line must, of course, be reasonable and balanced. As ITLOS observed in *Bangladesh/Myanmar*, “an equitable solution requires, in light of the coastal geography of the Parties, that [the adjustment] be done in a balanced way so as to avoid drawing a line having a converse distorting effect on the seaward projection of Myanmar’s coastal façade.”<sup>40</sup> Were it otherwise, the effect would, in the words of the ICJ, “be to remedy one instance of cut-off by creating another.”<sup>41</sup>

5.40 The reality in this case is that there is very little danger of creating a significant cut-off of India. In that regard, it is useful to recall that even if the Tribunal were to delimit the boundary as Bangladesh proposed in the Memorial – that is, leaving to Bangladesh *all* of the area beyond 200 M where the Parties’ potential entitlements under Article 76(4) overlap – India would still retain the continental shelf beyond 200 M in the area to the south of the outer limit of Bangladesh’s claim. The full extent of this shelf is shown in **Figure R5.6** (in Volume II only).

5.41 But Bangladesh no longer claims the entire area of overlap. As discussed above, it recognises the force and effect of the *Bangladesh/Myanmar* Judgment insofar as it relates to the interpretation of Article 76. Bangladesh has therefore modified its claim to take account of the ITLOS Judgment, and the delimitation principles stated therein. To be specific, Bangladesh submits that upon reaching the international 200 M limit, the 180°

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38 *Ibid.* at para. 236.

39 *Romania v. Ukraine* at para. 201.

40 *Bangladesh/Myanmar* at para. 325.

41 *Nicaragua v. Colombia* at para. 216.

line should bend and run along an azimuth of 214°<sup>42</sup> parallel to the Bangladesh-Myanmar delimitation up to the outer limit of Bangladesh's continental shelf. This proposed delimitation is depicted in **Figure R5.7** (following this page).

5.42 There are at least three compelling and inter-related reasons why this constitutes the equitable solution that Article 83 of the 1982 Convention requires. *First*, it more equitably abates the cut-off effect caused by the concavity of the Bangladesh coast. As discussed above, it has long since been recognised that the prejudicial effects of coastal irregularities like a concavity are greatest in areas furthest from shore.<sup>43</sup> This case proves the point. Whether equidistance or the 180° line that Bangladesh proposes within 200 M were used to delimit the area beyond 200 M, Bangladesh would be left with the narrow, pie-slice bit of maritime space that is the hallmark of a prejudicial coastal concavity. To be sure, Bangladesh's slice of the pie is somewhat bigger with the 180° line than with equidistance. Yet, in either case the fact remains: Bangladesh's rights in the continental shelf beyond 200 M would be limited to a small fraction of its potential entitlement solely by virtue of the concavity, while India would enjoy virtually every bit of its overlapping entitlement in the same area. Limiting Bangladesh to such a small area would run afoul of the principles that "each State [must] enjoy reasonable entitlements in the areas into which its coasts project"<sup>44</sup> and that the delimitation be effected in such a way as to allow the relevant coasts "to produce their effects, in terms of maritime entitlements, in a reasonable and mutually balanced way."<sup>45</sup>

5.43 The solution Bangladesh proposes is consistent with these principles. It would more appreciably – although not at all entirely – abate the effects of the relevant circumstance that permeates this case: its pronounced coastal concavity. Bangladesh would more truly enjoy "reasonable entitlements" in the area beyond 200 M, yet without creating any meaningful countervailing cut-off effect on India.

5.44 *Second*, the proposed solution would be consistent with the overall geographic circumstances prevailing in the Bay of Bengal, and with the *Bangladesh/Myanmar* Judgment. Nature has oriented the Bay along a northeast-southwest axis running from the head of the Bay to the point where the Indian coast turns in a more southerly direction nearer Sri

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42 The ITLOS judgment defined the boundary as a geodesic line with a starting azimuth of 215°. A geodesic line is curved on a Mercator projection and its azimuth changes along its length. By the time it reaches the 200M limit the azimuth shows a slight decrease to 214° and this is the correct value to use when starting the line at the 200M limit.

43 See *North Sea Cases* at para. 89; *Bangladesh/Myanmar* at paras. 293-294.

44 *Nicaragua v. Colombia* at para. 216.

45 *Romania v. Ukraine* at para. 201.

