

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

PEOPLE'S REPUBLIC OF BANGLADESH

v.

REPUBLIC OF INDIA

COUNTER-MEMORIAL OF THE REPUBLIC OF INDIA

VOLUME I

31 JULY 2012

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
I. THE DISPUTE SUBMITTED TO THE TRIBUNAL.....	1
II. THE LAW APPLICABLE TO THE ISSUES IN THIS CASE	6
III. STRUCTURE OF THE COUNTER-MEMORIAL	10
CHAPTER 2 GEOGRAPHY AND GEOMORPHOLOGY	13
I. COASTAL GEOGRAPHY, INCLUDING MAINLAND COASTS, ISLANDS AND LOW- TIDE ELEVATIONS	13
A. The Geography of India, its Coast in the Northern Part of the Bay of Bengal, and in the Andaman Islands.....	14
B. The Geography and Coast of Bangladesh	22
C. The Alleged “Instability” of the Coast between the Meghna and Hooghly Rivers	23
II. THE BAY OF BENGAL	24
III. THE “GEOLOGICAL HISTORY” OF THE BAY OF BENGAL.....	26
IV. CONCLUSIONS.....	30
CHAPTER 3 HISTORY OF THE DISPUTE	35
I. EMERGENCE OF THE NEW STATES AND ORIGIN OF THE DISPUTE.....	35
II. DECLARATION OF MARITIME ZONES	38
A. Bangladesh.....	38
B. India.....	41
III. THE PARTIES’ EFFORTS TO NEGOTIATE A MARITIME BOUNDARY AGREEMENT.....	42
CHAPTER 4 THE LAND BOUNDARY TERMINUS	53
I. INTRODUCTION	53
II. THE APPLICABLE LAW	58
A. The Applicable Law for the North-South or Vertical Axis: The Radcliffe Award and the “Midstream of the Main Channel”	58
B. The Applicable Law for the East-West or Horizontal Axis: The “ <i>Intra</i> <i>Fauces Terrae</i> ” Closing Line in British and International Jurisprudence	65

III. APPLYING THE LAW TO THIS DISPUTE.....	65
A. The East-West or Horizontal Axis: “The Closing Line”	65
B. The North-South or Vertical Axis: The Main Channel.....	66
IV. BANGLADESH’S INTERPRETATION	76
V. CONCLUSIONS	76
CHAPTER 5 DELIMITATION OF THE TERRITORIAL SEA.....	81
I. THE LAW APPLICABLE TO THE DELIMITATION OF THE TERRITORIAL SEAS OF INDIA AND BANGLADESH	81
A. Article 15.....	81
B. The Angle-Bisector and the Case Law	84
C. Other Relevant UNCLOS Articles	92
II. THE APPLICATION OF THE LAW TO THE FACTS OF THE PRESENT CASE.....	93
A. Bangladesh Has Failed to Establish the Presence of ‘Special Circumstances’	94
1. <i>Coastal Instability</i>	95
2. <i>Concavity</i>	96
3. <i>Bangladesh’s Misapplication of the Bisector Method</i>	97
B. Identification of Base Points	98
C. Construction of the Median Line	104
III. CONCLUSIONS	104
CHAPTER 6 DELIMITATION OF THE EXCLUSIVE ECONOMIC ZONE AND THE CONTINENTAL SHELF WITHIN 200 NAUTICAL MILES	113
I. THE APPLICABLE LAW ON THE DELIMITATION OF THE EXCLUSIVE ECONOMIC ZONE AND THE CONTINENTAL SHELF	113
II. THE RELEVANT COASTS AND THE RELEVANT AREA	121
A. Bangladesh’s Misconceptions Concerning the Notion of Relevant Coasts	122
B. The Relevant Coast of Bangladesh	130
C. The Relevant Coast of India.....	139
D. The Relevant Area	140
III. THE THREE-STAGE DELIMITATION METHODOLOGY	145
A. Stage 1 – The Provisional Equidistance Line	145

1. <i>The Absence of Compelling Reasons Not to Resort to the Standard Method</i>	146
2. <i>The Appropriate Base Points</i>	147
B. Stage 2 – (Ir)relevant Circumstances	152
1. <i>The Alleged Cut-off Effect</i>	163
a. Concavity Does Not Constitute per se a Relevant Circumstance	163
b. In the Present Case, the Alleged Concavity of the Bangladesh Coasts Does Not Constitute a Relevant Circumstance	168
(i) Absence of Any Relevant Concavity	173
(ii) Bangladesh’s Alleged “Need” for Access to an Entitlement in the Continental Shelf beyond 200 Nautical Miles	174
(iii) Bangladesh Has an access to a Share of the Continental Shelf Situated beyond 200 Nautical Miles from its Coasts	178
(iv) Bangladesh’s Claimed Right to “Have Broadly Comparable Access to the 200 M Limit”	179
2. <i>The Irrelevance of Economic Considerations</i>	193
C. Stage 3 – The Non-Disproportionality Test	195
IV. THE DELIMITATION LINE	198

CHAPTER 7 DELIMITATION OF THE CONTINENTAL SHELF BEYOND 200 NAUTICAL MILES207

I. THE CORRECT MEANING OF ARTICLE 76 OF UNCLOS	207
II. BANGLADESH’S ERRONEOUS APPLICATION OF ARTICLE 76 OF UNCLOS	220
A. The Foot of the Continental Slope Points	222
B. The Implementation of the Article 76(4)(a) Formulae.....	228
C. Conclusion.....	231
III. THE DELIMITATION OF THE CONTINENTAL SHELF BEYOND 200 NAUTICAL MILES	231
IV. CONCLUSIONS.....	234

SUBMISSIONS	245
APPENDIX INDIA'S CONTRIBUTION TO THE SEDIMENTARY PROCESSES IN THE BAY OF BENGAL	247
TABLE OF SKETCH-MAPS AND FIGURES.....	259
LIST OF ANNEXES (VOLUME II).....	263

CHAPTER 1

INTRODUCTION

1.1. The Government of the People’s Republic of Bangladesh (hereinafter ‘Bangladesh’), by its *Note Verbale* of 8 October 2009¹ notified the Republic of India (hereinafter ‘India’) that having failed to reach a settlement after negotiations and exchanges of views, Bangladesh had now elected to submit the dispute concerning the delimitation of the maritime boundary with India to the arbitral procedure provided for in Annex VII of the United Nations Convention on the Law of the Sea (hereinafter ‘UNCLOS’). Upon the constitution of the present Tribunal in accordance with article 3 of Annex VII to UNCLOS, the Rules of Procedure (hereinafter ‘Rules’) were adopted on 26 May 2010. Article 9 of the Rules prescribes the dates for filing the pleadings in the case. Bangladesh filed its Memorial on 31 May 2011. India was scheduled to file its Counter-Memorial on or before 31 May 2012. Pursuant to a request by India, in conformity with paragraph 5 of article 9 of the Rules, this date was extended to 31 July 2012 in order to allow India to take into account the judgment of 14 March 2012 of the International Tribunal for the Law of the Sea (hereinafter the ‘ITLOS’) in the case between Bangladesh and Myanmar. Accordingly, India submits this Counter-Memorial in response to the Memorial of Bangladesh of 31 May 2011.

I. The Dispute Submitted to the Tribunal

1.2 In its Statement of Claim accompanying the aforesaid Notification of 8 October 2009, Bangladesh described the subject-matter of arbitration as the dispute concerning the delimitation of the maritime boundary of Bangladesh with India in the territorial sea, the exclusive economic zone and the continental shelf in the Bay of Bengal. In its Statement of Claim, Bangladesh further states

“Since 1974, India has proposed delimitation based on what is claimed to be an equidistance line. Bangladesh has rejected India’s proposed line of delimitation as inequitable because, *inter alia*, the

¹ *Note Verbale* from the Ministry of Foreign Affairs of Bangladesh to the High Commission of India, Notification under Article 287 and Annex VII, Article 1 of UNCLOS, 8 October 2009, India’s Counter-Memorial, Vol. II, Annex IN-34, (hereinafter ‘Annex IN’).

line, in combination with Bangladesh's concave coastline at the northern end of the Bay of Bengal, severely cuts off and reduces Bangladesh's maritime entitlement"².

1.3 Setting out its version of some of the facts relevant to the dispute, Bangladesh also asserted that India had submitted on 11 May 2009 to the Commission on the Limits of the Continental Shelf (hereinafter the 'CLCS') information on its extended continental shelf and that India's claim denies Bangladesh any portion of its continental shelf whatsoever beyond 200 nautical miles, which would be inconsistent with the principles and rules established by UNCLOS. In this regard, Bangladesh has since also filed on 25 February 2011 its own submission to the CLCS in respect of the continental shelf beyond 200 nautical miles claiming areas extending up to 390 nautical miles from its coast³.

1.4 Bangladesh seeks the following relief in the Statement of Claim:

“Bangladesh requests the Tribunal to delimit, in accordance with the principles and rules set forth in UNCLOS, the maritime boundary between Bangladesh and India in the Bay of Bengal, in the territorial sea, the EEZ, and the continental shelf, including the portion of the continental shelf pertaining to Bangladesh that lies more than 200 nautical miles from the baselines from which its territorial sea is measured”⁴.

1.5 In its Memorial, Bangladesh contends that the geographical circumstances in this case are similar to those in the *North Sea Continental Shelf cases*⁵ before the International Court of Justice (hereinafter the 'ICJ') in 1969, where, in view of a concavity, the ICJ found that equidistance would not yield an equitable result. Bangladesh further contends that it would be highly inequitable for Bangladesh to be cut-off by the continental shelf lines claimed by India and Myanmar in the Bay of Bengal. According to Bangladesh, “nature has endowed Bangladesh with a substantial entitlement in the continental shelf beyond 200 M”⁶, and has thus an extensive “natural prolongation” in the sea-bed and sub-soil of the Bay of Bengal, which, it claims, is constituted of millions of tons of sediment from erosion of the Himalayan

² *Ibid.*

³ Memorial of Bangladesh (hereinafter 'MB'), Vol. III, Annex B25.

⁴ Annex IN-34.

⁵ *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands), Judgment, I.C.J. Reports 1969*, p. 3.

⁶ MB, para. 1.17.

Mountains which transports into the Bengal Delta, extending the Bengal Delta's land territory.

1.6 One of the most startling arguments in the Memorial of Bangladesh is its innovative theory of “natural prolongation”. Bangladesh has invented a theory of international property according to which source/origin of sediment determines title. The theory has no basis in law and one of the ironies in this case is that, even if the theory were to be accepted, it would not avail Bangladesh. Bangladesh is not, as it claims, the source of the sediment to which it lays claim and which forms its “natural prolongation”. These sediments, in fact, originate in India, Nepal and China and only wash through the international rivers that traverse Bangladesh on their way to the Bay of Bengal. In its *Note Verbale* sent to the Secretary-General of the United Nations on 29 October 2009, Bangladesh actually claims sediment “that has emerged mostly from *or across* the landmass of Bangladesh . . .”⁷. Here, the Tribunal is presented with yet another legal invention by Bangladesh: sediment that originates elsewhere and merely washes through the rivers of a state permanently acquires the transit state's “nationality” and entitles that State to claim sovereign rights over the sediment wherever it may settle.

1.7 India does not reject the proper role of equitable principles within the law of maritime boundary delimitation, applied in their proper stages as will be elaborated upon in this Counter-Memorial. However, India does reject the implication that the role of equity in maritime delimitations imports an enquiry into the fairness of a party's treatment by nature. The fundamental principle is that the law that has developed *is* equitable.

1.8 Following its independence in 1971, Bangladesh enacted its Territorial Waters and Maritime Zones Act of 1974, described as the “comprehensive instrument setting out the limits of its maritime zones”⁸ and thereafter (unknown to India at the time) “issued the notification contemplated in the Act, and claimed a 12 M territorial sea and an economic zone extending to 200 M. At the same time, it also declared a system of straight baselines consisting of lines connecting eight basepoints, all of which are located along the 10-fathom depth contour in the submerged delta”⁹.

⁷ Annex IN-35 (emphasis added).

⁸ MB, para. 3.19.

⁹ MB, para. 3.21.

1.9 Bangladesh contends in its Memorial that its “coastline is highly unstable and changes year-to-year (sometimes even day-to-day)”¹⁰. Bangladesh claims that in view of this coastal instability, it is difficult, if not impossible, to identify any normal base points for maritime delimitation purposes.

1.10 However, as Bangladesh also points out in its Memorial, having devised this approach, Bangladesh offered it for inclusion in UNCLOS. For all its efforts, it “was unable to persuade the delegates of all other States to sign on to the idea of permitting straight baselines to be drawn from points determined by a depth-based method”¹¹. Bangladesh’s insistence on the use of such depth-based base points was also one of the main reasons for the failure of the India-Bangladesh negotiations during the period 1974 to 2009 when India tried to reach an agreement with Bangladesh on maritime delimitation, now the subject-matter of the dispute before this Tribunal.

1.11 Bangladesh, in its Memorial, conceded that “. . . because its 1974 baselines were drawn along the 10-fathom line, they do not conform to the terms of Article 7” of UNCLOS. “It therefore does not rely on them for purposes of this maritime delimitation with India. Instead, to the extent they may be relevant, it relies only on basepoints along its coast on the Bay of Bengal”¹². These baselines, which it has claimed since 1974, apparently no longer serve Bangladesh’s litigation purposes and so have been casually discarded. The current position of Bangladesh, contrived for purposes of this litigation, is that it is impossible to draw straight baselines, even though it has easily done so for most of its history. Now, however, Bangladesh urges the Tribunal simply to overlook the fact that in the past Bangladesh itself had constructed baselines and base points and to adopt an angle-bisector without explaining the basis for it. As India will demonstrate, only when it is physically impossible to select appropriate base points necessary for delimitation based on the equidistance/relevant circumstances that this method may not be used. That is not the situation in the instant case.

1.12 Turning to one of the other issues in the dispute relating to the maritime boundary between India and Bangladesh, in its *Note Verbale* of 6 November 2009¹³, in response to Bangladesh’s *Note Verbale* and Notification of 8 October 2009, India drew attention to the fact

¹⁰ MB, para. 3.22.

¹¹ MB, para. 3.25.

¹² MB, para. 3.26.

¹³ *Note Verbale* from the Ministry of External Affairs of India to the High Commission of Bangladesh, 6 November 2009 (Annex IN-36).

that the decision of Bangladesh to refer the settlement of the India-Bangladesh maritime boundary to arbitration was premature. India pointed out that negotiations with regard to the land boundary between the two countries had been making good progress and that only a small area still remained to be demarcated which included the point on the coast from where the maritime boundary was to be delimited.

1.13 As explained later in this Counter-Memorial, when, upon its independence and the termination of British sovereignty in August 1947, India was divided into the two States of India and Pakistan, the Province of Bengal was divided into West Bengal and East Pakistan. The Bengal Boundary Commission appointed at the time prescribed the boundary between the territories of West Bengal and East Pakistan by its Award known as the ‘Radcliffe Award’ made on 12 August 1947. On 26 March 1971, Bangladesh, declared its own independence from Pakistan and upon coming into existence, succeeded to the former territories of East Pakistan. Although the boundary was substantially accepted, the land boundary terminus in the Bay of Bengal has continued to be the subject of disagreement despite negotiations between India and Bangladesh. In its Memorial, Bangladesh has set out its own views and conclusions of where the land boundary terminus is located¹⁴.

1.14 This Counter-Memorial will address India’s substantial disagreement with Bangladesh’s arbitrary and unsupported assertions as to the location of the land boundary terminus between the two States. India would only observe, in this introductory chapter, that Bangladesh, in accordance with an agreement between the two States, has participated in the land boundary negotiations and well knows that only the section which includes the land boundary terminus, though prescribed by the Radcliffe Award, remains to be agreed. India’s analysis will show the correct location of this land boundary terminus from which the maritime boundary must commence. This location, in India’s submission, is clearly identifiable by the terms of and the map attached to the Radcliffe Award, the reproduced certified copy of which is in the custody of the Government of India.

1.15 As Bangladesh confirms, it simultaneously commenced proceedings with Myanmar before the ITLOS¹⁵. In fact, Bangladesh issued a Notification on the same date, i.e., 8 October 2009, to Myanmar. In that case also, the main issue was the refusal of Bangladesh to

¹⁴ MB, paras. 3.15-3.16.

¹⁵ MB, para. 1.25.

accept the application of the standard equidistance/relevant circumstances method for the delimitation of the exclusive economic zone and the continental shelf. Bangladesh's contentions included, again, a claim of concavity as well as the instability of the Bangladesh deltaic coastline which, so it argued, made it unfeasible to identify the base points necessary for delimitation based on the equidistance/relevant circumstances method.

1.16 In relation to the delimitation of the continental shelf beyond 200 nautical miles, Bangladesh stresses the similarity of the contentions in the two cases in its Memorial as follows:

“The position Bangladesh takes in this case is fully consistent with its position in the proceedings with Myanmar. In both cases, Bangladesh maintains the view that the important differences between the juridical regimes of the continental shelf within and beyond 200 M must be recognised and given due weight: entitlement to a continental shelf beyond 200 M depends on proof of natural prolongation; natural prolongation is both geological and geomorphological in character; and the comparative extent of natural prolongation is the most relevant circumstance in delimiting the shelf beyond 200 M. . . .”¹⁶.

1.17 The ITLOS judgment of 14 March 2012 rejected a number of Bangladesh's contentions identical to those raised in the present case. For example, the ITLOS judgment held that “the most natural prolongation” argument made by Bangladesh had no relevance to that case, a ruling, equally applicable in the present case. The Tribunal held that natural prolongation was not an independent basis for entitlement and that the reference thereto in article 76 should be interpreted in the context of the subsequent provisions of article 76 of UNCLOS, in particular paragraph 4 thereof. India generally accepts the principles of law applied by the ITLOS to a number of other significant contentions at issue in its judgment.

II. The Law Applicable to the Issues in this Case

1.18 India and Bangladesh are both Parties to the 1982 United Nations Convention on the Law of the Sea. India deposited its instrument of ratification on 29 June 1995, and

¹⁶ MB, para. 7.11.

Bangladesh did so six years later on 27 July 2001. Pursuant to article 308(e) of UNCLOS, the Treaty became binding between the Parties on 25 August 2001.

1.19 For the purposes of this arbitration, the applicable law is to be found in the provisions of UNCLOS, in particular those that govern maritime delimitation of different zones: articles 15, 74 and 83¹⁷, as well as “other rules of international law not incompatible with this Convention”¹⁸.

1.20 India agrees with Bangladesh that some of the various maritime entitlements which are the subject of claims in this dispute are of relatively recent vintage in the law of the sea¹⁹. But the legal issues raised can no longer be regarded as uncertain, thanks to the development of a rich jurisprudence. In its light, Bangladesh’s account of the method for determining which State has rights and jurisdiction over the continental shelf and exclusive economic zones is fraught with inaccuracies and anachronisms. It is striking that Bangladesh in 2011 proposed the same criteria for maritime delimitation as did President Truman in 1945²⁰: in the words of the U.S. proclamation, the lateral boundary between adjacent states “shall be determined by the United States and the State concerned in accordance with equitable principles”²¹. Bangladesh tries to freeze that moment in legal history in order to ignore the subsequent evolution of the law, including the authoritative elaboration of what constitutes an equitable solution in this context. This intentional anachronism allows Bangladesh to pretend that an essentially intuitive and discretionary “equitable principles” approach – along with a talismanic invocation of a “natural prolongation” – still constitutes the alpha and the omega of this part of the law of the sea. It does not.

1.21 One cannot compress the entire law of the sea and the rich jurisprudence that has authoritatively elaborated the law on maritime delimitation of the continental shelf since 1945

¹⁷ See generally International Tribunal for the Law of the Sea, Case No. 16, *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment of 14 March 2012, paras. 51-55 (hereinafter “*Bangladesh/Myanmar*”), available on www.itlos.org. See also *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 61.

¹⁸ UNCLOS article 293(1).

¹⁹ MB, para. 6.8.

²⁰ MB, para. 6.9.

²¹ Presidential Proclamation 2667, “Policy of the United States With Respect to the Natural Resources of the Subsoil and Sea Bed of the Continental Shelf”, reprinted in *U.S. Federal Register*, Vol. 10, 1945, p. 12303, MB, Vol. III, Annex B4.

into the Truman Declaration or, indeed, even the *North Sea Continental Shelf cases*, as will be discussed in this Counter-Memorial. The law of maritime delimitation has undergone significant change over the last several decades through a legal process in which many courts and tribunals have clarified the applicable principles. This process has refined “equitable principles” and the essentially metaphorical idea of a continental shelf into a methodologically rigorous system of objective legal rules. The standard methodology that has resulted from these refinements is more fair, more predictable and, *in consequence*, more equitable in its approach to determining maritime boundaries. Bangladesh would have the Tribunal ignore the last six decades of jurisprudence and practice which now constitute the applicable law. Even more anachronistically, Bangladesh would like the law to refashion geography in order to make it accord with Bangladesh’s own self-serving concept of “equitable principles”.

1.22 Notwithstanding the *North Sea Continental Shelf* cases (or at least Bangladesh’s selective reading of them) and the Truman Proclamation of 1945, international law has recognised that “the ‘continental shelf’ is an institution of international law . . . [A]t a very early stage in the development of the continental shelf as a concept of law, it acquired a more extensive connotation, so as eventually to embrace *any sea-bed area* possessing a particular relationship with the coastline of a neighbouring State . . .”²².

1.23 The forty-three years that have passed since the *North Sea Continental Shelf* judgment make it all the more curious that Bangladesh imagines that the law of the sea is still governed by superseded experiments and still bedevilled by their unclarities and confusions. The early emphasis on “natural prolongation” and the sentiments of equity in the immediate aftermath of President Truman’s proclamation were understandable. But there is now an acknowledged “lack of identity between the legal concept of the continental shelf and the physical phenomenon known to geographers by that name”²³. In sum, the continental shelf at issue in this case is a concept of law and, as such, takes its meaning from the juridical treatment of the continental shelf. In fact, nowhere is the decline of geology and the ascent of the default

²² *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, Judgment, I.C.J. Reports 1982, p. 45, para. 41 (emphasis added).

²³ *Ibid.*, p. 46, para. 42.

equidistance line as significant legal criterion more obvious than in the recent *Bangladesh/Myanmar* judgment²⁴.

1.24 Responding to the juridical difficulties that a mere “equitable principles” approach presents, as well as the imprecision of many provisions of UNCLOS, modern courts and tribunals have focused on achieving equity by means of a more objective method²⁵. The modern method has been most recently expressed by the ICJ in the *Black Sea*²⁶ case and by the ITLOS in *Bangladesh/Myanmar*. Though Bangladesh’s Memorial only refers to the *Black Sea* case in footnotes, the ICJ unanimously distilled the current methodology for delimiting maritime rights as follows:

- *first*, determine the relevant coastlines, select appropriate base points along these coastlines and construct a provisional equidistance line – unless doing so is *unfeasible*;
- *second*, take account of any relevant circumstances calling for the adjustment of the provisional equidistance line (but not the abandonment of the equidistance line); and
- *third*, review the provisional (or adjusted) equidistance line to ensure it does not result in an excessive disproportion between the ratio of coast lengths and the ratio of maritime areas²⁷.

The standard methodology, as carefully elaborated by the ICJ, in the *Black Sea* case was followed by the ITLOS in *Bangladesh/Myanmar*, where the three-stage method was endorsed both in principle and in application to the Bay of Bengal²⁸. This method cannot be squared with the approach Bangladesh has urged this Tribunal to adopt.

²⁴ *Bangladesh/Myanmar*, Judgment of 14 March 2012. See also Joint Declaration of Judges Nelson, Chandrasekhara Rao, and Cot, *Bangladesh/Myanmar*, pp. 1-2.

²⁵ See Judges Nelson, Chandrasekhara Rao, and Cot in their Joint Declaration to the *Bangladesh/Myanmar* Judgment, the observation that since “[t]he provisions of the Convention, articles 74 and 83, are imprecise to say the least,” as a result “[c]ourts and tribunals have progressively reduced the elements of subjectivity in the process of delimitation in order to further the reliability and predictability of decisions in this matter”.

²⁶ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 61.

²⁷ *Ibid.*, paras. 115-122.

²⁸ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 233, 238-240.

1.25 The emphatic adoption of a clear methodology in the *Black Sea* case must lead to rejection out of hand of Bangladesh's claim that cut-offs are inequitable *per se*. Of course, the *Black Sea* judgment (and the line of jurisprudence from which it emanates) still permits courts and tribunals to take cut-offs into account. But only after a feasible equidistance line is drawn²⁹.

1.26 In the law of maritime delimitation as it now stands, the sole exception to the use of the equidistance method in the first phase of delimitation is "unfeasibility", not "relevant (or special) circumstances". While equitable considerations may call for adjustment of an equidistance line at a later stage of the enquiry, they do not call for the abandonment of the equidistance method altogether. It is only the unfeasibility of drawing an equidistance line that permits a court or tribunal to adopt an approach other than the standard one. In the light of these recent precedents, this Tribunal should, in India's submission, similarly dismiss Bangladesh's reliance on early judgments which have since been overtaken.

III. Structure of the Counter-Memorial

1.27 India's Counter-Memorial consists of two volumes. Volume I comprises the main text containing India's response to the Memorial of Bangladesh together with maps and figures. Volume II contains 39 annexes.

1.28 **Volume I** contains **seven chapters** including this Introduction.

1.29 **Chapter 2** describes the geography, including the coastlines, islands and low-tide elevations relevant to the delimitation of the maritime boundary between India and Bangladesh. It also contains a brief description of the Bay of Bengal and its geomorphology.

1.30 **Chapter 3** explains the history of the dispute between India and Bangladesh with respect to the delimitation of the maritime boundary between the two countries. The chapter

²⁹ See also Judges Nelson, Chandrasekhara Rao, and Cot, in their Joint Declaration in *Bangladesh/Myanmar*, pp. 1-2: the equidistance method now takes "priority" in any delimitation; this is because "[r]esort to equidistance as a first step leads to a delimitation that is simple and precise. However complicated the coastline involved is, there is always one and only one equidistance line, whose construction results from geometry and can be produced through graphic and analytical methods. A provisional equidistance line is to be drawn, calculated by reference to adequate base points chosen along the continental coasts of both parties".

describes the several meetings and negotiations held in order to bilaterally resolve the maritime boundary issue. It shows that Bangladesh's insistence on the use of its base points at 10-fathom depth and rejection of the standard equidistance method for the maritime delimitation were the principal reasons for the failure to reach an agreement.

1.31 **Chapter 4** deals with the identification of the land boundary terminus being the point at which the India-Bangladesh land boundary meets the Bay of Bengal and from where the maritime boundary is to be delimited.

1.32 **Chapter 5** addresses the delimitation of the territorial sea. The Parties are agreed that the delimitation is to be made in accordance with article 15 of UNCLOS.

1.33 **Chapter 6** is devoted to the delimitation of the continental shelf and of the exclusive economic zones. This chapter applies the well-established and authoritative "equidistance/relevant circumstances" three-stage method to determine the maritime boundary between India and Bangladesh, and describe the delimitation line thus established.

1.34 **Chapter 7** deals with the issue of delimitation of the continental shelf beyond 200 nautical miles. It will be shown that the method applicable to the delimitation of the continental shelf is equally applicable to the entire shelf whether within or beyond 200 nautical miles.

1.35 The Counter-Memorial concludes with India's formal submissions.

CHAPTER 2

GEOGRAPHY AND GEOMORPHOLOGY

2.1. This chapter describes the coastal geography, including the mainland coasts, islands and low-tide elevations relevant to the delimitation of the maritime boundary between India and Bangladesh (**Section I**). It also contains a brief description of the Bay of Bengal (**Section II**), and a response to what Bangladesh claims is its geological history (**Section III**).

I. Coastal Geography, Including Mainland Coasts, Islands and Low-Tide Elevations

2.2 The Bay of Bengal, which forms the north-eastern arm of the Indian Ocean, is bordered by Sri Lanka and India to the west; by India and Bangladesh to the north; and by Bangladesh, Myanmar and India's Andaman and Nicobar Islands to the east and southeast. Its southern boundary has been defined by the International Hydrographic Organization as the "imaginary line from Dondra Head (80° 35' E, 5°55' N) at the southern end of Sri Lanka to the northern tip of Sumatra"³⁰. The area of the Bay of Bengal is approximately 22 million square kilometres³¹.

2.3 India's coasts to the north and west of the Bay of Bengal and along the Andaman Islands to the southeast, on the one hand, and Bangladesh's coast in the north and northeast of the Bay, on the other, are directly relevant to the present proceedings. Myanmar's coast lies between Bangladesh and India's Andaman Islands.

2.4 Contrary to the impression that Bangladesh seeks to convey throughout its Memorial³², it is not only Bangladesh's coast that is concave. The concavity is shared by both States at the north of the Bay. India's coasts to the west, northwest and north of the Bay are

³⁰ International Hydrographic Organization, *Limits of Oceans and Seas*, 1953, p. 21 (3rd ed.), MB, Vol. III, Annex B38.

³¹ The Andaman Sea, which lies between the Andaman and Nicobar Islands and the southern coast of Myanmar and the west coast of Thailand, is not included in the Bay of Bengal.

³² See, for example, MB, para. 2.2 ("the most significant geographical circumstance . . . is the fact that Bangladesh lies entirely within a major concavity along the northern coast of the Bay of Bengal").

concave throughout their considerable length. Indeed, the whole of the Bay of Bengal is marked by a pronounced concavity (see sketch-map No. 2.1 at page 15).

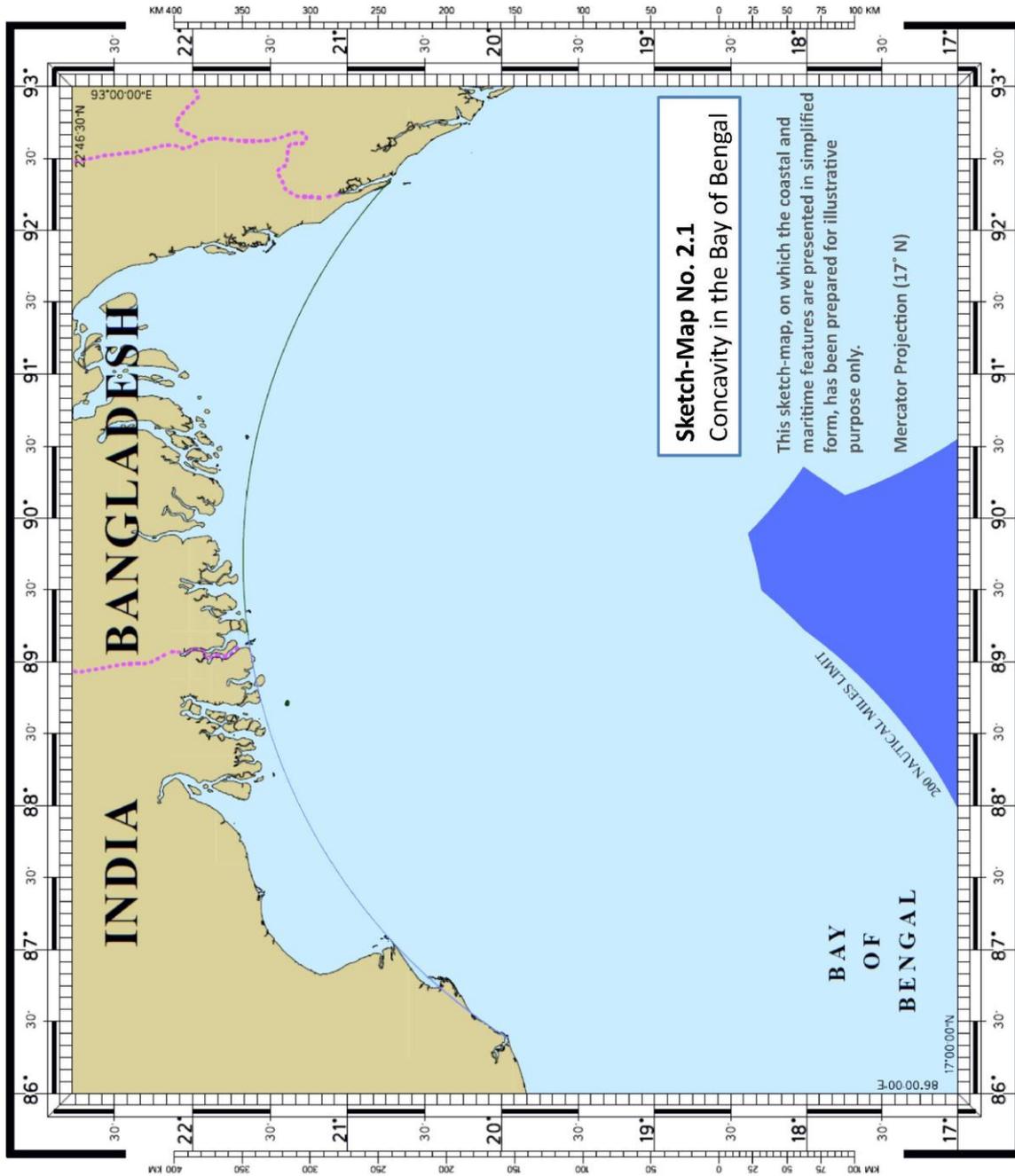
A. The Geography of India,
its Coast in the Northern Part of the Bay of Bengal, and in the Andaman Islands

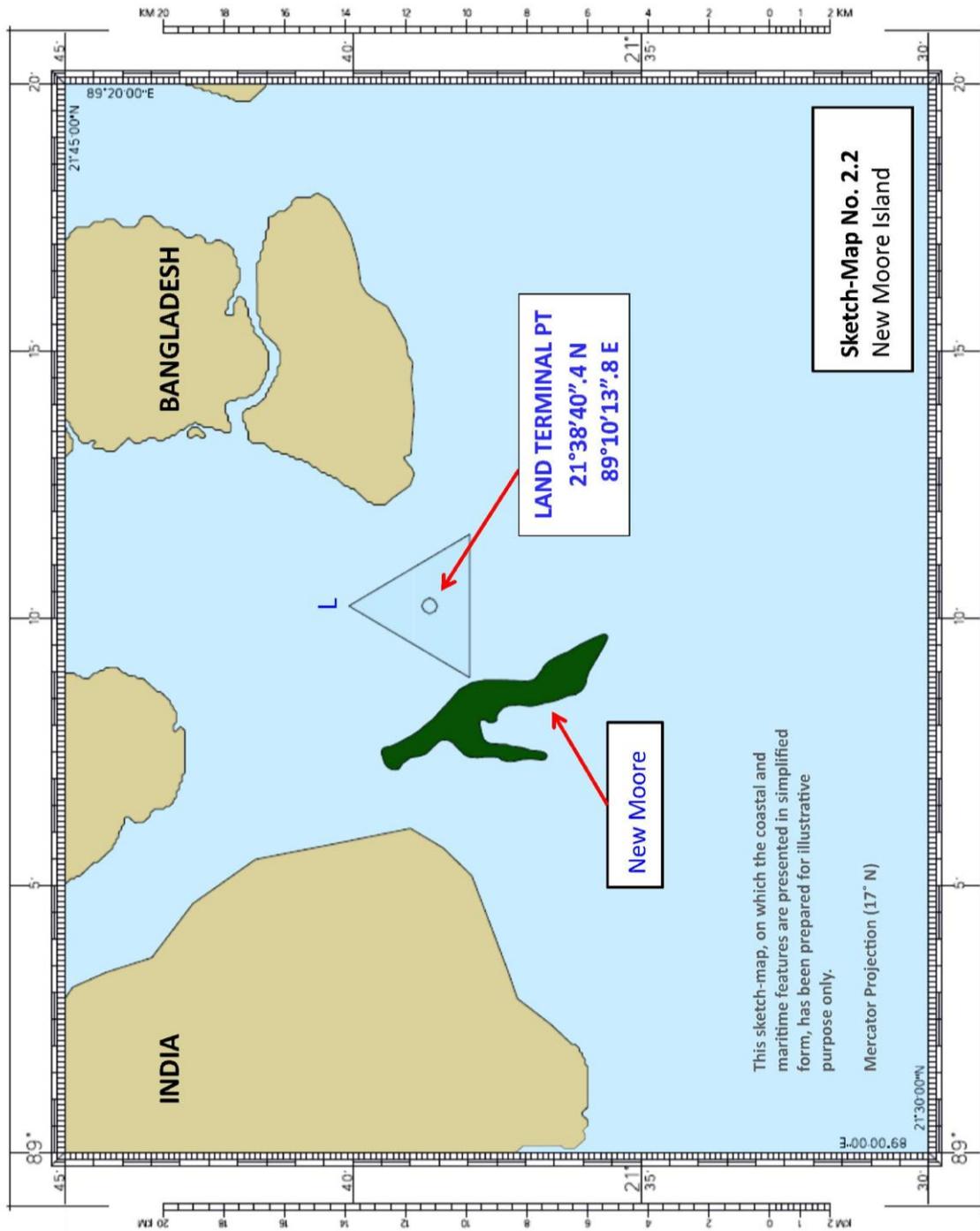
2.5 India's land territory covers an area of approximately 3.29 million square kilometres. It has a population of over 1.2 billion people, and is the second most populous State in the world.

2.6 India's coast to the north and west of the Bay of Bengal starts at the land boundary terminus with Bangladesh, that is to say, at 21°38'40.4" N; 89°10'13.8" E (Point L, see chapter 4 below and especially paragraph 4.3).

2.7 Immediately to the west of the land boundary terminus, within India's territorial sea, is the low-tide elevation known in India as *New Moore Island* (and in Bangladesh as South Talpatty Island). It lies approximately 1.1 nautical miles off the Indian coast, and 3.5 nautical miles from the nearest point on the coast of Bangladesh. The whole of New Moore Island lies west of the land boundary terminus. It is shown on sketch-map No. 2.2 at page 17, and on the recent satellite image of January 2012, found in figure No. 2.3 at page 19.

2.8 New Moore Island is known to have existed as an island from the 1970's. On earlier charts the location of New Moore Island was marked as 'breakers', which indicates an underwater obstruction. Recent charts show it as a significant low-tide elevation. The feature has thus shown a degree of stability over the years.





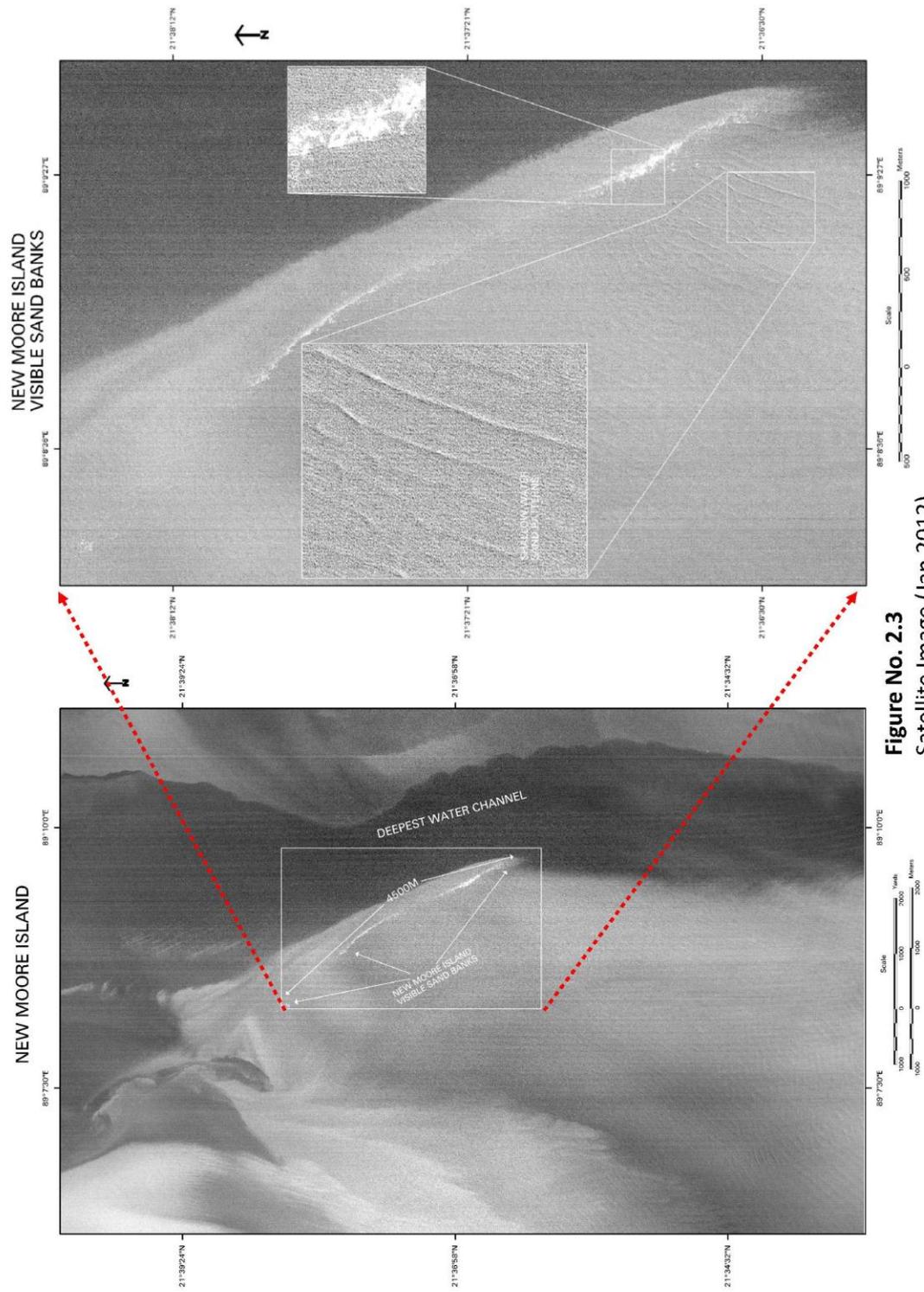


Figure No. 2.3
 Satellite Image (Jan 2012)
 New Moore Island

2.9 In its Memorial, however, Bangladesh asserts that “[b]y 1990, satellite imagery showed that it had disappeared completely”³³. Bangladesh included in its Memorial satellite imagery from 1973 (where the island is visible) and from 1989 (where it is not)³⁴. But satellite images cannot be used to establish the absence of a feature such as New Moore Island. The image from 1989 does not establish that the feature had ‘disappeared completely’ as no indication is given of the state of the tide when the image was taken. As mentioned in paragraph 2.7 above, recent satellite imagery confirms its continued existence as a low-tide elevation.

2.10 Between the land boundary terminus and Devi Point, the first three segments of the Indian coastline is approximately 411 kilometres in length (see sketch-map No. 6.6 at page 141). From Devi Point to Point Calimere, the southernmost point on the Indian peninsula projecting onto the Bay, India’s coastline extends for more than 1,390 kilometres, forming the western shore of the Bay of Bengal. To the east of the Bay, India’s Andaman Islands have a total length of approximately 355 kilometres.

2.11 From the land boundary terminus with Bangladesh, the *first segment* of India’s coastline runs in a westerly direction for a distance of approximately 218 kilometres to a point close to and due south of Haripur in the vicinity of the city of Balasore.

2.12 For approximately the first 118 kilometres, until it reaches the Hooghly River estuary, the coastline forms the westerly part of the Ganges-Brahmaputra delta system. In the delta system the coast is characterised by highly dissected mangrove tidal marshes with meandering tidal channels and creeks. Beyond the Hooghly River, the coastline continues for a further 100 kilometres until it reaches the point in the vicinity of Balasore. Here the coast is normal and not deltaic.

2.13 From that point, India’s coastline turns radically to proceed, in a *second segment* in a north/south direction for 80 kilometres until it reaches Maipura Point. The entire coast is concave. The River Burhabalang flows into the Bay in the north and the Rivers Dhamra and Maipura flow into the Bay in the south.

³³ MB, para. 2.19.

³⁴ MB, Vol. II, Figure 2.3.

2.14 From Maipura Point, the *third segment* of India's coastline runs in a north-east/south-west direction for 113 kilometres until it reaches Devi Point. The coast here is normal and sandy in patches. Close to the midpoint of this segment the River Mahanadi flows into the Bay of Bengal close to the port of Paradip. At the southern end of this segment is Devi Point, at the mouth of the Devi River.

2.15 *South of Devi Point*, the long coast of peninsular India facing the Bay of Bengal stretches for 865 kilometres, first in a north-east/south-west direction until Ramaypatnam Light, and then for 528 kilometres in a north-south direction until Point Calimere. A number of important rivers flow into the Bay of Bengal along this coast. Chilka Lake is situated to the immediate south of Devi Point. The Rivers Godavari and Krishna meet the Bay of Bengal south of the port of Vishakhapatnam. The main features of the north-south coast due south of Ramaypatnam Lighthouse are the Pulicat Lake north of Chennai Port and the Cuavery Delta close to Point Calimere.

2.16 On the eastern side of the Bay of Bengal, south of Myanmar's Preparis and Coco Islands, lie India's *Andaman Islands*. The Andaman Islands, which form part of the Andaman-Nicobar group belonging to India, consist of a total of 349 islands, of which the 325 islands located north of 10° N latitude constitute the Andaman Islands. The total geographic area of the entire Andaman-Nicobar islands is 8,249 square kilometres, of which the Andaman Islands cover 6,408 square kilometres. The total population of Andaman-Nicobar Islands is about 380,000, of which nearly 90% live in the Andaman Islands.

2.17 The physiography of the Andaman-Nicobar group of islands is characterised by undulating topography and intervening valleys. Seaward coasts of the outer islands have sandy beaches. The west coast of the Islands, facing the Bay of Bengal, is characterised by a 320 kilometre-long barrier reef.

B. The Geography and Coast of Bangladesh

2.18 Bangladesh covers an area of approximately 147,000 square kilometres. It is situated to the north and north-east of the Bay of Bengal, sharing the north coast of the Bay with India. Its land territory borders India and Myanmar.

2.19 Most of Bangladesh's land territory is part of the Bengal Delta, which was formed over many years, mainly but not exclusively by the accumulation of sediments carried by the Ganges and Brahmaputra Rivers, and their predecessors.

2.20 The most easterly part of Bangladesh, situated between the Meghna River and the Bangladesh-Myanmar land boundary, is the only hilly area in Bangladesh. This area is dominated by the Chittagong Hills, which constitute the western fringe of the mountain ranges in Myanmar and have the same geological origin.

2.21 The coast of Bangladesh, not all of which is relevant to the current proceedings, is approximately 520 kilometres in length. It is concave, like that of India.

2.22 Bangladesh's coast starts at the land boundary terminus with India (see chapter 4 below). The *first segment* runs for 177 kilometres in a direction slightly north of east to the mouth of the Meghna River. This segment is deltaic, with a great network of rivers, indentations and a large number of islands and low-tide elevations just off-shore.

2.23 The *second segment* is the indentation formed by the mouth of the Meghna River, which has a maximum width east-west of 100 kilometres.