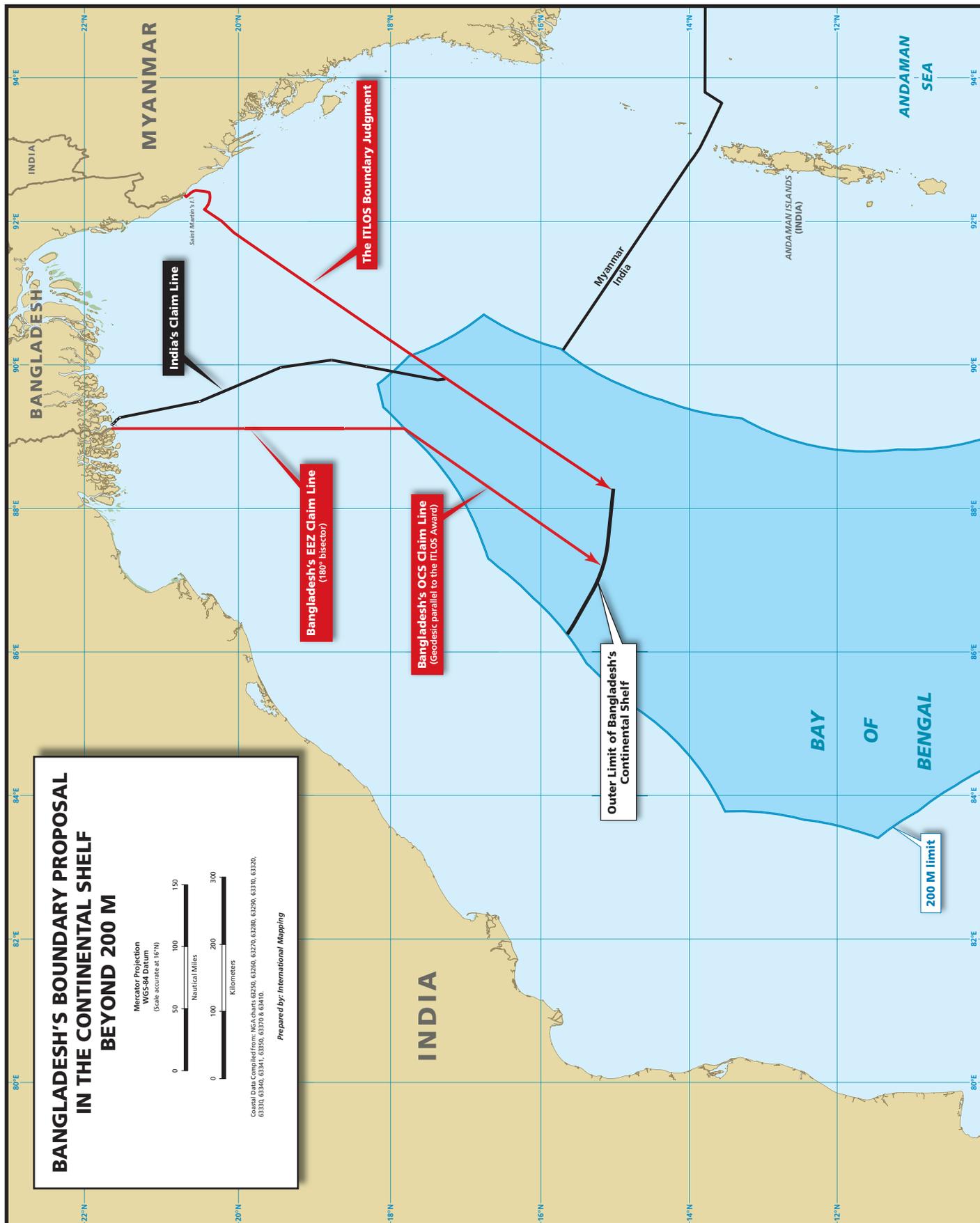


Figure R5.7



Lanka. The direction of that axis can be quantified more precisely by calculating a median line along the area of outer continental shelf beyond 200M. As depicted in **Figure R5.8** (in Volume II only), the axis follows a general bearing of 214°/215°, virtually identical to the bearing of the Bangladesh-Myanmar delimitation as adjudged by ITLOS. Thus, by continuing the continental shelf boundary between Bangladesh and Myanmar beyond 200 M along the 214° azimuth, ITLOS in effect placed the maritime boundary along the axis of the Bay of Bengal as a whole.

5.45 It is in this light that ITLOS's decision not to change the direction of the delimitation line at 200 M can be understood. Due to the general directional orientation of the Bay, combined with Myanmar's far more limited potential entitlements in the continental shelf beyond 200 M, ITLOS had less latitude to craft a solution that ensured that both States in that case would be able to enjoy reasonable entitlements in the common area into which both their coasts project. If it had deflected the line with Myanmar at 200 M even by just small amount, the result would have been to more obviously cut off the projection of Myanmar's coast into the sea.

5.46 The circumstances in this case are different, however. Bending the delimitation line in this case to run along a 214° azimuth that is parallel to the Bangladesh/Myanmar boundary beyond 200 M would align the Bangladesh/India boundary both with the general directional axis of the Bay and the result in *Bangladesh/Myanmar*. Moreover, there is substantially more flexibility to deflect the line on the Indian side than there was on the Myanmar side. There is, as stated, no danger of cutting India off to any significant degree. Bending the line as Bangladesh proposes would still allow India to reach a substantial portion of its potential entitlement in the area of overlap, not to mention its very ample entitlements (unclaimed by Bangladesh) to the south. Conversely, failing to bend the line would exacerbate the cut-off of Bangladesh, and leave all or virtually all of the area of overlapping entitlements to India.

5.47 *Third*, deflecting the line in the manner Bangladesh proposes would comport with the State practice discussed in Bangladesh's Memorial and revisited in the previous Chapter.<sup>46</sup> As shown, there is a substantial body of State practice from Africa, Asia, the Caribbean and Europe in which States trapped in the middle of a concavity have been accorded corridors of maritime space out to the natural limits of their entitlements. Although none of these agreements extends to areas beyond 200 M, this is not determinative. There is, as stated, only one continental shelf and the same principles apply throughout.<sup>47</sup> What mat-

46 See RB at paras.4.89-4.90.

47 *Bangladesh/Myanmar* at paras. 361-362.

ters is the achievement of an equitable solution. All of these examples are relevant *mutatis mutandis* to the achievement of such a solution beyond 200 M. They show that an equitable delimitation must account for the relevant geographical circumstances, including concavity and cut-off, in order to avoid potential inequity.<sup>48</sup>

5.48 The State practice also comports with Professor Charney's principle of "maximum reach." In his writing, Professor Charney observed that international courts and tribunals have sought "to delimit maritime boundaries so that all disputants are allotted some access to the areas approaching the maximum distance from the coast permitted for each zone."<sup>49</sup> He cites as examples the *North Sea Cases*, the *Gulf of Fonseca* case and *St. Pierre & Miquelon*. To this list can be added the *Guinea/Guinea-Bissau* case in which the distinguished arbitral tribunal expressly noted that the critical problem posed by a coastal concavity is that "the equidistance method has the other drawback of resulting in the middle country being enclaved by the other two and thus prevented from extending its maritime territory as far seaward as international law permits."<sup>50</sup>

5.49 The ICJ's recent Judgment in *Nicaragua v. Colombia* can also be added to this list. In crafting the solution it ultimately adopted in the case, the Court was guided by the need to ameliorate the cut-off effect the provisional equidistance line had on Nicaragua's mainland coast. At the same time, the Court was mindful of the need to do so in a balanced fashion. It stated that:

[A]ny adjustment or shifting of the provisional median line must not have the effect of cutting off Colombia from the entitlements generated by its islands in the area to the east of those islands. Otherwise, the effect would be to remedy one instance of cut-off by creating another. An equitable solution requires that each State enjoy reasonable entitlements in the areas into which its coasts project.<sup>51</sup>

Elsewhere, the Court similarly referred to "the need to avoid cutting either State off from the maritime spaces into which its coasts project."<sup>52</sup>

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48 See also RB at paras 4.60 *et seq.*

49 J.I. Charney, "Progress in International Maritime Boundary Delimitation Law," *American Journal of International Law*, Vol. 88, No. 227 (1994) (hereinafter "Charney (1994)") at pp. 247 *et seq.* MB, Vol. III, Annex B43.

50 *Delimitation of Maritime Boundary between Guinea and Guinea-Bissau*, Award, 14 February 1985, reprinted in 25 ILM 252 (hereinafter "*Guinea/Guinea-Bissau*") at para. 104. Reproduced in MB, Vol. V.

51 *Nicaragua v. Colombia* at para. 216.

52 *Ibid.* at para. 236.

5.50 To take account of these concerns, the Court used two parallels of latitude to define the boundary in the area to the east of Colombia's islands. It thus created for Nicaragua unimpeded access to its 200 M limit north and south of the corridor it created so that Colombia's islands would project to the limits of their entitlements, and thereby gave effect to Charney's principle of maximum reach.

5.51 This result is all the more remarkable given the diminutive size of Colombia's insular possessions. The Court calculated the total relevant coastal length of Colombia's islands to be just 65 km, less than 1/8<sup>th</sup> the size of Nicaragua's relevant coast. Even this figure may arguably overstate the size of the islands because it included the measurement of their entire circumference.<sup>53</sup> Even so, the ICJ considered itself bound to avoid cutting them off "from the maritime spaces into which [their] coasts project," and instead allowed them to project fully to the outer limits of those spaces.<sup>54</sup>

5.52 Bangladesh is, of course, far different from these tiny Colombian islands. It is a substantial coastal State. As explained in the previous Chapter, its relevant coastal length is 424 km. Measured point-to-point between its land boundary termini with India and Myanmar, its coastal opening onto the seas measures 348 km (188 M). (The difference between the two measurements is due to the concavity of Bangladesh's coast.) If Colombia's small insular possessions in the middle of the Caribbean Sea were enabled to "extend [their] maritime territory as far seaward as international law permits,"<sup>55</sup> Bangladesh's mainland coast should receive no less favourable treatment.

5.53 For all these reasons, the boundary beyond 200 M that Bangladesh proposes constitutes an equitable solution under Article 83. It abates the concavity-induced cut off on Bangladesh without creating any corresponding cut-off effect on India. It is also consistent with the case law and State practice.

5.54 Bangladesh observes that in *Bangladesh/Myanmar*, ITLOS ruled that the 215° boundary adopted in that case extended "until it reaches the area where the rights of third States may be affected."<sup>56</sup> Should the Arbitral Tribunal agree with Bangladesh that the boundary with India beyond 200 M should be deflected so as to accord Bangladesh a corridor out to the limits of its continental shelf, the ITLOS boundary would by necessity reach the area where Bangladesh, India and Myanmar all maintain claims. In that event,

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53 *Ibid.* at paras. 151-153.

54 *Ibid.* at para. 236.

55 *Guinea/Guinea-Bissau* at para. 104.

56 *Bangladesh/Myanmar* at para. 462.

Bangladesh submits that the 215° line should continue to mark the limits of its maritime jurisdiction; it makes no claim to anything east of the line. In the event that any portions of this area are later determined to appertain to India, the Arbitral Tribunal should determine that the same 215° line equally delimits the area between it and Bangladesh.

### III. The Grey Area

5.55 India's Counter-Memorial says nothing about what was referred to in the ITLOS Judgment to as the "grey area" – that is, the small area beyond the Bangladesh EEZ which is within 200 M of India.<sup>57</sup> As ITLOS observed:

Such an area results when a delimitation line which is not an equidistance line reaches the outer limit of one State's exclusive economic zone and continues beyond it in the same direction, until it reaches the outer limit of the other State's exclusive economic zone.<sup>58</sup>

In this case, the grey area is created by the use of the non-equidistant 180° line to delimit the boundary out to India's 200 M limit. The size and location of the grey area is depicted in **Figure R5.9** (following this page).