2.24 The *third segment* starts slightly to the north of Cox's Bazar, from the lighthouse on Kutubdia Island, and extends for 140 kilometres in a relatively straight line in a northwest-southeast direction to the land boundary with Myanmar in the mouth of the Naaf River. This segment is not deltaic, but is similar to Myanmar's Rakhine coast to the south. 6.5 nautical miles southwest of the land boundary with Myanmar lies St. Martin's Island, a Bangladeshi island lying directly opposite the coast of Myanmar. At low-tide St. Martin's Island has a surface area of eight square kilometres.

C. The Alleged "Instability" of the Coast between the Meghna and Hooghly Rivers

2.25 In its Memorial Bangladesh repeatedly asserts the instability of the coast in the Ganges-Brahmaputra delta region, between the Meghna and Hooghly Rivers. This sweeping claim does not accurately reflect the position in the different zones of the lower delta plain. The lower delta plain of the Ganges-Brahmaputra can be divided into three zones: the Meghna estuary region, east of 90°10' longitude; the western lower delta plain, which forms

a part of the Sundarbans mangrove forest; and the central peninsula lying between the first two zones. Of these three zones, only the Meghna estuary region is affected by any kind of instability³⁵.

2.26 The lower deltaic plain of the Ganges-Brahmaputra, consisting of parts of the coastal plains of India and Bangladesh, is characterized by the world's largest single area of mangrove forest, the Sundarbans (designated a world heritage site by UNESCO in 2002). This forest occupies a total area of about 5,700 square kilometres, of which the eastern 60% is located in Bangladesh and the western 40% in India³⁶. Mangroves are generally not land-builders³⁷ but rather, highly-reactive opportunists which can rapidly colonise newly deposited and stable intertidal sediments – and, in so doing, 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 considerably³⁸. For example, a World Bank funded project has assisted in the stabilisation of around 120,000 hectares of recently deposited Gangetic sediments over the last ten years³⁹. Similar afforestation programmes are presently underway at numerous locations, including, for example, Australia, Thailand, Vietnam, Philippines and Benin. 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.

II. The Bay of Bengal

2.27 The Bay of Bengal occupies an area of about 2.2 million square kilometres. The average water depth is 2,200 metres (with a maximum depth of around 4500 metres in the Andaman-Sumatra trench area). The bathymetry (depth to the seabed) of the present-day Bay

³⁵ M. M. Rahman and S. K. Biswas, "Feasible Solution of Protection and Adaptation Strategy for Coastal Zone of Bangladesh", *Pakistan Journal of Meteorology*, Vol. 8, 2011, pp. 9-19 (Annex IN-38).

³⁶ F. Blasco and M. Aizpuru, "Mangroves along the Coastal Stretch along the Bay of Bengal: Present Status", *Indian Journal of Marine Sciences*, Vol. 31, 2002, pp. 9-20 (Annex IN-28).

³⁷ E. C. F. Bird, "Mangroves as Land-Builders", *Victorian Naturalist*, Vol. 88, 1971, pp. 189-197 cited in F. Blasco, P. Saenger and E. Janodet, see footnote below.

³⁸ F. Blasco, P. Saenger and E. Janodet, "Mangroves as Indicators of Coastal Change", *Catena*, Vol. 27, 1996, pp.167-178 (available at http://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1642&context=esm_pubs).

³⁹ P. Saenger and N. A. Siddiqi, "Land from the Sea: The Mangrove Afforestation Program of Bangladesh", *Ocean and Coastal Management*, Vol. 20, 1993, pp. 23-39 (Annex IN-24).

of Bengal shows an overall steady gradient. Towards the northern margin of the Bay, the bathymetry is shallow, and depth to the sea bed is less than 2000 meters. The bathymetry over the central part of the Bay is relatively flat. Here the average depth is around 3,000 meters. The seafloor gradient decreases gradually from north to south.

2.28 The Bay of Bengal is where the massive Ganges River system drains into the sea. The Ganges enters the Bay of Bengal basin from the north-west, after draining the Himalayas and most of north India for about 2,500 kilometres (see figure No. 2.4 at page 27).

2.29 The Ganges divides downstream into two distributaries. The River Padma flows south-east towards the confluence with the River Brahmaputra in Bangladesh. The other part flows due south through India's West Bengal as the River Bhagirathi-Hoogly. The total drainage area of the Ganges is about 1,087,400 square kilometres, of which 46,000 square kilometres lies within Bangladesh and 862,769 square kilometres within India. The Brahmaputra enters the basin from the north-east after draining Tibet and north-east India for about 2900 kilometres. The Meghna River drains the Sylhet basin (in Bangladesh) and part of the Tripura Hills (in India) before flowing into the Brahmaputra.

2.30 A number of other major rivers flow into the Bay. The Mahanadi River, which flows for 858 kilometres through India; the Godavari River, which flows for 1,465 kilometres through India; the Krishna River, which flows for 1,327 kilometres through India; and the Kaveri River, which flows for 805 kilometres through India. The sediment supply from these rivers and others to a great extent controls the general morphology of the Bay of Bengal.

2.31 The Bengal Fan, which is the largest submarine fan⁴⁰ in the world, covers an area of approximately 2.8 to 3.0 million square kilometres. It is currently supplied mainly by the sediments from the Ganges and Brahmaputra Rivers, with contributions of sediment from several other large rivers in India and Bangladesh⁴¹.

⁴⁰ A submarine fan is an accumulation of land-derived sediment that is fan or cone shaped and lies off the seaward opening of large rivers and submarine canyons.

⁴¹ J. R. Curray, F. J. Emmel, and D. G. Moore, "The Bengal Fan: Morphology, Geometry, Stratigraphy, History and Processes", *Marine and Petroleum Geology*, Vol. 19, 2003, pp. 1191-1223, MB, Vol. IV, Annex B65.

III. The “Geological History” of the Bay of Bengal

2.32 Bangladesh included, in its Memorial, a long section on the ‘geological history’ of the Bay of Bengal⁴². This Counter-Memorial does not discuss this matter, which is not considered relevant to the legal issues in the present proceedings. As explained in chapter 7 below, the *Bangladesh/Myanmar* judgment of the ITLOS found that the sedimentary process, be it the sediments origin or quantity, has no relevance for delimitation⁴³. But even though it is legally irrelevant, India wishes to place on record the inaccuracies of the partial ‘facts’ asserted by Bangladesh on the formation of sediments in the Bay of Bengal. That is the subject of the remainder of this chapter. Greater detail is given in the Appendix at the end of this Counter-Memorial (“India’s Contribution to the Sedimentary Processes in the Bay of Bengal”) at page 247.

2.33 As a part of the process of establishing the outer limits of India’s continental shelf beyond 200 nautical miles in the Bay of Bengal under the provisions of article 76 of UNCLOS, Indian scientists have collected a wealth of high-quality geophysical data. Analyses of this data has helped refine the earlier estimates of sediment thickness in the Bay of Bengal by Dr. Curray and others, who had utilized sparse data collected over four decades back.

⁴² MB, paras. 2.32-2.47.

⁴³ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 322, 447.

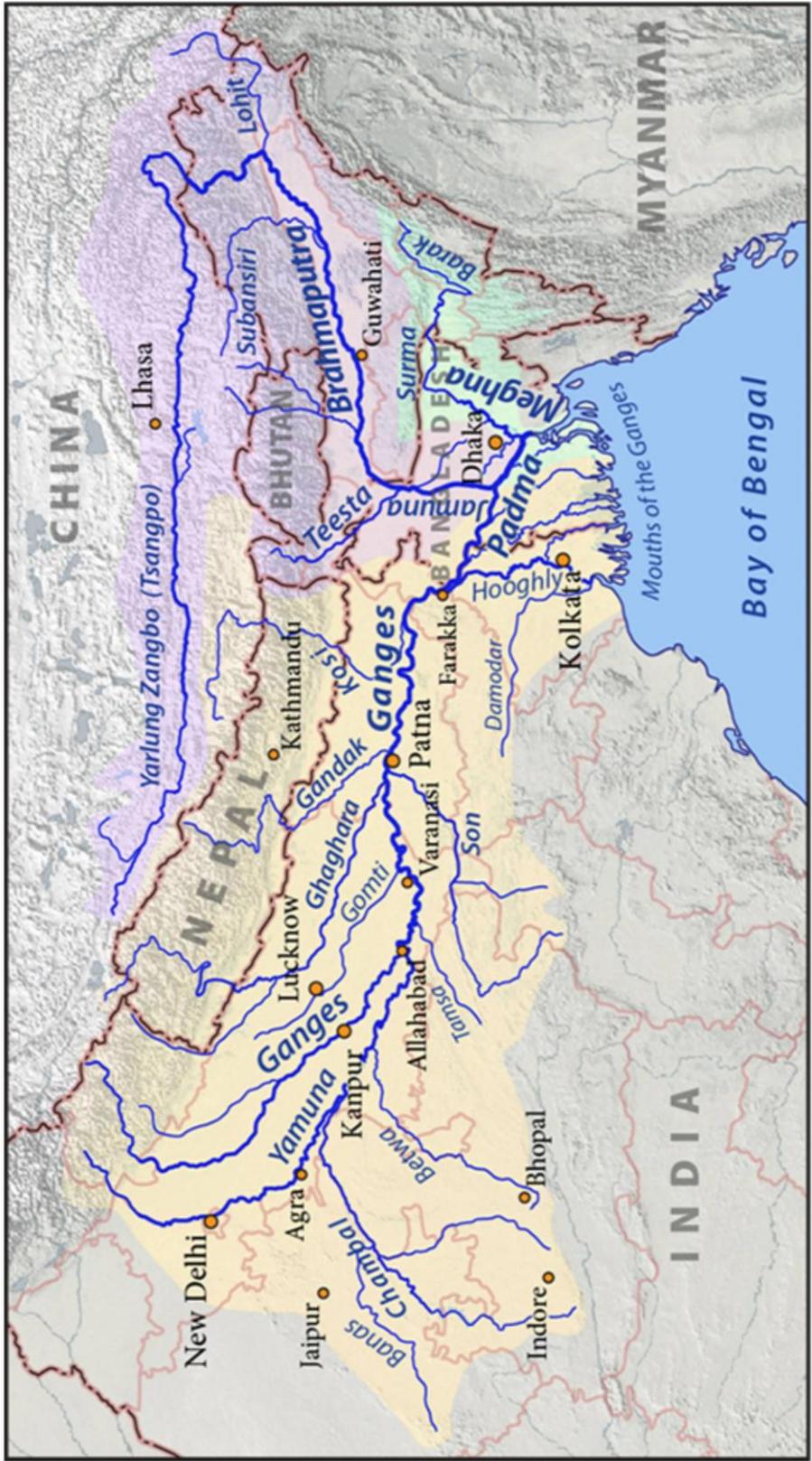


Figure No. 2.4
Ganges-Brahmaputra-Meghna Basin

2.34 These studies establish that prior to the collision of Indian and Eurasian and Burmese tectonic plates, the sediment supply was, in general, higher in the western parts of the Bay of Bengal, as can be seen in figure No. 2.5 at page 31. During this period, the Mahanadi and Krishna-Godavari Rivers of peninsular India were very active and drained huge sediments from Deccan and other inland regions of India⁴⁴.

2.35 The pattern of post-collision sediment distribution (figure No. 2.6 at page 33) however, differs from the sediment pattern of total and pre-collision sediments in the Bay of Bengal. During the post-collision period, a greater sediment supply into the Bay originated from the Ganges-Brahmaputra-Irrawaddy River systems, than from the peninsular rivers.

2.36 Notwithstanding the above, it has now been established that even during the post-collision period, there have been phases in the evolutionary history of the Bay of Bengal when rivers on the Indian peninsula were more active in supplying sediments to the Bay of Bengal than the river systems from the north⁴⁵. In sum, studies suggest that sediments from the continental shelf of peninsular India off the Krishna-Godavari deltas have contributed significantly to the sediments in the Bengal Fan⁴⁶. The Appendix at page 247 of this Counter-Memorial provides further details on the conclusions of these recent studies.

⁴⁴ G. Rao *et al.*, “Crustal Evolution and Sedimentation History of the Bay of Bengal Since the Cretaceous”, *Journal of Geophysical Research*, Vol. 102, No. B8, 1997, at p. 17747. MB, Vol. IV, Annex B58; R. Bastia, S. Das and M. Radhakrishna, “Pre- and Post-Collisional Depositional History in the Upper and Middle Bengal Fan and Evaluation of Deepwater Reservoir Potential along the Northeast Continental Margin of India”, *Marine and Petroleum Geology*, Vol. 27, 2010, pp. 2051-2061 (Annex IN-37).

⁴⁵ D. A. V. Stow, K. Amano, P. S. Balson, G. W. Brass, J. Corrigan, C. V. Raman, J. J. Tiercelin, M. Townsend and N. P. Wijayananda, “Sediment Facies and Processes on the Distal Bengal Fan, Leg 116”, in J. R. Cochran, D. A. V. Stow *et al.* (eds.), *Proceedings of the Ocean Drilling Program, Scientific Results*, Vol. 116, 1990, pp. 377-396 (Annex IN-21); K. Amano and A. Taira, “Two-Phase Uplift of Higher Himalayas since 17 Ma”, *Geology*, Vol. 20, 1992, p. 391-394 cited in D. K. Rea, “Delivery of Himalayan Sediment to the Northern Indian Ocean and its Relation to Global Climate, Sea Level, Uplift, and Seawater Strontium”, in R. A. Duncan *et al.* (eds.), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, 1992, pp. 387-402 (Annex IN-22); P. D. Clift and J. Blustajn, “Reorganization of the Western Himalayan River System After Five Million Years Ago”, *Nature*, Vol. 438, 2005, pp. 1001-1003 (Annex IN-30); A. A. Allen, “Volte-Face in the Punjab”, *Nature*, Vol. 438, 2005, pp. 925-926 (Annex IN-29).

⁴⁶ S. J. Sangode, N. Suresh and T. N. Bagati, “Godavari Source in the Bengal Fan Sediments: Results from Magnetic Susceptibility Dispersal Pattern”, *Current Science*, Vol. 80, 2001, pp. 660-664 (Annex IN-27); N. P. C. Reddy and K. Mohano Rao, “Heavy Sediment Influx during Early Holocene: Inference from Clay Mineral Studies in a Core from the Western Bay of Bengal”, *Current Science*, Vol. 81, 2001, pp. 1361-1364 (Annex IN-26); A. V. R. Sastry, K. V. Suresh, M. V. Ramesh and S. Kamalakaram, “Sediment Transport from the Outer Shelf into the Lower Bengal Fan”, *Geological Survey of India*, Spl. Pub. No. 29, 1992, pp. 189-195 (Annex IN-23).

IV. Conclusions

2.37 The main conclusions to be drawn from this chapter are:

- (i) The concavity of Bangladesh's coast to the north and north-east of the Bay of Bengal is matched by a similar concavity of India's coast to the north and north-west.
- (ii) Bangladesh greatly exaggerates the instability of its coast. In fact, the coasts of India and Bangladesh facing the Bay of Bengal are sufficiently stable to make it possible to identify appropriate base points for the purposes of delimitation.
- (iii) The relevant coasts of India and Bangladesh facing the Bay of Bengal are of approximately the same length.
- (iv) The whole of the Bay of Bengal is covered by deep sediments. While the origin of the sediments is not legally relevant⁴⁷, it should be noted that Bangladesh's assertions concerning the origin of the sediments in the Bay are incorrect.

⁴⁷ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 322 and 447, and chapter 7 below.

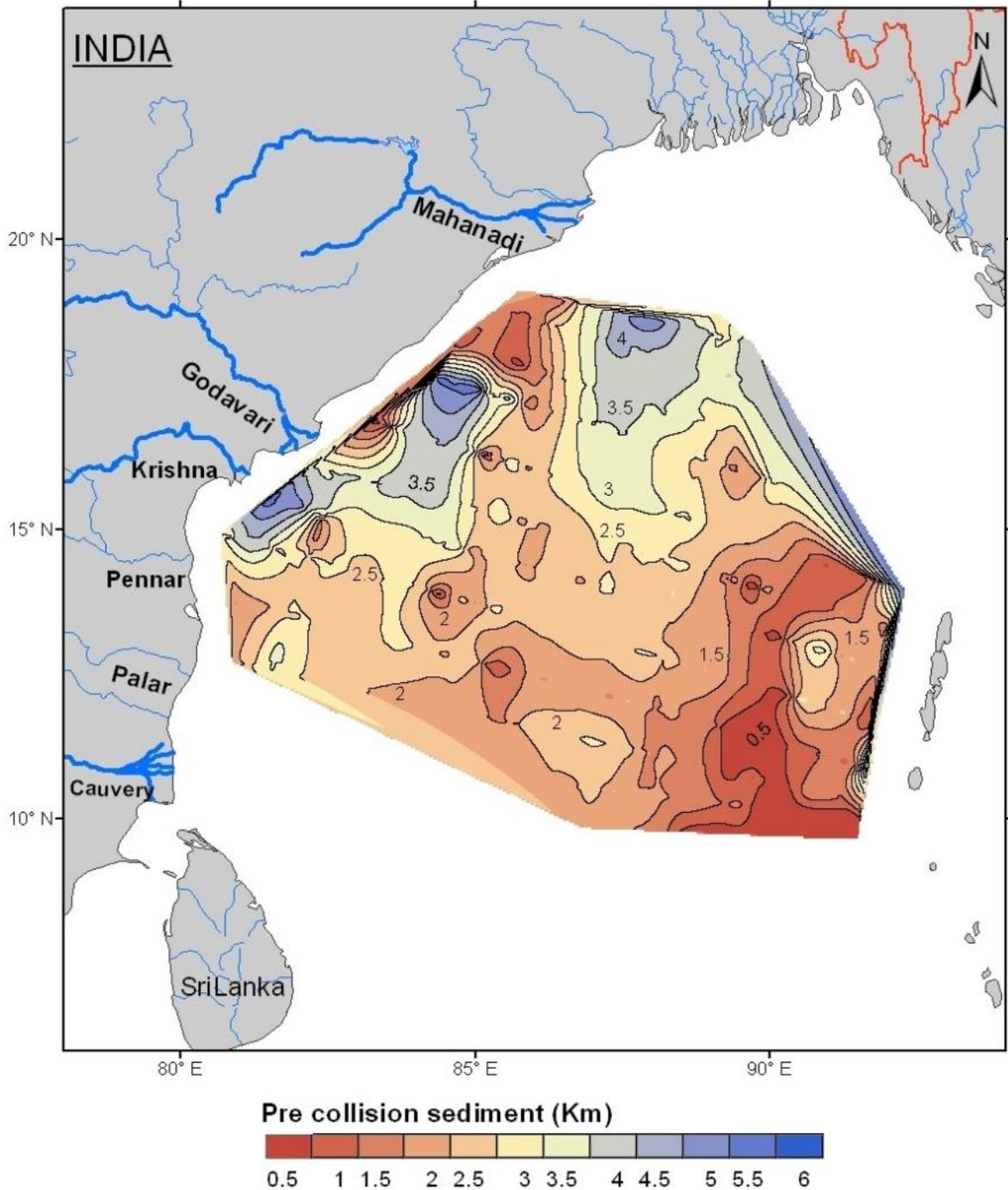


Figure No. 2.5 Pre-collision sediment thickness (in km) map of the Bay of Bengal, based on seismic data collected for delineation of the outer limits of the Indian Continental Shelf.

The two-way-travel time values from seismic reflection data have been converted to thickness values using the wide-angle reflection velocities.

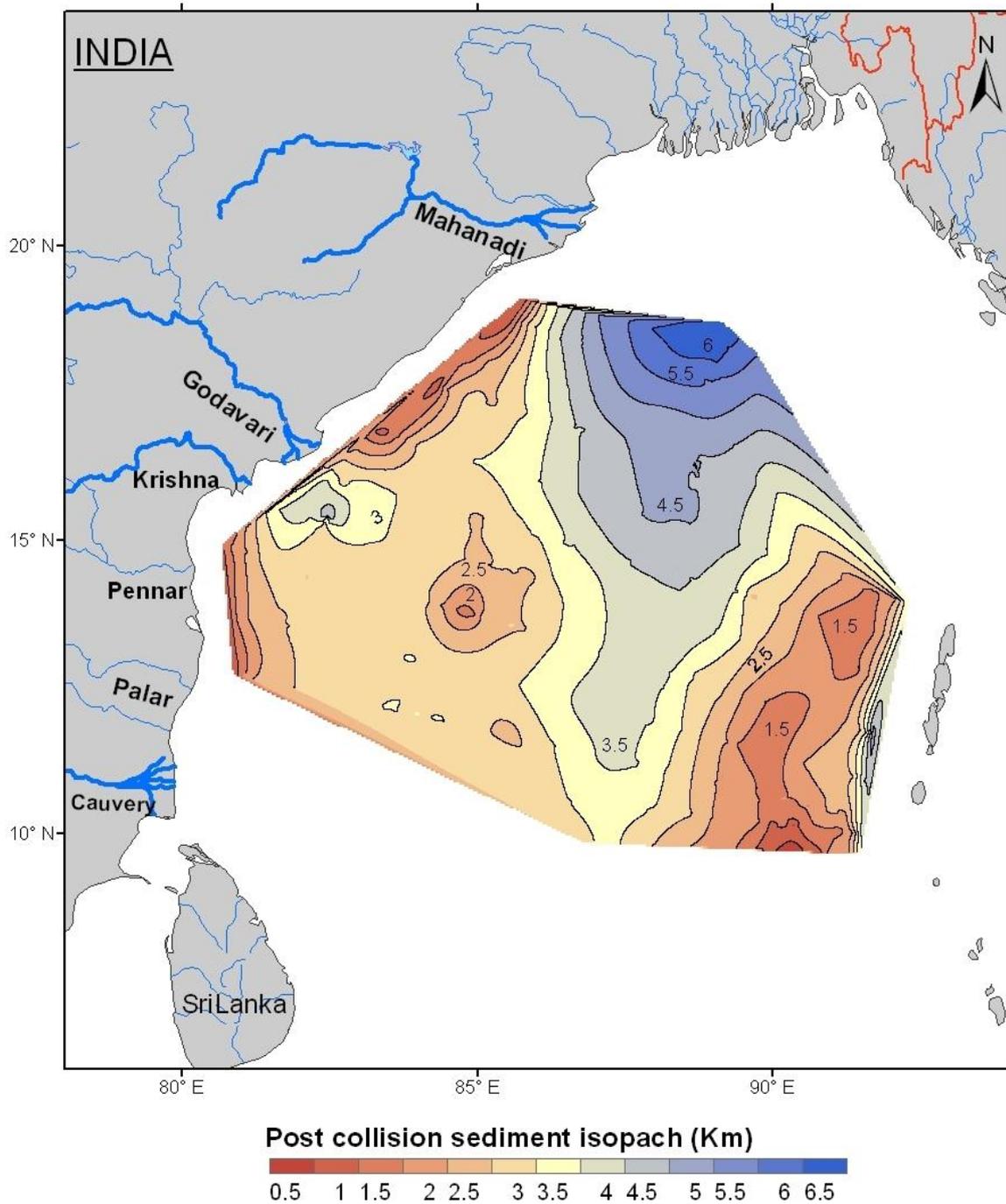


Figure No. 2.6 Post-collision sediment thickness (in km) map of the Bay of Bengal, based on seismic data collected for delineation of the outer limits of the Indian Continental Shelf.

The two-way-travel time values from seismic reflection data have been converted to thickness values using the wide-angle reflection velocities.

CHAPTER 3

HISTORY OF THE DISPUTE

3.1 This chapter explains the history of the dispute between India and Bangladesh with respect to the delimitation of their maritime boundary. The chapter first outlines the emergence of the new States of India and Pakistan and thereafter of Bangladesh (**Section I**). It next refers to the legislation enacted by India and Bangladesh with respect to their maritime zones and territorial waters (**Section II**). The chapter then describes the origin and premise of the dispute and the negotiations held in an effort to reach an agreement on the maritime boundary (**Section III**).

I. Emergence of the New States and Origin of the Dispute

3.2 The broad historical facts leading to the political division and establishment of the two States of India and Pakistan, in 1947 are well-known. However, it is appropriate and necessary to revisit and summarise some of the salient aspects relevant to the present proceedings and to correct certain misconstructions made by Bangladesh.

3.3 Until 15 August 1947, India was a single country, part of the British Empire. Upon the termination of British sovereignty, significant parts of its territory consisting of some of the provinces and districts were carved out of India and the country was divided into the two independent States of India and Pakistan. The enabling legal instrument for the independence and partition of the country into the two States was the Indian Independence Act of 1947⁴⁸ of the United Kingdom Parliament. In accordance with this Act, the two separate States of India and Pakistan were established on 15 August 1947.

3.4 Sections 2 and 3 of the Act of 1947 specified the territories which were to constitute parts of India and Pakistan. Section 2 provided, *inter alia*, for the partition of the erstwhile province of Bengal out of which East Bengal became part of Pakistan and West Bengal remained a part of India. Section 3(3) provisionally specified the districts of the province

⁴⁸ MB, Vol. III, Annex B11.

which were to constitute East and West Bengal subject to the award of a boundary commission appointed by the then Governor General of India.

3.5 A Boundary Commission was appointed on 30 June 1947 with Sir Cyril Radcliffe as Chairman and two High Court judges, one each from East and West Bengal. The Boundary Commission, which came to be known as the Bengal Boundary Commission, completed its Report and made its Award known as ‘The Radcliffe Award’ on 13 August 1947. The Award was accepted by the two newly independent States, though some differences about its interpretation relating to the land boundary were the subject of a subsequent joint commission known as the Indo-Pakistan Disputes Tribunal which made its award on 26 January 1950⁴⁹.

3.6 The Radcliffe Award described, in Annexure A to the Award, the boundary relevant for the purpose of these proceedings between East Bengal, which became East Pakistan, and West Bengal which remained a part of India. The Award also had a map attached which formed Annexure B of the Award.

3.7 Paragraph 10 of the Award provided that:

“The demarcation of the boundary line is described in detail in the schedule which forms Annexure A to this award, and in the map attached thereto, Annexure B. The 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 on the map in Annexure B, the description in Annexure A is to prevail”.

3.8 In accordance with the provisions of paragraph 10 of the Award, the boundary line between East and West Bengal was described in Annexure A. The relevant part reads as follows:

“A line shall then be drawn . . . *to the point where the boundary between the Districts of 24 Parganas [in the west] and Khulna [in the east] meets the Bay of Bengal.* This line shall follow the course indicated in the following paragraphs. So much of the Province of Bengal as lies to the west of it shall belong to West Bengal [India]”⁵⁰.

⁴⁹ MB, Vol. III, Annex B16.

⁵⁰ Bengal Boundary Commission Report to His Excellency the Governor General of India, 12 August 1947 (Radcliffe Award) (Annex IN-2) (emphasis added).

3.9 Annexure B being the map referred to in the Award was duly certified as such by the Chairman of the Commission and attached to the Award. A full-scale reproduced certified copy which is in the custody of the Government of India is depicted in Annex IN-2, and a copy is reproduced at page 55.

3.10 The southern part of the boundary described in the Radcliffe Award between the districts of 24 Parganas and Khulna was the subject of a Gazette Notification issued by the Government of Bengal on 24 January 1925 which described this part of the boundary as being “. . . *the midstream of the main channel of the river Ichhamati, then the midstream of the main channel for the time being of the rivers Ichhamati and Kalindi, Raimangal and Haribhanga till it meets the Bay*”⁵¹. This is reflected in the map in Annexure B to the Radcliffe Award.

3.11 Bangladesh declared its independence from Pakistan in March 1971. The new State of Bangladesh, upon coming into existence, succeeded to the territories of East Pakistan⁵².

3.12 The years that followed the emergence of this newly independent State of Bangladesh also coincided with the period of increased international activity in the area of maritime law defining, *inter alia*, the rights of coastal States, the extent of their national jurisdiction and the high seas beyond the limits of such jurisdiction. These issues were the subject-matter of several United Nations Conferences on the Law of the Sea. The United Nations General Assembly, by its Resolution 3067(XXVIII) of 16 November 1973⁵³, had confirmed its decision to convene the Third United Nations Conference on the Law of the Sea and invited States participating in the Conference to submit proposals, including draft articles for discussion, consideration and possible adoption.

3.13 Delegates from both India and Bangladesh participated in this Conference and made several suggestions and proposals. As is well-known, deliberations of the Third Conference continued for eleven sessions between 1973 and 1982 leading to the adoption of the final

⁵¹ Annex IN-1 (emphasis added).

⁵² MB, para. 3.18.

⁵³ United Nations General Assembly, Resolution 3067(XXVIII), Reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction and use of their resources in the interests of mankind, and convening of the Third United Nations Conference on the Law of the Sea, 16 November 1973 (Annex IN-4).

draft of the Convention in April 1982. This was also the period during which India and Bangladesh held extensive negotiations referred to hereafter in an effort to try to agree on a maritime boundary.

II. Declaration of Maritime Zones

A. Bangladesh

3.14 Bangladesh enacted its Territorial Waters and Maritime Zones Act, 1974 on 14 February 1974⁵⁴, which, as stated in paragraphs 3.20 and 3.21 of its Memorial, proclaimed that “[t]he sovereignty of the Republic [of Bangladesh] extends to the territorial waters as well as to the airspace over and the bed and subsoil of such waters”. Additionally, the Act established a contiguous zone extending to 6 nautical miles measured from the outer limit of the territorial waters, a continental shelf extending to the outer limits of the continental margin and an “economic zone” and “conservation zone”; thereafter, on 13 April 1974, Bangladesh issued the Notification contemplated in the Act, claiming a 12 nautical miles territorial sea and an economic zone extending up to 200 nautical miles⁵⁵. In the same Notification, it also declared a system of straight baselines consisting of lines connecting eight points, all of which are located along the 10-fathom depth contour in the submerged delta.

3.15 These baselines were declared by Bangladesh eight years before the adoption of UNCLOS. The 10-fathom line that Bangladesh used to declare its baselines had no basis – even at the time of the Notification – in the international law of the sea.

3.16 Neither of these events was formally brought to the notice of the Government of India and the Notification of April 1974⁵⁶ was not given any publicity in the Bangladesh press or radio. Until September 1974 India was not formally informed of the April Notification

⁵⁴ Annex IN-5.

⁵⁵ Annex IN-6.

⁵⁶ *Ibid.*

declaring the base points based on 10 fathom depth, or the baselines constructed on this basis⁵⁷.

3.17 The Prime Minister of Bangladesh and his team were in India in May 1974 when negotiations were held for settling the land boundary between India and Bangladesh. At this time the Bangladesh Foreign Secretary suggested, at a meeting held on 9 May 1974, that the two States should also settle the maritime boundary between them so that there would be no conflict regarding the exploitation of the seabed resources or fisheries or regarding other uses of the sea in their respective zones. It was agreed that the talks would be held at the beginning of June 1974 in Dacca, after the Indian side had completed the required preparatory work. Since no invitation was received until 7 June 1974 and due to the forthcoming session of the Third United Nations Conference on the Law of the Sea in Caracas from 16 June 1974 till the end of August 1974, it was decided that these talks should be held after the Caracas session was over.

3.18 While the negotiations for a mutually agreed maritime delimitation between India and Bangladesh were shortly due to begin, as suggested by Bangladesh in May 1974, the representative of Bangladesh on 3 July 1974 announced at the Caracas session of the Conference:

“ . . . his country’s views on national jurisdiction and the extent of its coastal State control which grew out of the fact that the sea, the seabed and its resources, both living and non-living, renewable and non-renewable, constituted an essential supplement to its economy. That had been the impetus behind his Government’s efforts to define the extent of its sovereign rights over the management and control of the ocean, and the limits of its national jurisdiction. The Bangladesh Parliament had already enacted a ‘Territorial Waters and Maritime Zones Act’, which enabled the Government to declare the limits of the territorial waters, contiguous zone, economic zone and continental shelf. Pursuant to that Act the Government had issued notices stating that its territorial waters extended to 12 nautical miles, and its economic zone to 200 nautical miles, from baselines expressed in geographical co-ordinates.

. . . With a view to removing any possible doubt, Bangladesh had defined its continental shelf as comprising the sea-bed and subsoil of the submarine areas adjacent to the coast of the country but beyond

⁵⁷ *Note Verbale* from the High Commission of India to the Ministry of External Affairs of India, 19 September 1974 (Annex IN-9).

the limits of the territorial waters, up to the outer limits of the continental margin bordering on the ocean basin or abyssal floor. The legislation also envisaged comprehensive control over the utilization of the continental shelf⁵⁸.

And on 16 July 1974

“ . . . The only feasible method of demarcation of the landward and seaward areas was a baseline expressed in terms of a certain depth. The present method of determining the baselines, set forth in articles 3 and 4 of the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone, did not take account of the geographical peculiarities of the coastline in States such as his own . . . At the appropriate time his delegation would submit a text concerning the drawing of baselines in such cases⁵⁹ .

The above declaration was thus the first formal indication to the world about the fact that the Government of Bangladesh had not only enacted its Act of 1974 but that, pursuant to the Act, it had issued a formal statutory notification specifying the extent of its territorial waters, its economic zone and continental shelf from baselines ‘drawn following the depth method’.

3.19 Given the fact that this occurred as India and Bangladesh had recently agreed to begin friendly negotiations (assumed to be without any predetermined positions) to reach a mutual agreement on their maritime boundary, India considered it a manifestation of lack of good faith on Bangladesh’s part to fix and announce baselines and base points along the 10-fathom line and notifying the extent of their exclusive economic zone and continental shelf prior even to the first consultation between the two States. This action had no basis in international law. It was further compounded by Bangladesh’s refusal to agree to anything which, it claimed, was at variance with the provisions of its 1974 Act already approved by their Parliament; this despite the fact that the action was not in conformity with international law and would encroach on India’s legitimate claims. The position taken by Bangladesh to accord priority to their national law over well accepted principles/norms of international law became a major aspect of disagreement and effectively frustrated the subsequent negotiations to settle the maritime boundary between India and Bangladesh by bilateral agreement.

⁵⁸ See Summary Records of the 27th Plenary Meeting of the Third United Nations Conference on the Law of the Sea, Doc. A/CONF.62/ SR.27, 3 July 1974, paras. 53 and 56 (Annex IN-7).

⁵⁹ Summary Records of the 5th Meeting of the Second Committee of the Third United Nations Conference on the Law of the Sea, Doc. A/CONF.62/C.2/SR.5, 16 July 1974, para. 10 (Annex IN-8).

B. India

3.20 India enacted its own “Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976” (Act of 1976)⁶⁰, which took into account principles that were being discussed at the Third United Nations Conference on the Law of the Sea and on which there was broad consensus which is now reflected in UNCLOS.

3.21 For some time prior to the Act of 1976, India had begun negotiations to achieve agreement on maritime boundaries with some of the States in the region. Some of these negotiations, particularly those with Sri Lanka and Indonesia, were at an advanced stage.

3.22 It is pertinent to draw attention to the fact that India’s Act of 1976 places significant emphasis on a primary effort to achieve the establishment of maritime boundaries by agreement in a mutually cooperative manner. Section 9 (1) of the Act of 1976 prescribes:

“The maritime boundaries between India and any State whose coast is opposite or adjacent to that of India in regard to their respective territorial waters, contiguous zones, continental shelves, exclusive economic zones and other maritime zones shall be as determined by agreement (whether entered into before or after the commencement of this section) between India and such State and pending such agreement between India and any such State, and unless any other provisional arrangements are agreed to between them, the maritime boundaries between India and such State shall not extend beyond the line every point of which is equidistant from the nearest point from which the breadth of the territorial waters of India and of such State are measured.”

3.23 Under the terms of the Act, in May 2009, India also declared straight baselines along its coastlines including in the area near Bangladesh. Bangladesh considers India’s baselines in areas closest to Bangladesh as incompatible with the terms of article 7 of UNCLOS⁶¹.

3.24 India has seven neighbouring States with which it shares maritime zones. It is relevant to note that out of these seven countries, India has signed twelve agreements with five of its neighbouring countries: Myanmar, Thailand, Sri Lanka, Indonesia and Maldives. All these agreements are based on the equidistance line/median line principles. Despite the fact that in

⁶⁰ Act No. 80, 28 May 1976 (Annex IN-13).

⁶¹ MB, paras. 3.30 and 5.21.

some cases, the countries involved, like India, have concave coastlines (similar to the claim made by Bangladesh), the equidistance line has been used by mutual agreement. Except for Bangladesh and Pakistan, India has delineated its maritime boundaries with all its other neighbouring States by agreement⁶².

III. The Parties' Efforts to Negotiate a Maritime Boundary Agreement

3.25 The negotiations between India and Bangladesh continued at several meetings from November 1974 till January 1982 (i.e., covering almost the same period while the sessions of the Third United Nations Conference on the Law of the Sea were being held and the 1982 Convention finalised). It must be said, however, that these attempts to find a mutually agreed solution were continually obstructed by the unilateral actions followed by a rigidity in the approach of Bangladesh.

3.26 During that period, both India and Bangladesh had also held negotiations on the exploration of their continental shelf with various international exploration companies. In this context, some of the actions taken by Bangladesh further adversely affected the efforts to achieve a mutually agreed maritime delimitation.

3.27 In the period prior to the first projected round of negotiations, upon an examination of the implications of the baselines fixed by Bangladesh, and also announced at the UN Conference, it was found that Bangladesh's action would lead to an encroachment upon parts of the area on the Indian side of the equidistance line; and that the Government of Bangladesh had in fact issued a Letter of Intent to Ashland Oil Company, a US oil company, for possible exploration covering an area on the Indian side of the median line. Consequently, the Government of India issued a *Note Verbale* to the Government of Bangladesh on 31 October 1974 stating, *inter alia*, (in paragraph 5) that:

“The attention of the Government of India has also been drawn to the fact that the Government of Bangladesh are entertaining applications or offers for award of contracts for exploration of the area and that a Letter of Intent has already been issued to one Ashland Oil Company for off-shore exploration of the continental shelf adjoining the India

⁶² List of Agreements concluded by India with neighbouring countries (Annex IN-39).

area. It is suggested that, pending the settlement of the maritime boundary between the two countries, the Government of Bangladesh desist from any exploration of the area considered as Indian by the Government of India and ensure that no exploration work is carried out by any party, whether by the Ashland Oil Company or any other, on behalf of the Government of Bangladesh in such area”⁶³.

The Negotiations

3.28 The following paragraphs briefly describe the subsequent meetings held between India and Bangladesh from 1974 till 2009.

3.29 The first round of negotiations was held in Dacca from 30 November to 4 December 1974. At this meeting, representatives of Bangladesh sought to explain the basis on which their baselines were drawn, i.e., the depth method referred to in their announcement during the Caracas session, and also discussed other related aspects of their proclaimed maritime zones. The Indian representatives pointed out that the method followed by Bangladesh, and announced at the Conference, was not envisaged in international law and expressed serious concern and anxiety at Bangladesh’s action in unilaterally declaring its maritime boundary, which also appeared to encroach upon the Indian area. India took the position that the general rule or practice of States in determining a maritime boundary, whether adjacent or opposite, was to construct an equidistance line, taking into account the islands and the low-tide elevations on either side. Such equidistance or median line could be modified or deviated from only in the case of “special/relevant circumstances”. This rule had in effect been embodied in article 12 of the 1958 Geneva Convention on Territorial Sea and Contiguous Zone and in article 6 of the 1958 Geneva Convention on the Continental Shelf. It had also been followed in State practice both with regard to countries opposite to each other as well as among countries adjacent to each other.

3.30 The Bangladesh representatives continued to stress that in settling a boundary between adjacent States, the principle to be followed was to ensure that the boundary line was equitable to both sides. The discussions were therefore essentially exploratory in regard to the position of each side.

⁶³ Annex IN-10.

3.31 It will be noted from this record that, during the discussions, the representatives of India referred to the *Note Verbale* of 31 October 1974 (which expressed its concerns about the Ashland Oil Company appointed by the Bangladesh Government for offshore exploration of the continental shelf) and pointed out that Bangladesh must desist from encroaching on any part of the India area⁶⁴. The Bangladesh side stated that their Government was seized of the matter and subsequently, on 13 December 1974, in a *Note Verbale* to India, stated, *inter alia*,

“With respect to the suggestion of the Government of India that pending the settlement of the maritime boundary between the two countries the Government of Bangladesh desist from any exploration of the area considered as Indian by the Government of India and ensure that no exploration work is carried out by any party, the Government of Bangladesh has taken care to enter into contracts for exploration entirely within the area which forms part of its territorial sea and continental shelf. *The Bangladesh Government, therefore, does not consider that there is any reason to refrain from proceeding with work in its contracted areas*”⁶⁵.

India continued to regard this issue as requiring urgent attention; hence the need to have the next round of meeting by the earliest possible date.

3.32 The second round of negotiations was consequently held at New Delhi between 15 and 17 January 1975 at the level of Foreign Secretaries. India’s concern over Bangladesh having awarded exploration contracts to companies, one of which encroached on the Indian side, was reiterated.

3.33 Bangladesh continued to argue that there was no general rule of international law governing maritime boundaries, that a number of methods of equal validity can and have been used for drawing such boundaries and that maritime boundaries have to be settled between States taking into account their particular conditions and circumstances. Bangladesh asserted that the adoption of the equidistance principle would not be fair to Bangladesh because the concavity of its coast, despite its large land mass, would result in disproportionately narrowing its continental shelf.

⁶⁴ *Ibid.*

⁶⁵ *Note Verbale* from the High Commission of Bangladesh to the Ministry of External Affairs of India, 13 December 1974 (emphasis added) (Annex IN-11).

3.34 The Indian representatives pointed out that in the Bay of Bengal, the shelf was the common natural prolongation of the land territory of India, Bangladesh and others and had therefore to be delimited in accordance with known and established principles of law and precedents. The rule of equidistance had not only been included in the 1958 Convention on the Continental Shelf to which more than 50 States were parties but had also been followed in almost all cases of maritime delimitation whether among opposite or adjacent States. This rule had also been followed by India in its maritime boundary agreements with Indonesia and Sri Lanka, which had been concluded a year prior to the start of negotiations with Bangladesh. It was also pointed out that the equidistance line could be adjusted, if special circumstances so warranted, but as a general rule, equidistance was universally recognised.

3.35 As regards the 10-fathom baseline adopted by Bangladesh, it was pointed out that this was not in accordance with international law and that in any case it could not be applied in determining the maritime boundary.

3.36 India also conveyed its concern at the failure of Bangladesh to respond to India's request to stop exploration in the areas of possible overlap. It was again agreed that the Parties should meet as early as possible, in 10 to 15 days time, for further discussions in Dacca in an effort to narrow the differences and to submit to the two Prime Ministers joint recommendations which would be equitable and acceptable to both States.

3.37 A third round of negotiations was therefore held in Dacca from 8 to 11 February 1975, again at the level of Foreign Secretaries. No further progress was achieved. India contended that the agreement must be reached on the basis of acknowledged principles; Bangladesh reiterated its earlier position and stated its unwillingness to amend in any way the boundary that it had drawn unilaterally. Bearing in mind the urgency of the matter, it was again agreed to hold the next round of negotiations at the earliest opportunity.

3.38 Accordingly, the fourth round of negotiations was held soon after, i.e., from 1 to 5 March 1975 at New Delhi, again at the level of Foreign Secretaries.

3.39 It was evident from the negotiations that there was little chance of narrowing the differences between the two sides. While India made several suggestions to try to achieve a compromise and even raised the possibility of a slight adjustment to the equidistance line to secure an agreement, Bangladesh did not respond positively nor make any proposal which

signified the slightest deviation from its basic position of retaining the whole of the area contracted to Ashland Oil Company.

3.40 During the course of the visit, a separate meeting was also held to advise the Bangladesh authorities of India's intention to address an appropriate communication to the Ashland Oil Company, in an effort to ensure that its prospecting activities did not intrude into the Indian area. On Bangladesh's request, as a gesture of conciliation and goodwill, the Government of India agreed to withhold the letter, pending the outcome of further talks between the two Governments led by their respective Foreign Secretaries.

3.41 However, there was no progress on the Ashland issue. It was conveyed to Bangladesh that this had put the Government of India in an indefensible position before the Indian Parliament and its people; and furthermore, that, were it not for the Ashland incident, the issues involved could have been discussed extensively and more positively with good prospects of reaching an agreement.

3.42 The fifth round of negotiations between 29 March and 2 April 1975 was held at New Delhi during the official visit of the Foreign Minister of Bangladesh at the invitation of the Government of India. In a joint press release⁶⁶, the Foreign Ministers of India and Bangladesh stated that negotiations on the delimitation of the maritime boundary had advanced to a stage where both sides were confident of finding a mutually satisfactory solution. This meeting was followed by the visit of the Bangladesh Foreign Minister to India on 16 August 1975. During this brief visit, the issue of the maritime boundary was raised again but it was not found possible to reach a conclusion.

3.43 After an interval of three years, a sixth round of negotiations took place at New Delhi from 22 to 23 March 1978⁶⁷. Most of the same issues were raised by both States and the negotiations ended in agreeing to understand each others' point of view and work towards a mutual agreement.

⁶⁶ Press release of 2 April 1975 on the talks held between the Foreign Ministers of India and Bangladesh at New Delhi from 29 March to 2 April 1975 (Annex IN-12).

⁶⁷ Joint press statement issued on the conclusion of Indo-Bangladesh talks on delimitation of maritime boundary, 24 March 1978 reproduced in A. S. Bhasin (ed.), *India - Bangladesh Relations: Documents 1971-2002*, Vol. IV, 2003, p. 1919 (Annex IN-14).

3.44 At the seventh round of negotiations held from 2 to 5 December 1980⁶⁸ at New Delhi, India pointed out that, pursuant to the provisions of Section 9 of the Indian Act of 1976, which obliged the authorities to attempt to reach mutual agreements on maritime boundaries, it had concluded mutual maritime delimitation agreements with other States in the region and was most anxious to achieve a similar success in negotiations with Bangladesh. Bangladesh's response was that politically they could not accept any suggestions to modify their position and abandon the 10-fathom baseline. Bangladesh thus showed no flexibility in its position and continued to be intransigent.

3.45 In 1982, there were consultations between the Foreign Secretaries of both countries. They discussed important bilateral issues one of which was the maritime boundary. At this meeting, they reviewed their respective positions on the issue but found no meeting ground and decided to continue talks to reach an amicable solution.

3.46 It was also learnt that meanwhile, the various international oil companies including Ashland Oil Company had terminated their contracts for offshore exploration. However, as is apparent from a copy of a Notice with an attached map placed on the 'PetroBangla' website⁶⁹, Bangladesh continued to invite bids from companies to undertake offshore exploration for oil and natural gas (at least until February 2008) in blocks indicated on the attached map which testify to its exaggerated claims in the Bay of Bengal (see figure No. 3.1 at page 49).

3.47 It is relevant to make a brief reference to a part of the plenary address of the Bangladesh representative at the concluding Plenary Session of the Third Conference of UNCLOS on 9 December 1982, the day before UNCLOS was concluded. He stated, *inter alia*,:

“We have to acknowledge that not all our hopes have been realized in this Convention. We believe that the unique geographical circumstances of our coastline and the peculiar conditions associated therewith warrant adequate treatment. It is also impossible not to

⁶⁸ Report on the Indo-Bangladesh Talks on Maritime Boundary, 5 December 1980 reproduced in A. S. Bhasin (ed.), *India - Bangladesh Relations: Documents 1971-2002*, Vol. IV, 2003, pp. 1930-1931 (Annex IN-15).