5.56 In *Bangladesh/Myanmar*, ITLOS had no difficulty deciding the status of this area. It held:

[I]n the area beyond Bangladesh's exclusive economic zone that is within the limits of Myanmar's exclusive economic zone, the maritime boundary [*i.e.*, the 215° line] delimits the Parties' rights with respect to the seabed and subsoil of the continental shelf but does not otherwise limit Myanmar's rights with respect to the exclusive economic zone, notably those with respect to the superjacent waters.<sup>59</sup>

In other words, the grey area was Bangladesh's continental shelf and Myanmar's EEZ.

5.57 The Tribunal saw nothing anomalous in creating an area of divided jurisdiction, observing:

The Tribunal recalls in this respect that the legal regime of the continental shelf has always coexisted with another legal regime in the same area. Initially that other regime was that of the high seas and the other States concerned were those exercising high seas freedoms. Under the Convention,

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57 See MB at paras. 7.69-7.74.

58 *Bangladesh/Myanmar* at para. 464.

59 *Ibid.* at para. 474.

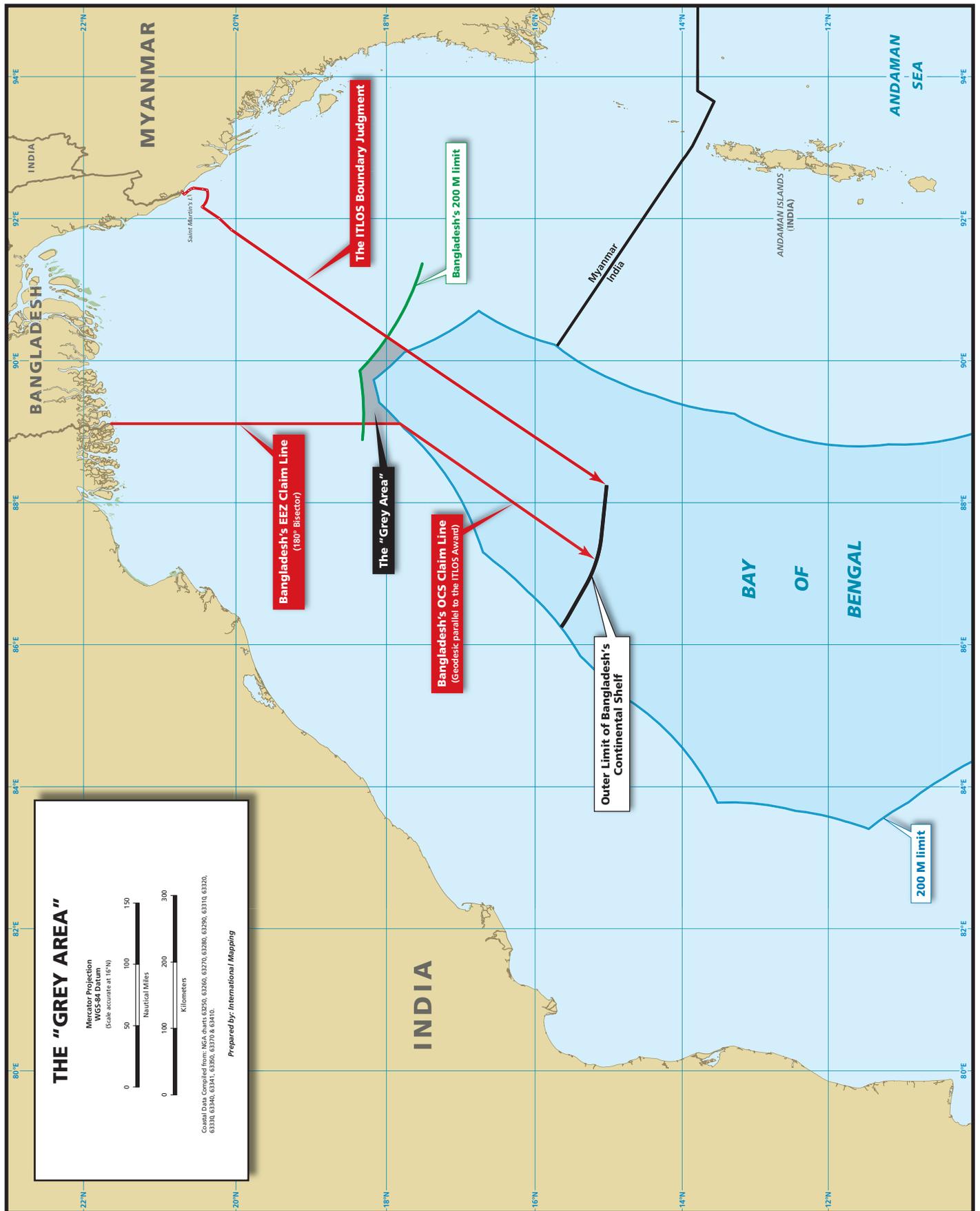


Figure R5.9



as a result of maritime delimitation, there may also be concurrent exclusive economic zone rights of another coastal State. In such a situation, pursuant to the principle reflected in the provisions of articles 56, 58, 78 and 79 and in other provisions of the Convention, each coastal State must exercise its rights and perform its duties with due regard to the rights and duties of the other.<sup>60</sup>

5.58 Bangladesh submits that the Arbitral Tribunal should adopt the same solution in this case. The area beyond 200 M from Bangladesh but within 200 M from India should be continental shelf as to Bangladesh and EEZ as to India. Beyond 200 M from India, the boundary would be a pure continental shelf boundary.

#### IV. The Proposed Delimitation Line Beyond 200 M Is Not Disproportionate

5.59 The final step in the delimitation process is, of course, the now-familiar disproportionality test. In *Barbados/Trinidad and Tobago*, the Annex VII tribunal explained the purpose of this test in the following terms:

The role of proportionality, as noted, is to examine the final outcome of the delimitation effected, as the final test to ensure that equitableness is not contradicted by a disproportionate result.<sup>61</sup>

5.60 In order to perform the test it is necessary to have measures both of the Parties' relevant coasts and the relevant area. It is to that task that Bangladesh now turns.

5.61 Turning first to the identification of the relevant coast of Bangladesh, this is not an issue about which much need be said. In its Counter-Memorial, India accepts that the entire coast of Bangladesh is relevant to this delimitation.<sup>62</sup> Bangladesh agrees. This approach has the added advantage of being consistent with the approach to the Bangladesh relevant coast taken by ITLOS in *Bangladesh/Myanmar*.

5.62 In its March 2012 Judgment, ITLOS measured the relevant coast of Bangladesh by means of two straight lines that together added up to 413 km. India measures this same coast as being 417 km in length. India has, however, measured the Bangladesh coast from the wrong land boundary terminus. As described in Chapter 3, the actual land boundary terminus as determined by Radcliffe in 1947 is located some 7 km further to the west of

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60 *Ibid.* at para. 475.

61 *Barbados/Trinidad and Tobago* at para. 337. Reproduced in MB, Vol. V.

62 CMI at para. 6.37.

where India purports to place it. These 7 km must be added to the length of Bangladesh's relevant coast. The final measurement is therefore 424 km.

5.63 On the Indian side, the Counter-Memorial argues that India's relevant coast should be measured by three straight lines connecting the land boundary terminus with Bangladesh in the Raimangal Estuary to Devi Point on India's peninsular coast. According to the Counter-Memorial, these three segments taken together yield a total coastal length of 411 km. Here again, India has measured from the wrong land boundary terminus. The 7 km that were added to the length of the Bangladesh relevant coast just above must be deducted from the length of the India relevant coast. The proper measurement of the first three segments of the India relevant coast is therefore 404 km.

5.64 That said, in Bangladesh's view, considered in light of the ITLOS Judgment, India's relevant coast must actually be deemed longer than that. The Counter-Memorial inappropriately stops its measurement of India's relevant coast at Devi Point because it limits its consideration of the relevant area to the space within 200 M. As discussed in Chapter 4, however, the frame of reference must be expanded to include also the area beyond 200 M since that describes the entirety of the area at issue in this case.<sup>63</sup> That being the case, India's relevant coast must also be longer.

5.65 Bangladesh considers it appropriate to extend India's relevant coast to that point on the peninsular coast of India directly opposite the point on the proposed outer limit of Bangladesh's continental shelf that is closest to India. The relevant point on the Indian coast is at Sandy Point. Measuring the distance between Devi Point and Sandy Point by means of a straight line adds an additional 304 km to the length of India's relevant coast. The final measurement is thus 708 km.

5.66 **Figure R5.10** (following this page) depicts the relevant coasts of both Bangladesh and India. India's relevant coast is longer than Bangladesh's by a ratio of **1:1.67**.

5.67 Bangladesh notes that the relevant coasts as defined for purposes of conducting the disproportionality analysis are not the same as the coasts used in Chapter 4 for the construction of the angle-bisector line proposed for the delimitation of the EEZ and continental shelf within 200 M. There is no requirement that they be one and the same. Indeed, India expressly agrees that different coasts can be used for these two different purposes. The Counter-Memorial states:

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63 RB at para. 4.151.