⁶⁹ Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources of the Government of The People's Republic of Bangladesh and Bangladesh Oil, Gas And Mineral Corporation (Petrobangla), Notice Inviting Bids for Exploration of Oil and Natural Gas under Bangladesh Offshore Bidding Round 2008 (with map), February 2008 (Annex IN-32).

agree with the assessment by some representatives that the scheme of the Convention gives too much to some and too little to many others. Yet the Convention, with all its imperfections, offers a viable package deal which must be taken as a whole in the spirit of mutual co-operation and friendship.

. . .

The Convention before us contains many inadequacies but, in the spirit of our commitment to international law, peace and good order and solidarity with the people of the developing world and of the non-aligned and the Islamic countries, I have been entrusted by my Government to sign the Convention. However, at the appropriate time Bangladesh will avail itself of the provisions of article 310 to make a declaration on matters of our vital national interests. . . .”⁷⁰.

3.48 Bangladesh had already of course taken action on the basis indicated above by addressing a letter of 28 April 1982 to the President of UNCLOS drawing attention to:

“ . . . the unique configuration of its coastline associated with peculiar geomorphological and geological conditions obtaining off-shore conditions that lead to a highly fluctuating low-water mark and areas of shallow water so unstable and variable as not to be amenable to conventional charting . . . In this background, Bangladesh proposed a formulation based upon depth criteria and bathymetric factors which in the circumstances of the case mark the limits of navigation and charting”⁷¹.

3.49 Although Bangladesh claimed in the letter that it had received support for the above views, this in fact was contradicted in letters of 30 April 1982⁷² each from India and Myanmar.

3.50 After 1982, no negotiations took place for the next 26 years until 2008 when talks were resumed at the technical level between India and Bangladesh.

⁷⁰ Summary Records of the 191st Plenary Meeting of the Third United Nations Conference of the Law of the Sea, Doc. A/CONF.62/SR.191, 9 December 1982, paras. 169 and 174 (Annex IN-19).

⁷¹ Letter from the representative of Bangladesh to the President of the Conference, Doc. A/CONF.62/L.140, 28 April 1982 (Annex IN-16).

⁷² Letter from the representative of India to the President of the Conference, Doc. A/CONF.62/L.148, 30 April 1982 (Annex IN-17) and letter from the representative of Burma to the President of the Conference, Doc. A/CONF.62/L.149, 30 April 1982 (Annex IN-18).

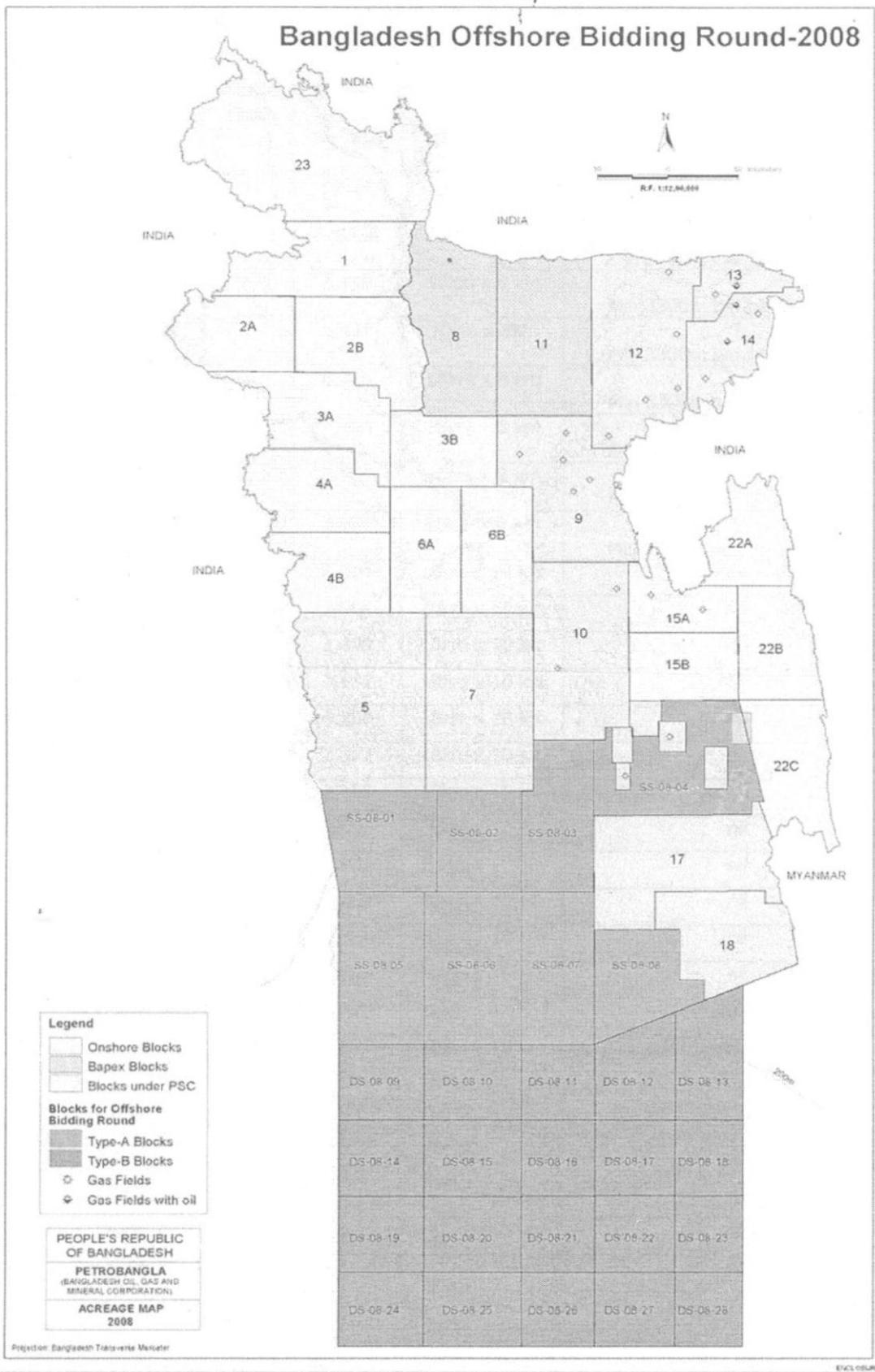


Figure 3.1 Oil Block Area Claimed by Bangladesh in 2008

3.51 At the technical level talks held from 15-17 September 2008 and 17-18 March 2009, representatives of both India and Bangladesh reiterated their respective positions. At the last meeting, it appeared that Bangladesh might be considering dropping its insistence on base points determined by depth. Brief discussions were also held on the possible land boundary terminus and the method to be followed for drawing the maritime boundary but Bangladesh was not forthcoming and therefore the differences between the Parties remained unresolved.

3.52 On 8 October 2009, Bangladesh commenced the present arbitration pursuant to article 3(d) of Annexure VII of UNCLOS.

3.53 It is now obvious that Bangladesh has, since the end of the negotiations with India, abandoned its contention that base points should be determined based on depth criteria; it stated in paragraph 5.20 of its Memorial that “[a]s in its case with Myanmar, Bangladesh does not rely on the straight baselines it adopted in 1974”. However, Bangladesh has continued to insist on the application of its national laws even in the notice of arbitration.

3.54 Furthermore, the proposals now contained in Bangladesh’s Memorial seeking a maritime boundary based on the angle-bisector method was at no time brought up in the course of mutual discussions held between India and Bangladesh.

3.55 Thus, although from 1974 to 2009, India and Bangladesh had eight rounds of negotiations and two expert-level talks to try to agree on a maritime boundary between the two countries, Bangladesh’s rigid stance precluded any settlement.

3.56 From the above account, it is evident that while India followed a consistent, transparent and well recognised equidistance/median line approach in its maritime boundary agreements and negotiations with its neighbours and with this reasonable and accommodating position was able to settle through bilateral/trilateral agreements maritime boundaries with five out of its seven maritime neighbours, Bangladesh, because of its insistence on unreasonable and incorrect application of international law, was unable to delimit its maritime boundary by agreement with both its maritime neighbours. Bangladesh’s Memorial at paragraph 3.34 also acknowledges India’s readiness to adjust the equidistance line if the circumstances so warranted but as stated above no agreement could be reached because Bangladesh continued to advance extreme and exaggerated claims which have no basis or precedent in international law or practice.

CHAPTER 4

THE LAND BOUNDARY TERMINUS

I. Introduction

4.1. India and Bangladesh agree that the terminus of the land boundary between them has been authoritatively defined by the Radcliffe Award and that, accordingly, the only function of the Tribunal is to interpret the relevant provisions of this Award in their legal context. India's concern, expressed in its *Note Verbale* of 6 November 2009⁷³, to the effect that the *de novo* determination of the land boundary terminus was not a matter that was governed by UNCLOS, has thus been addressed.

4.2. The Radcliffe Award, in its last section which is relevant for identifying the land boundary terminus of the international boundary, provided:

“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”⁷⁴.

The boundary between the two districts of Khulna and 24 Parganas was established by Notification No. 964 Jur. which provided that

“the Western boundary of district Khulna passes along the south-western boundary of Chandanpur to [. . . intermediate villages omitted . . .], . . . 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 Haribhanga till it meets the Bay”⁷⁵.

4.3. It is agreed by the Parties that the land boundary terminus to be identified in accordance with the Radcliffe Award is found in the estuary which is at the southern end of the vast Sundarbans mangrove forest and which meets the Bay of Bengal at the *intra fauces terrae* closing line. This estuary is formed by the confluence of a complex network of rivers

⁷³ *Note Verbale* from the Ministry of External Affairs of India to the High Commission of Bangladesh, 6 November 2009 (Annex IN-36).

⁷⁴ Radcliffe Award, para.8 (Annex IN-2).

⁷⁵ Annex IN-1.

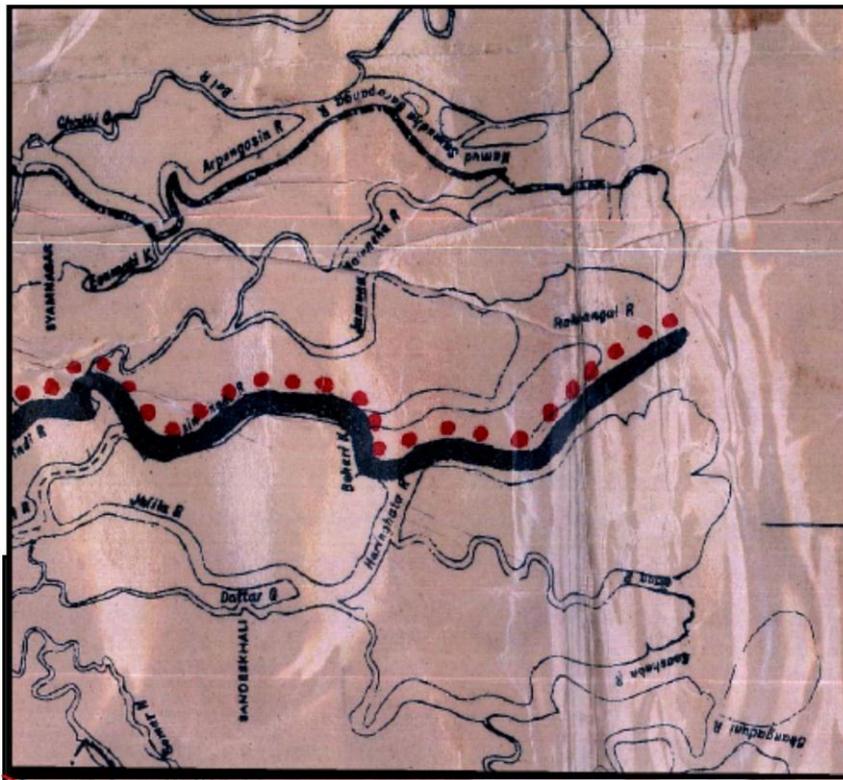
descending southward through the Sundarbans. The land boundary terminus is the point where the midstream of the main channel of the Hariabhanga River meets the Bay of Bengal. India submits that that point, whose co-ordinates are 21°38'40.4" N, 89°10'13.8" E, is to the east of the low-tide elevation known as New Moore Island.

4.4. This is manifest in the reproduced certified copy of the map at Annexure B of the Radcliffe Award, which is at Annex IN-2. It will be further commented on later in this chapter. That map, bearing Sir Cyril Radcliffe's signature, is also reproduced with a magnification of the relevant portion at page 55.

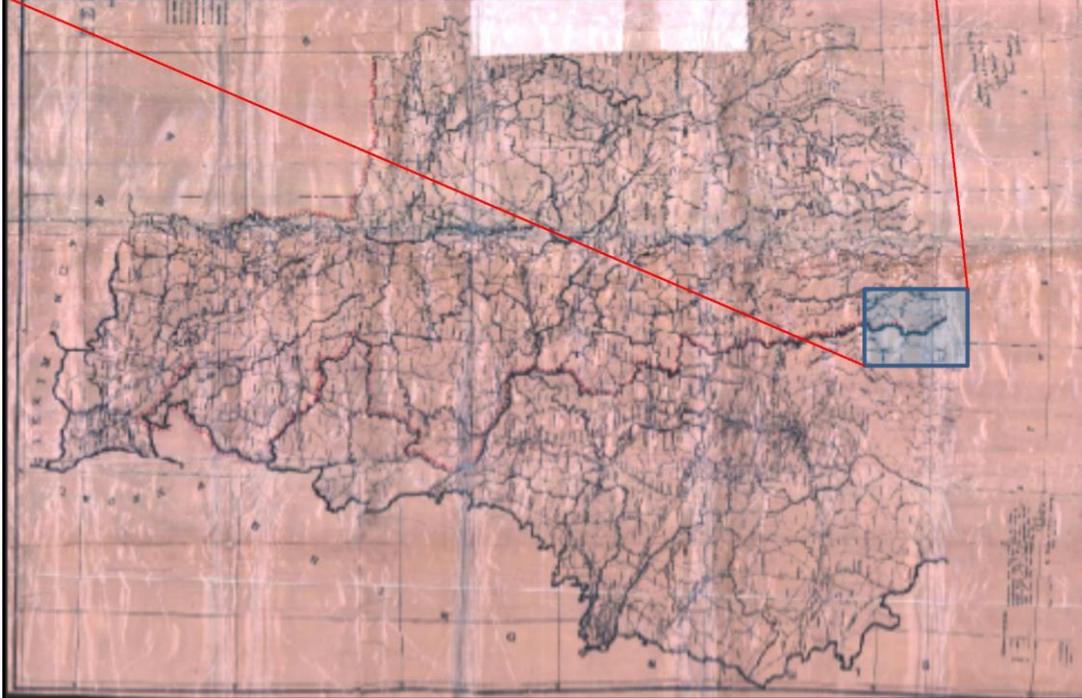
4.5. As is apparent from its terms, the Radcliffe Award locates the land boundary terminus between the two States where the midstream of the main channel of the Hariabhanga in the estuary (the vertical axis) intersects a closing line drawn from "headland to headland" across the mouth of the estuary (the horizontal axis); the latter indicates, for legal purposes, where the estuary meets the Bay of Bengal. As can be seen from the magnification of the map, consistent with the express language of the Award, Radcliffe drew his boundary line so that it followed the *main channel* of the Hariabhanga till it "meets the Bay of Bengal"⁷⁶. There are, thus, two axes to the land boundary terminus. The first or 'vertical' axis is constituted by the midstream of the main channel running in a south-easterly direction down through the estuary. The second or 'horizontal' axis is constituted by a line running from headland-to-headland across the mouth of the estuary, approximately east-west. The intersection of the vertical and horizontal axes is the land boundary terminus.

4.6. The applicable law for determining the horizontal axis is contemporaneous with British law as it was applied in India and the rest of the British Empire. As for the vertical axis, the Parties agree that the key part of the applicable law with respect to it is to be found in the Radcliffe Award of which more will be said below. But, as will be shown, that Award was not issued in a legal vacuum. It confirmed, as the international boundary, an existing internal boundary under the British pre-partition public law, namely, the pre-partition

⁷⁶ It is not India's contention that the dotted red line on this map represents the boundary (which, were it chosen, would benefit India); instead the solid black line indicates the course that Radcliffe chose and marked as the boundary.



Map No. 4.1
Radcliffe Map



administrative boundary between the districts of 24-Parganas and Khulna. That same boundary constituted the easternmost boundary of India and the westernmost boundary of East Pakistan after partition and, thereafter, the westernmost boundary of contemporary Bangladesh where it meets the Bay of Bengal.

4.7. The Award's boundary between the districts of 24-Parganas and Khulna incorporates the pre-partition boundary between the districts; the boundary follows the main channel through a series of rivers (the Kalindi, Raimangal, and Hariabhanga Rivers) as that channel transits the northern expanse of the two districts. In the sector of that boundary which concerns the Tribunal, the Raimangal and Hariabhanga empty into the estuary. Moreover, bathymetric data of the estuary confirm the location of the main channel consistent with pre-partition government documents. All of this is made abundantly clear from the southeasterly trajectory of the Award's boundary line as it approaches the Bay of Bengal.

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 in a southeasterly direction down through the estuary, and exposes Bangladesh's "hugging" boundary line as pure fiction (see sketch-map No. 4.2 at page 59). The Tribunal will therefore have little difficulty in disposing of the pastiche of nineteenth-century Gazetteers that Bangladesh has assembled in an attempt to prop up its treatment of the land boundary terminus in its Memorial. Annexure B illustrates the meaning of the Award's phrase "the point where that boundary meets the Bay of Bengal"⁷⁷. That and the relevant text of the Award are the most authoritative evidence that the pre-partition administrative boundary between 24-Parganas and Khulna determines the vertical, north-south axis of the land boundary terminus. In what follows, India will demonstrate how that evidence, considered in the light of all other relevant evidence and in terms of the applicable law, confirms this axis of the land boundary terminus. The east-west axis is, under the applicable law, subject to the headlands-to-headlands or *intra fauces terrae* principle. Applying these respective methods, the land boundary terminus is at 21°38'40.4" N, 89°10'13.8" E, and it is from that point that the maritime boundary should commence.

⁷⁷ Radcliffe Award, Annexure A, para. 8 (discussed at paras. 4.14-4.19 below) (Annex IN-2).

4.9. Because the land boundary terminus is the intersection of the horizontal and vertical axes and each axis is subject to a different legal regime, this chapter will proceed to set out the law applicable to the determination of the north-south or vertical axis and then the law applicable to the determination of the west-east or horizontal axis. On those bases, India will indicate the point of intersection of the two axes, i.e., the midstream of the main channel with the closing line across the mouth of the estuary. Thereafter, India will demonstrate the errors in Bangladesh's alternative theory of the land boundary terminus.

II. The Applicable Law

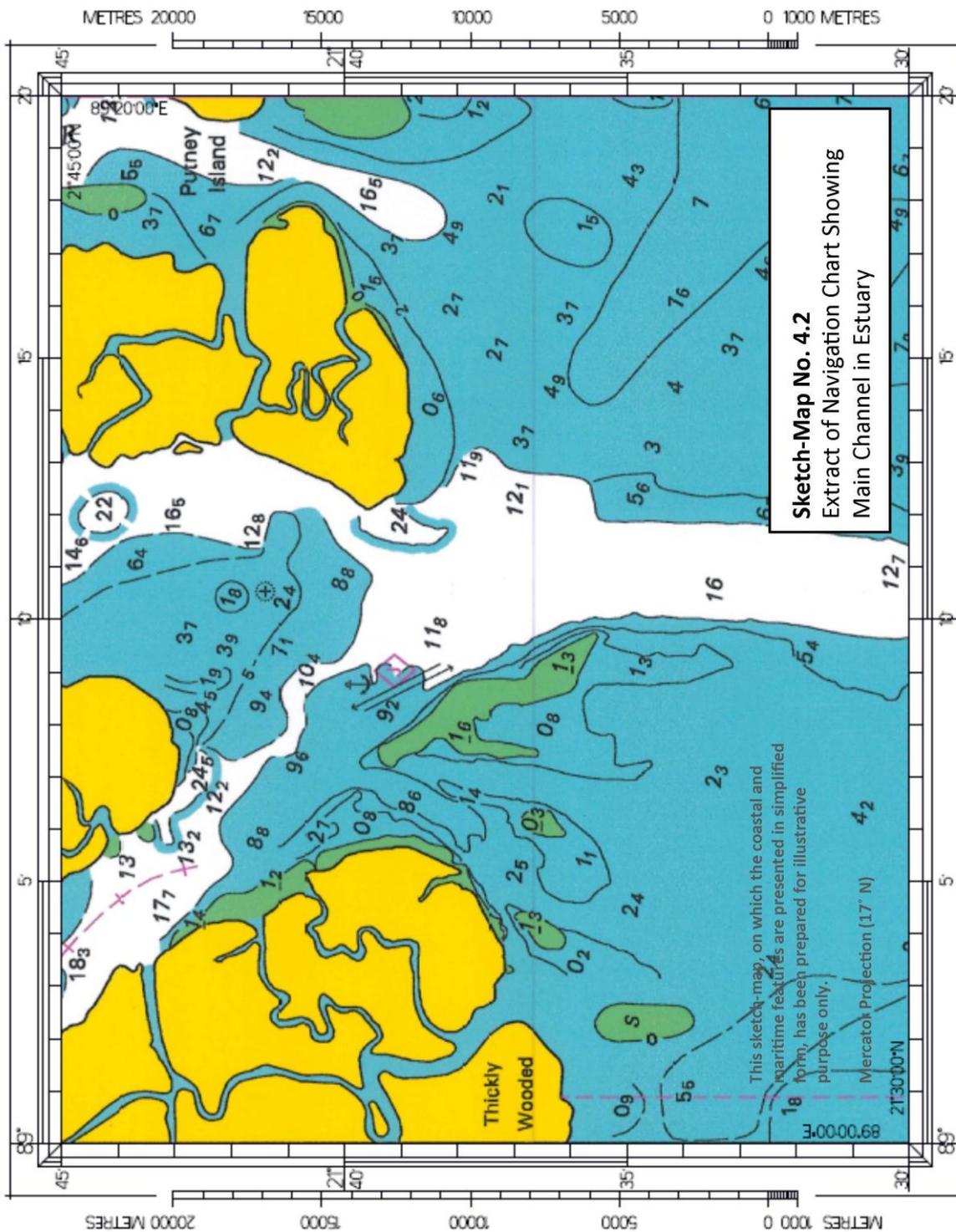
4.10. The Radcliffe Award drew significantly upon contemporary administrative boundaries. They, in turn, were consistent with settled contemporaneous British public law, regarding the delimitation of internal waters from the commencement of the territorial sea in territories under British jurisdiction. This section will discuss this body of applicable law in detail, for it shaped the boundary line that Radcliffe described in Annexure A and delineated on the Annexure B map.

A. The Applicable Law for the North-South or Vertical Axis: The Radcliffe Award and the "Midstream of the Main Channel"

4.11. In July of 1947, the Indian Independence Act received Royal Assent⁷⁸. The Act fixed that on 15 August 1947, British India would become two independent dominions of the Crown called India and Pakistan. For the purposes of this UNCLOS arbitration, the critical provision of that Act is section 2(2)(a), which transferred the newly created "Provinces of East Bengal and West Punjab" to the "new Dominion" of Pakistan. In short, on the "appointed day" of 15 August, the province of "East Bengal" would become part of Pakistan while the province of "West Bengal" would become part of India.

4.12. Section 3 of the Indian Independence Act turned to the crucial problem of establishing the new international boundary in lieu of the administrative boundary between the new provinces of East Bengal and West Bengal. The Act foresaw the complexities of boundary delimitation and delegated the final determination of the boundary to a Commission to be

⁷⁸ MB, Vol. III, Annex B11.



established for that purpose. Section 3 provided that “the 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. . . .”⁷⁹. On 30 June, 1947, the Governor-General of British India appointed the Bengal Boundary Commission in accordance with section 3 of the Indian Independence Act. He charged the Commission in its terms of reference with “demarcat[ing] the boundaries of the two parts of Bengal on the basis of ascertaining the contiguous areas of Muslims and non-Muslims. In doing so, it will also take into account other factors”⁸⁰. Sir Cyril Radcliffe was appointed Chairman of the Bengal Boundary Commission. The Chairman’s decision became the Award as provided in section 3 of the Act.

4.13. The principal concern of the Commission, in that part of its work that is relevant to this case, was not to divide the large wild forests of the Sundarbans region, but to demarcate the two parts of Bengal⁸¹. Radcliffe accepted this view of the Commission’s mandate, but insisted upon the importance of “tak[ing] into account other factors” in the final Award. The final Award emphasized a “workable” boundary, and Radcliffe noted that “I have done what I can in drawing the line to eliminate any avoidable cutting of railway communications *and of river systems*, which are of importance to the life of the province . . .”⁸².

4.14. The operative section of the Radcliffe Award reads as follows:

Report

. . .

7. . . . The demarcation of the boundary line is described in detail in the schedule which forms Annexure A to this award, and in the map attached thereto, Annexure B. The 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 on the map in Annexure B, the description in Annexure A is to prevail

. . .

Annexure A

. . .

⁷⁹ MB, Vol. III, Annex B11, section 3.

⁸⁰ Annex IN-2 at p. 1059.

⁸¹ *Ibid.*

⁸² *Ibid.*, at p. 1061 (emphasis added).

6. From the point on the River Ganges where the channel of the River Mathabanga takes off, the line shall run along that channel to the northernmost point where it meets the boundary between the Thanas of Dualatpur and Karimpur. *The middle line of the main channel shall constitute the actual boundary.*

7. From this point the boundary between East and West Bengal shall run along the boundaries between the Thanas of Dualatpur and Karimpur; Gangani and Karimpur [other intermediate thanas omitted] . . . to the point where the boundary between those thanas meets the boundary between the districts of Khulna and 24 Parganas.

8. *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.*⁸³

4.15. The sections of the Radcliffe Award that are most relevant to this arbitration have been emphasized above. As paragraph 8 of Annexure A makes clear, the Award adopted a pre-existing administrative boundary between 24-Parganas and Khulna as the boundary between India and Pakistan (and modern-day Bangladesh). Hence, to understand this part of the Radcliffe Award, it is necessary to examine more closely the terms of that pre-existing administrative boundary. Bangladesh also agrees that the administrative boundary between 24-Parganas and Khulna was well defined when the Boundary Commission was deliberating in 1947.

4.16. The authoritative definition of that administrative boundary was promulgated on 24 January 1925, when the Secretary to the Government of Bengal published Notification No. 964 Jur. in *The Calcutta Gazette*. In pertinent part, the Notification reads as follows:

“In exercise of the power conferred by the Bengal Districts Act . . . , and in modification of all previous notifications relating to the boundary between the districts of Khulna and 24-Parganas, the Governor in Council is pleased to declare that the following shall be the boundary between the said two districts: —

From the south-west corner of village Chauduria . . . the Western boundary of district Khulna passes along the south-western boundary of Chandanpur [. . . intermediate villages omitted . . .], then along the midstream of the main channel for the time being of the river Sonai up to the south-west corner of Keragachhi, [. . . intermediate villages omitted . . .] and north-western boundary of Radhanagar . . . *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*

⁸³ Radcliffe Award (emphasis added) (Annex IN-2).

*rivers Ichhamati and Kalindi, Raimangal and Haribhanga till it meets the Bay*⁸⁴.

While India has omitted a long list of intermediate villages from this excerpt⁸⁵, everything else is reprinted in its entirety. In particular, this administrative notification establishes that where the boundary between the two districts runs along a river, that boundary is the “midstream of the main channel” of the boundary river.

4.17. The last part of the quoted excerpt from the Notification is constructed in an unusual fashion: the indicated rivers are “paired.” Thus, “the main channel of the rivers Ichhamati *and* Kalindi, Raimangal *and* Haribhanga” (emphasis added). And these words are immediately preceded by a separate reference to the Ichhamati. In its Memorial, Bangladesh has ignored the “twinning” of each set of rivers and has simply assumed that the relevant river is the last in the series, i.e., the Hariabhanga. India has no objection to this specific reading but would note that the twinning of the “Raimangal *and* Haribhanga” with the singular “main channel” allows for another reading which is also consistent with the geographical situation where the Hariabhanga and the Raimangal form the estuary and meet the Bay of Bengal. Whether the 1925 Notification is read as Bangladesh reads it and India is prepared to read it or in this alternative formulation makes no legal or practical difference, as, in one the main channel of the Hariabhanga meets the Bay of Bengal and in the other, the main channel of the Raimangal *and* Hariabhanga meets the Bay of Bengal. The point of particular relevance is that both meet it at the same point east of New Moore Island.

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. The use of the adjective “main” to modify “channel” allows for the possible existence of secondary channels. In this case, Bangladesh has proposed what is plainly a secondary channel, if indeed it is a channel at all, which may be doubted since it is effectively blocked towards the south.

⁸⁴ Annex IN-1.

⁸⁵ The full document is reproduced in Annex IN-1.

4.19. The criteria for determining which of two competing channels qualifies as the main channel have been authoritatively discussed by the ICJ in *Kasikili/Sedudu*⁸⁶; they are, moreover, common sense criteria: depth, width, flow of water and comparative navigability⁸⁷. In particular, to compare “depth,” the Court considered both mean depths and minimum depths of each party’s candidate for the main channel⁸⁸. To compare “width,” it looked to the relative widths between low-water marks, and determined that satellite evidence is probative of width⁸⁹. To determine “flow,” or “volume of water carried,” the Court considered the expert evidence submitted by the Parties, but concluded that it was not possible to reconcile the Parties’ warring figures⁹⁰. Finally, the Court considered “navigability,” defined as “the combined result of [a waterway’s] depth, its width and the volume of water it carries, taking account of natural obstacles such as waterfalls, rapids, shallow points, etc, along its course”⁹¹. The criterion of navigability can be outcome-determinative on the question of “main channel”: indeed, in *Kasikili/Sedudu*, the Court held that “the ‘main channel’ in this part of the [River] Chobe is that of the two which offers more favourable conditions for navigation”⁹². As for the means for determining the main channel, the Court specified visibility as an appropriate method, even though it proved indecisive in that case⁹³. When India turns to the application of these criteria below, it will show that, in terms of the factual criteria for determining the “main channel,” the channel which meets the Bay of Bengal to the east of the low-tide elevation known as New Moore Island is incontrovertibly the main channel. This main channel has the added virtue that it mirrors the reproduced certified map of the boundary annexed to the Radcliffe Award.

⁸⁶ *Kasikili/Sedudu Island (Botswana/Namibia)*, Judgment, I.C.J. Reports 1999, p. 1045.

⁸⁷ *Ibid.*, para. 30.

⁸⁸ *Ibid.*, para. 32.

⁸⁹ *Ibid.*, para. 33.

⁹⁰ *Ibid.*, paras. 34-35.

⁹¹ *Ibid.*, para. 40.

⁹² *Ibid.*

⁹³ *Ibid.*, paras. 37-38.

B. The Applicable Law for the East-West or Horizontal Axis:
The “*Intra Fauces Terrae*” Closing Line in British and International Jurisprudence

4.20. The boundary line adopted by the Radcliffe Award follows the “midstream of the main channel” of the river. Once this axis is established, it becomes necessary to determine where, as a matter of law, that once-internal boundary line between districts “meets” the Bay of Bengal. The applicable law to determine this horizontal axis of the boundary terminus between 24-Parganas and Khulna is the public law of Imperial Britain at the moment of partition which is consistent, in this matter, with contemporaneous international law.

4.21. At the moment of partition, British public law embraced the doctrine that the entirety of the waters between the headlands of British bays is subject to the sovereign dominion of the Crown. These waters are described in contemporary British law as being *intra fauces terrae* (“within the jaws of the land”), a doctrine corresponding to the headlands-to-headlands theory of contemporaneous international law. Bangladesh accepts that the waters of the estuary must be treated as a continuous bay over which the doctrine of *intra fauces terrae* applies⁹⁴. This is a correct application of contemporaneous British law on the subject and requires this Tribunal to complete the enquiry into the land boundary terminus by drawing a closing line between the two headlands of the estuary, in accordance with British practice at the time of partition. If one projects Annexure B of the Radcliffe Award onto a modern map of the region, this line connecting the headlands of the estuary would appear as shown on sketch-map No. 4.3 at page 67. The red line projected onto this map spans 8.1 nautical miles and connects the headlands of the modern estuary.

4.22 As stated above, India and Bangladesh agree on the law on this matter.

III. Applying the Law to this Dispute

A. The East-West or Horizontal Axis: “The Closing Line”

4.23 Despite the common ground between India and Bangladesh regarding the *intra fauces terrae* principle, there does appear to be a slight cartographic error in the construction of the

⁹⁴ MB, para. 5.10..

headland closing line in the Bangladesh Memorial. While Bangladesh has affirmed that the “headland” or *intra fauces terrae* approach applies to the estuary, it has drawn its headland-to-headland line so that it meets Indian shores slightly north of the true Indian headland. The red line projected onto sketch-map No. 4.5 at page 71 remedies this error and properly connects the modern headlands of both sides of the estuary.

4.24 As is evident in the above figure, the land turns to face the sea at a point slightly south of Bangladesh’s headland closing line, hence the simple latitudinal line drawn in the Memorial is erroneous. India’s line is more accurate as it reaches the true geographic headland of Indian territory.

B. The North-South or Vertical Axis: The Main Channel

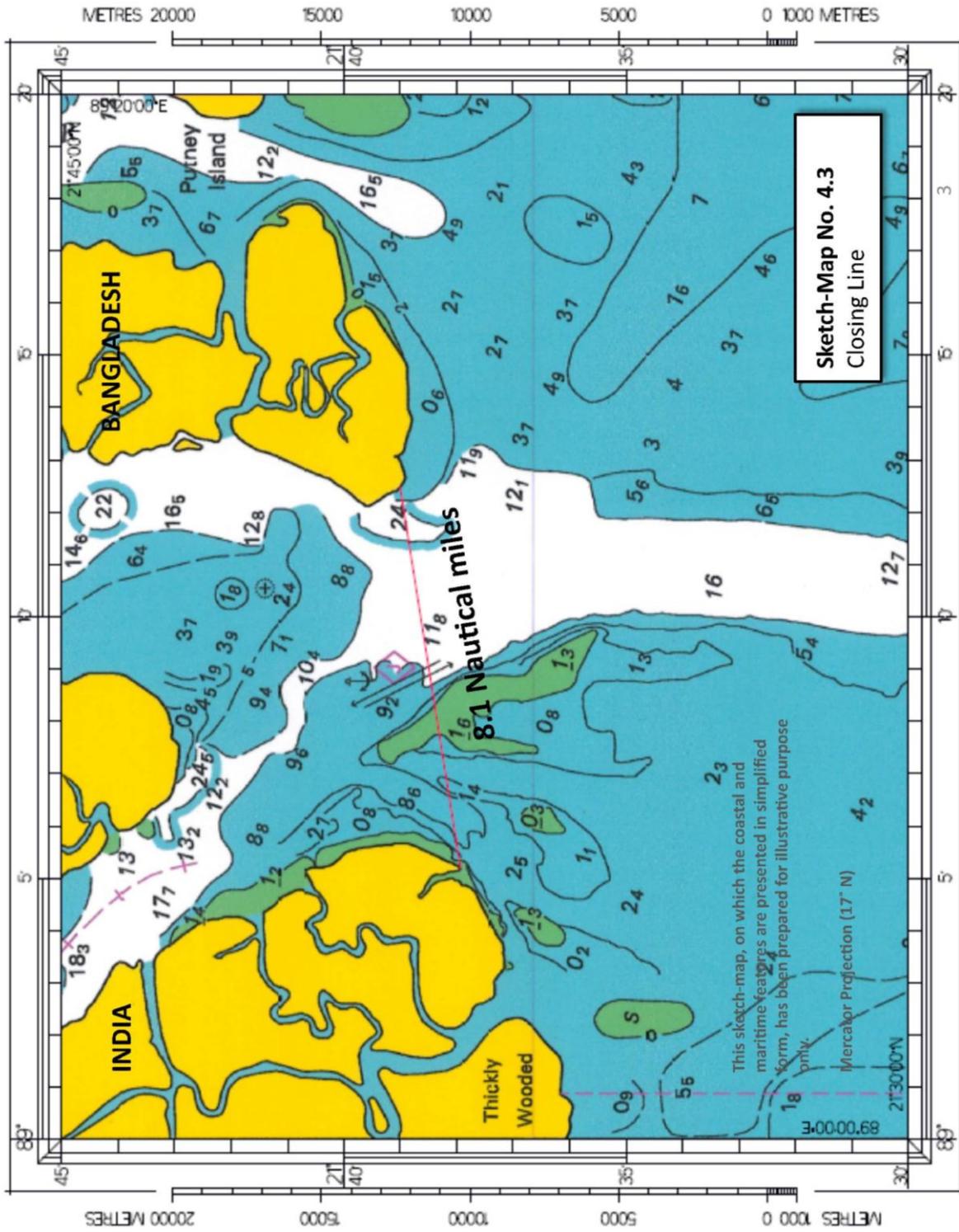
4.25 The drawing of the *intra fauces terrae* closing line constitutes the critical first step in determining the precise co-ordinates of the land boundary terminus between India and Bangladesh. The second step – defining the “main channel” of the internal waters in this area – will now be discussed. The Parties agree on the binding authority of the Radcliffe Award but they differ with respect to the identity of the main channel and, consequently, the point where its midstream intersects with the closing line. The Parties also apparently agree on the importance “of an authoritative map”⁹⁵, but Bangladesh assumes, incorrectly, that there is no certified true copy⁹⁶ and hence resorts to secondary maps. There is a reproduced certified map and India has already produced it in Annex IN-2⁹⁷. As to whether there have been any significant changes in the land boundary terminus since 1947, India notes that “Bangladesh submits that the land boundary terminus established in 1947 has remained unchanged since that date . . .”⁹⁸.

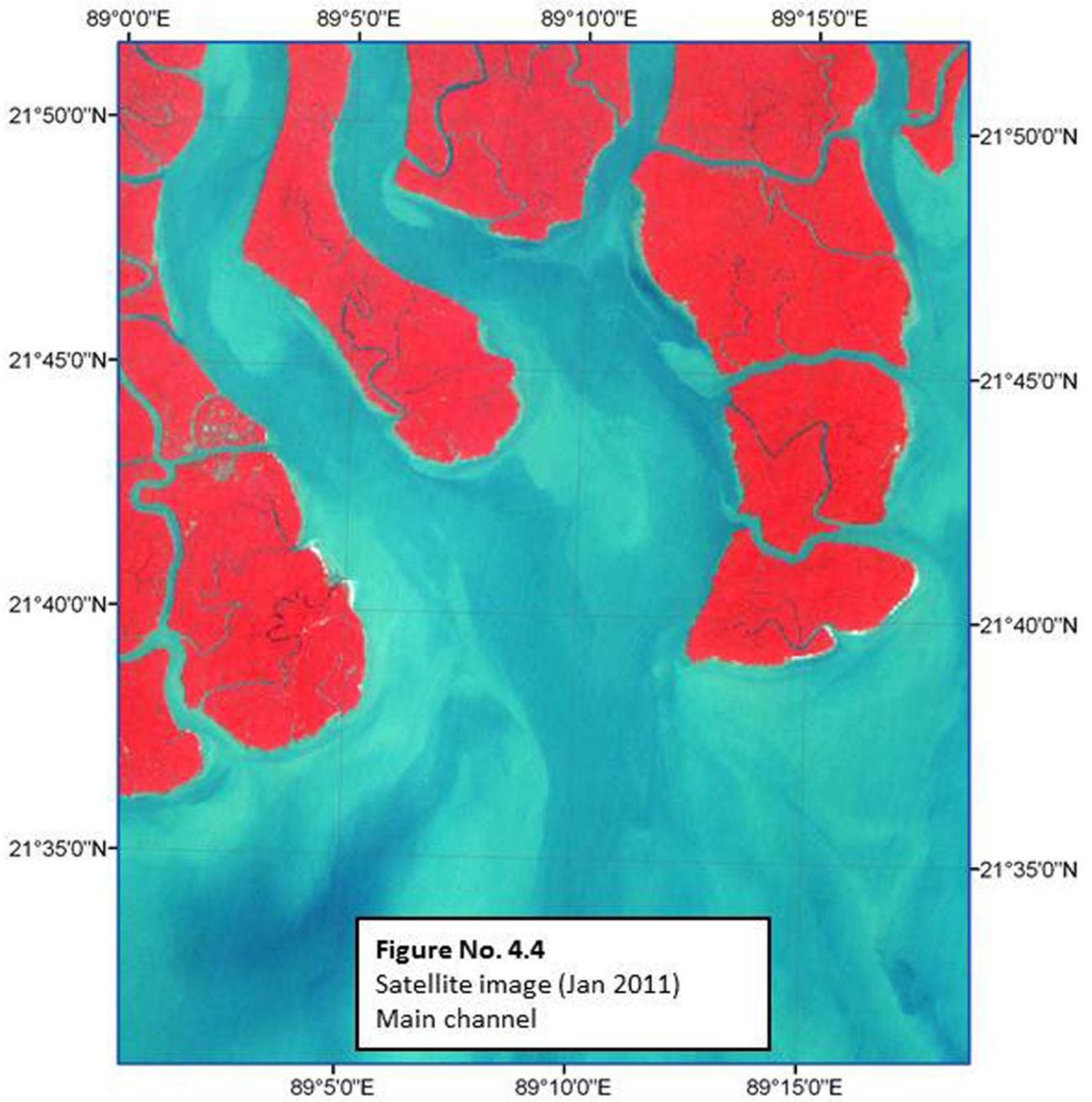
⁹⁵ MB, para. 5.8.

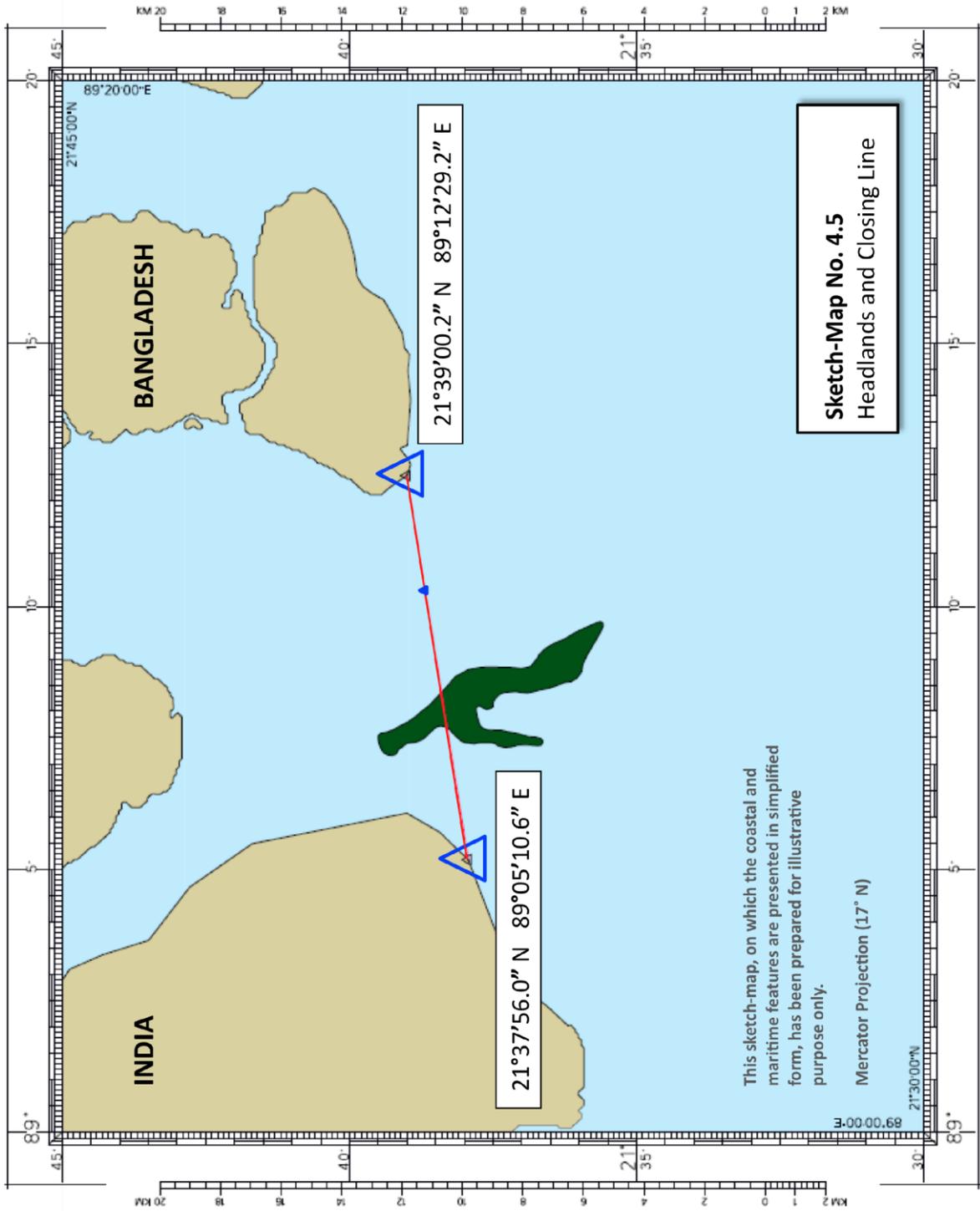
⁹⁶ *Ibid.*

⁹⁷ See also map No. 4.1 at page 55.

⁹⁸ MB, para. 5.6.







21°39'00.2" N 89°12'29.2" E

21°37'56.0" N 89°05'10.6" E

Sketch-Map No. 4.5
Headlands and Closing Line

This sketch-map, on which the coastal and maritime features are presented in simplified form, has been prepared for illustrative purpose only.

Mercator Projection (17° N)

4.26 Taken together, the Radcliffe Award and Notification No. 964 Jur. furnish the essential law for identifying the course of the main channel and the point where its midstream, as the land boundary, reaches the closing line and the Bay of Bengal. To recapitulate, the Radcliffe Award had said

“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”⁹⁹.

The boundary between the two districts was established by Notification No. 964 Jur., which stated

“The Western boundary of district Khulna passes along the south-western boundary of Chandanpur to [. . . intermediate villages omitted . . .], . . . 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 Haribhanga till it meets the Bay”¹⁰⁰.

Special attention should be paid to the last clause. Bangladesh has construed the underlined “it” to circularly refer to “the boundary”¹⁰¹ between the two districts. The Memorial says, “[i]n particular, the 1925 Notification provides that the district boundary was ‘the midstream of the main channel for the time being of the rivers Ichhamati and Kalindi, Raimangal and Haribhanga [sic] till it [*i.e.*, *the boundary*] meets the Bay”¹⁰². This reading is erroneous in several important ways.

4.27 As a matter of grammar, Bangladesh’s interpretation violates the rule of the last antecedent. Referential or qualifying phrases refer to the nearest antecedent clause. Since this was a British colonial decree, it is appropriate to turn to British rules of construction. No better authority can be found than Lord Coke who said “*semper proximo antecedente*

⁹⁹ Radcliffe Award, para. 8 (Annex IN-2).

¹⁰⁰ Annex IN-1 (emphasis added).

¹⁰¹ MB, para. 3.10. The bracketed words are in the original; the emphasis has been added.

¹⁰² *Ibid.*

refertur”¹⁰³. Thus, “it” must refer, both grammatically and notionally, to the “midstream of the main channel” of the listed rivers, not to “the boundary”.

4.28 The more precise geographical, logical, and grammatically proper reading of the underlined “it” is that the Governor in Council was referring to the “midstream of the main channel.” Wherever the midstream of the main channel “meets the Bay” is the land boundary terminus between 24-Parganas and Khulna districts and, accordingly, between India and Bangladesh. This interpretation is the only one which is historically, grammatically and geographically coherent.

4.29 The land boundary terminus to which India’s analysis leads is not only the main channel from the estuary to the Bay of Bengal, but it is the only continuous navigable channel. Thus, in addition to complying with the terms of the Radcliffe Award, it alone also assures both India and Bangladesh the future use of the waterway. In this respect, it is consistent with the international *thalweg* principle. Plainly this was a matter of concern to Radcliffe, who, as was noted, stated that “I have done what I can in drawing the line to eliminate any avoidable cutting of railway communications and of river systems . . .”¹⁰⁴. It is noteworthy that the ICJ in *Kasikili/Sedudu* held that the terms “centre of the main channel” and “*Thalweg des Hauptlaufes*” were used interchangeably¹⁰⁵. Given that Bangladesh has proposed a “hugging line,” based on a channel which is much shallower and ultimately blocked, it is clear that India’s reading of the Notification and of the Award has the added benefit of being the only one which is also consistent with the *thalweg* principle.

4.30 As for the comparative navigability of the two candidate channels, the Tribunal may turn to Bangladesh’s own secondary source: *The Imperial Gazetteer of India*. The full excerpt of the Gazetteer cited by Bangladesh reads as follows, with the words omitted by Bangladesh’s Memorial italicized:

¹⁰³ See H. Broom, *A Selection of Legal Maxims*, 1884, p. 636 (discussing the maxim *Ad proximum Antecedens fiat Relatio, nisi Impediatur Sententia*); E. Beal, *Cardinal Rules of Legal Interpretation*, 1908, pp. 66-67 (2nd ed.) (discussing the rule of the last antecedent, and noting its presence in Lord Coke’s commentaries: *semper proximo antecedente refertur*). See, e.g., *Nobelman v. American Sav. Bank, U.S.*, Vol. 508, 1993, pp. 330-331 (while holding that courts’ use of the rule is “not compelled,” finding that the “rule of the last antecedent . . . is quite sensible as a matter of grammar . . .”).

¹⁰⁴ Radcliffe Award (Annex IN-2).

¹⁰⁵ *Kasikili/Sedudu Island (Botswana/Namibia), Judgment, I.C.J. Reports 1999*, p. 1062, para. 25.

Raimangal. — Estuary in the Sundarbans, Bengal. Its entrance is situated about 12 miles eastward of the Guasuba River; and about 6 miles from the sea it receives the united streams of three rivers — the Hariabhanga being the westernmost, the Raimangal proper the next, and the Jamuna the easternmost. The point of land on the west side of the entrance is situated in lat. 21° 37' N., with a depth of 5 or 6 fathoms in the channel close to it, and with from 10 to 12 fathoms inside towards the Hariabhanga river. From the point to seaward, the depth decreases gradually to 4 fathoms in the western channel, the outer part of which is separated from the Guasuba by a sand bank which stretches out from the land between them. The eastern channel leads directly to the entrance of the Raimangal and Jamuna rivers, having a sandbank between it and the western channel, with deep water inside. According to Captain Horsburgh's Sailing Directions, *two considerable reefs of breakers have formed on the western side of the channel leading to these rivers, situated respectively at 5 and 10 miles from the land*¹⁰⁶.

Following the ICJ's authoritative development of the standards for choosing a "main channel," it is clear that the deepest navigable main channel of this entrance to the sea lies considerably to the east of the natural obstacles over which Bangladesh's "hugging boundary" runs.

4.31 The cumulative requirement of the boundary and, as a result, the vertical axis of the land terminus point is where the "main channel" is and, further, where its "midstream" is. The term "main channel" carries with it the possibility of one or more secondary channels. Bangladesh's candidate for the "main channel" is clearly, to put it at its highest, a secondary channel. Bangladesh's candidate is derived from a variety of unofficial maps, none of which even comes close to approximating the line marked on the signed Radcliffe map. Thus, it neither meets the text of the Award nor the Radcliffe map.

4.32 But the ultimate test for determining the main channel is empirical. Which channel is the main channel? Even assuming, contrary to evidence from neutral sources, that Bangladesh's proposed "hugging" channel were a continuous channel that reaches the Bay of Bengal, it could not conceivably be described as "the main channel" in comparison with the main channel of the Hariabhanga that passes in a south-easterly direction down through the estuary till it meets the Bay. The attached satellite image (see figure No. 4.4 at page 69) and

¹⁰⁶ W. W. Hunter (ed.), *The Imperial Gazetteer of India*, Vol. 7, 1881, p. 483 (emphasis added), MB, Vol. III, Annex B37, quoted at MB, para 3.14.

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.

4.33 India submits, following the ICJ's visibility test, that a mere consultation of the comparative images of Bangladesh's and India's proposed channels shows beyond doubt that, in terms of width, depth, flow of water and comparative navigability, the main channel is the easternmost channel, intersecting the closing line to the east of the low-tide elevation known as New Moore Island. The charts which also show width and depth of the channels as well as their continuous navigability confirm that India's submission of the main channel is correct.

4.34 Accordingly, the main channel meets the closing line at 21°38'40.4" N. The mainstream of the main channel is at 89°10'13.8" E. Hence the land terminus of India and Bangladesh is at 21°38'40.4" N, 89°10'13.8" E (Point L).

IV. Bangladesh's Interpretation

4.35 The language of the Radcliffe Award and the 1925 Notification do not support the legal argument assembled in the Bangladesh Memorial in support of its proposed land boundary terminus. None of the maps adduced by Bangladesh is of an authority comparable to the Radcliffe map and none of the maps which Bangladesh adduced is consistent with the Radcliffe map. Nearly all of the texts offered to support Bangladesh's "hugging" boundary line are drawn from a mixture of sources that address neither the coastal façade of pre-partition British India nor the precise terminus of the boundary between the districts of 24-Parganas and Khulna.

V. Conclusions

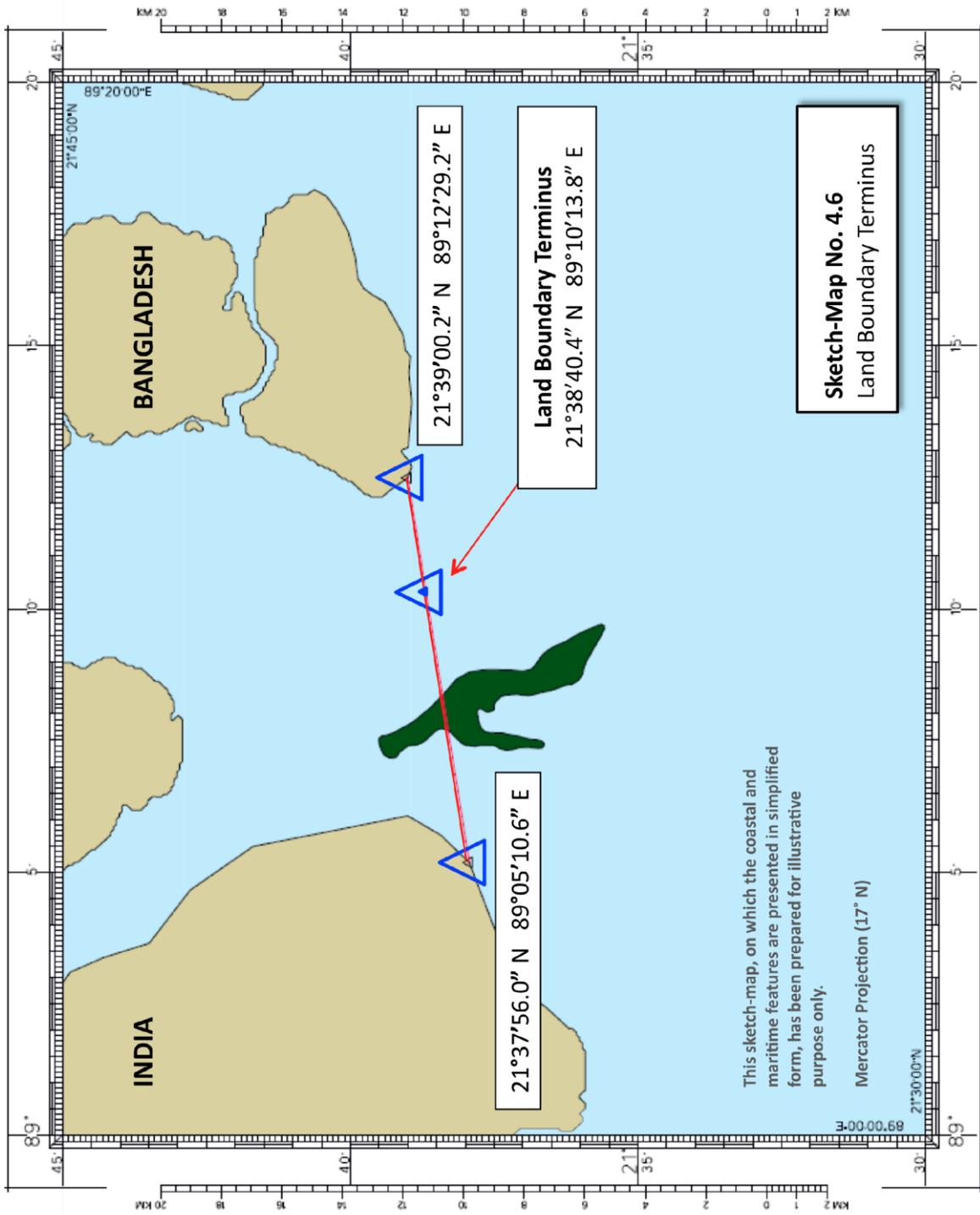
4.36 For the above reasons, India submits that

- (i) The proper closing line in the estuary, delimiting the internal waters of pre-partition India from the Bay of Bengal and, by operation of law, the waters of India and

Bangladesh in the said estuary, runs from India's headland at 21°37'56.0" N 89°05'10.6" E to Bangladesh's headland at 21°39'00.2" N 89°12'29.2" E.

- (ii) The land boundary terminus between India and Bangladesh is the point at which the main channel of the Raimangal intersects with the above closing line. That point is at 21°38'40.4" N, 89°10'13.8" E.

The accurate closing line and the co-ordinates of the land boundary terminus are illustrated on sketch-map No. 4.6 at page 79.



CHAPTER 5

DELIMITATION OF THE TERRITORIAL SEA

5.1 This chapter first describes the law applicable to the delimitation of the territorial seas of India and Bangladesh, which is to be found in Part II, section 2, of UNCLOS and in the case law (**Section I**). The law is then applied to the facts of the case (**Section II**). **Section II.A** explains that neither of the special circumstances invoked by Bangladesh necessitates a departure from the median line. In **Section II.B** the appropriate base points are identified. In **Section II.C** the territorial sea boundary is determined by drawing a median line.

I. The Law Applicable to the Delimitation of the Territorial Seas of India and Bangladesh

A. Article 15

5.2 The Parties agree that the applicable law for the delimitation of the territorial sea is to be found in article 15 of UNCLOS¹⁰⁷. Article 15 reads:

“Article 15

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.”

5.3 As noted by Bangladesh¹⁰⁸, article 15 of UNCLOS is virtually identical to article 12 of the 1958 (Geneva) Convention on the Territorial Sea and Contiguous Zone. Article 12 in

¹⁰⁷ MB, para. 5.16: “The delimitation of the territorial sea between Bangladesh and India therefore falls to be effected on the basis of the principles set out in Article 15.”

¹⁰⁸ MB, para. 5.14.

turn had its origin in the work of the International Law Commission in the 1950's, which (on the basis of the report of a group of experts that met in The Hague in April 1953¹⁰⁹) decided on the median line approach in preference to other options (including the perpendicular to the general direction of the coast)¹¹⁰.

5.4 In its Memorial, Bangladesh assimilates the delimitation of the territorial sea with the delimitation of maritime areas beyond the territorial sea (exclusive economic zones, continental shelf). This may be correct as regards the well-established method of delimitation (equidistance/relevant circumstances). But the wording of article 15 is materially different from that of articles 74(1) and 83(1). As the ITLOS has recently said, 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”¹¹¹. Unlike articles 74(1) and 83(1), there is no reference in article 15 to achieving an equitable solution. Under article 15 – and absent either an agreement or the necessity by reason of historic title or other special circumstances to delimit the territorial sea otherwise – delimitation of the territorial sea is to be effected by

“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.”

5.5 In the present case, there is no agreement between the Parties on the delimitation of the territorial sea¹¹². Nor does either Party claim the existence of a ‘historic title’ within the

¹⁰⁹ International Law Commission, Report of the Committee of Experts on Technical Questions Concerning the Territorial Sea, The Hague, 14 to 16 April 1953, reproduced in English in N. Nandan and S. Rosenne (eds.), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, Vol. II, pp. 59-63 (Annex IN-3). The original French text of the report is reproduced in the *Yearbook of the International Law Commission*, Vol. II, 1953, pp. 77-79.

¹¹⁰ See the International Law Commission’s Commentary to article 14 of its final draft articles (*Yearbook of the International Law Commission*, Vol. II, 1956, p. 272), especially para. (6): “The group of experts . . . was unable to support this last method of drawing the boundary. It was of the opinion that it was often impracticable to establish any “general direction of the coast”; the result would depend on the “scale of the charts used for the purpose and . . . how much coast shall be utilized in attempting to determine any general direction whatever”. Consequently, since the method of drawing a line at right angles to the general direction of the coastline is too vague for purposes of law, the best solution seems to be the median line which the group of experts suggested.”

¹¹¹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 150.

¹¹² See MB, paras. 1.11, 1.28 and 5.16.

meaning of article 15¹¹³. Bangladesh, however, asserts that there are “other special circumstances” which necessitate that the line of delimitation between the territorial seas is a curiously constructed 180° angle-bisector starting from its proposed land boundary terminus, rather than the median line.

5.6 The modern law concerning relevant circumstances in the context of delimitation of the continental shelf and exclusive economic zones¹¹⁴ and special circumstances in the context of delimitation of the territorial sea are closely related. 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. 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”¹¹⁵, in *Bangladesh/Myanmar* it opposed the same claim by its opponent.

5.7 In *Bangladesh/Myanmar*, Myanmar sought to minimize the effect of Bangladesh’s St. Martin’s Island, arguing that “special circumstances” should trump the application of the equidistance principle to Myanmar’s undisputed sovereign coastline¹¹⁶. In response, Bangladesh invoked the contemporary law on maritime delimitation: Bangladesh argued that the coastline of St. Martin’s Island should be given “full effect,” and that “the burden is on Myanmar to persuade the Tribunal why St. Martin’s Island should be treated as a special circumstance and it has failed to meet that burden”¹¹⁷. Bangladesh further argued that Myanmar had “attempted to manufacture a ‘special circumstance’ where none exists” by use

¹¹³ MB, para. 5.16.

¹¹⁴ See chapter 6 below.

¹¹⁵ MB, para. 5.35.

¹¹⁶ Myanmar Counter-Memorial in the *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, paras. 4.51-4.71.

¹¹⁷ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 142.

of a “pseudo-geographic artifice”¹¹⁸. In response to Bangladesh’s insistence on the priority of “equidistance” over “special circumstances”, the ITLOS dismissed Myanmar’s “special circumstances” argument and held that “pursuant to article 15 of the Convention, the territorial sea of the Parties is to be delimited by an equidistance line”¹¹⁹. The ITLOS then properly applied the remainder of article 15 when it held that the “first step to be considered in the construction of the delimitation line is the selection of base points from which the delimitation line will be drawn”¹²⁰.

5.8 Bangladesh’s *volte-face* on the application of article 15 in its dispute with India is unsurprising, given its shifting theory of equity; but what is good law for Bangladesh in its dispute with Myanmar remains good law in its dispute with India.

B. The Angle-Bisector and the Case Law

5.9 It is clear from the case law that the equidistance/relevant circumstances method is to be applied unless it is impossible to identify appropriate base points, rendering it unfeasible to construct a provisional equidistance line. Only where this is unfeasible may recourse be had to other methods such as the “angle-bisector”.

5.10 As confirmed by the ITLOS in *Bangladesh/Myanmar*, the leading authority for the modern law on maritime delimitation is the unanimous ICJ judgment in the *Black Sea* case. However, in its Memorial Bangladesh emphasises two earlier decisions. Repeatedly citing the *Guinea/Guinea-Bissau* arbitration award¹²¹, Bangladesh would have this Tribunal return to a decision which has long been considered a very special one¹²², and which has not subsequently been followed. That case, remarkable for ignoring the rights of third parties, has not and should not be followed.

¹¹⁸ *Ibid.*, para. 138.

¹¹⁹ *Ibid.*, para. 153.

¹²⁰ *Ibid.*, para. 154.

¹²¹ *Delimitation of Maritime Boundary between Guinea and Guinea-Bissau*, Award of 14 February 1985, *I.L.M.*, Vol. 25, p. 252.

¹²² Dissenting opinion of arbitrator Mr. Bedjaoui in the case concerning the *Delimitation of the maritime boundary between Guinea-Bissau and Senegal*, Decision of 31 July 1989, *UNRIAA*, Vol. XX, p. 194, para. 104 and note 109.

5.11 Bangladesh also relies on the *Gulf of Maine* case, in which a Chamber of the ICJ applied the “angle-bisector” method¹²³. Bangladesh contends that this was done because features such as islands and low-tide elevations “sometimes lying at a considerable distance from terra firma . . . exerted a significant effect on the equidistance line”¹²⁴. What Bangladesh fails to mention is that the Chamber explicitly stated that the “main reason” for opting for the angle-bisector method was that the establishment of an equidistance line “would encounter the difficulty of the persistent uncertainty as to sovereignty over Machias Seal Island”¹²⁵. As the ICJ explained in *Nicaragua v. Honduras*:

“The Court notes that in the case concerning *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, the ‘main reason’ for the Chamber’s objections to using equidistance in the first segment of the delimitation was that the Special Agreement’s choice of Point A as the beginning of the line deprived the Court of an equidistance point, ‘derived from two base points of which one is in the unchallenged possession of the United States and the other in that of Canada’.”¹²⁶

In the present case, on the other hand, the line starting at the land boundary terminus is not controlled by base points over which sovereignty is disputed. Moreover, constructing an equidistance line based on base points located on the mainland coast or low-tide elevations of India and Bangladesh accurately reflects the geographical reality of the Bay of Bengal. Hence, the *Gulf of Maine* case is of no relevance to the delimitation in the present case.

5.12 Bangladesh, in addition, misuses *Nicaragua v. Honduras*¹²⁷. Through its heavy emphasis upon one sentence taken out of context from that judgment, Bangladesh would have this Tribunal misconstrue its central holding. Bangladesh’s argument in this respect is two-fold, the second element being an extension of the first. *First*, the coast of the Bengal Delta is said to be “among the most unstable in the world”¹²⁸. *Second*, due to global climate change,

¹²³ MB, paras. 6.88-6.90.

¹²⁴ *Ibid.*, para. 6.88.

¹²⁵ *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, Judgment, I.C.J. Reports 1984, p. 232, para. 211.

¹²⁶ *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea, (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p. 743, para. 279.

¹²⁷ MB, para. 6.78.

¹²⁸ *Ibid.*, para. 6.77.

parts of the Delta currently constituting land territory could be submerged in a more or less foreseeable future¹²⁹.

5.13 According to the first argument, “[t]he forces of accretion and erosion resulting from massive sediment flows, low-elevations, large and frequent storms and, increasingly, climate change-induced sea level rise constantly reshape the Delta. As a result, the base points used to plot an equidistance line – and thus the line itself – this year might be very different from next year. Indeed, today’s coastal base points may be under water tomorrow.”¹³⁰

5.14 The ICJ only made use of an “angle-bisector” in determining the maritime boundary in *Nicaragua v. Honduras* – as it confirmed in the *Black Sea* case – because choosing base points near the land boundary terminus was impossible, and so an equidistance line could not be drawn. In the *Black Sea* case, the ICJ stated:

“First, the Court will establish a provisional delimitation line, using methods that are geometrically objective and also appropriate for the geography of the area in which the delimitation is to take place. So far as delimitation between adjacent coasts is concerned, an equidistance line will be drawn unless there are compelling reasons that make this unfeasible in the particular case (see *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, judgment, I.C.J. Reports 2007 (II), p. 745, para. 281)”¹³¹.

5.15 The circumstances in the present case are in no sense comparable to those in *Nicaragua v. Honduras*. In that case, Cape Gracias a Dios consisted of the delta formed at the mouth of the boundary river, the River Coco. The ICJ’s description of Cape Gracias a Dios and the surrounding areas is worth repeating. Concerning the sedimentation process in the River Coco, the Court said: “The most notable effect is the rapid accretion and inevitable advance of the coastal front due to the constant deposition of terrigenous sediments carried by the rivers to the sea”¹³². The ICJ continued:

¹²⁹ *Ibid.*, para. 6.81.

¹³⁰ *Ibid.*, para. 6.77.

¹³¹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 101, para. 116. In the French version of the judgment, “make this unfeasible” is “*ne le permettent pas*”.

¹³² *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea, (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, pp. 672-673, para. 31.

“The River Coco has been progressively projecting Cape Gracias a Dios towards the sea carrying with it huge quantities of alluvium. . . . In sum, both the delta of the River Coco and even the coastline north and south of it show a very active morpho-dynamism. The result is that the river mouth is constantly changing its shape, and unstable islands and shoals form in the mouth where the river deposits much of its sediment”¹³³.

This morpho-dynamism 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 later¹³⁴.

5.16 The decisive factor, at this step of the delimitation process, is not whether the relevant coasts of the Parties are stable or not throughout their whole length, but whether base points appropriate for drawing an equidistance line can be determined on these coasts. The consequences of the instability of the coastal features in *Nicaragua v. Honduras* for the determination of base points were of an entirely different order from those in the present case, notwithstanding the dramatic presentation by Bangladesh¹³⁵.

5.17 Not only was the river mouth extremely unstable, it also created a highly unusual land boundary terminus point: the land boundary ran along the narrowing Cape Gracias a Dios that projected, needle-like, into the sea. As a consequence, if any two base points were to have been used for the purposes of generating a provisional equidistance line, the Court would have had to select two points along opposite sides of the needle-like Cape. Even if two such base points could have been forced upon the geography of the Cape, they would have formed the base for a completely arbitrary equidistance line. The exceptional configuration of Cape Gracias a Dios is apparent from sketch-map No. 5.1 at page 89 reproducing the Court’s judgment in *Nicaragua v. Honduras*¹³⁶. As this map makes clear, the land boundary between Honduras and Nicaragua terminates along a needle-like cape and poses insurmountable difficulties to finding sound base points.

¹³³ *Ibid.*, p. 673, para. 32.

¹³⁴ *Ibid.*, p. 692, para. 99 and p. 693, para. 101.

¹³⁵ See e.g., MB, paras. 2.17-2.22 and 6.79-6.80.

¹³⁶ *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea, (Nicaragua v. Honduras), Judgment, I.C.J. Reports 2007*, p. 762.

5.18 Because the Bangladesh Memorial neglects this critical aspect of the decision, it is worth quoting the judgment with enough context to make the Court’s reasoning clear:

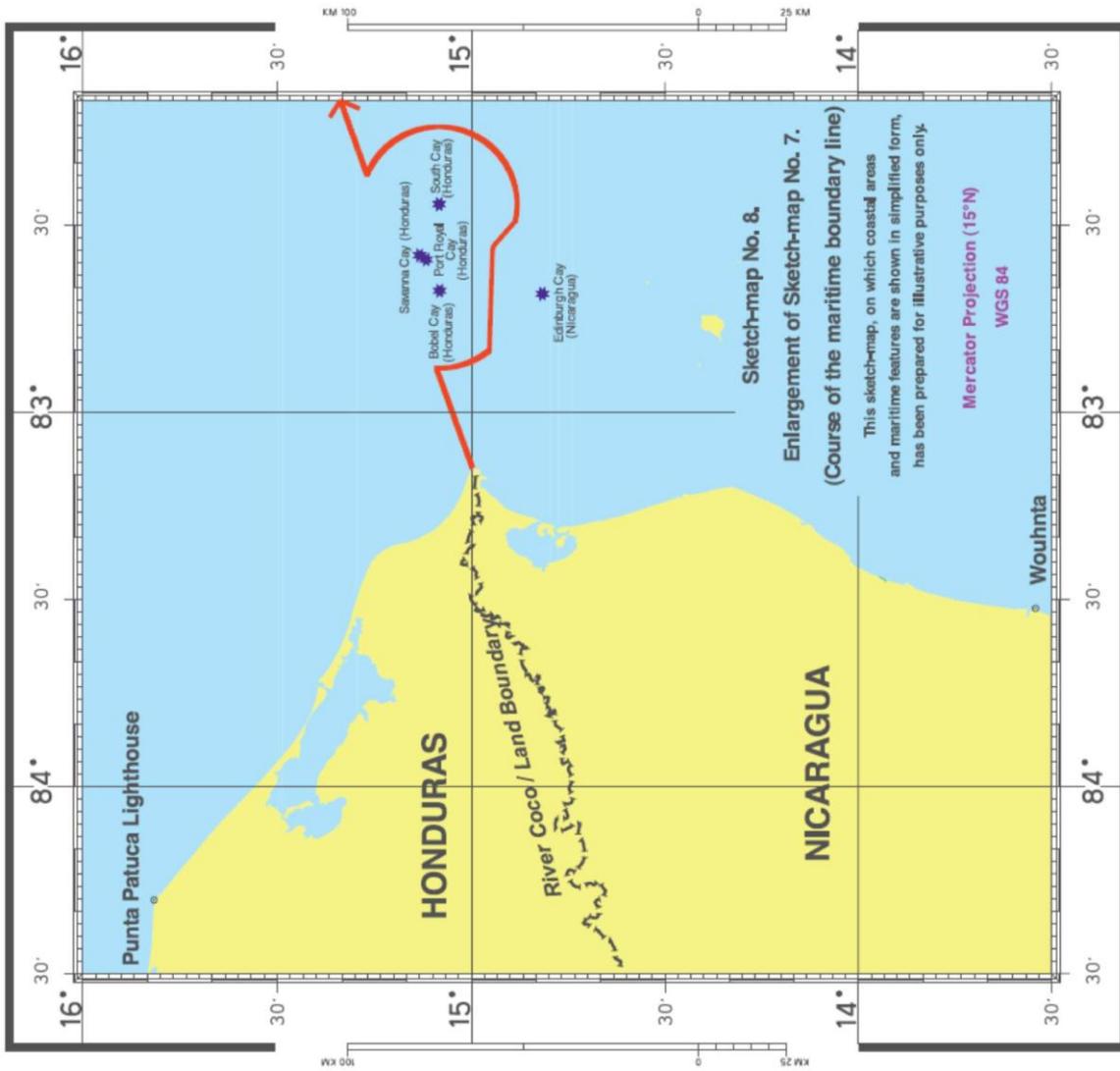
“[t]he pair of base points to be identified on each bank of the River Coco at the tip of the Cape would assume a considerable dominance in constructing an equidistance line, especially as it travels out from the coast. Given the close proximity of these base points to each other, any variation or error in situating them would become disproportionately magnified in the resulting equidistance line. *The Parties agree*, moreover, that the sediment carried to and deposited at sea by the River Coco have caused its delta, as well as the coastline to the north and south of the Cape, to exhibit a very active morpho-dynamism. Thus continued accretion at the Cape might render any equidistance line *so constructed* today arbitrary and unreasonable in the near future”¹³⁷.

5.19 Thus, in *Nicaragua v. Honduras*, equidistance was unfeasible because it was impossible to find base points on the tip of the needle. As the larger context from the judgment makes clear, it was not the mere presence of deltaic coasts that thwarted the drawing of an equidistance line; the accretion of sediment along the delta merely made evident the arbitrariness of using “two sides of a needle” as base points. In other words, the reason sediment was mentioned at all in *Nicaragua v. Honduras* was that the geologic “needle” that so vexed the drawing of an equidistance line might later change its formation as sediment continued to be deposited in the future. This exposed the absurdity of proposing base points that the Court had already dismissed as unfeasible. That this is the clear import of this section of the judgment is confirmed when the Court later states that “[g]iven the set of circumstances in the current case *it is impossible for the Court to identify base points and construct a provisional equidistance line for the single maritime boundary delimiting maritime areas off the Parties’ mainland coasts*”¹³⁸.

5.20 It should further be noted that the significance of “morpho-dynamism” was a point of agreement between Nicaragua and Honduras. It would, of course, be an error to recast this point of factual agreement between the Parties regarding the unfeasibility of coastal base points on their own coasts as a general equitable principle applicable beyond Cape Gracias a Dios. It is not applicable to the relevant coasts of the Bay of Bengal in the instant case.

¹³⁷ *Ibid.*, p. 742, para. 277 (emphasis added).

¹³⁸ *Ibid.*, p. 743, para. 280 (emphasis added).



Sketch-Map No. 5.1
 Reproduction of Sketch-Map
 No. 8 from *Nicaragua v.*
Honduras

5.21 Remarkably, Bangladesh presents the *dicta* about the probative value of sediment as if they were the principal holding of *Nicaragua v. Honduras*. This is a misreading of the decision; moreover, it cannot be reconciled with the *Black Sea* judgment, which cited *Nicaragua v. Honduras* for the proposition that it is only *unfeasibility* that can call for the abandonment of the drawing of a provisional equidistance line as an otherwise indispensable step in the delimitation process¹³⁹.

5.22 The second objection by Bangladesh to the application of the equidistance/relevant circumstances method is based on a prediction as to the effect of global climate change, which will allegedly:

“affect the two sides of the Bengal Delta coast differently. The average height above sea-level of the moribund delta is lower than the average height above sea-level of the active delta. The consequence is that more of India’s deltaic coast will be submerged below future sea levels than Bangladesh’s. According to a recent commentary published in the journal *Nature Geoscience*, based on current predictions the face of the Bengal Delta less than 90 years into the future will look considerably different than it does now”¹⁴⁰.

5.23 Article 7(2) of UNCLOS, to which both Bangladesh and India are Parties reads:

“Where because of the presence of a delta and other natural conditions the coastline is highly unstable, the appropriate points may be selected along the furthest seaward extent of the low-water line and, notwithstanding subsequent regression of the low-water line, the straight baselines shall remain effective until changed by the coastal State in accordance with this Convention.”

Even though article 7 concerns straight baselines (and not the fixing of base points for the purposes of delimitation), the principle in article 7(2) may be taken into consideration in the present case.

5.24 In *Tunisia/Libya* the ICJ emphasised that what mattered were “the physical circumstances as they exist today” and “the geographical configuration of the present-day coasts”:

¹³⁹ See *supra*, para. 5.14

¹⁴⁰ MB, para. 6.81 (footnote omitted).

“The function of the Court is to make use of geology only so far as required for the application of international law. *It is of the view that what must be taken into account in the delimitation of shelf areas are the physical circumstances as they are today; that just as it is the geographical configuration of the present-day coasts, so also it is the present-day sea-bed, which must be considered.* It is the outcome, not the evolution in the long-distant past, which is of importance”¹⁴¹.

5.25 In the absence of any “compelling reasons” that would make the drawing of a provisional equidistance line “unfeasible in the particular case”¹⁴², that line must be constructed from appropriate base points determined on the relevant coasts of the Parties.

5.26 In short, the applicable standard for deviating from the equidistance method in favour of the bisector method is the impossibility of identifying appropriate base points, rendering it unfeasible to construct a provisional equidistance line.

C. Other Relevant UNCLOS Articles

5.27 In addition to article 15, other provisions of Part II, Section 2, of UNCLOS (articles 5, 9 and 13) are relevant to the present delimitation.

5.28 Article 5 (Normal baseline) provides as follows:

“Except where otherwise provided in this Convention, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State.”

5.29 Article 9 (Mouths of rivers) reads:

“If a river flows directly into the sea, the baseline shall be a straight line across the mouth of the river between points on the low-water line of its banks”¹⁴³.

¹⁴¹ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, Judgment, I.C.J. Reports 1982, p. 54, para. 61 (emphasis added). See also: A. H. A. Soons, “The Effects of a Rising Sea Level on Maritime Limits and Boundaries”, *Netherlands International Law Review*, Vol. 37, 1990, pp. 226-229 (Annex IN-20); and Y. Tanaka, “Reflections on Maritime Delimitation in the *Nicaragua/Honduras* Case”, *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht*, Vol. 68, 2009, pp. 925-926 (Annex IN-33).

¹⁴² *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 101, para. 116, referring to *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p. 745, para. 281.

Unlike article 10 (Bays), article 9 is not limited to the case where the mouth of a river falls within the territory of a single State.

5.30 Finally, article 13 (Low-tide elevations) provides:

“1. A low-tide elevation is a naturally formed area of land which is surrounded by and above water at low tide but submerged at high tide. Where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the mainland or an island, the low-water line on that elevation may be used as the baseline for measuring the breadth of the territorial sea.

2. Where a low-tide elevation is wholly situated at a distance exceeding the breadth of the territorial sea from the mainland or an island, it has no territorial sea of its own”¹⁴⁴.

II. The Application of the Law to the Facts of the Present Case

5.31 As explained in chapter 4 above, the land boundary terminus, which is the starting point for the maritime delimitation, was determined at the time of the independence of India and Pakistan in August 1947, and has not subsequently changed. The land boundary terminus (Point L) has the co-ordinates 21°38'40.4" N, 89°10'13.8" E.

5.32 In **Subsection A** below, it will be shown that Bangladesh has failed to establish the presence of ‘special circumstances’ by reason of which it would be, in the words of article 15, “necessary to delimit the territorial seas of the two States in a way which is at variance” with the normal equidistance line. **Subsection B** then sets forth the base points applicable to the delimitation of the territorial sea. In **Subsection C** the median line is constructed on the basis of these base points.

¹⁴³ The precise import of the words “flows directly into the sea” is unclear. The French text begins with the words: “Si un fleuve se jette dans la mer sans former d’estuaire . . .”. There is no reference to an estuary in the English text.

¹⁴⁴ Low-tide elevations are also referred to in articles 7(4) and 47(4) of UNCLOS, but these provisions are not relevant in the present case.

A. Bangladesh Has Failed to Establish the Presence of ‘Special Circumstances’

5.33 Under article 15 it is for the party asserting the existence of special circumstances to make out the case for departing from the median line. As the International Court stated in *Nicaragua v. Honduras*, “Article 15 of UNCLOS itself envisages an exception to the drawing of a median line, namely ‘where it is necessary by reason of historic title or special circumstances’”¹⁴⁵. Later in the same paragraph the Court referred to “the exception described in Article 15”. In *Bangladesh/Myanmar*, the ITLOS noted the absence of “compelling reasons” [“*raisons impérieuses*”] that justified treating St. Martin’s Island as a special circumstance for the purposes of article 15¹⁴⁶. Thus, the median line is the general rule; a variant necessitated by ‘special circumstances’ is the exception, for which there must be compelling reasons. It is thus for Bangladesh to show that there are special circumstances that necessitate a departure from the median line. This Bangladesh has failed to do.

5.34 In chapter 5 of its Memorial, Bangladesh argues that there are two distinct special circumstances which necessitate the application of the “angle-bisector” method to the delimitation of the Parties’ territorial seas, rather than the median line:

- (i) coastal instability¹⁴⁷, making it, in Bangladesh’s words, “extremely difficult – if not impossible – to establish stable basepoints from which to construct any meaningful equidistance line”¹⁴⁸ (subsection 1 below); and
- (ii) the concave nature of Bangladesh’s coastline¹⁴⁹ (subsection 2 below).

Even if the “angle-bisector” were appropriate (*quod non*), Bangladesh has misapplied it in a most extraordinary fashion (subsection 3 below)

¹⁴⁵ *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea*, (*Nicaragua v. Honduras*), Judgment, I.C.J. Reports 2007, p. 744, para. 280

¹⁴⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal* (*Bangladesh/Myanmar*), Judgment, para. 152.

¹⁴⁷ MB, paras. 5.40-5.44.

¹⁴⁸ MB, para. 5.2.

¹⁴⁹ MB, paras. 5.45-5.47.

1. Coastal Instability

5.35 Bangladesh's factual assertions about the instability of the coastlines, which it describes – repeatedly – with a variety of colourful expressions¹⁵⁰, are answered in chapter 2 above, where it was explained 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 coast¹⁵¹.

5.36 Although only covering a small part of the relevant coasts, figure 2.3 in Volume II of Bangladesh's Memorial illustrates the stability of the deltaic coast. This should not come as a surprise. As Bangladesh acknowledges, the Bengal Delta along the coast in the vicinity of the boundary between the Parties, "is the world's largest mangrove forest, known as the Sundarbans"¹⁵² and, as is well known, mangroves have a stabilizing effect on the coasts¹⁵³. In any event, the issue is not instability *per se*, but whether it prevents the designation of base points.

5.37 What the Tribunal has to do in the present case is to identify appropriate base points for drawing an equidistance line; it is not required to ascertain whether the relevant coasts of the Parties are stable or not throughout their whole length. Nor is it confronted with a coastline that renders the selection of appropriate base points unfeasible. Bangladesh already attempted to argue that before the ITLOS in *Bangladesh/Myanmar*, without success¹⁵⁴. The ITLOS noted, in its discussion of "Point β2," Bangladesh's protestations that the coast was "characterized by a very active morpho-dynamism" such that "the location of base point β2 this year might be very different from its location next year". The ITLOS was "satisfied that

¹⁵⁰ Among the more colourful are "the transient nature of the coastal geography", "the rapid pace of coastal migration", "a uniquely unstable coastline" (all expressions to be found in a single paragraph in the Memorial of Bangladesh, MB, para. 5.17).

¹⁵¹ See chapter 2, paras. 2.25-2.26.

¹⁵² MB, para. 2.16; see also MB, Vol. II, Figure 2.2.

¹⁵³ G. Prasetya, "The Role of Coastal Forests and Trees in Protecting against Coastal Erosion", in S. Braatz, S. Fortuna, J. Broadhead and R. Leslie (eds.), *Coastal Protection in the Aftermath of the Indian Ocean Tsunami: What Role for Forests and Trees?*, Proceedings of the Regional Technical Workshop, KhaoLak, Thailand, 28–31 August 2006, FAO, 2007, notably pp. 104-105, 108 and 120 (available at <http://www.fao.org/forestry/13191-0ce216e2fd6097aecc9708480cec2b6d0.pdf>) (Annex IN-31); see also chapter 2, para. 2.26.

¹⁵⁴ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 241-266, especially at paras. 244 and 261-262.

the five base points selected by Myanmar are the appropriate base points on the coasts of the Parties for constructing the provisional equidistance line”¹⁵⁵.

5.38 In *Nicaragua v. Honduras*, it was impossible to identify appropriate base points, but this task poses no great challenge in the present case.

5.39 Thus the *Nicaragua v. Honduras* “unfeasibility” exception to the equidistance/relevant circumstances method is not applicable here: while the accretion of sediment may change to a certain degree the relevant coastlines (as is generally the case where rivers flow into the sea), Bangladesh can point to no “unfeasibility” problem similar to that posed by Cape Gracias a Dios. There is no “needle-like” protrusion into the sea at the land-boundary terminus between Bangladesh and India. There is no factual basis for Bangladesh’s legal arguments to the effect that the instability of the coast necessitates the adoption of an “angle-bisector” for the delimitation of the territorial seas of the Parties.

2. Concavity

5.40 Any 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. For the purpose of delimitation of the territorial sea neither the relevant coast of India nor that of Bangladesh shows any marked concavity. Chapter 6 below explains that concavity is not a relevant circumstance in maritime delimitation *per se*¹⁵⁶. Furthermore, that chapter shows that the starting point of the delimitation line is not, in fact, located in a concavity¹⁵⁷; that Bangladesh’s self-proclaimed “entitlement” to a continental shelf beyond 200 nautical miles cannot constitute a relevant circumstance as such; and that in any case the effect of the line determined in the ITLOS judgment of 14 March 2012, combined with the line proposed by India in the present case, already gives Bangladesh access to the continental shelf beyond 200 nautical miles, and consequently, no “cut-off” effect can result from India’s proposed delimitation line¹⁵⁸.

¹⁵⁵ *Ibid.*, para. 266.

¹⁵⁶ See paras. 6.63-6.71 below.

¹⁵⁷ See para. 6.75 below.

¹⁵⁸ See paras. 6.77-6.85 below.

3. Bangladesh's Misapplication of the Bisector Method

5.41 Bangladesh then proposes the “angle-bisector method”, giving no reason – compelling or otherwise – as to why the drawing of a provisional equidistance line is unfeasible; it merely relies on the fact that this method has been used in the past. It is therefore only for the sake of completeness that India notes that the extraordinary application of the “angle-bisector method” by Bangladesh is plainly erroneous.

5.42 As explained in detail in chapter 6, Bangladesh distorts the concept of relevant coasts in order to obtain a wholly artificial “angle” and thus construct its favoured bisector line, and does so in two separate (alternative) ways¹⁵⁹. In order to construct the first of its “alternative” relevant coasts, Bangladesh moves the starting point of its claimed coastal façade northward and moves that of the Indian alleged coastline southward¹⁶⁰. As a result the two starting points do not coincide: that of the Bangladesh’s coastline is located north of Bangladesh’s claimed land terminus while that of the Indian line lies south of that terminus. At the same time, 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”. The obvious aim of this double manoeuvre is to push the delimitation line westward and to generate an artificial and unfounded 180° bisector line, which is – perhaps unsurprisingly – very much in its favour¹⁶¹. Figure 6.17 of Bangladesh Memorial is telling in this respect.

5.43 Bangladesh’s other “alternative” relevant coasts used to construct its bisector take the form of a straight line in “the general direction of the parties’ respective coastlines”¹⁶². As can be seen in figure 6.18 of Bangladesh’s Memorial¹⁶³, this straight line does not correlate with the coast but rather runs over the sea, leaving more than 11,463 square kilometres of sea north of that so-called coastline¹⁶⁴. Such a line is clearly entirely disconnected from the general direction of the coast and is wholly unjustified. The resulting perpendicular is as unjustified as the straight line from which it stems.

¹⁵⁹ See paras. 6.17-6.30 below.

¹⁶⁰ MB, para. 6.105.

¹⁶¹ *Ibid.*

¹⁶² *Ibid.*, para. 6.103.

¹⁶³ *Ibid.*, Vol. II, Figure 6.18.

¹⁶⁴ For an extensive analysis of Bangladesh’s erroneous construction of the relevant coasts see paras. 6.17-6.30 below.

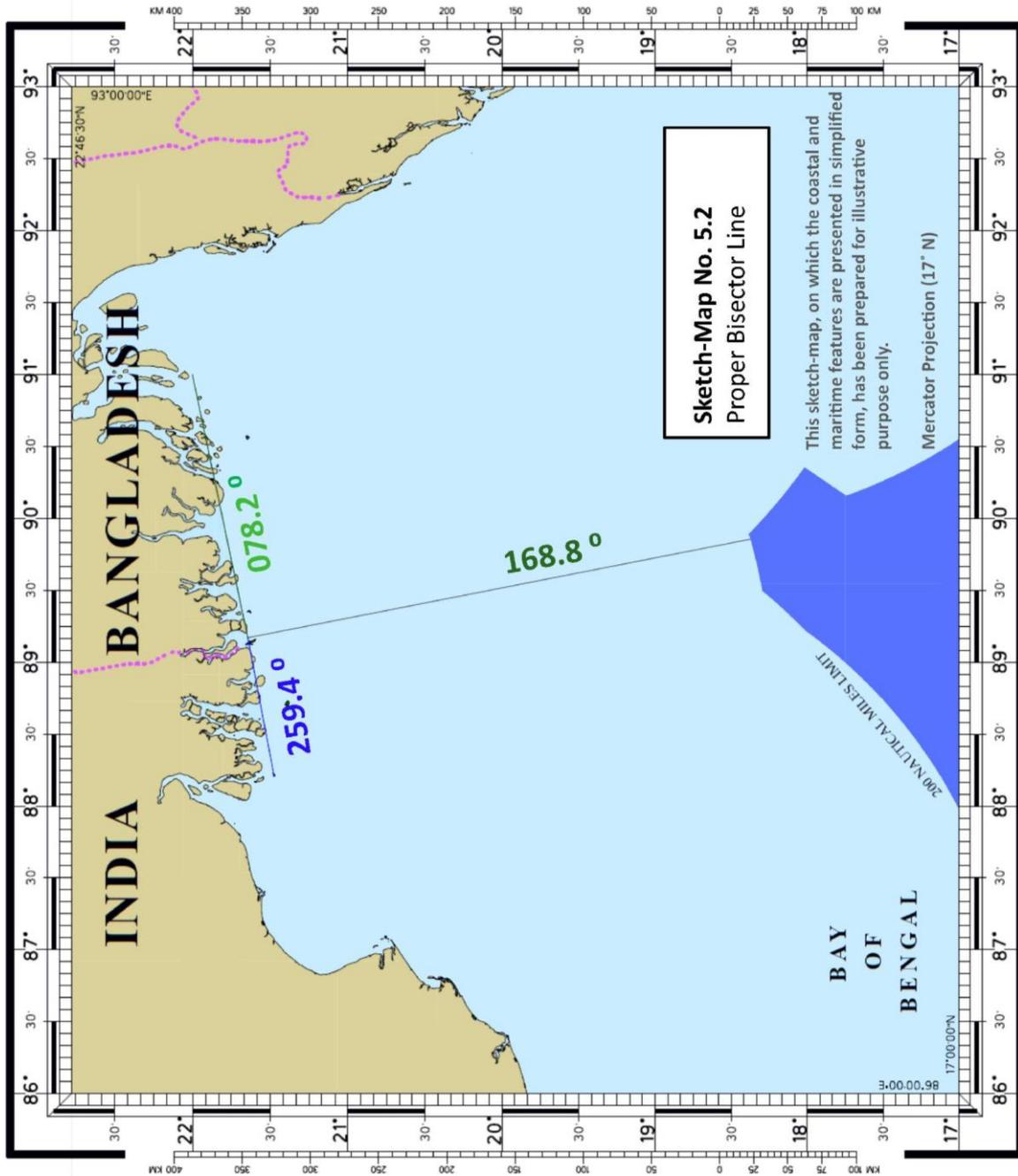
5.44 Were a proper angle-bisector line adopted, it would be drawn very differently:

- (i) The apex of the angle would be at Point L, the terminal point of the land boundary, as seen on sketch-map No. 5.2 at page 99.
- (ii) The sides of the angle would be the first segments of the relevant coasts of the Parties, that is, respectively, in the case of India, the segment running in a roughly westerly direction from the land boundary terminus with Bangladesh to the eastern bank of the Hooghly River estuary; and in the case of Bangladesh, the segment proceeding in a roughly easterly direction from the land boundary terminus with India to the mouth of the Meghna River.
- (iii) Consequently, the resulting bisector would run in a south-easterly direction at 168.8° degrees, as shown on sketch-map No. 5.2.