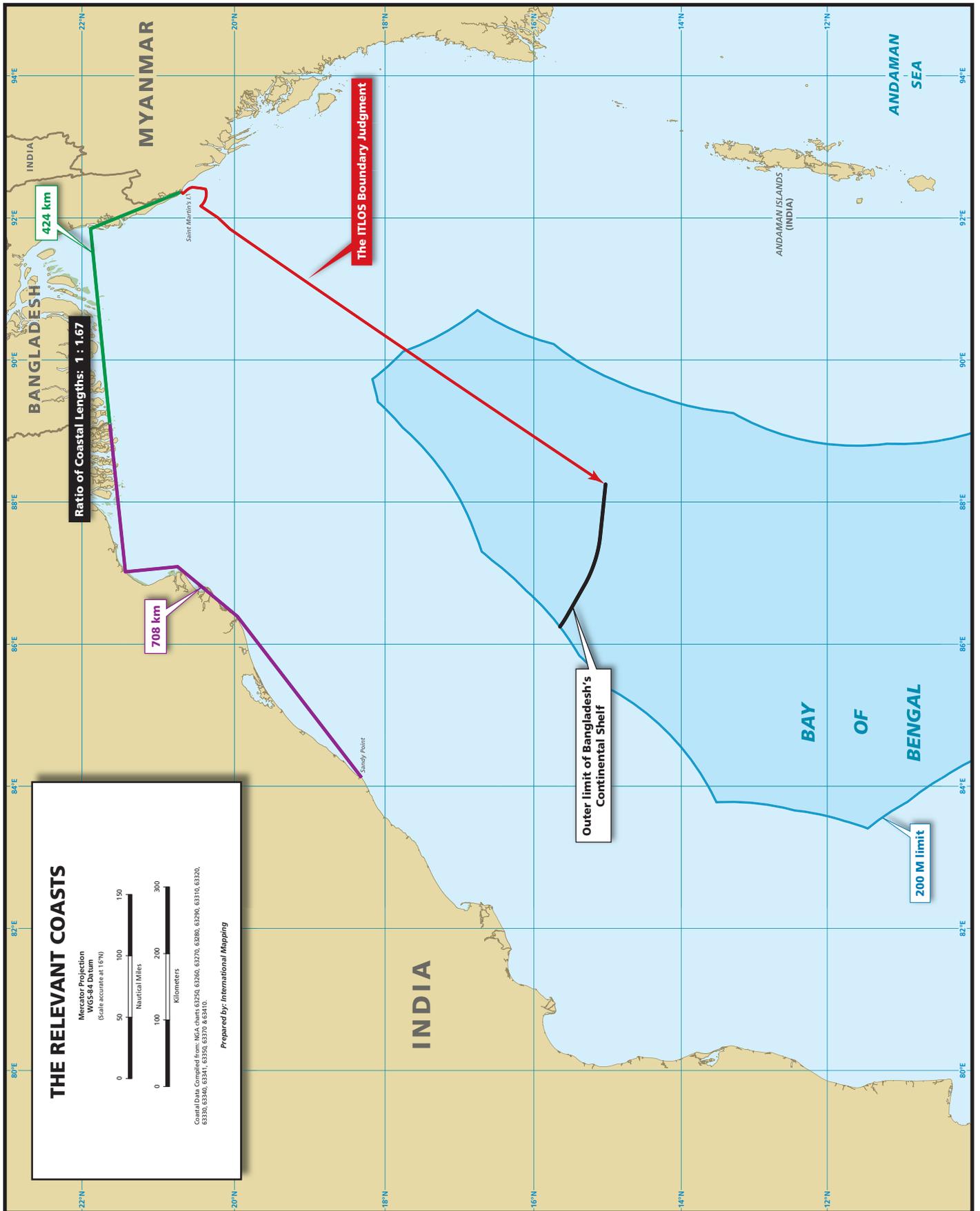


Figure R5.10



[A] clear distinction should be made between the coasts relevant for drawing the bisector, and those which are relevant for applying the non-disproportionality test. Contrary to Bangladesh's unexpressed assumption, the identification of the relevant coasts for the delimitation in general and the depiction of the general direction of the coast when applying the angle-bisector method are two distinctly different operations which are performed at two different stages of the delimitation process.<sup>64</sup>

5.68 In this respect, India is correct. The coast selected for the determination of the bisector and the coast selected for purposes of conducting the disproportionality analysis serve different purposes. The coast used for determining the course of the bisector must be selected with a view to alleviating the circumstances that warranted recourse to the bisector in the first place: here, the inequities caused by Bangladesh's concave coast. The relevant coasts used for purposes of the disproportionality calculation, however serve an entirely different purpose. In that distinct context, the purpose is simply "to ensure that there is not a disproportion so gross as to 'taint' the result and render it inequitable."<sup>65</sup>

5.69 Turning then to the relevant area, the critical point has already been stated. Consistent with the ITLOS Judgment, it must include not only areas within 200 M but also areas beyond 200 M that are in dispute between the Parties. Here, that area virtually defines itself:

- In the south, it is limited by the outer limit of Bangladesh's claim in the outer continental shelf as submitted to the CLCS. Beyond that limit, no areas can be relevant to this dispute.
- In the east, it is limited by the extension of the 215° azimuth adjudged by ITLOS. Bangladesh recognises that it can have no claim to the areas to the east of that line.
- And in the west, it is limited by the line connecting India's Sandy Point with the point on Bangladesh's outer limit line closest to the Indian coast.

5.70 The relevant area so defined is depicted in **Figure R5.11** (following page 158). It measures a total of 366,854 sq km.

5.71 Using Bangladesh's proposed boundary solution to delimit this area yields the result depicted in **Figure R5.12** (following Figure R5.11). The division of maritime space

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64 CMI at para. 6.28.

65 *Nicaragua v. Colombia* at para. 242.

among the Parties would be as follows: 145,364 sq km for Bangladesh and 221,490 sq km for India. The ratio is **1:1.52** in favour of India. Although Bangladesh receives marginally more maritime space than it would get by drawing a strictly proportionate boundary (1:1.52 v. 1:1.67), the result is remarkably consistent with the ratio of coastal lengths and certainly by no means disproportionate within the meaning of the law. It therefore easily passes the disproportionality test.

5.72 Notably, the alternative solutions analysed in this Reply – namely, India’s claim line and the provisional equidistance line – are significantly less proportionate and therefore cannot constitute an equitable solution in the case.

5.73 **Figures R5.13** and **R5.14** (in Volume II only) show the way in which India’s claim line and an accurately drawn provisional equidistance line would divide the relevant area, respectively. For comparative purposes, the proportionality figures for each of the different delimitation lines are presented in the following table:

	<b>Bangladesh</b>	<b>India</b>	<b>Ratio</b>
Coastline (km)	424	708	1:1.67
<b>Area Calculations (sq km)</b>			
India’s Claim Line	82,689	284,165	1:3.44
Provisional Equidistance Line	86,294	280,560	1:3.25
Bangladesh’s Claim Line	145,364	221,490	1:1.52

As can be seen, both India’s claim line and an accurately drawn provisional equidistance line yield results that accord more than two times more maritime space to India than a strictly proportionate delimitation would dictate.