5.45 However, India reiterates that there is no reason whatsoever to have recourse to the “angle-bisector method” in the present case.

B. Identification of Base Points

5.46 As explained in Section I above, article 15 of UNCLOS provides that, absent agreement, historic title or other special circumstances, the boundary between the territorial seas shall be “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.” There is in the present case no agreement, historic title or other special circumstances.



5.47 Neither Party is relying, for the purposes of the present delimitation, on straight baselines drawn in accordance with article 7 of UNCLOS. Bangladesh expressly acknowledges that, as its 1974 straight baselines are not in accordance with UNCLOS, it is not relying on them in these proceedings. It adds that “to the extent they may be relevant, it relies only on base points along its coast on the Bay of Bengal”¹⁶⁵. India does not accept Bangladesh’s criticism of India’s own straight baselines¹⁶⁶, but in any event does not intend to rely on them for the purposes of the present delimitation of maritime zones between India and Bangladesh.

5.48 Bangladesh has not listed any base points in its Memorial¹⁶⁷. It has, instead, seen fit to rely exclusively (and wrongly) on the construction of an “angle-bisector” line. The fact that Bangladesh has elected not to identify base points cannot prevent the application of article 15 of UNCLOS. It is ultimately for the Tribunal to identify appropriate base points for the application of article 15.

5.49 In identifying appropriate base points in accordance with the provisions of Part II, section 2, of UNCLOS, the Tribunal will apply the well established methodology developed in the case law of international courts and tribunals. As both the ICJ and the ITLOS have made clear, the Tribunal need not base itself on the choice of base points made by one of the Parties¹⁶⁸. In *Romania v. Ukraine*, the ICJ proceeded “to identify base 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 figure formed by the line connecting all these points reflects the direction of the coastlines”¹⁶⁹.

¹⁶⁵ MB, para. 3.26. See also MB, para. 5.20: “Bangladesh does not rely on the straight baselines it adopted in 1974”.

¹⁶⁶ Notification S.O.1197(E) depicted in MB, Vol. II, Figure 3.3 ; see MB, paras. 3.30 and 5.21-5.28.

¹⁶⁷ Bangladesh adopted the same approach in *Bangladesh/Myanmar*, where it equally did not list any base points; the ITLOS nevertheless proceeded to select base points (those proposed by Myanmar plus one other): Judgment of 14 March 2012, para. 266.

¹⁶⁸ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 108, para. 137; *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 264.

¹⁶⁹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 105, para. 127.

5.50 There is extensive State practice, in line with article 13 of UNCLOS, involving the use of the low-water lines on low-tide elevations as the baseline for measuring the territorial sea, and the use of base points on such low-water lines for the purposes of delimitation¹⁷⁰.

5.51 In *Qatar v. Bahrain*, the ICJ considered various questions concerning low-tide elevations¹⁷¹. It concluded that, in that case, 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”¹⁷².

5.52 The 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. In the present case, the first task of the Tribunal will be to determine the land boundary terminus. Once the location of the land boundary terminus/start of the maritime boundary is determined (see chapter 4 above), the appurtenance of the two low-tide elevations relevant to the present case will be clear since they lie respectively on the Indian and Bangladesh side of any conceivable median line. India and Bangladesh are therefore entitled, under article 13 of UNCLOS, to identify base points on these low-tide elevations for the purposes of delimitation.

5.53 The starting point for the delimitation is the land boundary terminus at 21°38'40.4" N; 89°10'13.8" E (Point L).

5.54 As can be seen clearly on sketch-map No. 2.2 at page 17, the low-tide elevation known as New Moore Island is located to the south-west of point L. The entirety of the low-

¹⁷⁰ As long ago as 1993, Bowett wrote: “In general, all of these features [islands, together with rocks, reefs, and low-tide elevations] will be valid for use as basepoints, in conjunction with the equidistance method, where they can be regarded as forming an integral part of the coast. This is a matter of judgment, not a matter of any rule or definition.” See D. Bowett, “Islands, Rocks, Reefs, and Low-Tide Elevations in Maritime Boundary Delimitations”, in J. I. Charney and L. M. Alexander (eds.), *International Maritime Boundaries*, Vol. I, 1993, p. 151.

¹⁷¹ *Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain)*, Merits, Judgment, *I.C.J. Reports 2001*, pp. 97-103, paras. 188-209.

¹⁷² *Ibid.*, pp. 102-103, para. 209. In the case concerning *Sovereignty over Pedra Branca/Pulau Batu Puter, Middle Rocks and South Ledge*, the Court held that sovereignty over South Ledge (a low-tide elevation) belonged “to the State in the territorial sea of which it is located”, *I.C.J. Reports 2008*, p. 101, para. 299.

tide elevation lies west of the land boundary terminus. It is thus clearly located within India's territorial waters.

5.55 For the purpose of delimiting the territorial seas, in accordance with article 13 of UNCLOS, it is proposed that the following two base points should be selected on the Indian side, located on New Moore Island:

I-1 21°37'50.7" N 89°08'49.9" E

I-2 21°35'30.0" N 89°09'40.6" E

The following three base points have been selected, for the purpose of delimiting the territorial seas, on the Bangladesh side:

B-1 21°38'56.0" N 89°12'41.8" E

B-2 21°38'57.4" N 89°14'47.6" E

B-3 21°37'32.7" N 89°20'25.5" E

The first two of these base points are located on the low-water line on the coast of Bangladesh (on the prominent peninsula at the east side of the estuary). The third is located on a low-tide elevation within 12 nautical miles of Bangladesh's coastline.

5.56 These base points were identified since they are the most prominent points controlling the simplified equidistance line. They are located where the coasts are sufficiently stable for the identification of base points. In particular, as explained in chapter 2 above, 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 decades¹⁷³.

5.57 Both India's and Bangladesh's base points used to construct the equidistance line in the territorial sea are shown on sketch-map No. 5.3 at page 107.

¹⁷³ See *supra*, para. 2.7.

C. Construction of the Median Line

5.58 Beginning from the land boundary terminus at $21^{\circ}38'40.4''$ N, $89^{\circ}10'13.8''$ E (Point L), the median line delimiting the territorial seas of India and Bangladesh is then constructed using the base points identified in the preceding sub-section as follows:

- (i) Starting from the land boundary terminus at Point L ($21^{\circ}38'40.4''$ N; $89^{\circ}10'13.8''$ E), the boundary follows a geodetic azimuth of 149.3° until it reaches Point T1, with the co-ordinates $21^{\circ}37'15.7''$ N, $89^{\circ}11'07.6''$ E.
- (ii) From Point T1, the boundary follows a geodetic azimuth of 129.4° until it reaches Point T2, with the co-ordinates $21^{\circ}35'12.7''$ N, $89^{\circ}13'47.5''$ E.
- (iii) From Point T2, the boundary follows a geodetic azimuth of 144.2° until it reaches Point T3, with the co-ordinates $21^{\circ}32'25.7''$ N, $89^{\circ}15'56.5''$ E.
- (iv) From point T3, the boundary follows a geodetic azimuth of 168.6° , until it reaches the end of the delimitation line in the territorial sea, at a distance of 12 nautical miles from the low water line of both States' coast.

The construction of the median line, along with its controlling base points is shown on sketch-map No. 5.4 at page 109.

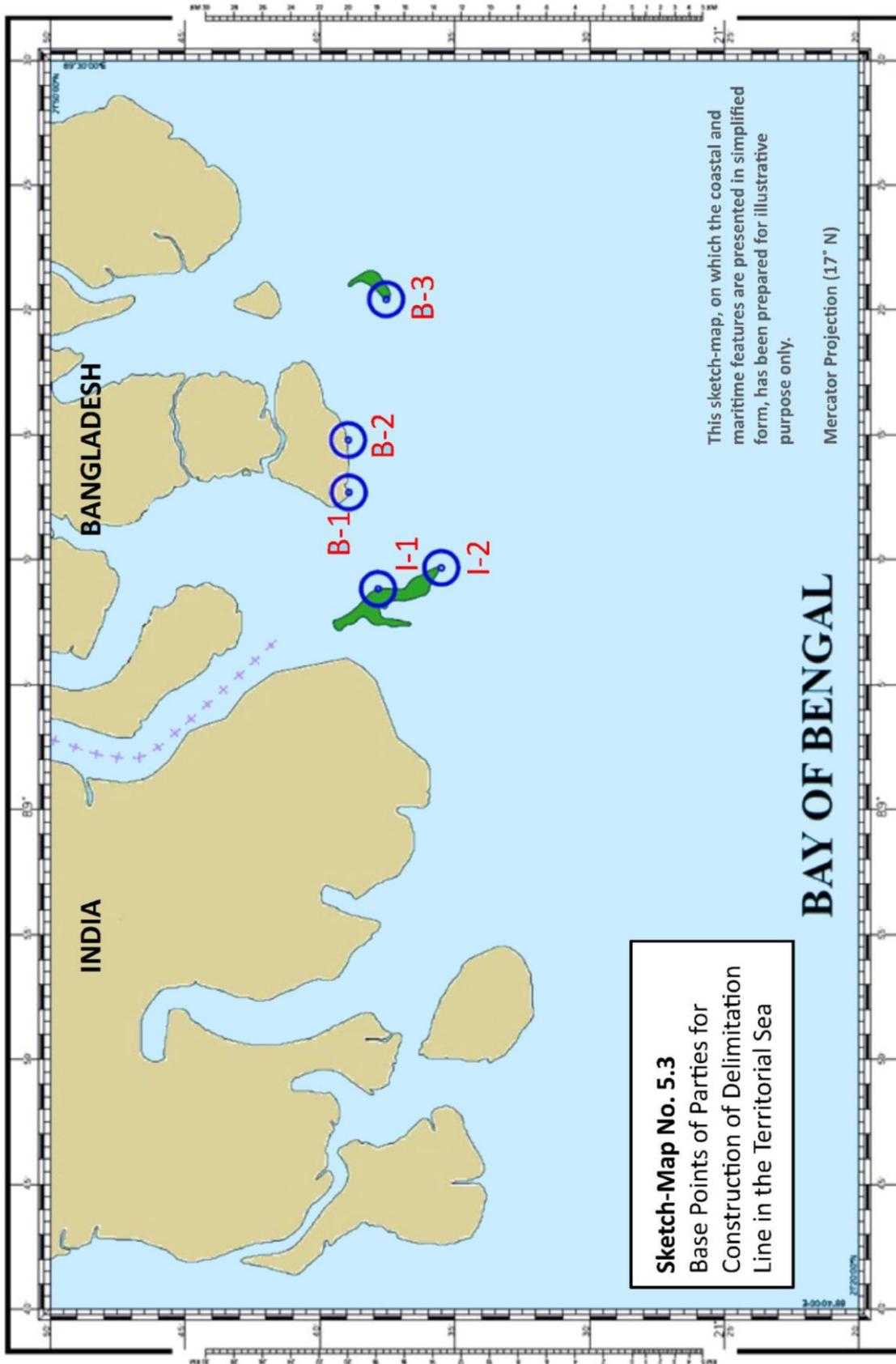
5.59 The median line in the territorial sea thus constructed is shown on sketch-map No. 5.5 at page 111.

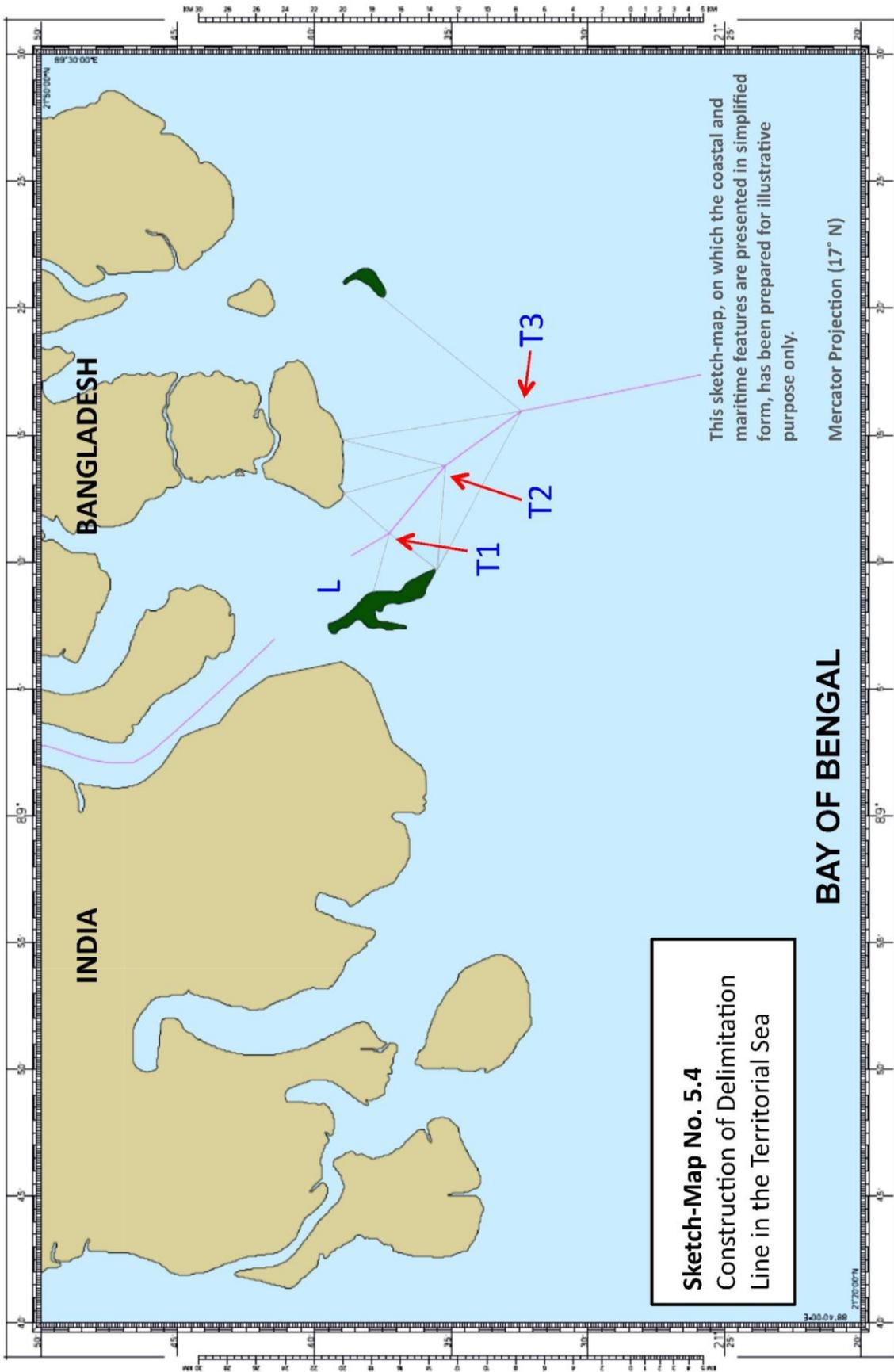
III. Conclusions

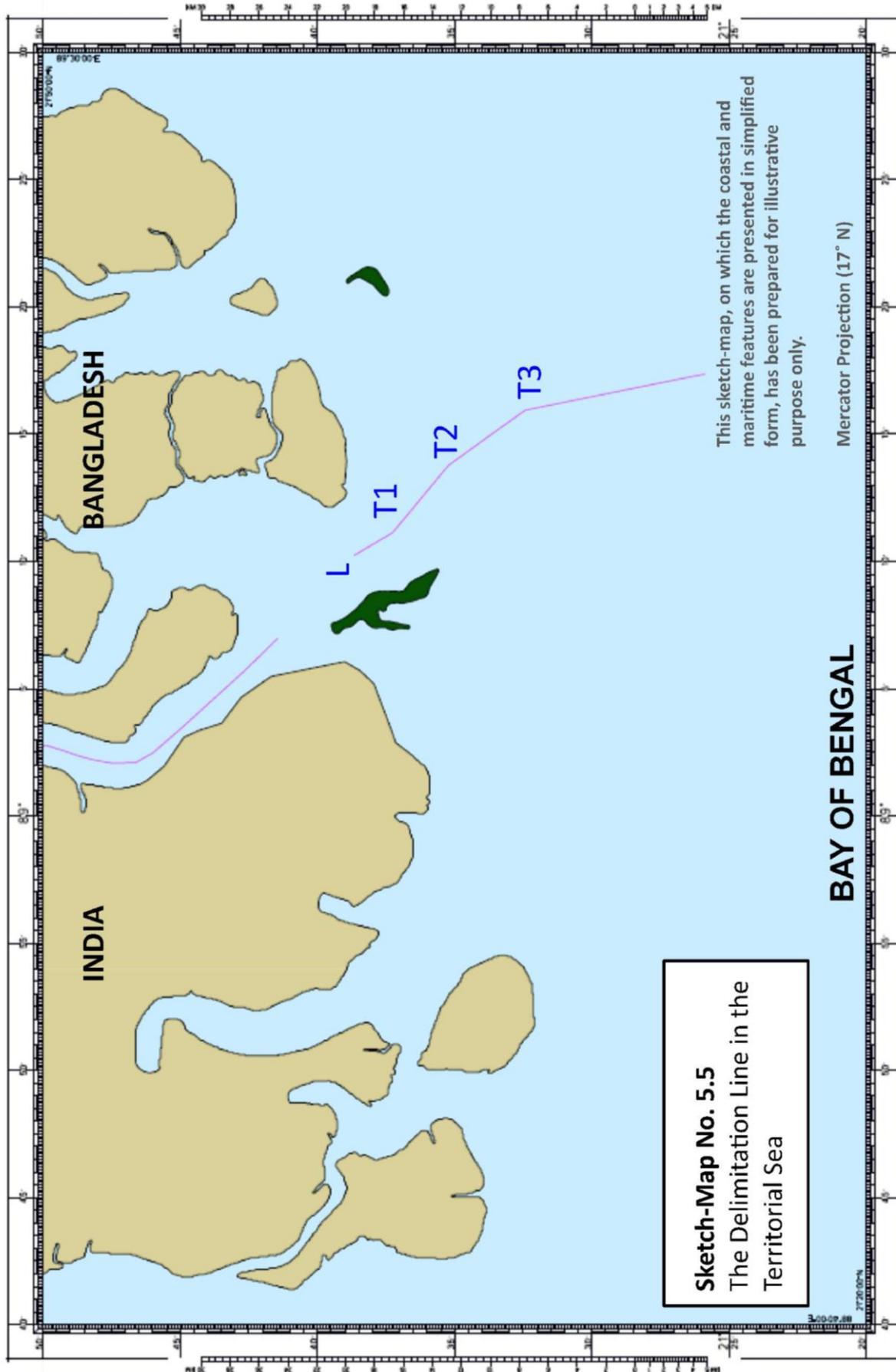
5.60 Neither of the “special circumstances” invoked by Bangladesh necessitates the drawing of an “angle-bisector” line, or any other departure from the median line. Nor does the alleged instability of the coastline, nor its concavity, have the effect alleged by Bangladesh.

5.61 The boundary between the territorial seas of India and Bangladesh is therefore “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” and is as set out in paragraph 5.58 above and illustrated on sketch-map No. 5.5 at page 111.







CHAPTER 6

DELIMITATION OF THE EXCLUSIVE ECONOMIC ZONE AND THE CONTINENTAL SHELF WITHIN 200 NAUTICAL MILES

6.1 The present chapter discusses the misconceptions in Bangladesh's Memorial and sets out the correct rules applicable to the delimitation of the exclusive economic zone and the continental shelf within 200 nautical miles. The chapter then elaborates on the concrete application of these principles in the present case. The issue of the delimitation of the continental shelf beyond 200 nautical miles is dealt with in chapter 7 below.

6.2 This chapter includes four sections:

- **Section I** sets out the applicable law on the delimitation of the exclusive economic zone and the continental shelf;
- **Section II** describes the relevant coasts of the Parties and the relevant area to be delimited in the present case;
- **Section III** applies the now well-established "equidistance/relevant circumstances" three-stage method to construct the maritime boundary between India and Bangladesh; and,
- to conclude, **Section IV** describes the delimitation line thus established.

I. The Applicable Law on the Delimitation of the Exclusive Economic Zone and the Continental Shelf

6.3 UNCLOS sets out the general principles for delimiting a State's exclusive economic zone and continental shelf in two separate provisions – article 74 describes the delimitation of the exclusive economic zone where States claim potentially overlapping areas, while article 83 does the same for the continental shelf. As the ITLOS recently observed, "these two articles are identical in their content, differing only in respect of the designation of the

maritime area to which they apply”¹⁷⁴. In the *Black Sea* case, the ICJ usefully combined articles 74 and 83 into a single unified text which is reproduced below:

“1. The delimitation of the exclusive economic zone [the continental shelf] between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures provided for in Part XV.

3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

4. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the exclusive economic zone [the continental shelf] shall be determined in accordance with the provisions of the agreement.”¹⁷⁵

6.4 In accordance with articles 74, paragraph 1, and 83, paragraph 1, of the UNCLOS, the delimitation must achieve an equitable solution on the basis of international law as referred to in article 38 of the Statute of the ICJ. While UNCLOS is clear in respect to the result to be achieved, it is silent so far as concerns the method for achieving such a solution. This lacuna has been progressively filled by the case-law of the ICJ and of various arbitral tribunals, as was expressly acknowledged by the ITLOS in its judgment in *Bangladesh/Myanmar*:

“Decisions of international courts and tribunals, referred to in article 38 of the Statute of the ICJ, are also of particular importance in determining the content of the law applicable to maritime delimitation under articles 74 and 83 of the Convention. In this regard, the Tribunal concurs with the statement in the Arbitral Award of 11 April 2006 that: ‘In a matter that has so significantly evolved over the last 60 years, customary law also has a particular role that, together with judicial and arbitral decisions, helps to shape the considerations that apply to any process of delimitation’ (*Arbitration between Barbados*

¹⁷⁴ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 182.

¹⁷⁵ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, pp. 74-75, para. 31.

*and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them, Decision of 11 April 2006, RIAA, Vol. XXVII, p. 147, at pp. 210-211, para. 223).*¹⁷⁶

Thus,

“International courts and tribunals have developed a body of case law on maritime delimitation which has reduced the elements of subjectivity and uncertainty in the determination of maritime boundaries and in the choice of methods employed to that end.”¹⁷⁷

And, as a result:

“[t]he Tribunal notes that jurisprudence has developed in favour of the equidistance/relevant circumstances method. This is the method adopted by international courts and tribunals in the majority of the delimitation cases that have come before them.”¹⁷⁸

6.5 The modern international law on maritime delimitation has been very clearly set out in the most recent judgments of the ICJ and of the ITLOS. In particular, the *Black Sea and Bangladesh/Myanmar* judgments precisely describe how courts and tribunals should interpret articles 74 and 83, which are silent on the method to be used to obtain the “equitable solution” they mention and make clear that there can be no doubt that, in order to achieve an equitable solution the “equidistance/relevant circumstances” three-stage method must be applied¹⁷⁹:

“In the *Black Sea* case, the ICJ built on the evolution of the jurisprudence on maritime delimitation. In that case, the ICJ gave a description of the three-stage methodology which it applied. At the first stage, it established a provisional equidistance line, using methods that are geometrically objective and also appropriate for the geography of the area to be delimited. ‘So far as delimitation between

¹⁷⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 184. See also, appended to that judgment, the declaration of Judge Treves, pp. 2-3 and further the declaration of Judge Wolfrum, p. 2.

¹⁷⁷ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 226.

¹⁷⁸ *Ibid.*, para. 238; see also paras 229-232; see also *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009*, p. 101, paras. 116 and 120 and p. 103, para. 122.

¹⁷⁹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009*, p. 101, paras. 118-122 and *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 223.

adjacent coasts is concerned, an equidistance line will be drawn unless there are compelling reasons that make this unfeasible in the particular case' (*Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, *Judgment, I.C.J. Reports 2009*, p. 61, at p. 101, para. 116). At the second stage, the ICJ ascertained whether 'there are factors calling for the adjustment or shifting of the provisional equidistance line in order to achieve an equitable result' (*ibid.*, at pp. 101, para. 120). At the third stage, it verified that the delimitation line did not lead to 'an inequitable result by reason of any marked disproportion between the ratio of the respective coastal lengths and the ratio between the relevant maritime area of each State by reference to the delimitation line' (*ibid.*, at p. 103, para. 122)."¹⁸⁰

6.6 By use of this method, the need for fairness and equity is now expressed more predictably: equity is only introduced after a provisional equidistance line has been constructed; at that point, the function of equity is to determine whether the default *equidistance line* should be shifted. An equitable consideration is also brought to bear as a last step of the delimitation enquiry, as tribunals conduct a narrowly tailored "proportionality" analysis.

6.7 When asked to delimit overlapping claims to the continental shelf (or exclusive economic zone), in the *Black Sea* case, the ICJ established a clear and straightforward method. Keeping in mind "the principle that the land dominates the sea," as a preliminary step, the court or tribunal must "determine the coasts of [the Parties] which generate the rights of these countries to the continental shelf and the exclusive economic zone . . ." "¹⁸¹ Similarly, in *Bangladesh/Myanmar*, the ITLOS cited the principle that the land dominates the sea, as well as the famous *North Sea dictum* that "the land is the legal source of the power which a State may exercise over territorial extensions to seaward"¹⁸². The ITLOS further elaborated that only the *relevant* coasts, i.e., coasts that "generate projections which overlap with those of the coast of another party" have legal significance for maritime delimitation¹⁸³. The definition of the relevant coasts is indispensable for the drawing of seaward projections

¹⁸⁰ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, *Judgment*, para. 223; see also para. 240.

¹⁸¹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, *Judgment, I.C.J. Reports 2009*, p. 89, para. 77.

¹⁸² *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, *Judgment*, para. 185.

¹⁸³ *Ibid.*, para. 198.

and also contributes to the “non-disproportionality” review of the final delimitation line, a matter which is discussed below. However they are measured, it is an additional principle that the coasts of each party should be measured using the same method “to ensure consistency in measuring the respective coasts of the Parties”¹⁸⁴.

6.8 Once the “relevant coasts” have been defined, the court or tribunal then should proceed “*in defined stages*”¹⁸⁵. Because the discrete identity of these stages is crucial to the proper disposition of this case (and because the conflation of these stages is critical to Bangladesh’s interpretation of *Black Sea*), it is again worthwhile to quote the International Court’s rationale in context. The Court said that the first stage of the “delimitation methodology” required by the jurisprudence applying articles 74 and 83 of UNCLOS has “in recent decades been specified with precision. First, the Court will establish a provisional delimitation line, using methods that are geometrically objective and also appropriate for the geography of the area in which the delimitation is to take place”¹⁸⁶.

6.9 Indeed, in an extended exegesis establishing that equidistance is the standard rule, the Court stated yet again that “[a]t this initial stage of the construction of the provisional equidistance line the Court is not yet concerned with any relevant circumstances that may obtain and the line is plotted on strictly geometrical criteria on the basis of objective data.”¹⁸⁷ The Court did not abolish equity; it simply excluded its application in the first stage of the modern maritime delimitation methodology.

6.10 The judgment in the *Black Sea* case is not a *volte-face* from the ICJ’s considered judgment two years earlier in *Nicaragua v. Honduras*; the two are entirely consistent. In the *Black Sea* case, the Court noted one – *and only one* – situation in which courts and tribunals should not apply the equidistance normal rule in the first instance. The Court can only decline to use an equidistance line where it is “*unfeasible in the particular case*”. As discussed

¹⁸⁴ *Ibid.*, para. 204.

¹⁸⁵ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 101, para. 115. See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 240.

¹⁸⁶ *Maritime Delimitation in the Black Sea*, *ibid.*, para. 116. See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal*, *ibid.*, para. 233.

¹⁸⁷ *Maritime Delimitation in the Black Sea*, *ibid.*, para. 118.

above¹⁸⁸, in *Nicaragua v. Honduras*, the closeness of base points surrounding a geologic “needle” at the end of the land boundary made the drawing of the first set of base points unfeasible. The Court’s holding in *Nicaragua v. Honduras* and its description of the limited exception of “unfeasibility” in the *Black Sea* case both make clear that emotional pleas for “relevant circumstances” cannot affect application of the basic rule according to which the enquiry begins with equidistance.

6.11 Having carefully prescribed in the *Black Sea* judgment that *feasibility* rather than equity is the single criterion that limits the use of the equidistance/relevant circumstances method, the ICJ proceeded to describe a clear three-stage method. In so doing, it carefully confined the role of “equity” and “relevant circumstances” – those factors may, in appropriate circumstances, call for the *adjustment* or *shift* of a provisional equidistance line, but never its abandonment. It is necessary to elaborate the second and third stages in some detail because they show the extent to which the development of the law has foreclosed the methods and arguments that run throughout Bangladesh’s Memorial.

6.12 Bangladesh has already tested its misreading of the *Black Sea* judgment before the ITLOS – and with a notable lack of success. It argued in *Bangladesh/Myanmar* that the ITLOS “should apply the angle-bisector method in delimiting the maritime boundary between Bangladesh and Myanmar in the exclusive economic zone and on the continental shelf. In its view, this method would eliminate the inequity associated with equidistance and lead to an equitable result.”¹⁸⁹ In response, the ITLOS noted that

“[i]nternational courts and tribunals have developed a body of case law on maritime delimitation which has reduced the elements of subjectivity and uncertainty in the determination of maritime boundaries and in the choice of methods employed to that end.”¹⁹⁰

The ITLOS continued that

“in the *Black Sea* case, the ICJ built on the evolution of the jurisprudence on maritime delimitation. In that case, the ICJ gave a description of the three-stage methodology which it applied. At the

¹⁸⁸ See paras. 5.14-5.21.

¹⁸⁹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 213.

¹⁹⁰ *Ibid.*, para. 226.

first stage, it established a provisional equidistance line, using methods that are geometrically objective and also appropriate for the geography of the area to be delimited.”¹⁹¹

Furthermore, the ITLOS noted that

“jurisprudence has developed in favour of the equidistance/relevant circumstances method. This is the method adopted by international courts and tribunals in the majority of the delimitation cases that have come before them.”¹⁹²

Crucially, the ITLOS assessed Bangladesh’s proposed alternative of using an “angle-bisector” method in the Bay of Bengal and concluded that

“in the present case the appropriate method to be applied for delimiting the exclusive economic zone and the continental shelf between Bangladesh and Myanmar is the equidistance/relevant circumstances method.”¹⁹³

The fact that the ITLOS followed “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.

6.13 After the relevant coastline is defined (and a provisional equidistance line is drawn) during the first stage of the three-part *Black Sea* method, international courts and tribunals should then move on to the second step. In the *Black Sea* case, the Court described the second step as follows:

“[O]nce the provisional equidistance line has been drawn, [the Court] shall ‘then [consider] whether there are factors calling for the adjustment or shifting of that line in order to achieve an ‘equitable result’ . . . Such factors have usually been referred to in the jurisprudence of the Court, since the *North Sea Continental Shelf* cases, as the relevant circumstances. . . . Their function is to verify that the provisional equidistance line, drawn by the geometrical method from the determined base points on the coasts of the Parties is

¹⁹¹ *Ibid.*, para. 233.

¹⁹² *Ibid.*, para. 238.

¹⁹³ *Ibid.*, para. 239.

not, in light of the particular circumstances of the case, perceived as inequitable.”¹⁹⁴

As this passage makes clear, the exclusive use of “relevant circumstances”, taken in isolation, has been definitively abandoned. International courts and tribunals that are charged with delimiting maritime rights are to start “by the geometrical method,” and it is only after the equidistance line is drawn that they should entertain the equitable considerations. Thus the type of concerns that characterize the *North Sea* cases, the Bangladesh Memorial, and the “equitable solution” language of articles 74 and 83 of UNCLOS¹⁹⁵, are now to be considered in the *second* and *third* steps of the delimitation enquiry. These concerns do not affect the decision to use an equidistance line, and when they are considered, their importance is disciplined by the modern three-phase method. Thus, in the *Bangladesh/Myanmar* case, the ITLOS determined that certain features of the Bangladesh-Myanmar coastline called for a shift of the provisional equidistance line, but was careful to note that “an equitable solution requires, in light of the coastal geography of the Parties, that this 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.”¹⁹⁶ The ITLOS thus appreciated the important benefit of deferring the consideration of the equities to a second stage: it assures that pleading equities does not undermine the goal that maritime delimitation be objective and dispassionate. The principal object, as the ITLOS noted, “is a line that allows the relevant coasts of the Parties ‘to produce their effects, in terms of maritime entitlements, in a reasonable and mutually balanced way’.”¹⁹⁷

6.14 The many flavours of equitable demands that emerge as the Bangladesh Memorial unfolds, whatever their value, must all be confined to the second step of the *Black Sea* and *Bangladesh/Myanmar* cases methodology. Among other things the Court in *Black Sea*

¹⁹⁴ *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009*, p. 112, para. 155.

¹⁹⁵ *Ibid.* (“the Court should adjust the line in order to achieve the ‘equitable solution’ as required by Articles 74, paragraph 1, and 83, paragraph 1, of UNCLOS”).

¹⁹⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 325.

¹⁹⁷ *Ibid.*, para. 326 (quoting *Black Sea* at para. 201).

considered various “relevant circumstances” (“cut-off,” disproportionality, the delimitations of third parties, and *effectivités*) as part of the second step of its enquiry¹⁹⁸.

6.15 As is now clear, the first and second steps embrace a rule-of-law approach that emphasizes predictability and carefully parses alleged equitable concerns. But there is one final step to the *Black Sea* enquiry. Before pronouncing an equidistance line (whether adjusted or not) final, courts and tribunals should undertake an *ex post facto* check of non-disproportionality in their provisional equidistance lines. The Court noted that

“[t]he continental shelf and exclusive economic zone allocations are not to be assigned in proportion to length of respective coastlines. Rather, the Court will check, *ex post facto*, on the equitableness of the delimitation line it has constructed.”¹⁹⁹

6.16 The thinly veiled proposition of an alleged principle of equality that runs through the Bangladesh Memorial is completely at odds with modern case law. As against the thesis that each State should get *some* of “its maximum extent” (also styled as the Gardiner formula in the Memorial²⁰⁰), it is now settled that proportionality is not an end in itself in the law of the sea. This accounts for the heavy emphasis on *non-disproportionality* as well as the decision to treat *disproportionality* as an *ex post* – rather than an *ex ante* – test in the modern case law. It is not a matter of giving each state *some* part of *everything*. Indeed, this proposition hearkens back to the *North Sea* acknowledgment that “equity does not require that a State without access to the sea should be allotted an area . . .”²⁰¹

II. The Relevant Coasts and the Relevant Area

6.17 Bangladesh does not make any effort to define relevant coasts of the Parties in its Memorial. It is, however, a prerequisite to any process of maritime delimitation since, as the ICJ explained in *Romania v. Ukraine*:

¹⁹⁸ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, pp. 112-128, paras.155-204.

¹⁹⁹ *Ibid.*, p. 129, para. 211. See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 240.

²⁰⁰ MB, paras. 7.30, 7.33 and 7.34.

²⁰¹ *North Sea Continental Shelf*, Judgment, I.C.J. Reports 1969, pp. 49-50, para. 91.

“[t]he title of a State to the continental shelf and to the exclusive economic zone is based on the principle that the land dominates the sea through the projection of the coasts or the coastal fronts. . . . It is therefore important to determine the coasts . . . which generate the rights of [the Parties] to the continental shelf and the exclusive economic zone, namely, those coasts the projections of which overlap, because the task of delimitation consists in resolving the overlapping claims by drawing a line of separation of the maritime areas concerned.”²⁰²

Consequently, any maritime delimitation first requires the determination of both the relevant coasts of the Parties and the relevant maritime area.

A. Bangladesh’s Misconceptions Concerning the Notion of Relevant Coasts

6.18 Bangladesh does not, in its Memorial, specify the relevant coasts of the Parties. It refers to them in two different respects:

- first, it refers to the relevant coasts as the straight lines forming the angle, the intersection of which constitutes the bisector line which, it alleges, should be the maritime boundary between the Parties²⁰³;
- second, it refers to “the lengths of the Parties’ relevant coasts” in order to compare them with “the size of the maritime areas each would receive as a result of the proposed delimitation”²⁰⁴.

But, in neither case, does it attempt to justify, as a legal matter, what it presents as its own and India’s alleged “relevant coasts”.

6.19 Bangladesh’s amorphous conception of the relevant coasts is misconceived. It confuses the two different functions of the relevant coasts, which must be distinguished, especially when one resorts to the “angle-bisector method”, which, in any event, is not appropriate in the present case.

²⁰² *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 89, para. 77.

²⁰³ MB, paras. 6.87 and 6.101-6.103.

²⁰⁴ MB, para. 6.124.

6.20 As the ICJ explained in *Romania v. Ukraine*:

“The role of relevant coasts can have two different though closely related legal aspects in relation to the delimitation of the continental shelf and the exclusive economic zone. First, it is necessary to identify the relevant coasts in order to determine what constitutes in the specific context of a case the overlapping claims to these zones. Second, the relevant coasts need to be ascertained in order to check, in the third and final stage of the delimitation process, whether any disproportionality exists in the ratios of the coastal length of each State and the maritime areas falling either side of the delimitation line.”²⁰⁵

6.21 For both aspects, it is necessary to determine the precise length of the “relevant coasts” of the Parties. Bangladesh completely omits the threshold determination of the relevant coasts ignoring the ICJ’s approach in the *Black Sea* case. Instead, Bangladesh in a cavalier fashion, simply assumes there has been such a determination when it endeavours to establish that there is no marked disproportion between the lengths of the relevant coasts of the Parties and the respective maritime areas within which each Party enjoys sovereign rights.

6.22 Regarding this last point, Bangladesh’s argument (in full) is as follows:

“6.125 The respective coastal façades of Bangladesh and India on the Bengal Delta as depicted in Figures 6.17 and 6.18 are broadly comparable. If the ICJ’s approach in *Nicaragua v. Honduras* and *Gulf of Maine* is followed, the two resulting coastal façades measure: for Bangladesh 177 km; for India 150 km. . . .

6.126 If the *Guinea/Guinea-Bissau* arbitral tribunal’s method is employed, Bangladesh’s portion of the single coastal front line measures 283 km; India’s measures 160 km.”²⁰⁶

6.23 Leaving aside for the moment the actual calculation of the proportions²⁰⁷, it is striking that, in lieu of reasoned argument, Bangladesh contents itself with a mere reference to two sketch-maps²⁰⁸ in which the “relevant coasts” are depicted, without offering any explanation as to the method and reasons for depicting them in this manner. Even odder, the sketch-maps

²⁰⁵ *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009*, p. 89, para. 78.

²⁰⁶ MB, paras. 6.125-6.126.

²⁰⁷ See paras.6.108-6.113 below.

²⁰⁸ Figures 6.17 (Applying the Bisector Methodology to the Deltaic Coasts of India and Bangladesh) in MB, Vol. I, p. 117, and 6.18 (The Bisector Methodology Using a Single South-Facing Coastal Front) in MB, Vol. II.

offer two options without any explanation and without offering a choice between two quite different lines. In any case, as will be shown below, neither of Bangladesh's lines is tenable; both are completely disconnected from the general configuration of the coasts.

6.24 Sketch-map No. 6.1 at page 125 is a reproduction of figure 6.17 taken from Bangladesh's Memorial. A glance at this map suffices to show that the lines supposed to represent respectively "India's deltaic coast" and "Bangladesh's deltaic coast"

- only follow (approximately, at best) very small portions of the respective coasts of the Parties; and
- purport to ignore portions of coasts whose projections quite clearly overlap. Bangladesh does this in disregard of the fact that "the task of delimitation consists in resolving the overlapping claims by drawing a line of separation of the maritime areas concerned."²⁰⁹

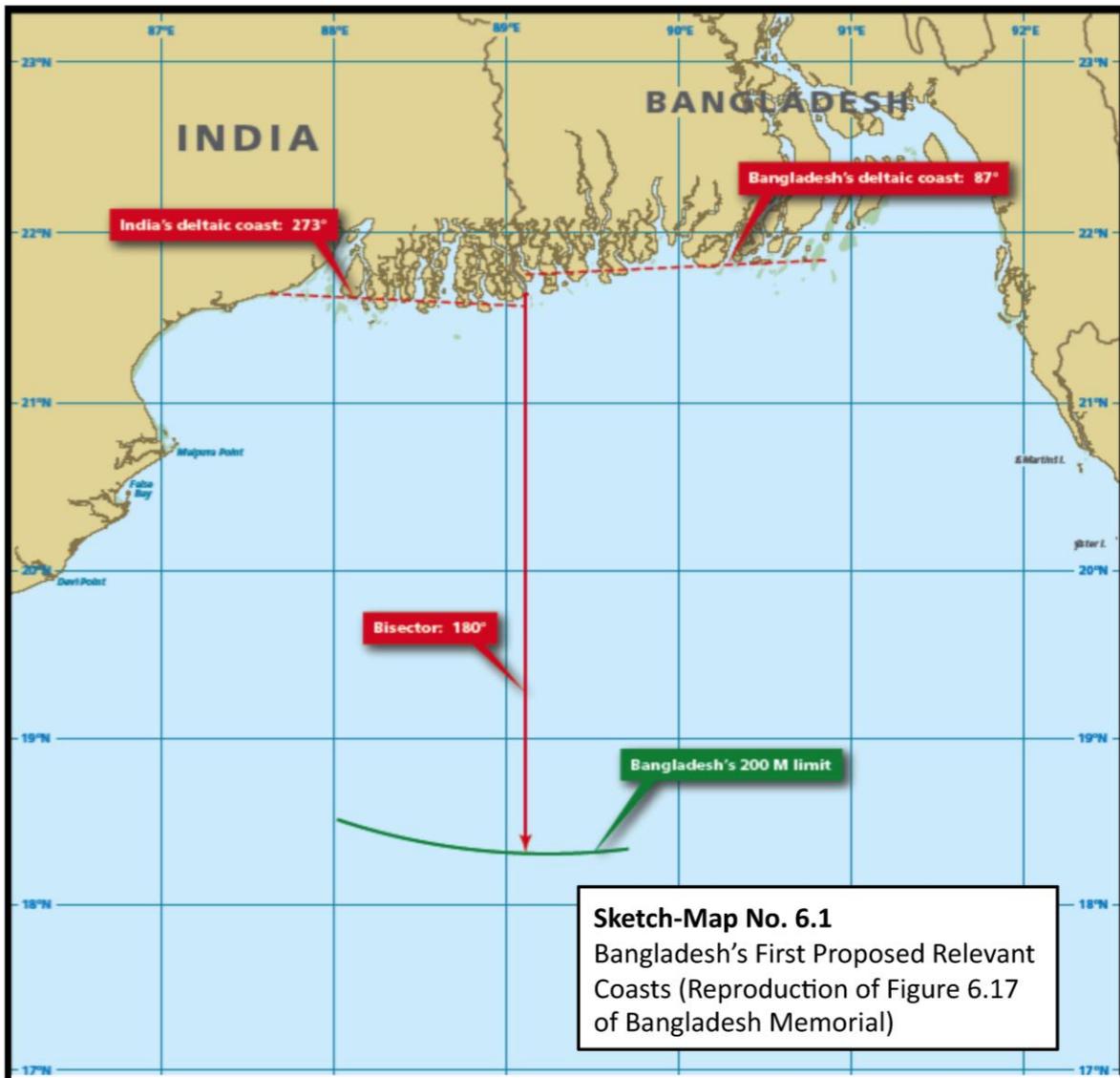
As the ICJ also explained in its 2009 judgment:

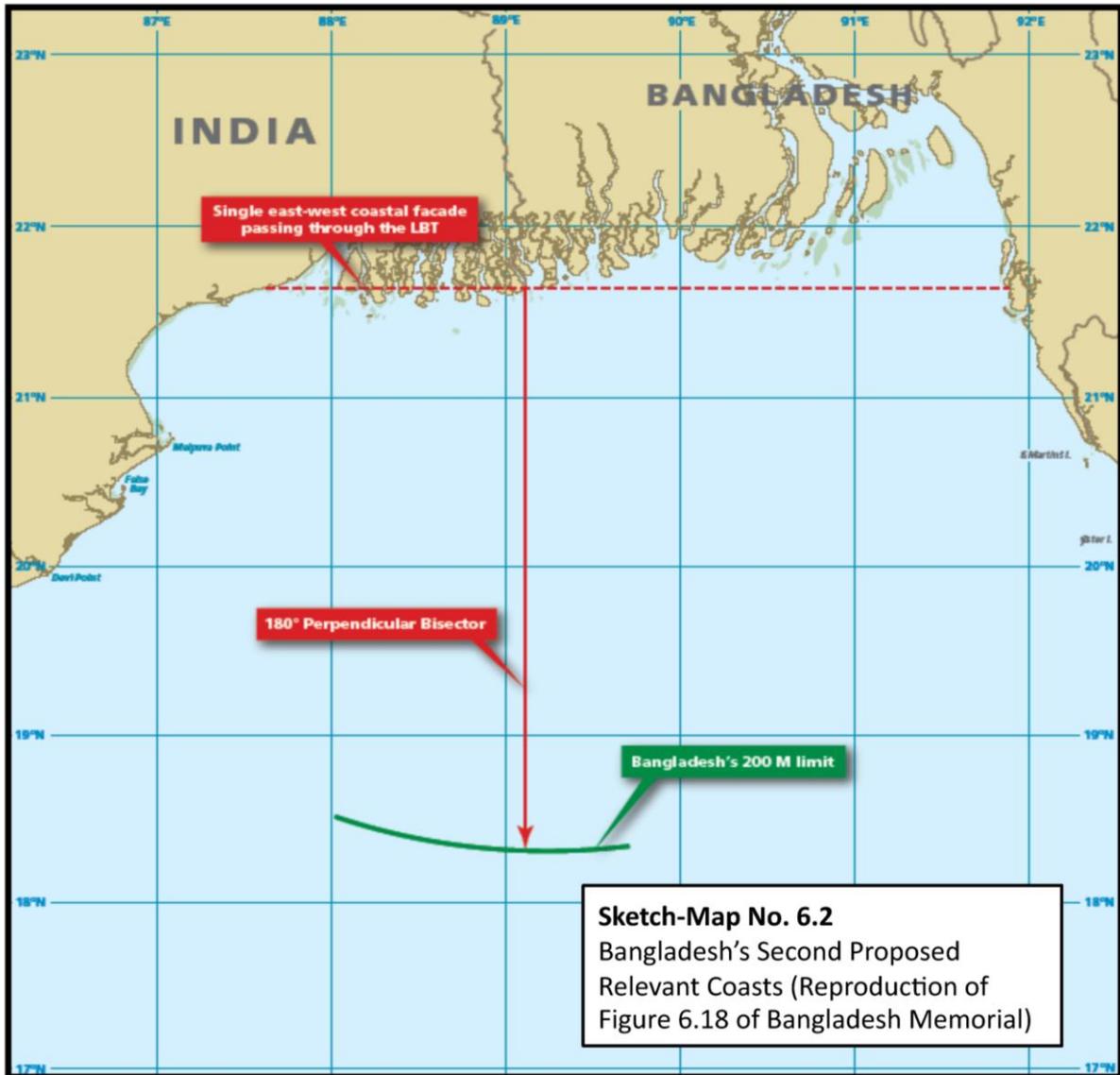
"the coast, in order to be considered as relevant for the purpose of the delimitation, must generate projections which overlap with projections from the coast of the other party. Consequently 'the submarine extension of any part of the coast of one Party which, because of its geographic situation, cannot overlap with the extension of the coast of the other, is to be excluded from further consideration by the Court' (*Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, judgment, *I.C.J. Reports 1982*, p. 61, para. 75)."²¹⁰

6.25 The same remarks apply with equal force to figure 6.18 in Bangladesh's Memorial. Moreover, in this second case, the general orientation of the alleged "relevant coasts" on the Indian side is entirely ignored (see sketch-map No. 6.2 at page 127).