5.74 Compounding this inequity is the fact that India retains substantial, indeed massive, potential entitlements in the continental shelf beyond 200 M outside the area of overlap, whereas Bangladesh does not. The ‘loss’ to India associated with Bangladesh’s proposed solution would amount to a mere 2% of its claimed shelf beyond 200 M, which is considerably less than the ‘loss’ of 27% of Myanmar’s outer shelf claim to Bangladesh resulting from the ITLOS Judgment of 14 March 2012.

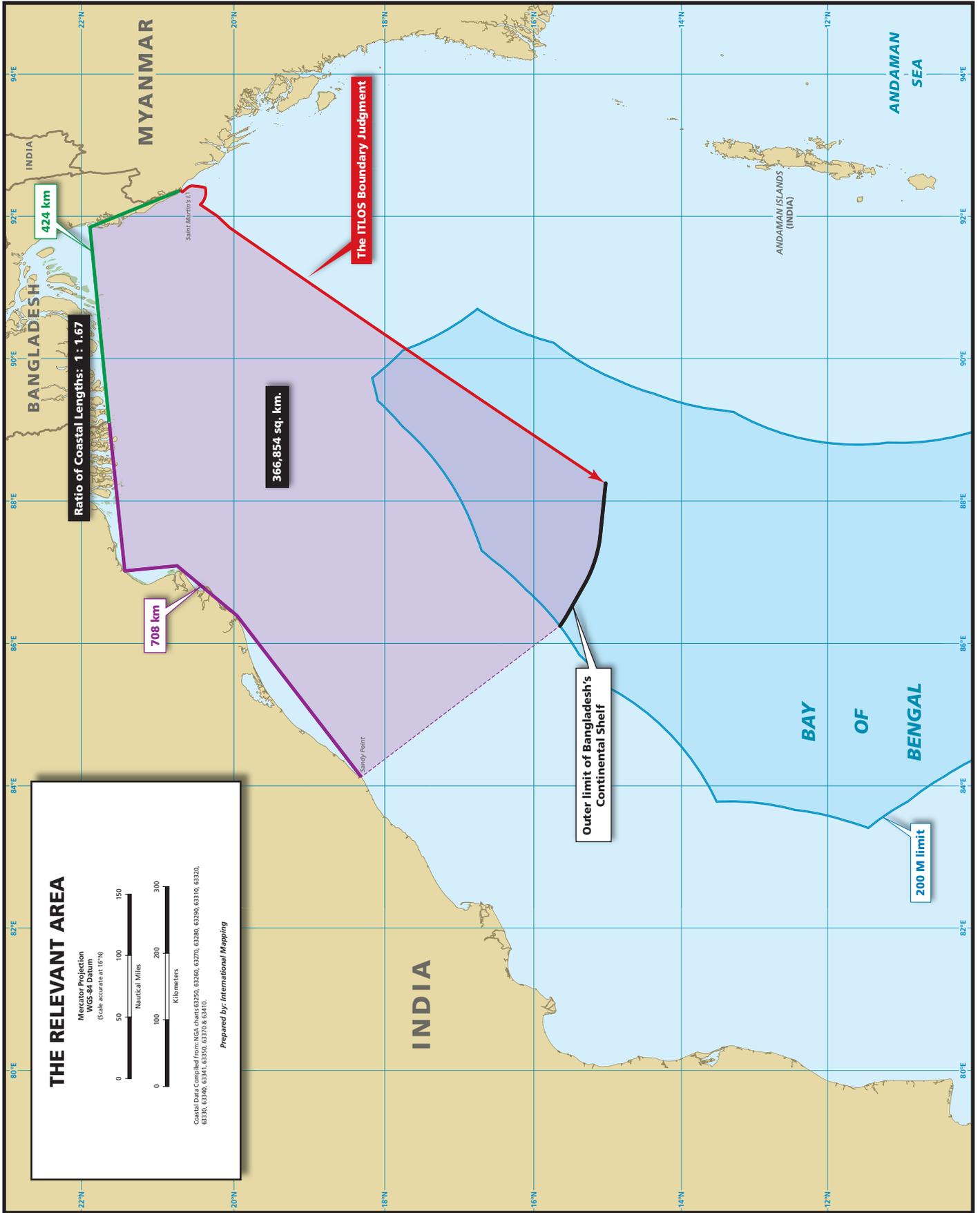


Figure R5.11



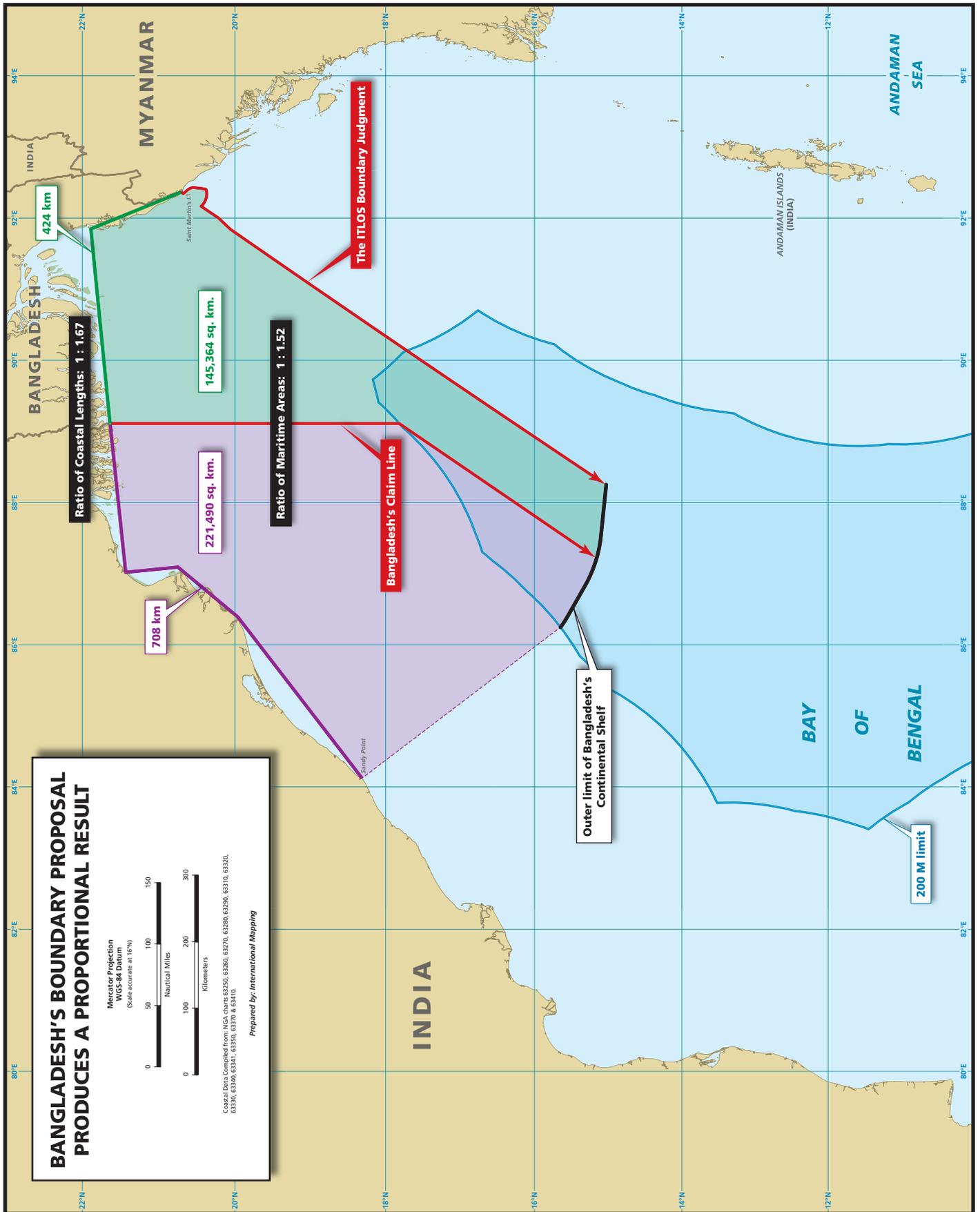


Figure R5.12



## Conclusions

5.75 For all the reasons presented above, Bangladesh proposes a delimitation line in the continental shelf beyond 200 M which:

- starts from the point at which the 180° bisector line meets India's 200 M limit;<sup>66</sup>
- thence follows a 214° azimuth, parallel to the Bangladesh-Myanmar delimitation as adjudged by ITLOS in its 14 March 2012 Judgment; and
- continues along the same 214° azimuth until it reaches the outer limit of Bangladesh's continental shelf as submitted to the CLCS in accordance with Article 76(8) of the Convention.<sup>67</sup>

5.76 This line has been shown earlier in Figure 5.7 above (following page 144). Such a line represents an equitable solution between the Parties as required by Article 83(1) of the Convention. It abates the cut-off effect on Bangladesh caused by the concavity of its coast; it ensures that Bangladesh