²⁰⁹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 89, para. 77.

²¹⁰ *Ibid.*, p. 97, para. 99.





6.26 Bangladesh's treatment of the relevant coasts blithely contradicts the fundamental principle applicable to the determination of the relevant coasts according to which "the method chosen and its results must be faithful to the actual geographical situation."²¹¹ This principle applies, whether with a view to applying the standard "equidistance/relevant circumstances" method or the "angle-bisector" method insofar as it may be applied in exceptional cases.

6.27 In this respect, it must be recalled that the method followed by the Court in *Nicaragua v. Honduras* does not depart from the basic principles of the preferred method described by the ICJ in *Romania v. Ukraine* and by the ITLOS in *Bangladesh/Myanmar*²¹². In *Nicaragua v. Honduras*, the Court made clear that :

"If it is to 'be faithful to the actual geographical situation' (*Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, I.C.J. Reports 1985, p. 45, para. 57), the method of delimitation should seek a solution by reference first to the States' 'relevant coasts' (see *Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain)*, Judgment, I.C.J. Reports 2001, p. 94 para. 178; see also the *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, I.C.J. Reports 2002, p. 442, para. 90)). Identifying the relevant coastal geography calls for the exercise of judgment in assessing the actual coastal geography. 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 coast. Thus, where the bisector method is to be applied, care must be taken to avoid 'completely refashioning nature' (*North Sea Continental Shelf*, Judgment, I.C.J. Reports 1969, p. 49, para. 91)."²¹³

6.28 Moreover, if the "angle-bisector method" were applicable – *quod non*, 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

²¹¹ *Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, I.C.J. Reports 1985, p. 45, para. 57.

²¹² See para. 6.10 above.

²¹³ *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea*, (*Nicaragua v. Honduras*), Judgment, I.C.J. Reports 2007, p. 747, para. 289 (emphasis added).

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 distinct stages of the delimitation process.

6.29 In its Memorial, Bangladesh ignores this important distinction. While it acknowledges²¹⁴ that, in both cases, “[i]dentifying the relevant coastal geography calls for the exercise of judgment in assessing the actual coastal geography”²¹⁵, it mixes up the relevant coasts and the line depicting the general direction of the coasts, using the same set of straight lines depicting the general direction of the coastlines of India and Bangladesh (which it concocted for drawing its angle-bisector line), for the non-disproportionality test. By so doing, Bangladesh misidentifies the coasts relevant to the delimitation, i.e., the segments of the coast “which generate the rights of [the Parties] to the continental shelf and the exclusive economic zone, namely, those coasts the projections of which overlap.”²¹⁶ In doing so, it drastically cuts down India’s relevant coast. Its purported application of the disproportionality test is therefore distorted as it is based, as shown below²¹⁷, on an unjustified exclusion of significant areas to which India is entitled.

6.30 In any case, the first step in a delimitation is to determine the whole extent of the relevant coasts, if only to substantiate possible compelling reasons which would render unfeasible the use of the equidistance method in the exceptional cases when it occurs. Therefore, it is necessary to identify the coasts of Bangladesh (**Section B**) and India (**Section C**) that generate overlapping maritime projections before determining the relevant area to be delimited (**Section D**).

B. The Relevant Coast of Bangladesh

6.31 Without providing any explanation, Bangladesh bluntly asserts that its “coastal front is a straight line that runs from the area of the land boundary terminus to the western margins

²¹⁴ MB, para. 6.102.

²¹⁵ See para. 6.26-6.27 above.

²¹⁶ See *Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 89, para. 77). See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 198.

²¹⁷ See paras. 6.108-6.113 below.

of the mouth of the Meghna Estuary²¹⁸ or, in the alternative, that its relevant coast would be the straight line represented on figure 6.18 in its Memorial²¹⁹, running from the land terminus to the north of the Maiskhal Island. This eccentric “multiple choice” approach calls for several remarks.

6.32 First, precisely, it is alternative: Bangladesh offers a “choice” – without any priority – to the Tribunal between what it calls the *Nicaragua v. Honduras* approach, consisting of depicting “the general direction of the parties’ respective coastlines”²²⁰ or the *Guinea/Guinea-Bissau* approach, based on the drawing of “a single straight line that depicts the general direction of the coast as viewed from a more regional perspective”²²¹. It is patently absurd to envisage that there could be two different “relevant coasts” for *all* purposes. By definition the bisector approach is concerned with an *angle*; therefore, the length of the coasts is not at issue when the relevant coasts are determined; what matters is only their direction. But, the use of the bisector method does not exclude recourse to the third step, that is the test of non-disproportionality; to that aim, the relevant coasts must be determined exactly in the same way as they are when recourse is made to the standard equidistance/relevant circumstances method.

6.33 Second, neither of the alternative solutions can be sustained factually or legally: in the first branch of the alternative the point of departure of both “relevant coasts” is different and does not coincide with its claimed land boundary terminus point: “Bangladesh’s deltaic coast” would be situated about 13 kilometres north of that terminus while “India’s deltaic coast” would start about 7.7 kilometres south of that same terminus (see sketch-map No. 6.3 at page 133).

6.34 Third, this is precisely what happens in the case of Bangladesh’s second branch of the alternative as illustrated on figure 6.18 of Bangladesh’s Memorial²²² where it is apparent that Bangladesh’s purported relevant coast is a pure waterline leaving an area of not less than

²¹⁸ MB, para. 6.105.

²¹⁹ MB, Vol. II, reproduced on page 127 above.

²²⁰ MB, para. 6.103.

²²¹ MB, para. 6.106.

²²² Also reproduced on page 127 above (sketch-map No. 6.2 at page 127).

11,463 square kilometres of sea north of that so-called coastline. Such a line is clearly entirely disconnected from the general direction of the coast and is wholly unjustified.

6.35 In its judgment of 14 March 2012 in the *Bangladesh/Myanmar* case, the ITLOS concluded that

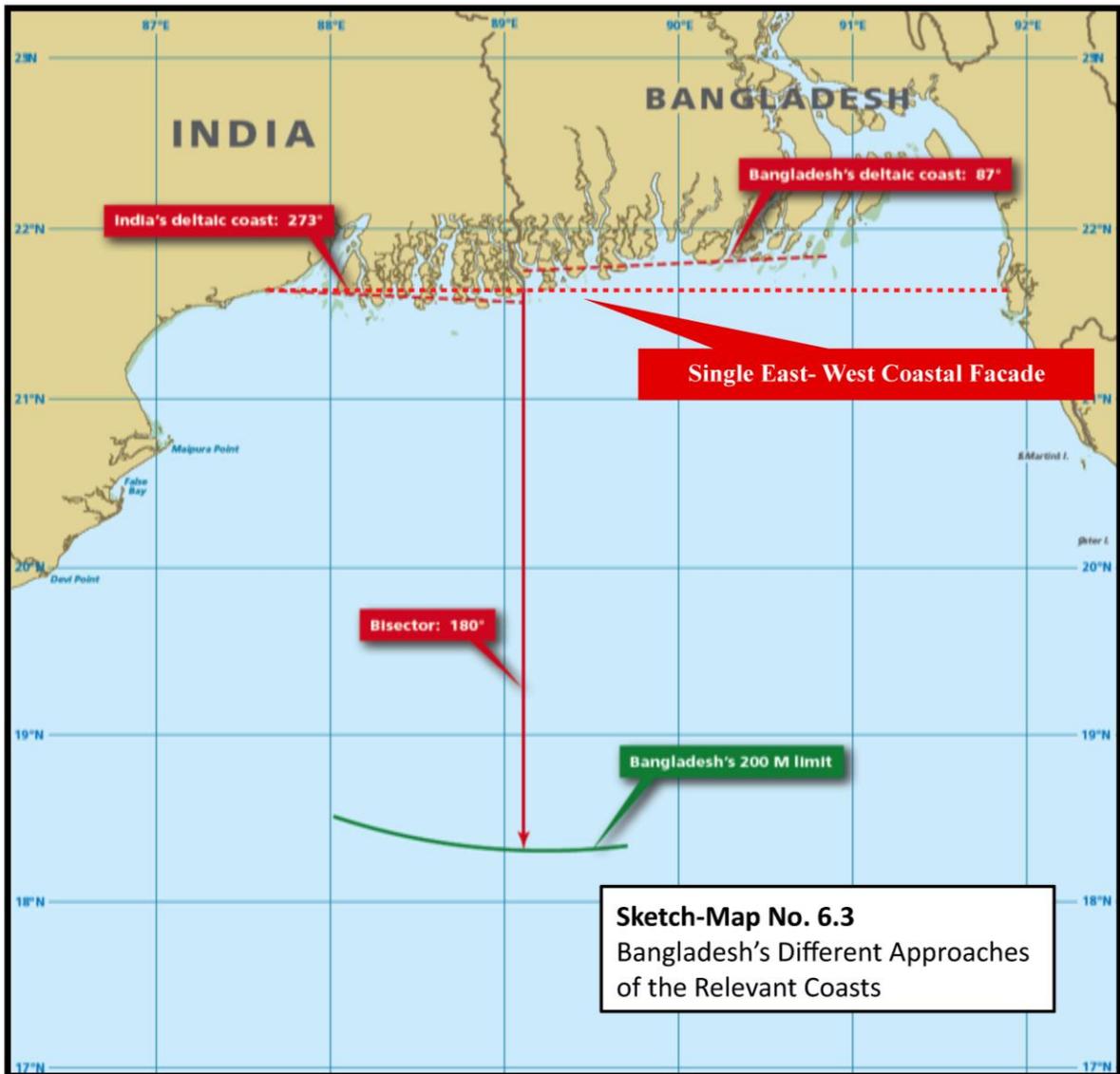
“the whole of the coast of Bangladesh is relevant for delimitation purposes, generating projections seaward that overlap with projections from the coast of Myanmar. To avoid difficulties caused by the complexity and sinuosity of that coast, it should be measured in two straight lines.

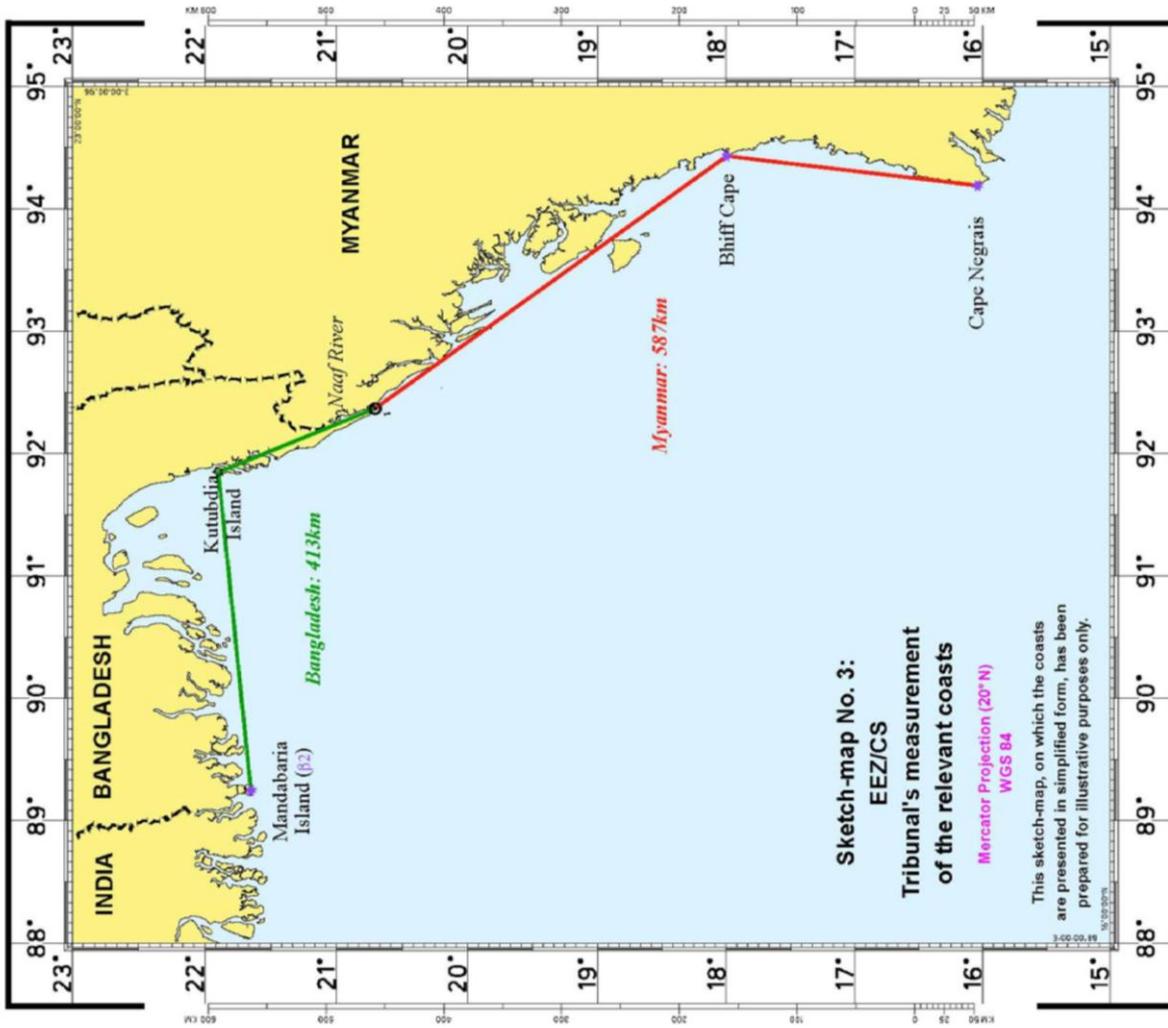
The Tribunal draws the first line from a point on Bangladesh’s coast on Mandabaria Island near the land boundary terminus with India, which was used by Myanmar as a base point (β2) for the construction of its proposed equidistance line (see paragraph 243), to a point on Kutubdia Island (see paragraph 188). The second line extends from the said point on Kutubdia Island to the land boundary terminus with Myanmar in the Naaf River. As a result, the length of Bangladesh’s relevant coast is approximately 413 kilometres.”²²³

6.36 It would indeed be bizarre were the same geography to change from case to case. India submits that the conclusion of the ITLOS is equally applicable in the instant case (see sketch-map No. 6.4 at page 135).

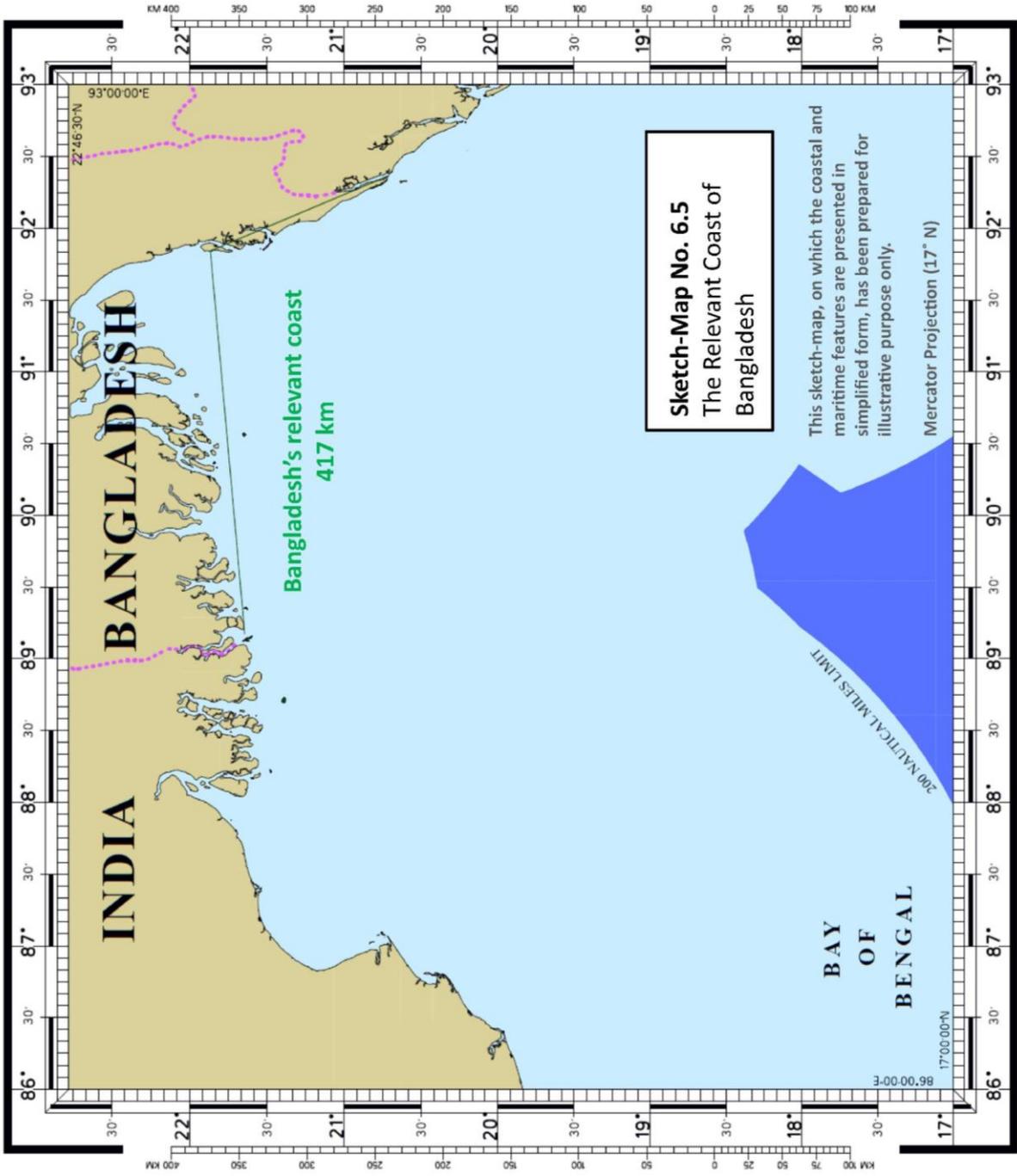
6.37 The relevant coast of Bangladesh, from the land boundary terminus with India to the land boundary terminus with Myanmar, measured through Mandabaria Island (point β2) and Kutubdia Island (light house) is 417 kilometres (see sketch-map No. 6.5 at page 137). The coast thus defined is relevant for checking the non-disproportionality of the provisional equidistance line, possibly adjusted in order to take account of possible relevant circumstances.

²²³ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 201-202. Given the Tribunal’s restraint (see para. 202 of the judgment), ten more kilometres are relevant in the present case.





Sketch-Map No. 6.4
ITLOS' Measurement of the Relevant Coasts of Bangladesh and Myanmar (Extract from ITLOS Judgment, 14 March 2012, *Bangladesh/Myanmar*, p. 67)



C. The Relevant Coast of India

6.38 According to Bangladesh, India's relevant coast consists of "a straight line extending from the vicinity of the Parties' land boundary terminus in the Hariabhanga River to the west bank of the Hooghly River."²²⁴ In the "alternative" "Guinea/Guinea-Bissau approach"²²⁵, this line would be slightly moved to the north and the angle of its orientation deflected to the south from 273° to 270°²²⁶.

6.39 Here again, these assertions are plainly wrong and call for the same general remarks as those made above with respect to Bangladesh's depiction of the Bangladesh relevant coast²²⁷: (i) there cannot exist a "choice" between two kinds of relevant coasts for all purposes; and (ii) in the first branch of the alternative, the starting points of the line respectively depicting the Bangladesh and Indian relevant coasts would not coincide.

6.40 If one applies the same reasoning to India's coast, the relevant coast is in three segments:

- the first segment runs in a westerly direction from the land boundary terminus with Bangladesh to a point close to and due south of Haripur in the vicinity of the city of Balasore;
- from that point, the coastline turns radically to proceed in a north/south direction up to Maipura Point (second segment);
- from Maipura Point the coast runs in a north-east/south-west direction until it reaches Devi Point (third segment).

6.41 Thus defined, the relevant coast of India measures 411 kilometres and is shown on sketch-map No. 6.6 reproduced on page 141.

²²⁴ MB, para. 6.105.

²²⁵ See paras. 6.22-6.25 above.

²²⁶ See para. 5.44 above.

²²⁷ See paras. 6.18-6.30 above.

D. The Relevant Area

6.42 In its 2009 judgment in *Romania v. Ukraine*, the International Court defined the relevant area as that in which the projections of the relevant coasts overlap²²⁸. It observed:

“that the legal concept of the ‘relevant area’ has to be taken into account as part of the methodology of maritime delimitation.

In the first place, depending on the configuration of the relevant coasts in the general geographical context and the methods for the construction of their seaward projections, the relevant area may include certain maritime spaces and exclude others which are not germane to the case in hand.

Secondly, the relevant area is pertinent to checking disproportionality. This will be done as the final phase of the methodology. The purpose of delimitation is not to apportion equal shares of the area, nor indeed proportional shares. The test of disproportionality is not in itself a method of delimitation. It is rather a means of checking whether the delimitation line arrived at by other means needs adjustment because of a significant disproportionality in the ratios between the maritime areas which would fall to one party or other by virtue of the delimitation line arrived at by other means, and the lengths of their respective coasts.”²²⁹

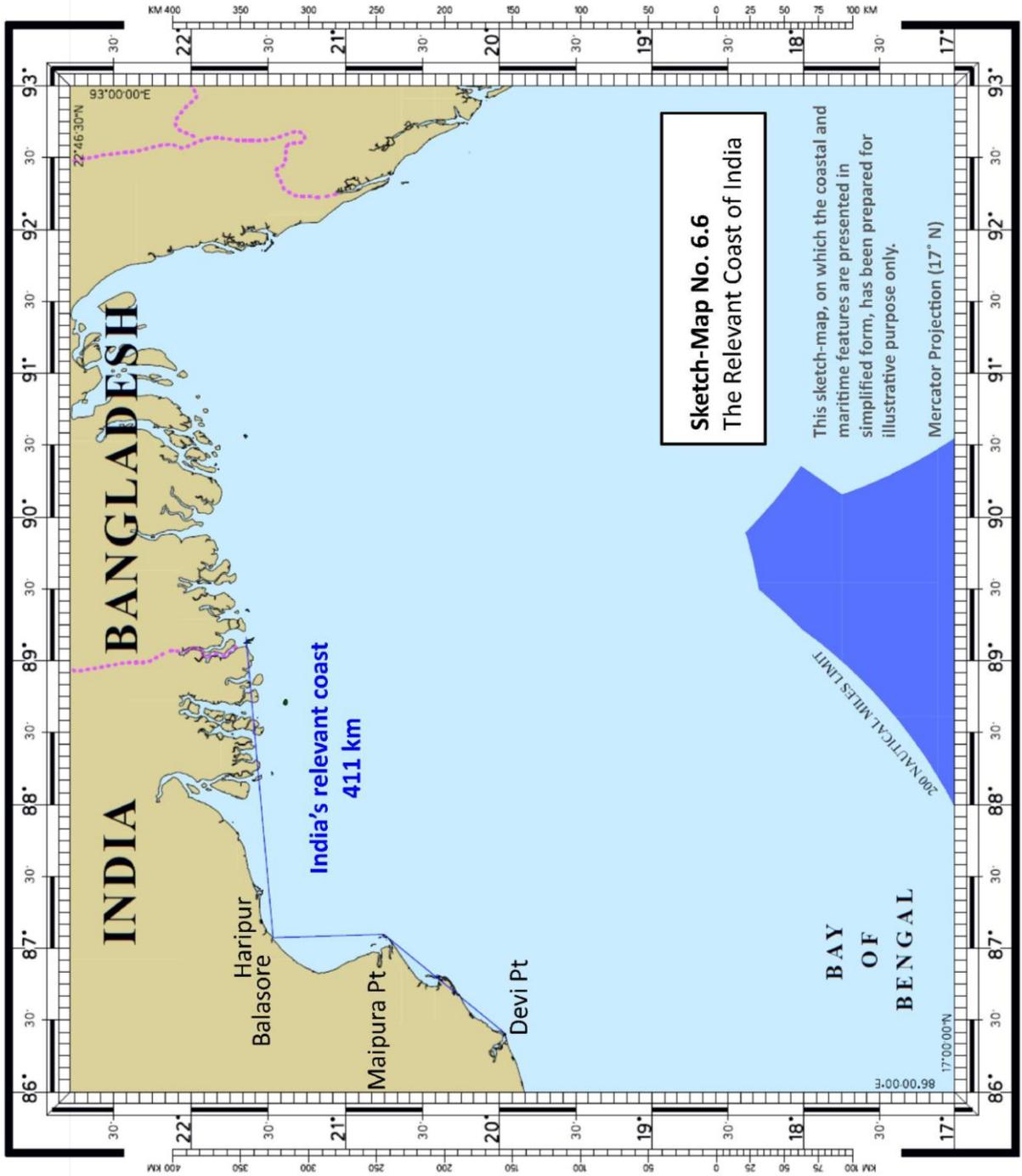
6.43 In the present case, the area to be delimited comprises the maritime zones lying directly off the respective relevant coasts of the Parties as described in paragraphs 6.37 and 6.40 above. It is limited to the south-east by the maritime boundary between Bangladesh and Myanmar set by the ITLOS judgment of 14 March 2012²³⁰.

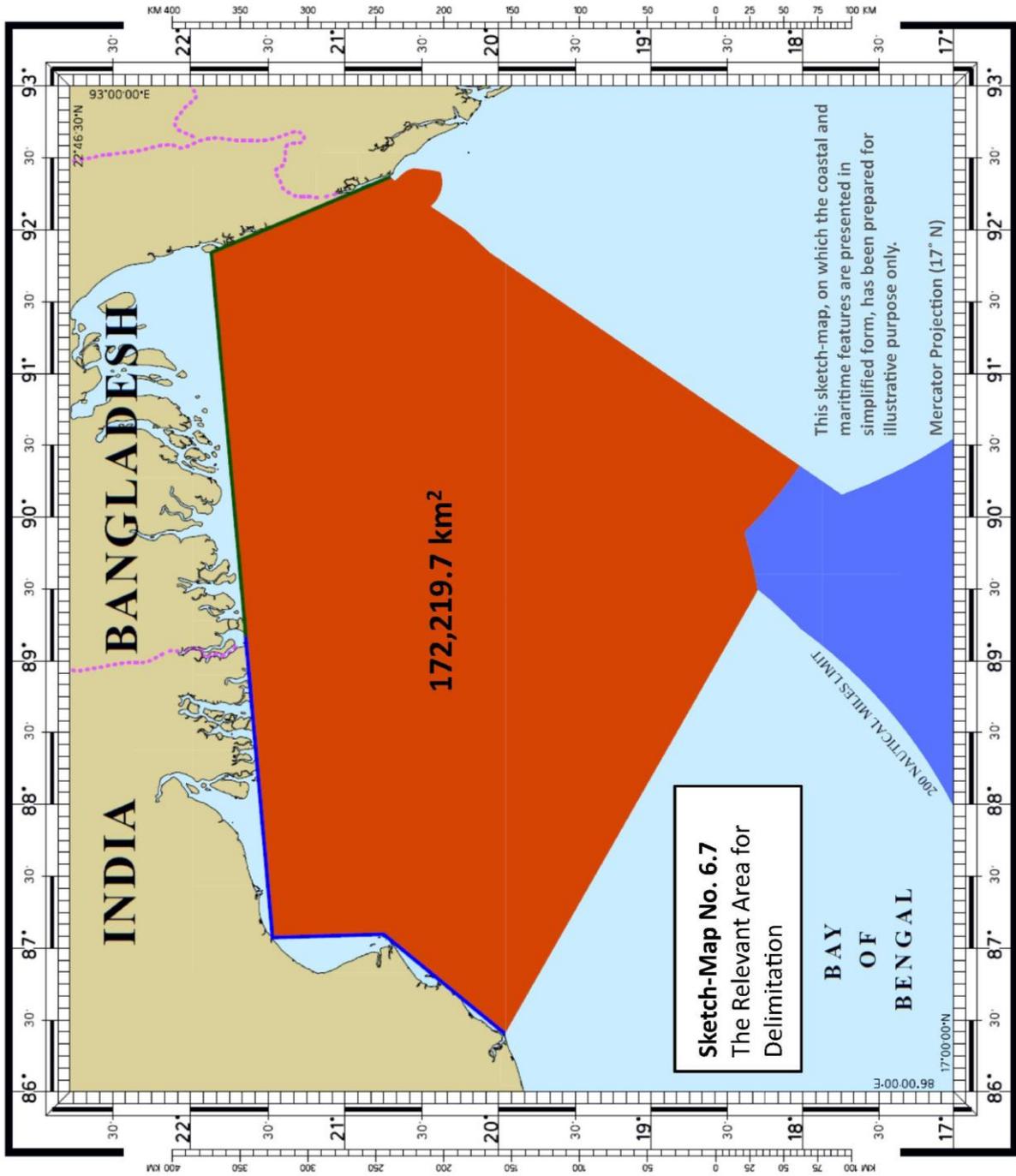
6.44 Accordingly, the relevant area measures 172,219.7 square kilometres and is shown on sketch-map No. 6.7 reproduced on page 143.

²²⁸ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 89, para. 77. Similarly, the ITLOS defined the relevant area as “the area of overlapping entitlements of the Parties that is relevant to this delimitation” (*Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 477).

²²⁹ *Ibid.*, pp. 99-100, para. 110.

²³⁰ See above, paras. 2.24 and 6.35-6.36.





III. The Three-Stage Delimitation Methodology

6.45 As explained above²³¹, in accordance with the standard method for the delimitation of the exclusive economic zones and the continental shelf, the first stage of the delimitation process is the construction of the provisional equidistance line; this is a purely technical operation, requiring the determination of appropriate base points – on the relevant coasts of the Parties – from which the line is drawn (**Section A**). At the second stage, the line thus provisionally drawn may be adjusted if relevant circumstances so require (**Section B**). Third, and finally, the line thus obtained is checked against the non-disproportionality test (**Section C**).

A. Stage 1 – The Provisional Equidistance Line

6.46 Bangladesh seeks to set aside the standard equidistance/relevant circumstances method on the pretext of the “inequity of the equidistance line”²³². By doing so, Bangladesh overlooks the fact that, according to well-established case law, equity can play no role in drawing the provisional equidistance line. As Bangladesh acknowledges, it is “essentially a mathematical construct”²³³; equitable considerations are only to be taken into account, if at all, during the second phase when relevant circumstances may lead to adjusting the equidistance line²³⁴, and, mainly, during the third stage of the delimitation process, when the non-disproportionality is tested²³⁵.

6.47 In a very small number of highly exceptional cases, the ICJ and one arbitral tribunal, have resorted to the “angle-bisector method”²³⁶. But this occurred only as a *substitute* for the equidistance method when, for compelling reasons, the drawing of an equidistance line

²³¹ See in particular para. 6.11.

²³² MB, chapter 6, Section II.B (paras. 6.37-6.83).

²³³ MB, para. 6.24.

²³⁴ See paras. 6.13 and 6.15 above.

²³⁵ See para. 6.16 above.

²³⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 234.

proved *unfeasible*²³⁷. No such reason exists in the present case and Bangladesh invokes none. Therefore, absent any compelling reason (1), it is not only appropriate but legally required first to draw an equidistance line as determined above (2)²³⁸.

1. The Absence of Compelling Reasons Not to Resort to the Standard Method

6.48 In the *Black Sea* case, referring to *Nicaragua v. Honduras*, the ICJ stated:

“First, the Court will establish a provisional delimitation line, using methods that are geometrically objective and also appropriate for the geography of the area in which the delimitation is to take place. So far as delimitation between adjacent coasts is concerned, an equidistance line will be drawn unless there are compelling reasons that make this unfeasible in the particular case (see *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, judgment, *I.C.J. Reports 2007 (II)*, p. 745, para. 281).”²³⁹

6.49 Invoking the “inequity of the equidistance line”, Bangladesh rules out the equidistance/relevant circumstances method on the pretexts that it would produce a “cut-off effect”²⁴⁰, “prevent Bangladesh from exercising sovereign rights in the continental shelf beyond 200 M”²⁴¹, and in any event be “unreliable given the geographic characteristics of the Bengal delta”²⁴².

6.50 Clearly, the first two alleged assertions put the cart before the horse: *if* the provisional equidistance line produces an inequitable result, then – and only then – would it have to be adjusted or shifted in order to achieve an equitable result. But of course, even accepting that these two assertions are relevant circumstances within the meaning of the standard method – *quod non*²⁴³ – this cannot be a compelling reason for skipping the first stage of the delimitation process.

²³⁷ See para. 6.10 above.

²³⁸ See paras. 6.5 and 6.8 above.

²³⁹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 101, para. 116.

²⁴⁰ MB, paras. 6.37-6.70.

²⁴¹ MB, paras. 6.71-6.74.

²⁴² MB, paras. 6.75-6.83.

²⁴³ See paras. 6.62-6.101 below.

6.51 Such a compelling reason would only exist if the geographic characteristics of the Bengal Delta were so unreliable that they would make it unfeasible to fix any base points from which the equidistance line could be drawn. But this is not so in the present case as it has been demonstrated in chapter 5 above²⁴⁴. In the absence of any “compelling reasons” that would make the drawing of an equidistance line “unfeasible in the particular case”²⁴⁵, that line must be constructed from appropriate base points determined on the relevant coasts of the Parties.

2. *The Appropriate Base Points*

6.52 As the ICJ recalled in the *Romania v. Ukraine* case, for delimiting the continental shelf and exclusive economic zones, base points must be selected “by reference to the physical geography of the relevant coasts.”²⁴⁶ In that same judgment, the Court pointed out some general guidelines for the determination of such base points:

- first, “the issue of determining the baseline for the purpose of measuring the breadth of the continental shelf and the exclusive economic zone and the issue of identifying base points for drawing an equidistance/median line for the purpose of delimiting the continental shelf and the exclusive economic zone between adjacent/opposite States are two different issues”²⁴⁷;
- second and consequently, in “the delimitation of the maritime areas involving two or more States, the Court [or, in the present case, the Arbitral Tribunal] should not base itself solely on the choice of base points made by one of those Parties”²⁴⁸;

²⁴⁴ See paras. 5.35-5.39

²⁴⁵ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 101, para. 116, referring to *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p. 745, para. 281.

²⁴⁶ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 108, para. 137; see also *ibid.*, p. 101, para. 117. See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 264.

²⁴⁷ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 108, para. 137.

²⁴⁸ *Ibid.*, p. 108, para. 137; see also *ibid.*, p. 101, para. 117.

- third, as recalled in chapter 5 above²⁴⁹, appropriate points must be identified “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 figure formed by the line connecting all these points reflects the general direction of the coastlines. The points thus selected on each coast will have an effect on the provisional equidistance line that takes due account of the geography”²⁵⁰; and
- fourth, “particular attention [must be] paid to those protuberant coastal points situated nearest to the area to the [*sic* – be] delimited.”²⁵¹

6.53 The following points, which refer “to the physical geography of the relevant coasts”, correspond to the guidelines laid down by the ICJ and constitute appropriate base points for the construction of the provisional equidistance line²⁵².

6.54 *On the coast of India*, the appropriate base points are:

- (i) the most southern point located on the low water line of New Moore Island (I-2 – co-ordinates 21° 35’ 30.0” N, 89° 09’ 40.6” E) shown on sketch-map No. 6.8 at page 149²⁵³; and
- (ii) the south-eastern point of the low tide elevation located approximately 11 nautical miles south of Dalhousie Point (I-3 – co-ordinates 21° 22’ 47.6” N, 88° 43’ 43.7” E) shown on sketch-map No. 6.8²⁵⁴.

The first point (I-2) is relevant both for the drawing of the territorial sea boundary and for the limit between the exclusive economic zone and continental shelf of the Parties²⁵⁵; base point I-3 only influences the drawing of the latter.

²⁴⁹ See e.g., para. 5.49 above.

²⁵⁰ *Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 105, para. 127.

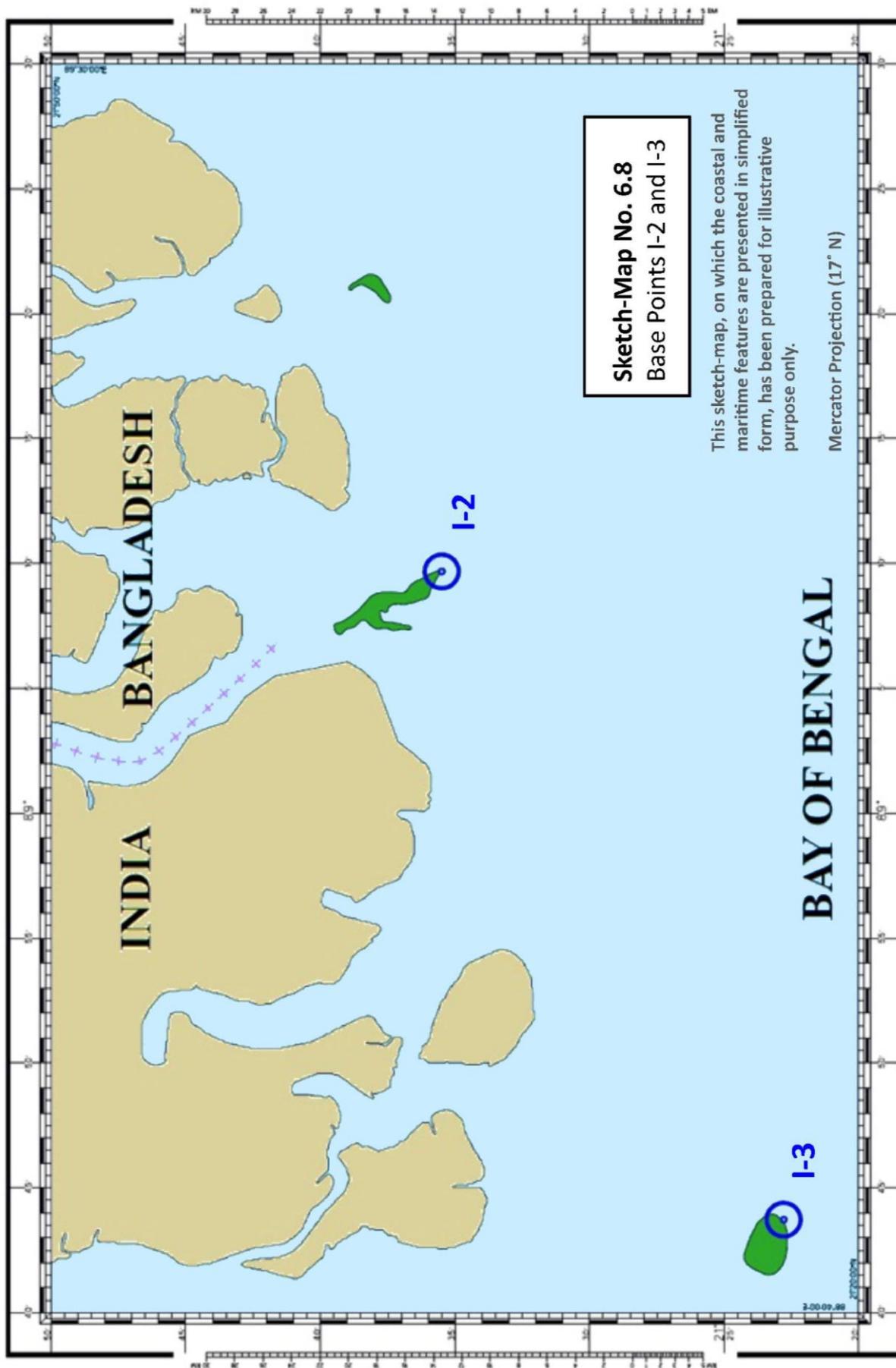
²⁵¹ *Ibid.*, p. 101, para. 117.

²⁵² See para. 5.49 above.

²⁵³ See also sketch-map No. 5.3 at page 107.

²⁵⁴ Devi point (I-4 – coordinates 19° 57’ 33.1” N, 86° 24’ 20.0” E), shown on sketch-map No. 7.2 at page 225, only enters into play for the delimitation of the continental shelf beyond 200 nautical miles (see sketch-map No. 7.3 at page 229 and 7.4 at page 237).

²⁵⁵ See para. 5.55 above.



6.55 *On the coast of Bangladesh*, the appropriate base points are:

- (i) the southernmost point of the low tide elevation located approximately 4 nautical miles south of Putney Island (B-3 – co-ordinates 21° 37' 32.7" N, 89° 20' 25.5" E) shown on sketch-map No. 6.9 at page 153;
- (ii) the southernmost point of the low tide elevation located approximately 11.5 nautical miles south-east of Andar Char Island (B-4 – co-ordinates 21° 38' 00.5" N, 90° 33' 32.0" E) shown on sketch-map No. 6.10 at page 155; and
- (iii) Shahpuri Point, some ten kilometres north from the mouth of the Naaf River (B-5 – co-ordinates 20° 43' 38.6" N, 92° 19' 30.2" E) shown on sketch-map No. 6.11 at page 157.

Base point B-3 controls both the lines separating the territorial sea of both Parties and their respective exclusive economic zones and continental shelf²⁵⁶; points B-4 and B-5 are specific to the drawing of the boundary between the exclusive economic zones and the continental shelf.

6.56 Consequently, the provisional equidistance line between the continental shelf and exclusive economic zones of the Parties is constructed as follows and is reproduced on sketch-map No. 6.12 appearing on page 159 of this Counter-Memorial.

- the delimitation line described at paragraph 5.6158 above continues along the geodetic azimuth of 168.6° until it reaches point T4, with co-ordinates 20° 30' 17.9" N, 89° 29' 20.9" E, which is equidistant from base points I-2, I-3 and B-3;
- from point T4, the line continues in a south direction and follows a geodetic azimuth of 157.0° until it meets point T5, with co-ordinates 19° 26' 40.6" N, 89° 57' 54.9" E, which is equidistant from base points I-3, B-3 and B-4;
- from point T5, the line takes a broadly south direction and follows a geodetic azimuth of 171.7° until it reaches point T6, with co-ordinates 18° 46' 43.5" N, 90° 04' 02.5" E, which is equidistant from base points I-3, B-4 and B-5;

²⁵⁶ *Ibid* .

- from point T6, the equidistance line follows a geodetic azimuth of 190.7° until it reaches the limit of 200 nautical miles at point Y, with co-ordinates 18° 19' 06.7" N, 89° 58' 32.1" E.

6.57 As is apparent on sketch-map No. 6.13 appearing on page 161, this line does not coincide with the "India's Claim Line" as alleged by Bangladesh²⁵⁷.

B. Stage 2 – (Ir)relevant Circumstances

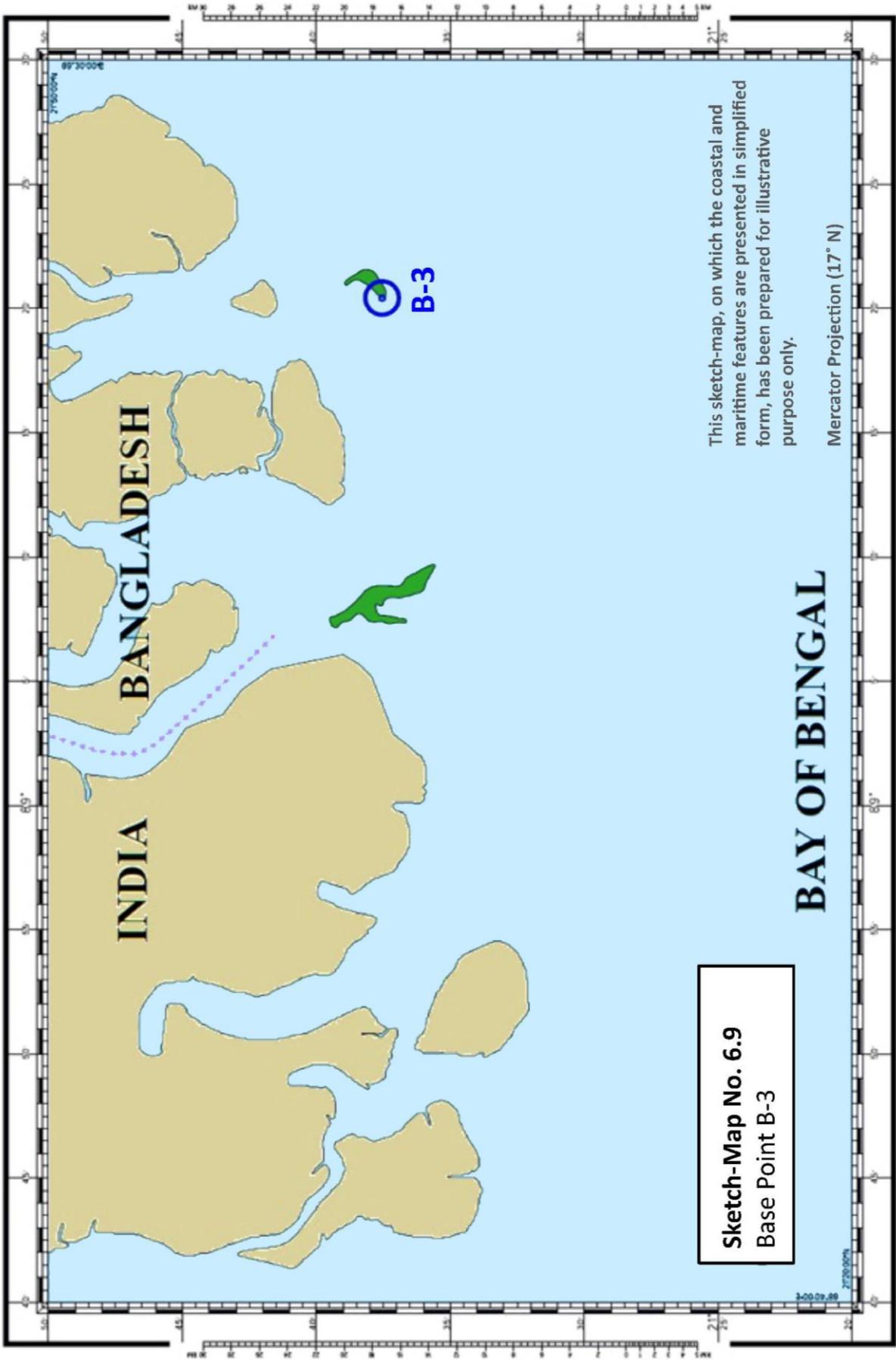
6.58 Once the provisional equidistance line is drawn, the second stage of the standard method of delimitation consists in considering "whether there are factors calling for the adjustment or shifting of the provisional equidistance line in order to achieve an equitable result"²⁵⁸.