is able to enjoy reasonable entitlements in all the areas into which its coast projects; it causes no cut-off effect on India; and it produces a result that is not disproportionate to the comparative length of the Parties' relevant coasts.

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66 This point is located at 17° 49' 36" N, 89° 06' 39" E.

67 Pending final action by the CLCS, this point is provisionally located at 15° 09' 04" N, 87° 01' 33" E.



## SUBMISSIONS

On the basis of the facts and law sets forth in this Reply, Bangladesh requests the Tribunal to adjudge and declare that:

- (1) The maritime boundary between Bangladesh and India follows a line with a geodesic azimuth of  $180^\circ$  from the location of the land boundary terminus at  $21^\circ 38' 14''$  N –  $89^\circ 06' 39''$  E to the point located at  $17^\circ 49' 36''$  N –  $89^\circ 06' 39''$  E; and
- (2) From the latter point, the maritime boundary between Bangladesh and India follows a line with a geodesic azimuth of  $214^\circ$  parallel to the delimitation adjudged by the International Tribunal for the Law of the Sea in the *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)* to the point located at  $15^\circ 09' 04''$  N –  $87^\circ 1' 33''$  E.

(All points referenced are referred to WGS84.)

31 January 2013

  
Rear Admiral (Retd.) Md. Khurshed Alam

*Deputy Agent of the People's Republic of Bangladesh*

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