6.59 None of the circumstances invoked by Bangladesh can be seen as "relevant" for the purpose of justifying shifting or adjusting the provisional equidistance line as drawn during the first phase, whether:

- its alleged cut-off effect;
- the necessary access to natural resources, including those of the continental shelf beyond 200 nautical miles; or
- the geographic characteristics of the Bay of Bengal, including the alleged concavity of Bangladesh's coast.

²⁵⁷ MB, Vol. I, Figure 6.2.

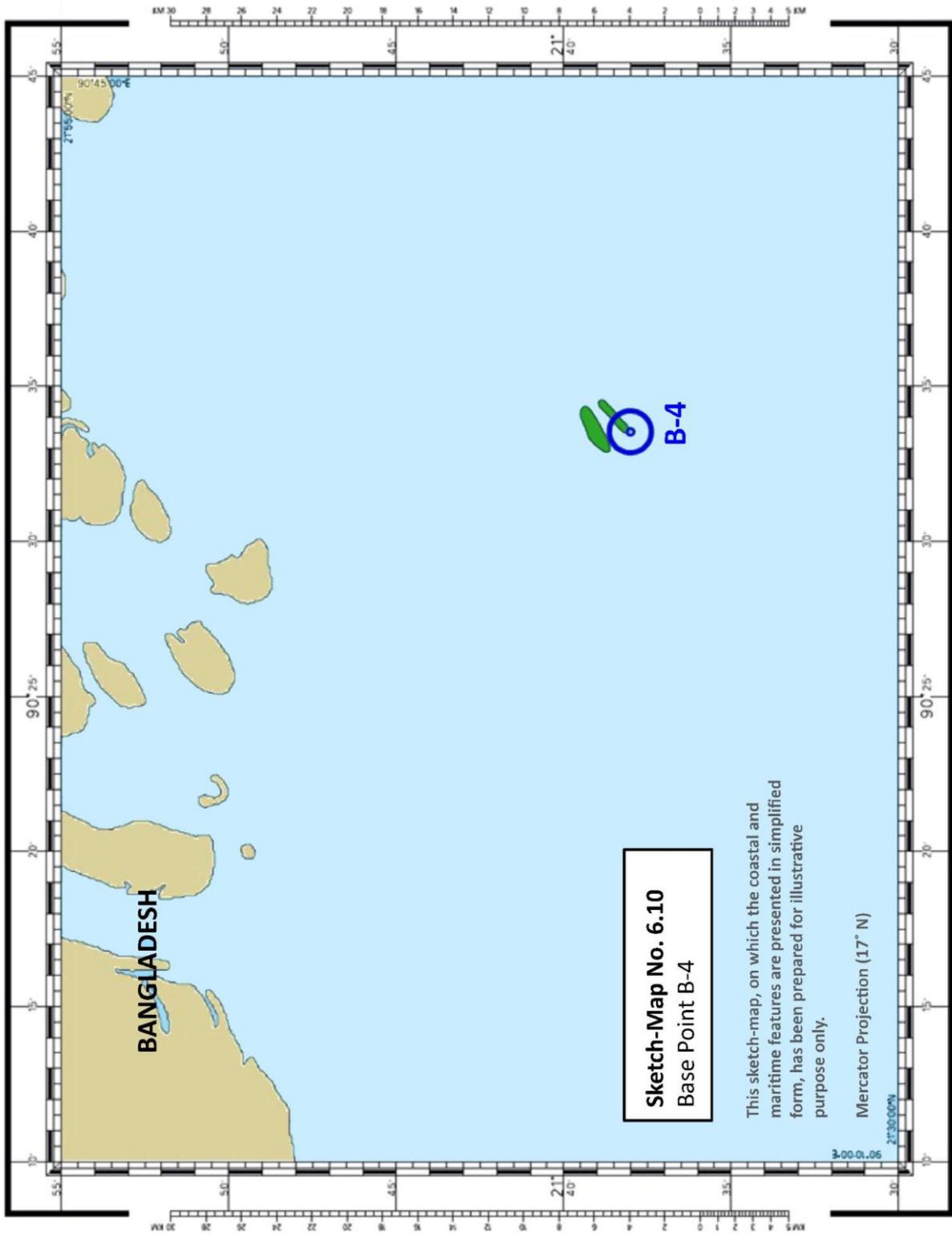
²⁵⁸ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 101, para. 120; see also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 233. See paras. 6.13-6.15 above.

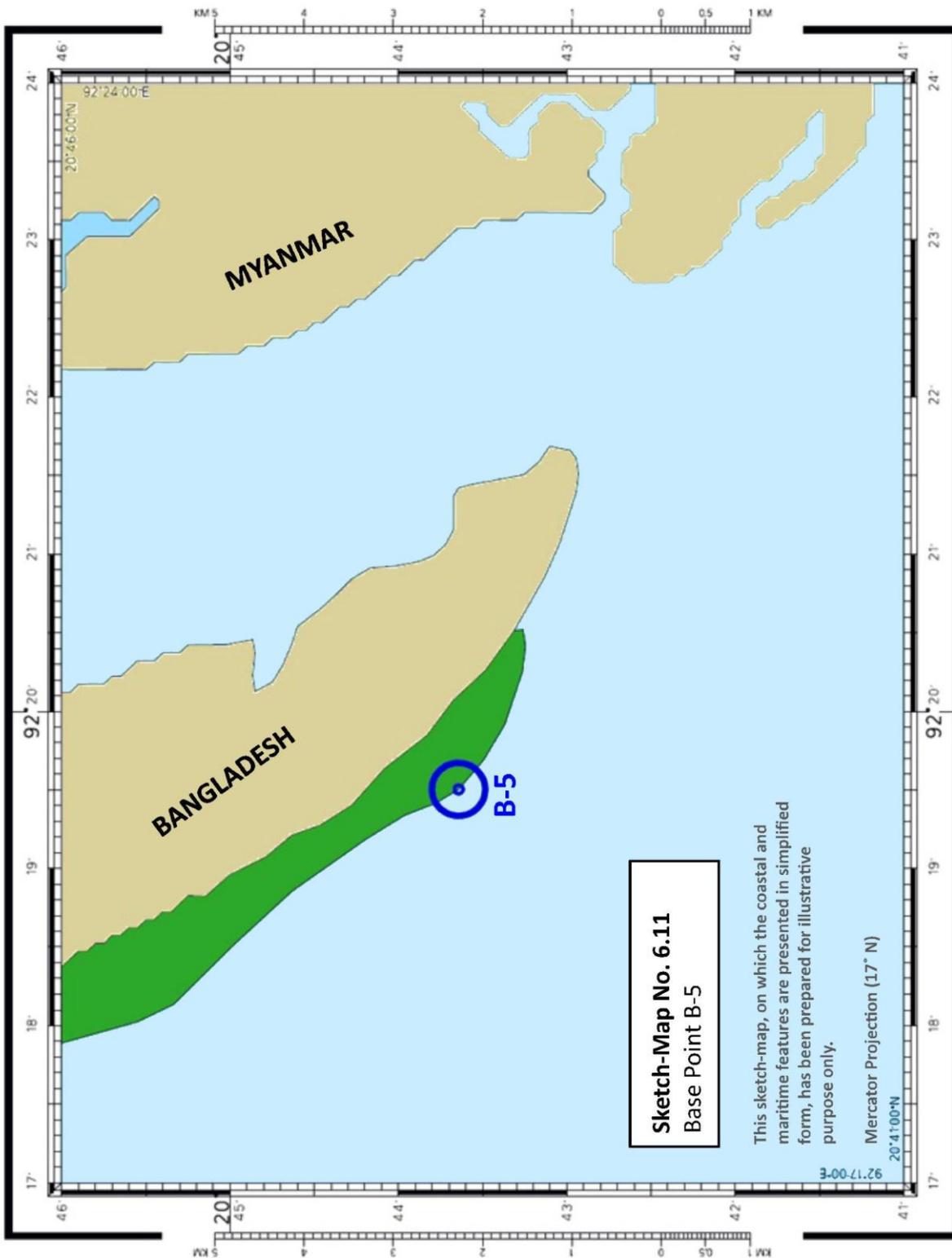


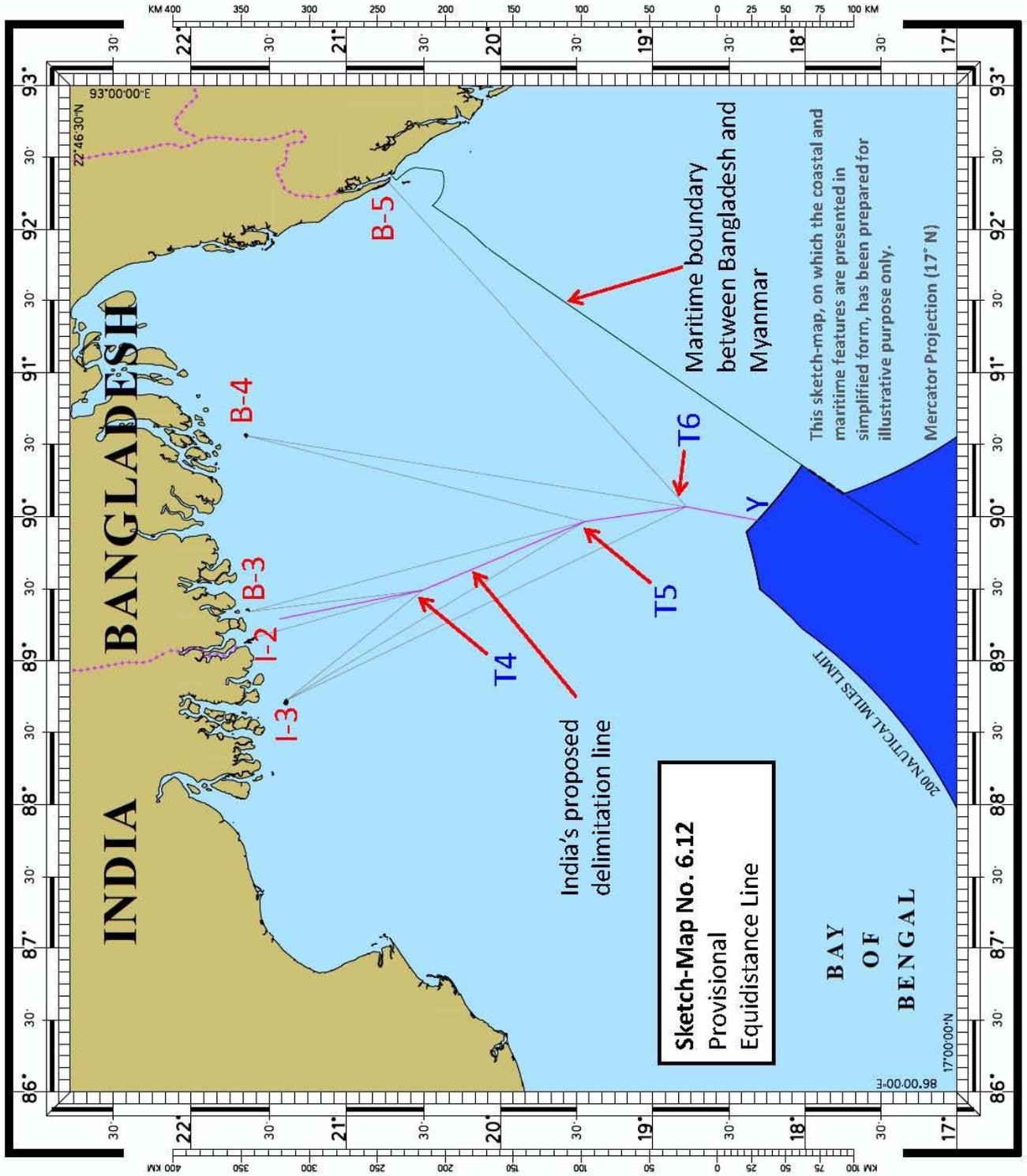
This sketch-map, on which the coastal and maritime features are presented in simplified form, has been prepared for illustrative purpose only.

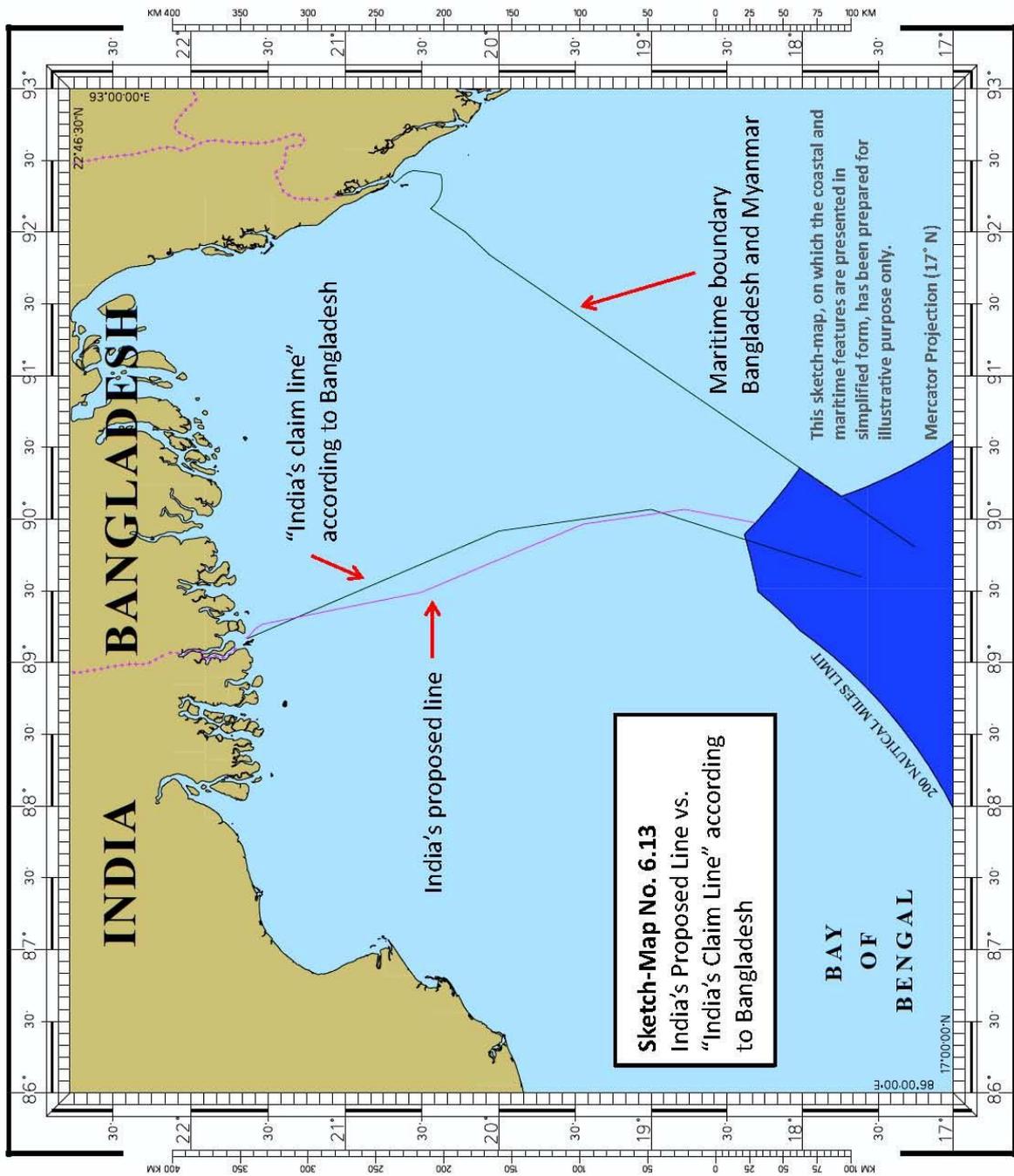
Mercator Projection (17° N)

Sketch-Map No. 6.9
Base Point B-3









6.60 In this respect it must be stressed that the circumstances of the present case are very different from the situation prevailing in *Bangladesh/Myanmar*. In particular:

- *both* Parties (and not Bangladesh alone) are situated at the top of the Bay of Bengal and have concave coasts;
- the coasts of *both* Parties (and not Bangladesh alone) have a “concavity within a concavity”; and
- on each side of the land boundary terminus, the relevant coasts are not concave but, on the contrary, slightly convex; and,
- in any case, Bangladesh’s access to the continental shelf beyond 200 nautical miles from its coasts is assured, following the ITLOS judgment of 14 March 2012.

6.61 Absent any relevant circumstance within the well-established meaning of that notion in the contemporary law of the sea, there is no reason to adjust or shift the provisional equidistance line resulting from the first phase of the delimitation.

1. The Alleged Cut-off Effect

6.62 In its recent judgment in *Bangladesh/Myanmar*, the ITLOS stated that

“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.”²⁵⁹

This is not so in the present case.

a. Concavity Does Not Constitute per se a Relevant Circumstance

6.63 The finding by the ITLOS that “concavity *per se* is not necessarily a relevant circumstance” is based on the international case-law.

²⁵⁹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 292.

6.64 The judgment of the International Court in *Cameroon v. Nigeria* is of special interest in this respect since the main relevant circumstance invoked by Cameroon in that case was precisely the concavity of its coast. It was in connection with this claim that the Court stated:

“delimiting with a concern to achieving an equitable result, as required by current international law, is not the same as delimiting in equity. The Court’s jurisprudence shows that, in disputes relating to maritime delimitation, equity is not a method of delimitation, but solely an aim that should be borne in mind in effecting the delimitation.

The geographical configuration of the maritime areas that the Court is called upon to delimit is a given. It is not an element open to modification by the Court but a fact on the basis of which the Court must effect the delimitation. As the Court had occasion to state in the *North Sea Continental Shelf* cases, ‘[e]quity does not necessarily imply equality’ and in a delimitation exercise ‘[t]here can never be any question of completely refashioning nature’ (*I.C.J. Reports 1969*, p. 49, para. 91).”²⁶⁰

6.65 Interestingly, not once does Bangladesh mention *Cameroon v. Nigeria*, which is certainly a most relevant judgment for the present case. Instead, it chooses to rely heavily on the *North Sea* cases and the *Guinea/Guinea-Bissau* case, which are more remote in time and less factually comparable. As India has shown in more detail in the Introduction to this Counter-Memorial²⁶¹, the *North Sea* judgment must now be viewed in the light of the subsequent development of the law of the sea, by way of customary law as reflected through the practice of the States and the international case law. It has been, if not superseded, at least substantially qualified and clarified by the subsequent case law. Moreover, the situation of Germany in that case was much more disadvantageous than that of Bangladesh in the present case. For its part, the rather eccentric *Guinea/Guinea-Bissau* case was, in the words of a member of the Tribunal in that case, a “particular case” (“*cas d’espèce*”)²⁶² and it has – not without good reasons – remained completely isolated.

²⁶⁰ *Ibid.*, pp. 443-445, paras. 294-295.

²⁶¹ See paras. 1.18-1.26 above.

²⁶² Dissenting Opinion of Mr Bedjaoui in the *Case Concerning the Delimitation of Maritime Boundary between Guinea-Bissau and Senegal*, Decision of 31 July 1989, *ILR*, Vol. 83, p. 97, para. 104 and footnote 57.

6.66 Bangladesh also invokes the *Saint-Pierre et Miquelon* case²⁶³. In that case, the French islands of Saint-Pierre and Miquelon were indeed surrounded by Canada and lay within the concavity formed by the Canadian coasts²⁶⁴. However, it was France and not Canada that claimed the application of the equidistance method²⁶⁵. And on the other hand, it is Canada that complained of the risk of a cut-off effect. The Court of Arbitration stated that the projection of Saint-Pierre-and-Miquelon “must not be allowed to encroach upon or cut off a parallel frontal projection of the adjacent segments of the Newfoundland (Canada) southern coast”²⁶⁶. Be this as it may, given that Bangladesh is not cut-off, the award, whatever its precedential value, is simply not relevant.

6.67 As the ICJ concluded in the *Cameroon v. Nigeria* case, so conspicuously ignored by Bangladesh:

“Cameroon contends that the concavity of the Gulf of Guinea in general, and of Cameroon’s coastline in particular, creates a virtual enclavement of Cameroon, which constitutes a special circumstance to be taken into account in the delimitation process. Nigeria argues that it is not for the Court to compensate Cameroon for any disadvantages suffered by it as a direct consequence of the geography of the area. It stresses that it is not the purpose of international law to refashion geography.

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. Nevertheless the Court stresses that this can only be the case when such concavity lies within the area to be delimited. Thus, in the *Guinea-Guinea-Bissau* case, the Arbitral Tribunal did not address the disadvantage resulting from the concavity of the coast from a general viewpoint, but solely in connection with the precise course of the delimitation line between Guinea and Guinea-Bissau (*ILM*, Vol. 25 (1986), p. 295, para. 104). In the present case the Court has already determined that the coastlines relevant to delimitation between Cameroon and Nigeria do not include all of the coastlines of the two States within the Gulf of

²⁶³ MB, para. 6.53.

²⁶⁴ *Case Concerning Delimitation of Maritime Areas between Canada and France (St. Pierre & Miquelon)*, Decision of 10 June 1992, *ILM*, Vol. 31, 1992, p. 1161, para. 26.

²⁶⁵ *Ibid.*, p. 1166, para. 56.

²⁶⁶ *Ibid.*, p. 1170, para. 70.

Guinea. The Court notes that the sectors of coastline relevant to the present delimitation exhibit no particular concavity. Thus the concavity of Cameroon's coastline is apparent primarily in the sector where it faces Bioko.

Consequently the Court does not consider that the configuration of the coastlines relevant to the delimitation represents a circumstance that would justify shifting the equidistance line as Cameroon requests.²⁶⁷

6.68 This conclusion is all the more telling in that, besides the concavity of the Gulf of Guinea, the presence of Bioko Island in front of Cameroon's coasts and the change in direction of Nigeria's coast from Akasso, made the situation of Cameroon much less favourable than that of Bangladesh in the present case²⁶⁸.

6.69 Similarly, the State practice invoked by Bangladesh does not assist it. It cites in particular the Agreement between Gambia and the Republic of Senegal of 4 June 1975²⁶⁹, the Agreement on Maritime Delimitation between The Government of Dominica and the Government of the French Republic of 7 September 1987²⁷⁰, the Maritime Delimitation Agreement between the Government of His Most Serene Highness the Prince of Monaco and the Government of the French Republic of 16 February 1984²⁷¹ and the Agreement between Denmark and the Federal Republic of Germany concerning the Delimitation of the Continental Shelf between the Two Countries in the North Sea of 28 January 1971²⁷². These agreements call for four main remarks:

- *first*, in each of these cases, the allegedly disadvantaged Party was given access to no further than the 200-nautical-mile limit by means of a narrow corridor; this is very different from the wide access to a broad continental shelf beyond 200 nautical miles claimed by Bangladesh in the present case;

²⁶⁷ *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, I.C.J. Reports 2002, pp. 445-446, paras. 296-297.

²⁶⁸ *Ibid.*, p. 433, para. 272.

²⁶⁹ See J.I. Charney and L.M. Alexander (eds.), *International Maritime Boundaries*, Vol. I, 1996, p. 849, MB, Vol. III, Annex B46.

²⁷⁰ *Ibid.*, p. 705.

²⁷¹ J.I. Charney and L.M. Alexander (eds.), *International Maritime Boundaries*, Vol. II, 1996, p. 1581, MB, Vol. III, Annex B47.

²⁷² *Ibid.*, p. 1801.

- *second*, in each of these agreements, with the exception of the Agreement between Denmark and the Federal Republic of Germany, the disadvantaged State was surrounded by a single State – (Senegal or France); and
- *third*, in most of these treaties, there would have been a cut off effect; yet as a result of the ITLOS judgment in the case between Bangladesh and Myanmar, this cannot occur in the present case;
- *fourth*, and above all, maritime boundary agreements are based on *political* considerations. As Bangladesh rightly notes the agreed lines “represent . . . a significant sacrifice” for the disadvantaged State²⁷³. In these agreements, “equity predominated as the basis for the drawing of the[se] line[s]”²⁷⁴. In the present case, the Tribunal is required to apply international law, not to decide *ex aequo et bono*, as Bangladesh accepts²⁷⁵.

6.70 Nor does State practice in the region support Bangladesh’s claim. Two agreements are particularly relevant in this regard. As illustrated in the sketch-maps appearing on pages 169 and 171,

- India, Myanmar and Thailand resorted to equidistance in the Gulf of Martaban marked by a pronounced concavity (see sketch-map No. 6.14)²⁷⁶; and
- India and Myanmar applied the equidistance method in a region (the southern part of the Rakhine coast) where Myanmar coast is concave (see sketch-map No. 6.15)²⁷⁷.

6.71 In any event, as the ICJ made clear, the fact that “a coast is markedly irregular or markedly concave or convex” could be taken into account only *when* it leads to a

²⁷³ MB, para. 6.61.

²⁷⁴ MB, para. 6.56 citing J.I. Charney and L.M. Alexander (eds.), *International Maritime Boundaries*, Vol. I, 1996, pp. 711-712.

²⁷⁵ MB, para. 6.17.

²⁷⁶ Agreement between the Government of the Union of Myanmar, the Government of the Republic of India and the Government of the Kingdom of Thailand on the Determination of the Trijunction Point between the Three Countries in the Andaman Sea, 27 October 1993, *UNTS*, Vol. 1886, I-32099, p. 144.

²⁷⁷ *Agreement between the Socialist Republic of the Union of Burma and the Republic of India on the Delimitation of the Maritime Boundary in the Andaman Sea, in the Coco Channel and in the Bay of Bengal*, 23 December 1986, *UNTS*, Vol. 1484, I-25390, p. 173

“disproportionate result”²⁷⁸. As will be shown in Sub-Section C below²⁷⁹, the delimitation line proposed by India easily meets the non-disproportionality test. It is the “equitable result” articles 74 and 83 require.

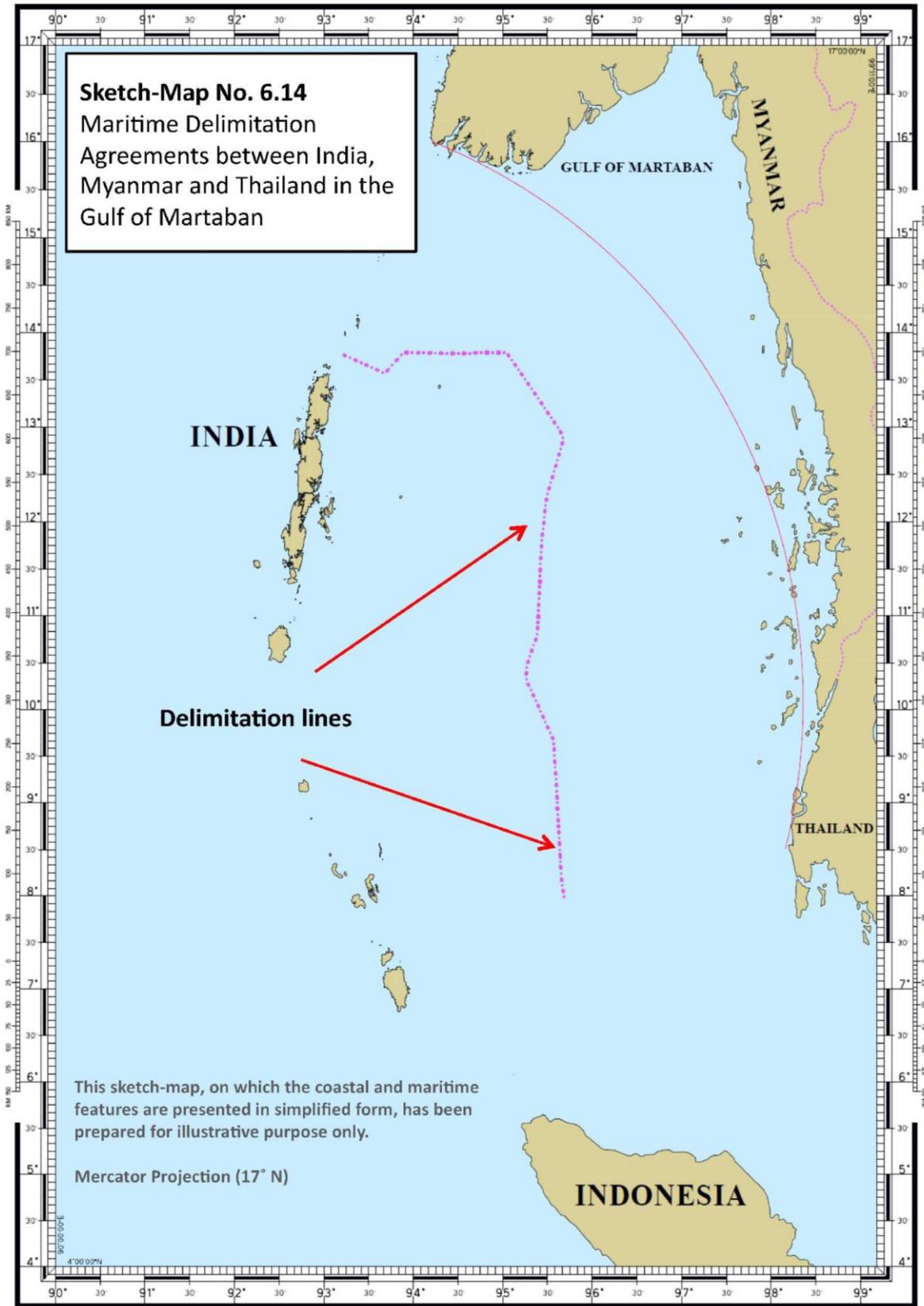
b. In the Present Case, the Alleged Concavity of the Bangladesh Coasts Does Not Constitute a Relevant Circumstance

6.72 Bangladesh would have the Court think that India’s alleged line produces a cut-off effect and deprives it of an alleged right of access to “its” continental shelf beyond 200 nautical miles and that the concavity of its coasts constitutes a relevant circumstance calling for an adjustment of the provisional line. This is wrong on several counts:

- while the Bangladesh coast is concave, the Indian coast is concave as well (*i*);
- the alleged “need” for access to an entitlement in the continental shelf beyond 200 nautical miles is by no means a relevant circumstance within the meaning of the law of maritime delimitation, effectively inverting the foundational principle that the “land dominates the sea.”(*ii*);
- Bangladesh *has* been awarded, on other grounds, an access to a share of the continental shelf situated beyond 200 nautical miles from its coasts by the ITLOS (*iii*); and,
- in any case, there is no abstract entitlement to equal access to a continental shelf beyond the 200-nautical-mile limit (*iv*).

²⁷⁸ *Continental Shelf (Libyan Arab Jamahiriya/Malta), Judgment, I.C.J. Reports 1985*, p. 44, para. 56.

²⁷⁹ See paras.6.108-6.113.



(i) *Absence of Any Relevant Concavity*

6.73 Bangladesh further explains that the cut-off effect it complains of

“is the result of the concave configuration of the Bangladesh coast. As noted in Chapter 2, Bangladesh sits on the Bay of Bengal’s north coast in a broad and deep concavity with India to the west and Myanmar to the east. Inside this general concavity, there is also a further concavity formed by the mouth of the Meghna River in the middle of the Bangladesh coast. These mutually reinforcing concavities have the effect of driving the two equidistance lines together a short distance in front of the Bangladesh coast.”²⁸⁰

6.74 The ITLOS showed sympathy for this argument *vis-à-vis* Myanmar in the *Bangladesh/Myanmar* case:

“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.”²⁸¹

6.75 However, besides the fact that an international court or tribunal cannot be deemed to have refashioned nature, the situation in the present case is different from that prevailing in that case:

- 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. This is in fact acknowledged by Bangladesh since the “angle-bisector” it endeavours to draw is a perpendicular²⁸² – which supposes that it intersects a straight line;
- in Bangladesh’s two preferred cases (*North Sea* and *Guinea/Guinea-Bissau*), the convexity of the coasts of the surrounding States increased the effect of the

²⁸⁰ MB, para. 6.38.

²⁸¹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 293.

²⁸² See e.g., MB, Figures 6.17 and 6.18, reproduced above, pp. 125 and 127.

concavity²⁸³; in the present case, India's coast too is concave, not convex²⁸⁴. And the Bay of Balasore too can be described as a "concavity within the concavity"²⁸⁵ as shown on sketch-map No. 6.16 on page 175.

6.76 In reality, Bangladesh is asking the Tribunal to completely refashion nature by correcting the effects of the concavity it complains of. This is manifestly 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* – as Bangladesh itself acknowledges²⁸⁶. In reality Bangladesh's argument is circular: it uses concavity to ask the Tribunal to ignore completely that same concavity.

(ii) *Bangladesh's Alleged "Need" for Access to an Entitlement in the Continental Shelf beyond 200 Nautical Miles*

6.77 Bangladesh alleges that "it would not be an equitable solution to prevent Bangladesh from exercising sovereign rights in the continental shelf beyond 200 M"²⁸⁷. To this end, it affirms that its "need for access to its entitlement in the outer continental shelf constitutes an independent 'relevant circumstance'. . ." ²⁸⁸ But "needs" are not relevant circumstances. Indeed, it is rather difficult to understand how a "need" can be a relevant circumstance in the legal meaning of the term which confirms that, in reality, Bangladesh invites the Tribunal to decide not on the basis of the law but *ex aequo et bono*. That the Tribunal may not do; but it can be noted that, even if the Tribunal were to give decision *ex aequo et bono* – *quod non*, India, with its vastly longer coastline and land territory dominating the Bay of Bengal, would be entitled to far more than it claims under the strict application of the law.

²⁸³ *North Sea Continental Shelf, Judgment, I.C.J. Reports 1969*, pp. 49-50, para. 91.

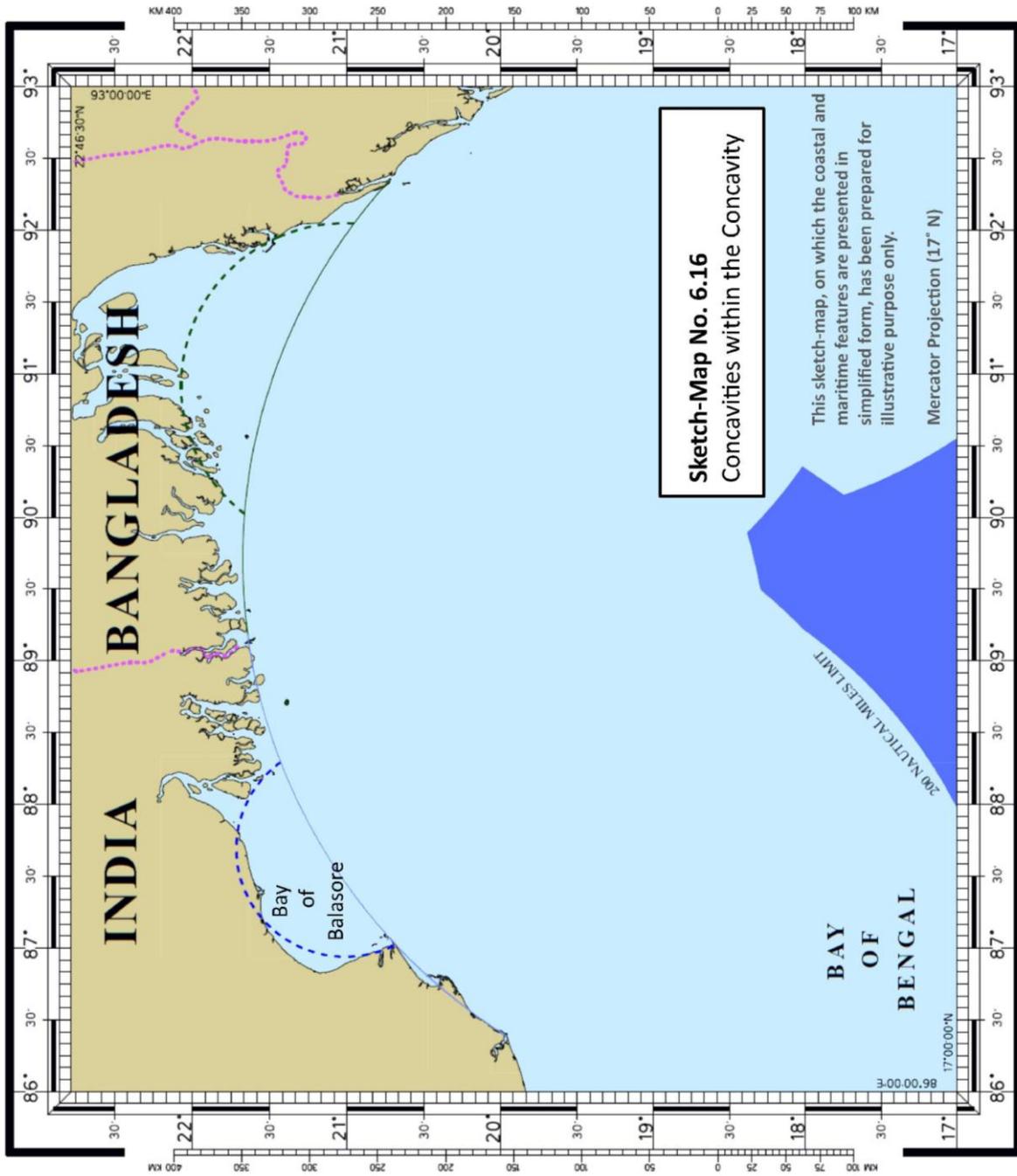
²⁸⁴ See para. 2.4 above.

²⁸⁵ See MB, paras. 2.10 and 6.48.

²⁸⁶ See MB, para. 6.17.

²⁸⁷ MB, paras. 6.71-6.74.

²⁸⁸ MB, para. 671.



6.78 Bangladesh’s argument based on an alleged “need for access to its entitlement” to some area of continental shelf beyond 200 nautical miles is circular and cannot form the legal basis of any maritime delimitation claim. As the Court of Arbitration said in the *Anglo-French Continental Shelf* case, any argument based on some “non-encroachment principle” is of no assistance: “[s]o far as delimitation is concerned . . . this [principle] states the problem rather than solves it. The problem of delimitation arises precisely because” there exist overlapping claims²⁸⁹.

6.79 If *both* Parties had overlapping entitlements, the allocation of sovereign rights in the continental shelf would depend on the delimitation, not vice-versa. Bangladesh rightly quotes the ICJ’s case law in that regard when it recalls in its Memorial²⁹⁰ that the Court stated in the *Jan Mayen* case that “the sharing-out of the area is . . . the consequence of the delimitation, not vice-versa”²⁹¹.

6.80 The case law shows clearly that Bangladesh’s claim is misconceived. In the *North Sea Continental Shelf* cases, the ICJ stated that “the appurtenance of a given area, considered as an entity, in no way governs the precise delimitation of its boundaries”²⁹². The Court confirmed its position in the *Tunisia/Libya Continental Shelf* case where it stressed that the entitlement of the coastal State is not relevant “in itself to determine the precise extent of the rights of one State *in relation to those of a neighbouring State*”²⁹³. In that regard, Bangladesh’s argument is absurd. If a “need for access to its entitlement” were a valid argument, it would equally apply to any maritime claim, that is to say to the exclusive economic zone in its entirety (up to 200 nautical miles) and to the continental shelf within and beyond 200 nautical miles as Bangladesh claims all of these areas. But then articles 74 (1) and 83 (1) of UNCLOS would be meaningless since both States would have in such a

²⁸⁹ *Delimitation of the Continental Shelf between France and the United-Kingdom*, Decision of 30 June 1977, UNRIAA, Vol. XVIII, p. 49, para. 79. See also N. Marques Antunes, *Towards the Conceptualisation of Maritime Delimitation. Legal and Technical Aspects of a Political Process*, Martinus Nijhoff Publishers, Leiden/Boston, 2003, pp. 128-129.

²⁹⁰ MB, para. 6.32.

²⁹¹ *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, I.C.J. Reports 1993, p. 66, para. 64.

²⁹² I.C.J. Reports 1969, p. 32, para. 46.

²⁹³ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, Judgment, I.C.J. Reports 1982, p. 46, para. 43 (emphasis added). See also *Delimitation of the Maritime Boundary between Guinea and Guinea-Bissau*, Award of 14 February 1985, UNRIAA, Vol. XIX, p. 184, para. 96.

situation overlapping *rights* – and not *claims*. Indeed, such a purported “need for access to its entitlement” “states the problem rather than it solves it”²⁹⁴.

(iii) *Bangladesh Has an access to a Share of the Continental Shelf Situated beyond 200 Nautical Miles from its Coasts*

6.81 Bangladesh asserts that:

“In Figure 6.2^[295], India’s claimed equidistance line is shown together with the equidistance line Myanmar currently claims in the parallel proceeding before ITLOS. As can be seen, the two lines form a *rapidly* narrowing wedge that truncates Bangladesh’s maritime entitlement *well before* it reaches the 200 M limit, let alone Bangladesh’s indisputable entitlement in the continental shelf beyond 200 M [discussed further below and in chapter 7]. Bangladesh is, in a word, cut off *and dramatically so*.”²⁹⁶

6.82 This dramatic presentation is misplaced, whether the Bangladesh’s argument is taken at face value or even if the ITLOS judgment of 14 March 2012 is taken into account.

6.83 In the first case (that is, independently of the ITLOS judgment):

- it is not true that the lines “form a *rapidly* narrowing wedge”: the wedge in question “narrows” in some respects only at its south extremity and it is to Bangladesh’s advantage; for the rest, Bangladesh’s area approximately looks like a square oriented south-east;
- it is not true that “Bangladesh’s maritime entitlement” is “truncated” “*well before* it reaches the 200 M limit”: the point of intersection is situated more than 194 nautical miles from Bangladesh’s baseline;
- consequently, it is not true that the claimed cut-off is “dramatic”, if it even qualifies as a “cut off” in the sense in which *North Sea Continental Shelf* coined the term: as noted

²⁹⁴ *Delimitation of the Continental Shelf between France and the United Kingdom*, Decision of 30 June 1977, UNRIAA, Vol. XVIII, p. 49, para. 79.

²⁹⁵ As to the inaccuracy of this line, see above, para. 6.57.

²⁹⁶ MB, para. 6.37 (emphasis added).

above²⁹⁷, any maritime delimitation between States with opposite or adjacent coasts has a “cut-off effect” and, in the present case, this effect is much less dramatic than it would have been in the *North Sea Continental Shelf* cases, where the meeting points of the equidistance lines between Germany, on the one hand, and Denmark and the Netherlands, on the other hand, would have stopped less than 100 nautical miles from the German coasts.

6.84 The result is even less “dramatic” if one takes into account the recent ITLOS judgment in *Bangladesh/Myanmar*. As shown on sketch-map No. 6.17 at page 181, which reproduces the maritime boundary between Bangladesh and Myanmar decided by the ITLOS, on which India’s claimed line has been superimposed, Bangladesh’s access to the continental shelf beyond 200 nautical miles is by no means impeded by the Indian proposed line which is clearly compatible with the ITLOS judgment, even if that decision is *res inter alios acta* for India.

6.85 Notwithstanding the fact that, as shown above²⁹⁸, on the basis of the “pre-2012 judgment”, the “short distance” in question is more than 194 nautical miles, that judgment (together with India’s claim line) ensures Bangladesh an area of continental shelf beyond 200 nautical miles so that Bangladesh cannot complain that “[t]o deny Bangladesh any access to this area – and leave it all to neighbouring States whose natural prolongation it is not – would constitute a manifestly inequitable solution.”²⁹⁹: whatever the solution reached in the present case, Bangladesh has an access to what it defines as “its” continental shelf beyond 200 nautical miles³⁰⁰.

(iv) *Bangladesh’s Claimed Right to “Have Broadly Comparable Access to the 200 M Limit”*

6.86 Bangladesh alleges that, since Bangladesh and India have “broadly comparable relevant coasts facing onto the high seas, there is no reason in principle why Bangladesh and

²⁹⁷ See para. 6.95 below.

²⁹⁸ See para. 6.83.

²⁹⁹ See MB, para. 6.73.

³⁰⁰ MB, paras. 1.10 and 7.70.

India should not have broadly comparable access to the 200 M limit in the area.”³⁰¹ However, while it is true that the ratio between both relevant coasts of the Parties is roughly equivalent, there exists no right to “have broadly comparable access to the 200 M limit”; and the international case-law has clearly rejected the very concept of “equal distribution”.

6.87 According to articles 74 and 83 of UNCLOS, the purpose of a maritime delimitation is to achieve an equitable solution, “not to apportion equal shares of the area, nor indeed proportional shares”³⁰². As the ICJ observed long ago, “in relation to the continental shelf, in 1969, judicial treatment of maritime delimitation does not involve the sharing-out of something held in undivided shares”³⁰³.

6.88 This now firmly established principle was recalled by the ICJ in its 2009 judgment in the *Romania v. Ukraine* case:

“The object of delimitation is to achieve a delimitation that is equitable, not an equal apportionment of maritime areas (*North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)*, Judgment, *I.C.J. Reports 1969*, p. 22, para. 18; *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, *I.C.J. Reports 1993*, p. 67, para. 64).”³⁰⁴

6.89 Because the land dominates the sea, each delimitation depends centrally on the configuration of the coast of the Parties³⁰⁵. The view expressed by one author according to which, in maritime delimitations, “all disputants are allotted some access to the areas

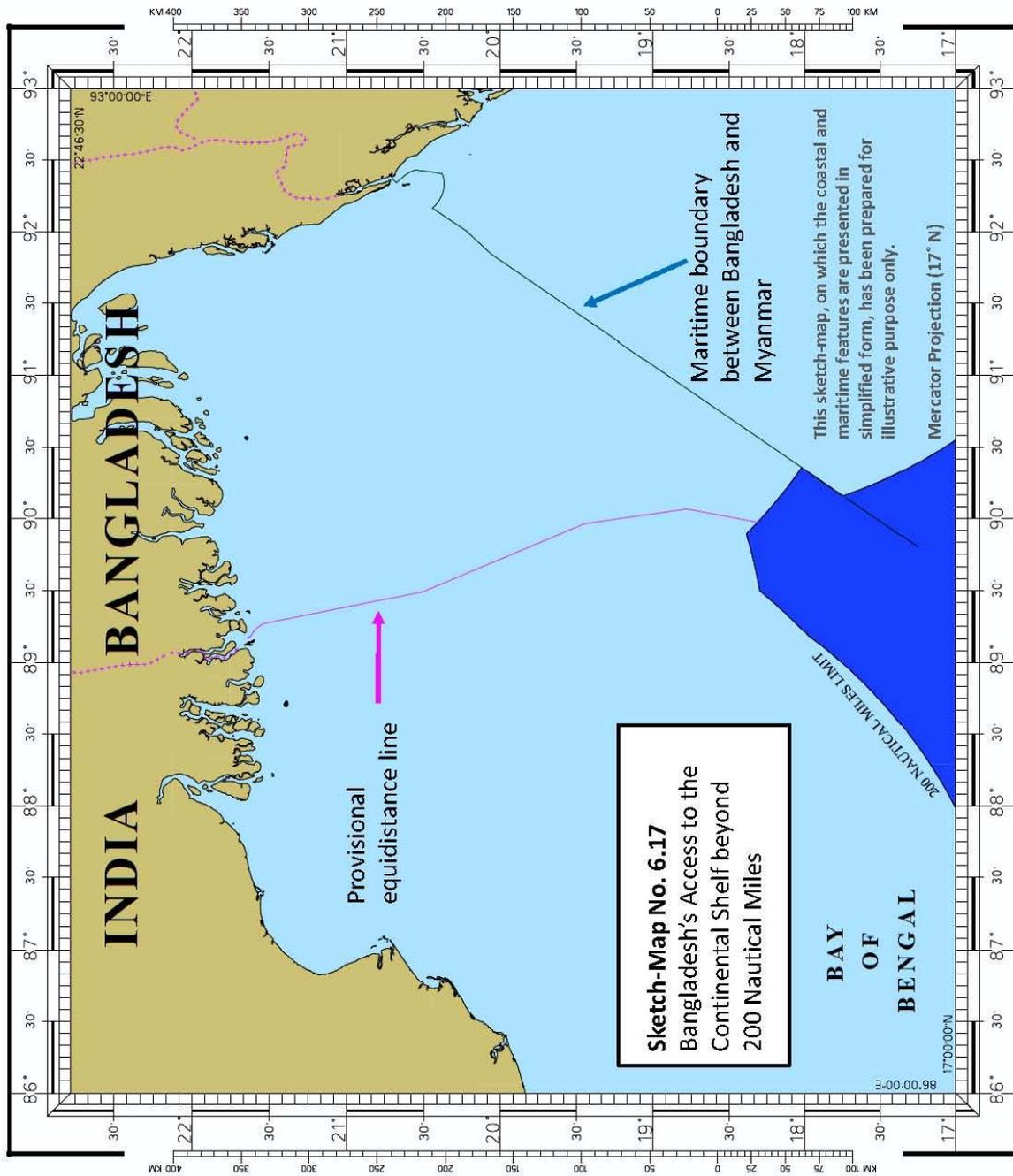
³⁰¹ MB, para. 6.49.

³⁰² *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 99, para. 110.

³⁰³ *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, *I.C.J. Reports 1993*, p. 67, para. 64 referring to *North Sea Continental Shelf*, Judgment, *I.C.J. Reports 1969*, p. 22, para. 18.

³⁰⁴ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 100, para. 111.

³⁰⁵ *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, *I.C.J. Reports 2002*, pp. 443-445, para. 295: “The geographical configuration of the maritime areas that the Court is called upon to delimit is a given. It is not an element open to modification by the Court.” (see para. 6.64 above).



approaching the maximum distance from the coast permitted for each one”³⁰⁶ and on which Bangladesh puts great store, finds no support in the case law of international courts and tribunals.

6.90 In the *Saint Pierre et Miquelon* case, Canada had claimed that the seaward extension of the projection of a coast must be proportionate to its length. The Court of Arbitration firmly rejected this claim:

“[it] cannot accept the contention that particular segments of coast may have an increased or diminished projection depending on their length. The extent of the seaward projections will depend, in every case, on the geographical circumstances.”³⁰⁷

6.91 In a similar vein, in the *Gulf of Maine* case, the ICJ held that “a maritime delimitation can certainly not be established by a direct division of the area in dispute proportional to the respective lengths of the coasts belonging to the parties in the relevant area.”³⁰⁸

6.92 The seaward extension of the maritime zones of the Parties to a delimitation case depends on the configuration of the coasts of these States, not on their length. In this respect, the Court of Arbitration in the *Saint Pierre et Miquelon* case correctly noted that “for example, a particular coast, however short, may have a seaward projection as far as 200 miles, if there are no competing coasts that could require a curtailed reach.”³⁰⁹ In the present case, Bangladesh’s coastal projection is limited by that of India. These are the geographical circumstances “on the basis of which the Court must effect the delimitation”³¹⁰.

6.93 As Judge Tanaka noted in the *North Sea* cases with regard to State practice:

³⁰⁶ See MB, para. 6.52 quoting Jonathan I. Charney, “Progress in International Maritime Boundary Delimitation Law,” *American Journal of International Law*, Vol. 88, No. 227, 1994, at pp. 247 et seq.

³⁰⁷ *Case Concerning Delimitation of Maritime Areas between Canada and France (St. Pierre & Miquelon)*, Decision of 10 June 1992, *ILM*, Vol. 31, 1992, p.1164, para. 45.

³⁰⁸ *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, Judgment, *I.C.J. Reports 1984*, p. 323, para. 185. See also *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 117, paras. 167 and *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, *UNRIAA*, Vol. XXVII, p. 244, para. 377 citing *Gulf of Maine*.

³⁰⁹ *Case Concerning Delimitation of Maritime Areas between Canada and France (St. Pierre & Miquelon)*, Decision of 10 June 1992, *ILM*, Vol. 31, 1992, p.1164, para. 45.

³¹⁰ *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, *I.C.J. Reports 2002*, pp. 443-445, para. 295.

“Examples are not lacking of a large State, because of being given too small a window on the open sea as a result of a special geographic configuration, getting a very small portion of the continental shelf quite disproportionate to its large land territory (for instance Syria, Congo, Guatemala, Romania).”³¹¹

6.94 In the region, several maritime delimitation agreements involve such a curtailment for one or both Parties; indeed, India itself has been so curtailed. This is the case in:

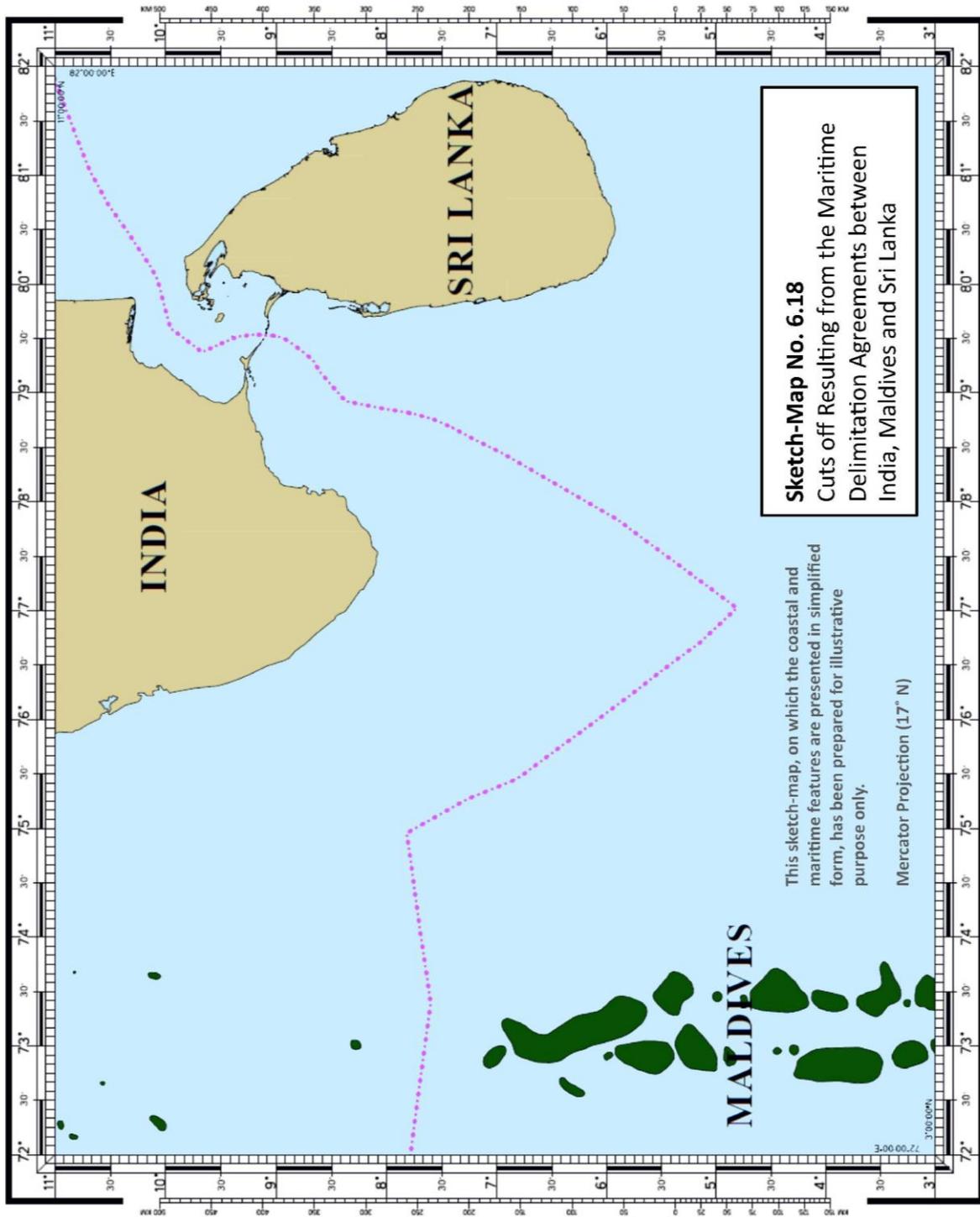
- the agreements between India, Maldives and Sri Lanka³¹², shown on sketch-map No. 6.18 at page 185;
- the agreements between India, Myanmar and Thailand³¹³, shown on sketch-map No. 6.19 at page 187; and
- the agreement between Malaysia and Thailand in the Gulf of Thailand³¹⁴.

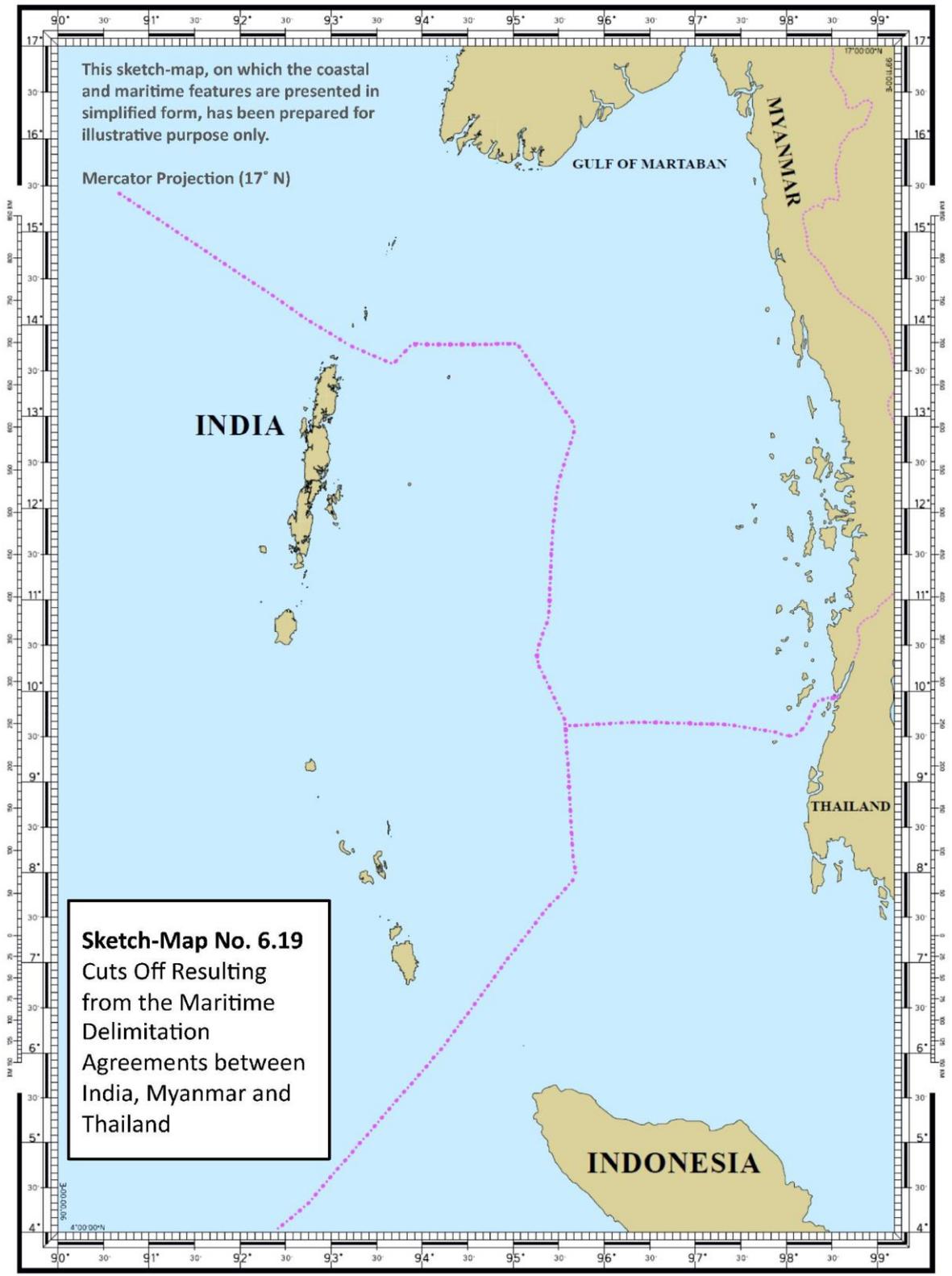
³¹¹ Judge Tanaka, Dissenting Opinion, *I.C.J. Reports 1969*, p. 189; see also Judge Sørensen, Dissenting Opinion, *ibid.*, pp. 255-256.

³¹² *Agreement between India and Maldives on Maritime Boundary in the Arabian Sea and Related Matters*, 28 December 1976 (reproduced in J.I. Charney and L.M. Alexander (eds.), *International Maritime Boundaries*, Vol. II, 1993, p. 1397); *Agreement between India and Sri Lanka on the Boundary in Historic Waters between the Two Countries and Related Matters*, 26-28 June 1974, *UNTS*, Vol. 1049, I-15802, p. 26 and *Agreement between Sri Lanka, India and Maldives Concerning the Determination of the Tri-Junction Point between the Three Countries in the Gulf of Manaar*, 23, 24 and 31 July 1976, *UNTS*, Vol. 1049, I-15805, p. 54.

³¹³ *Agreement between the Government of the Republic of India and the Government of the Kingdom of Thailand on the Delimitation of Seabed Boundary between the Two Countries in the Andaman Sea*, 22 June 1978, *UNTS*, Vol. 1122, I-17433, p. 11; *Agreement between the Government of the Socialist Republic of the Union of Burma and the Government of the Kingdom of Thailand on the Delimitation of the Maritime Boundary in the Andaman Sea*, 25 July 1980, *UNTS*, Vol. 1276, I-21069, p. 448; *Agreement between the Socialist Republic of the Union of Burma and the Republic of India on the Delimitation of the Maritime Boundary in the Andaman Sea, in the Coco Channel and in the Bay of Bengal*, 23 December 1986, *UNTS*, Vol. 1484, I-25390, p. 173 and *Agreement between the Government of the Republic of India and the Government of the Kingdom of Thailand on the Maritime Boundary between the Two Countries in the Andaman Sea from Point 7 to the Trijunction Point (Point T) between Thailand, India and Myanmar*, 27 October 1993 (reproduced in J.I. Charney and L.M. Alexander (eds.), *International Maritime Boundaries*, Vol. III, 1998, p. 2380).

³¹⁴ *Memorandum of Understanding between the Kingdom of Thailand and Malaysia on the Delimitation of the Continental Shelf Boundary between the Two Countries in the Gulf of Thailand*, 24 October 1979, *UNTS*, Vol. 1291, I-21271, p. 251.





6.95 As said in the *Saint Pierre et Miquelon* case, any maritime delimitation has a cut-off effect:

“Both Parties, however recognize that ‘some degree of cut off may be inherent in any delimitation’ . . . (C.M. para. 392 . . .); it has also been stated that any solution ‘*amputera . . . inéluctablement une partie de leurs droits. Tel est l’esprit de toute opération de délimitation.*’ (CMF para. 370)”³¹⁵.

The present case is not exempted from the general rule.

6.96 In any case, as shown in Subsection (iii) above, the situation in the Bay of Bengal is not one of “cut-off” as was the case in the *North Sea*. Bangladesh already has access to part of the continental shelf beyond 200 nautical miles. It is not cut-off by the interposition of the Indian shelf.

6.97 In this respect, figure 1.2 included in the Bangladesh’s Memorial (reproducing a sketch-map from the Memorial submitted by Germany in 1967) and reproduced as sketch-map No. 6.20 at page 191, is extremely telling. It shows two main things:

- first that the delimitation line between Myanmar and Bangladesh had an indisputable cut-off effect (and this is precisely the reason why, in *Bangladesh/Myanmar*, the ITLOS pushed the maritime boundary between the two States way south); but,
- second, that figure also shows, by contrast, that the equidistance line between India and Bangladesh by no means has such a cut-off effect.

6.98 Moreover, since what Bangladesh alleges is at stake in this case is access to the continental shelf *beyond* 200 nautical miles, it would be necessary to take into consideration the whole Indian coast facing this part of the Bay of Bengal, that is the whole eastern coast of the Indian peninsula, down to the point where the Indian claim overlaps with that of Sri Lanka. The length of the coast in question (from the boundary with Bangladesh to Palk Bay) is roughly 1,800 kilometres long – this length has to be compared with the length of the Indian coast, that is: 42,364 kilometres.

³¹⁵ *Case Concerning Delimitation of Maritime Areas between Canada and France (St. Pierre & Miquelon)*, Decision of 10 June 1992, *ILM*, Vol. 31, 1992, p. 1169, para. 67.

6.99 It is well established in the case-law of international courts and tribunals that the judicial determination of a maritime boundary does not allow for refashioning nature, a principle enunciated in the *North Sea Continental Shelf* cases, and never put in question afterwards:

“There can never be any question of completely refashioning nature, and 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. Equality is to be reckoned within the same plane, and it is not such natural inequalities as these that equity could remedy.”³¹⁶

6.100 According to Bangladesh, “[t]he *North Sea Cases* remain the touchstone of all subsequent jurisprudence”³¹⁷. While India has shown that many of the views expressed by the Court in its first essay into maritime boundary delimitation have been superseded by its subsequent jurisprudence, the Court has repeatedly confirmed its warning against using delimitation to refashion nature³¹⁸: the ICJ as well as international arbitral tribunals have constantly acted with the utmost care in this respect³¹⁹ and as noted by the Arbitral Tribunal in *Guyana/Suriname*:

“In short, international courts and tribunals dealing with maritime delimitations should be mindful of not remaking or wholly refashioning nature, but should in a sense respect nature.”³²⁰

6.101 In the present case, as in *Cameroon v. Nigeria*, this Tribunal is asked “to draw a delimitation line and not to provide equitable compensation for a natural inequality”³²¹.

³¹⁶ *North Sea Continental Shelf, Judgment, I.C.J. Reports 1969*, pp. 49-50, para. 91.

³¹⁷ MB, para. 6.67.

³¹⁸ As for the qualifications and complements brought in further judgments and awards as far as the *method* of delimitation is concerned, see paras. 1.18-1.26 above.

³¹⁹ See e.g.: *Continental Shelf (Tunisia/Libya), Judgment, I.C.J. Reports 1982*, pp. 63-64, para. 79; *Continental Shelf (Libyan Arab Jamahiriya/Malta), Judgment, I.C.J. Reports 1985*, pp. 39-40, para. 46; or *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009*, p. 110, para. 149; see also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 265.

³²⁰ *Guyana/Surinam*, Award of 17 September 2007, *ILM*, Vol. 47, 2008, p. 164, paras. 373-374.

³²¹ *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening), Judgment, I.C.J. Reports 2002*, p. 446, para. 299.

**FIGURE NO. 9 FROM THE MEMORIAL
SUBMITTED BY THE FEDERAL REPUBLIC OF GERMANY:
21 AUGUST 1967**

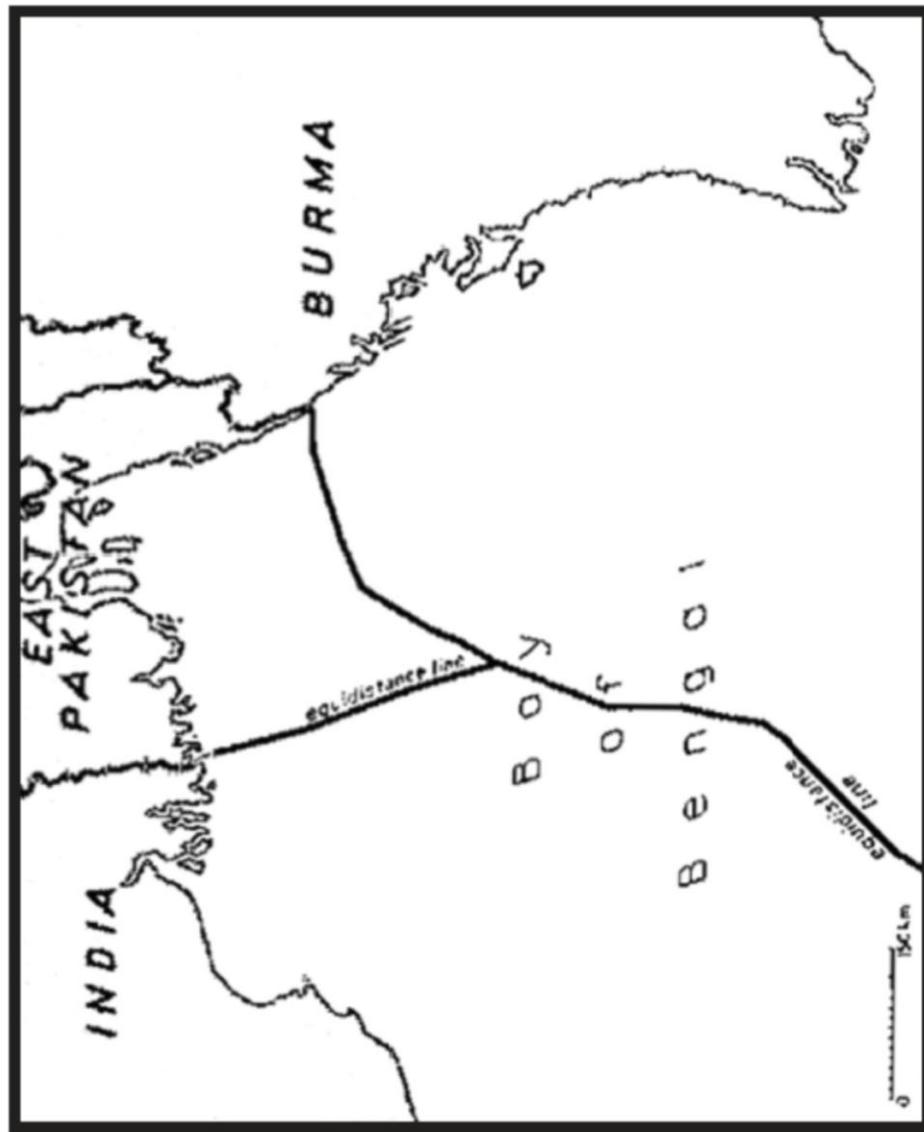


Figure 1.2

Sketch-Map No. 6.20
Figure 1.2 of Bangladesh
Memorial

2. *The Irrelevance of Economic Considerations*

6.102 In the absence of any valid argument, Bangladesh once again resorts to equity calling upon the Arbitral Tribunal to ensure the alleged subsistence needs of the people of Bangladesh. Bangladesh states in a dramatic tone that:

“The inequity of limiting Bangladesh to the narrow wedge of maritime space equidistance would give it is exacerbated by the fact that fish from the Bay of Bengal are a key component of the national diet. Fish are the main source of animal protein and other vital nutrients for poor, rural households, where malnutrition remains an ever-present threat. Given the density of the country’s population, large-scale animal husbandry is simply not a practicable alternative. Fishing is also a major source of employment. It provides full-time work for at least two million people, and another 10 million are involved in the fishing trade part-time. Many Bangladeshis, for example, fish part-time simply to meet their subsistence needs. To deny Bangladesh an equitable apportionment of the waters of the Bay of Bengal is to deny its people a fair share of a resource on which they depend heavily.”³²²

6.103 Economic considerations, if and when they are real, can only be taken into account in very exceptional situations:

“What the Chamber would regard as a legitimate scruple lies rather in concern lest the overall result, even though achieved through the application of equitable criteria and the use of appropriate methods for giving them concrete effect, should unexpectedly be revealed as radically inequitable, that is to say, as likely to entail catastrophic repercussions for the livelihood and economic well-being of the population of the countries concerned.”³²³

6.104 To be considered as relevant, States must present strong and well documented evidence:

“As to the first core contention of Barbados, the weight of evidence – and the Tribunal has considered the full range of evidence presented by Barbados – does not sustain its contention that its fisherfolk have traditionally fished for flyingfish off Tobago for centuries. Evidence

³²² MB, para. 6.63. See also para. 6.120.

³²³ *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, Judgment, I.C.J. Reports 1984, p. 342, para. 237. See also *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, UNRIAA, Vol. XXVII, p. 214, para. 241.

supporting that contention is, if understandably, nevertheless distinctly, fragmentary and inconclusive. The documentary record prior to the 1980s is thin. The Tribunal is aware of the risk of giving undue weight to written reports which may represent no more than a record of hearsay evidence and oral tradition. Nonetheless, those reports, especially reports of Barbadian officials, that were written more or less contemporaneously with the events that they describe must be given substantial weight, and more weight than affidavits written after this dispute arose and for litigious purposes. Those contemporaneous reports indicate that the practice of long-range Barbadian fishing for flyingfish, in waters which then were the high seas, essentially began with the introduction of ice boats in the period 1978-1980, that is, some six to eight years before Trinidad and Tobago in 1986 enacted its Archipelagic Waters Act. Indeed, that appears to be consistent with the direct evidence in the affidavits of the Barbadian fisherfolk, none of whom testifies that they themselves fished off Tobago prior to that time. Those short years are not sufficient to give rise to a tradition. Once the EEZ of Trinidad and Tobago was established, fishing in it by Barbados fisherfolk, whether authorized by agreement with Barbados or not, could not give rise either to a non-exclusive fishing right of Barbados fisherfolk or, *a fortiori*, to entitlement of Barbados to adjustment of the equidistance line.”³²⁴

6.105 Moreover, it must be noted that, in the present case, Bangladesh presents only one piece of “evidence” purporting to demonstrate the alleged dependence of the Bangladesh people on fisheries but even the article adduced does not support Bangladesh’s argument. This article shows that Bangladesh dramatically over estimated the dependence of its people on marine fish resources. According to the authors, “the country is very rich in inland water for fish production”³²⁵ and the capture fishing is mainly carried out in these inland waters³²⁶. In fact, inland waters fish resources are so important that, in the late 20th century, inland waters provided no less than 80% of the fish production³²⁷.

³²⁴ *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, UNRIAA, Vol. XXVII, pp. 221-222, para. 266. See also *ibid.*, pp. 222-223, paras. 267-270.

³²⁵ Md. Ferdous Alam and Kenneth J. Thompson, “Current Constraints and Future Possibilities for Bangladesh Fisheries”, *Food Policy*, Vol. 26, No. 3 (2001), p. 298 (MB, Vol. IV, Annex B64).

³²⁶ *Ibid.*, p. 299.

³²⁷ *Ibid.*, p. 300, Table 2.

6.106 It can be noted that, although the Parties in *Bangladesh/Myanmar* had invoked the necessity of acceding to marine resources in their respective pleadings³²⁸, the ITLOS did not even mention their argument on this point in its 14 March 2012 judgment.

6.107 In the present case, just as there was no special circumstance calling for an adjustment of the equidistance line in the territorial sea³²⁹, no relevant circumstance calls for the shifting or adjustment of the provisional equidistance line which must be drawn as a point of departure of the delimitation process of the continental shelf and exclusive economic zones between the Parties. Therefore, at the second stage of the establishment of the maritime boundary, the line remains the one described at paragraph 6.56 above (see sketch-map No. 6.12 at page 159).

C. Stage 3 – The Non-Disproportionality Test

6.108 The third stage of the maritime delimitation process has recently been described as follows by the ICJ:

“The Court now turns to check that the result thus far arrived at, so far as the envisaged delimitation line is concerned, does not lead to any significant disproportionality by reference to the respective coastal lengths and the apportionment of areas that ensue. This Court agrees with the observation that

‘it is disproportion rather than any general principle of proportionality which is the relevant criterion or factor . . . there can never be a question of completely refashioning nature . . . it is rather a question of remedying the disproportionality and inequitable effects produced by particular geographical configurations or features’ (*Anglo-French Continental Shelf Case*, RIAA, Vol. XVIII, p. 58, para. 101).

The continental shelf and exclusive economic zone allocations are not to be assigned in proportion to length of respective coastlines. Rather, the Court will check, *ex post facto*, on the equitableness of the delimitation line it has constructed (*Delimitation of the maritime*

³²⁸ See e.g.: Memorial of Bangladesh, paras. 6.63, 6.120 and Counter-Memorial of Myanmar, para. 5.143 and ITLOS/PV.11/9, p. 36, lines 13-33 and p. 37, lines 1-5 (Pr. Mathias Forteau) in the *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*.

³²⁹ See paras. 5.33-5.45 above.

*boundary between Guinea and Guinea-Bissau, RIAA, Vol. XIX, paras. 94-95).*³³⁰

6.109 It is a test of negative nature, as Bangladesh itself acknowledges³³¹ and, as noted by the Arbitral Tribunal in the case between *Barbados and Trinidad and Tobago*:

“The Tribunal also notes that in applying proportionality as a relevant circumstance, the decisions of the International Court of Justice cited above^[332] kept well away from a purely mathematical application of the relationship between coastal lengths and that *proportionality rather has been used as a final check upon the equity of a tentative delimitation to ensure that the result is not tainted by some form of gross disproportion.*”³³³

This was confirmed by the ICJ in *Romania v. Ukraine*:

“In the present case the Court has measured the coasts according to their general direction. It has not used baselines suggested by the Parties for this measurement. Coastlines alongside waters lying behind gulfs or deep inlets have not been included for this purpose. *These measurements are necessarily approximate given that the purpose of this final stage is to make sure there is no significant disproportionality.*”³³⁴

and by the ITLOS in *Bangladesh/Myanmar*:

“Having reached the third stage in the delimitation process as referred to in paragraph 240, the Tribunal will, for this purpose, first determine the relevant area, namely the area of overlapping entitlements of the Parties that is relevant to this delimitation. The Tribunal notes in this regard that mathematical precision is not

³³⁰ *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009, p. 129, paras. 210-211; see also p. 99, para. 110 and p. 103, para. 122; see also See also Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment, para. 240.*

³³¹ MB, paras. 6.32 and 6.124.

³³² At para. 237 of the award, the Tribunal mentioned the case of *Jan Mayen (I.C.J. Reports 1993, p. 38, at p. 68, para. 68, with reference to Libya/Malta, I.C.J. Reports 1985, p. 13, at p. 46, para. 59)* and the *North Sea Continental Shelf* cases (*Judgment, I.C.J. Reports 1969, p. 4, at p. 50, para. 91*).

³³³ *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them, Award of 11 April 2006, UNRIIAA, Vol. XXVII, p. 214, para. 238 (emphasis added).*

³³⁴ *Maritime Delimitation in the Black Sea (Romania v. Ukraine), Judgment, I.C.J. Reports 2009, pp. 129-130, para. 214 (emphasis added).*

required in the calculation of either the relevant coasts or the relevant area.”³³⁵

6.110 In the *Romania v. Ukraine* case, the ICJ decided:

“It suffices for this third stage for the Court to note that the ratio of the respective coastal lengths for Romania and Ukraine, measured as described above, is approximately 1:2.8 and the ratio of the relevant area between Romania and Ukraine is approximately 1:2.1. The Court is not of the view that this suggests that the line as constructed, and checked carefully for any relevant circumstances that might have warranted adjustment, requires any alteration.”³³⁶

6.111 The same holds true in the present case where the ratio of the relevant coasts of the Parties is 1 : 1.015 while the respective areas of the Parties resulting from the equidistance line is 1 : 0.942 – as shown on sketch-maps Nos. 6.21 and 6.22 at pages 201 and 203 respectively.

6.112 It must be recalled in this respect that international courts and tribunals have considered that only marked differences between the two ratios require the adjustment of the line. Thus, in the case of *Jan Mayen*, the ratio between the coast of the island of Jan Mayen and that of Greenland was 1 to 9.2 or 1 to 9.1 according to two different methods of calculation³³⁷; in the light of that disparity, the Court considered that “the median line should be adjusted or shifted in such a way as to effect a delimitation closer to the coast of Jan Mayen.”³³⁸ Similarly in the delimitation case between Barbados and Trinidad and Tobago, the Arbitral Tribunal decided that “[t]he disparity of the Parties’ coastal lengths resulting in the coastal frontages abutting upon the area of overlapping claims is sufficiently great to justify” a limited adjustment of the line³³⁹; in that case, the ratio between the length of the

³³⁵ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 477.

³³⁶ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 130, paras. 215-216.

³³⁷ *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, I.C.J. Reports 1993, p. 65, para. 61.

³³⁸ *Ibid.*, p. 68, para. 69.

³³⁹ *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, UNRIAA, Vol. XXVII, p. 239, para. 350.

respective coasts of the Parties was 8.2 : 1 in favour of Trinidad and Tobago³⁴⁰. These figures are out of all proportion with those – *quasi-null* – prevailing in the present case³⁴¹.

6.113 There is therefore no disproportionality at all requiring any adjustment of the equidistance line.

IV. The Delimitation Line

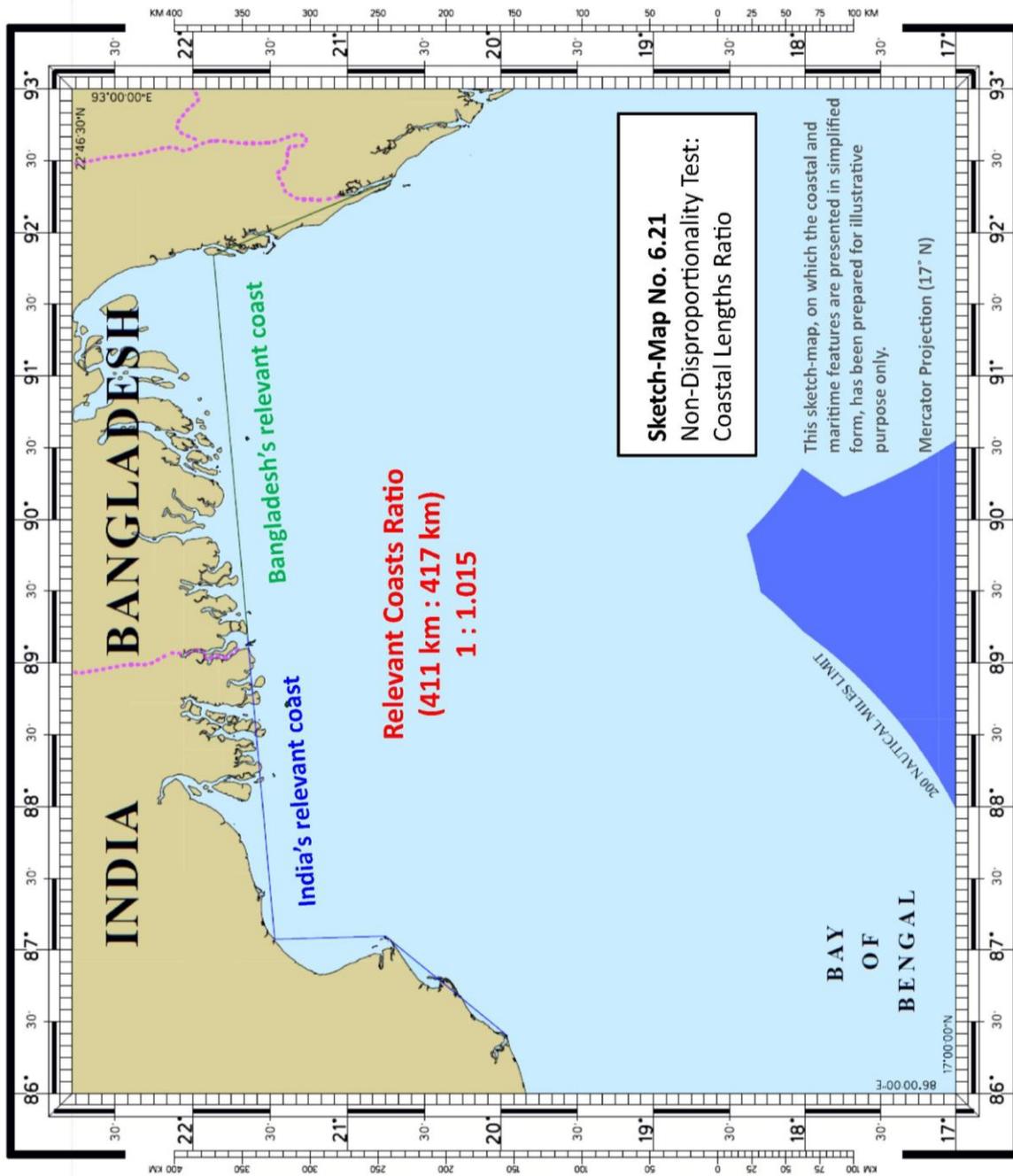
6.114 In view of the above, the maritime boundary between Bangladesh and India in the exclusive economic zone and the continental shelf within 200 nautical miles follows the following line:

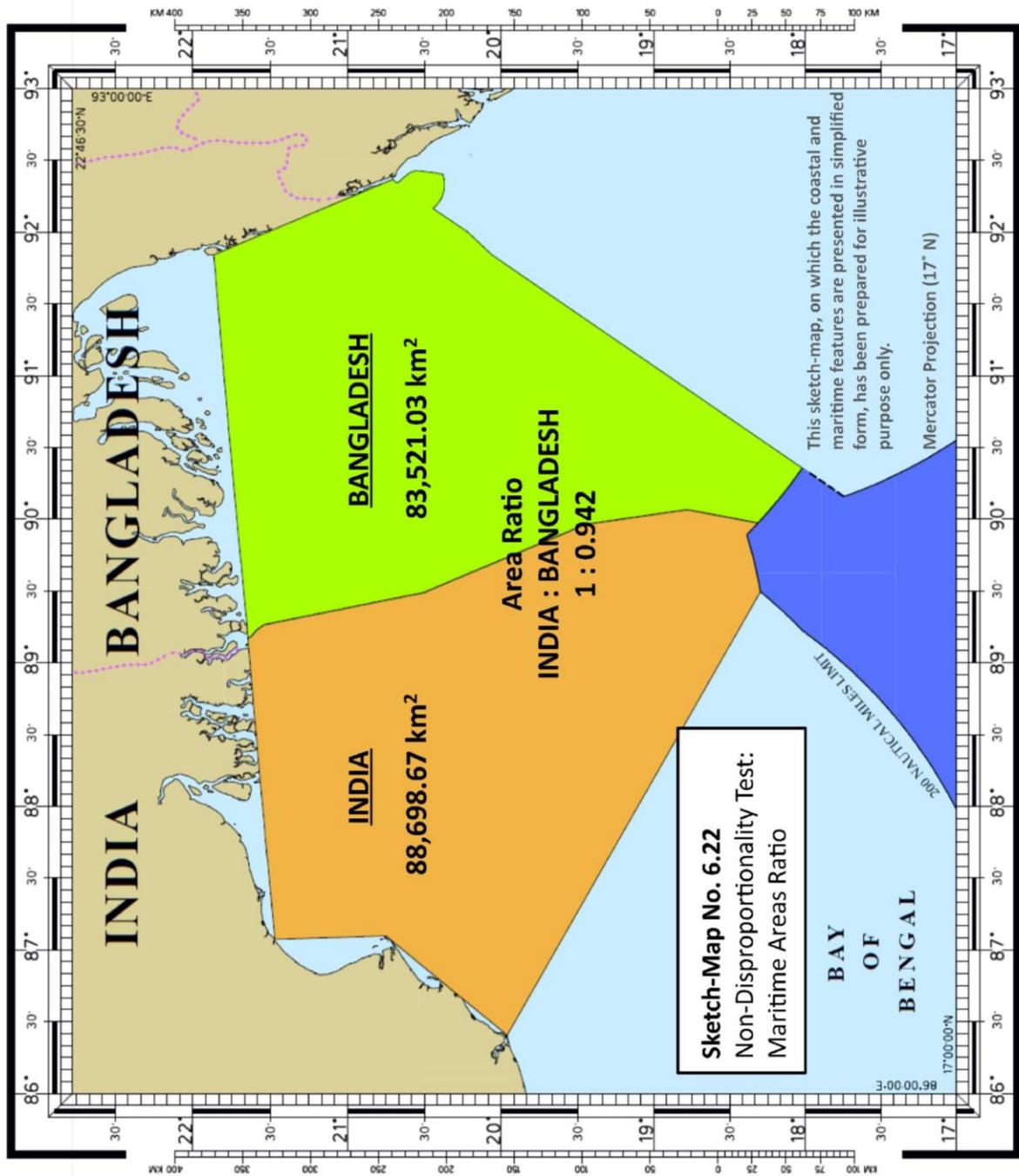
- the delimitation line described at paragraph 5.6158 above continues along the geodetic azimuth of 168.6° until it reaches point T4, with co-ordinates 20° 30' 17.9" N, 89° 29' 20.9" E, which is equidistant from base points I-2, I-3 and B-3;
- from point T4, the line continues in a south direction and follows a geodetic azimuth of 157.0° until it meets point T5, with co-ordinates 19° 26' 40.6" N, 89° 57' 54.9" E, which is equidistant from base points I-3, B-3 and B-4;
- from point T5, the line takes a broadly south direction and follows a geodetic azimuth of 171.7° until it reaches point T6, with co-ordinates 18° 46' 43.5" N, 90° 04' 02.5" E, which is equidistant from base points I-3, B-4 and B-5;
- from point T6, the maritime boundary follows a geodetic azimuth of 190.7° until it reaches the limit of 200 nautical miles at point Y, with co-ordinates 18° 19' 06.7" N, 89° 58' 32.1" E.

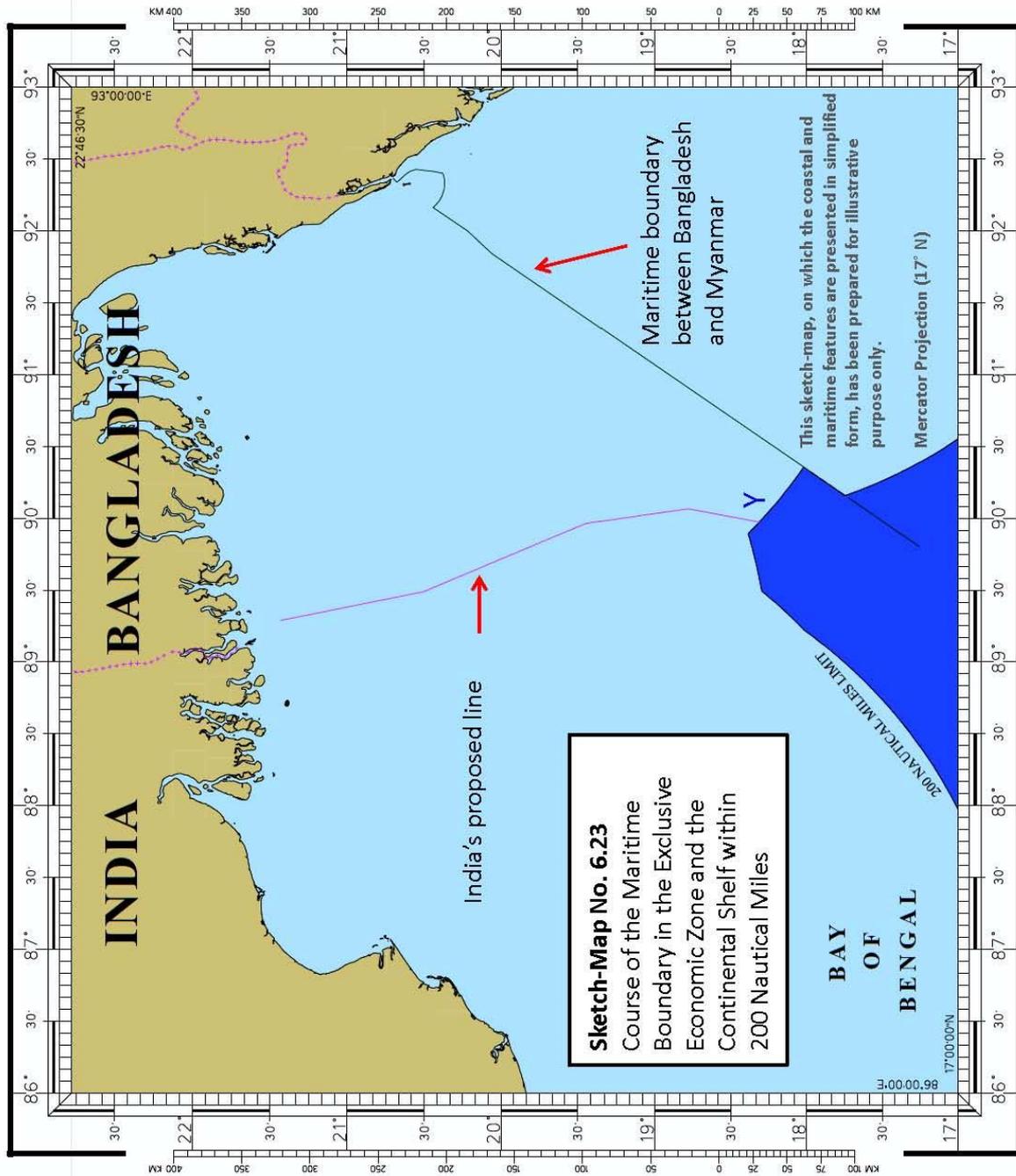
³⁴⁰ *Ibid.*, p. 234, para. 326.

³⁴¹ In *Tunisia/Libya*, the International Court of Justice found that the proportions of approximately 34:66 in favour of Tunisia in respect to the lengths of the coastlines and coastal fronts and a proportion 40:60 in respect to the areas of continental shelf “meet the requirements of the test of proportionality . . .” (*Continental Shelf (Tunisia/Libyan Arab Jamahiriya)*, *Judgment*, *I.C.J. Reports 1982*, p. 91, para. 131). In the *St. Pierre & Miquelon* case, the Court of Arbitration decided that a ratio between the coastlines of 15.3:1 and a ratio of the maritime spaces appertaining to the Parties of 16.4:1 was not disproportionate (*Delimitation of Maritime Areas between Canada and France*, Decision of 10 June 1992, *UNRIAA*, Vol. XXI, p. 296, para. 93).

6.115 The maritime boundary in the exclusive economic zone and the continental shelf within 200 nautical miles is drawn on sketch-map No. 6.23 appearing at page 205.







CHAPTER 7

DELIMITATION OF THE CONTINENTAL SHELF BEYOND 200 NAUTICAL MILES

7.1 This chapter deals with the delimitation of the continental shelf beyond the 200 nautical miles limit. It will show that Bangladesh's interpretation and application of article 76 of UNCLOS in its Memorial are ill-conceived and based on an unfounded and outdated understanding of the law. It should, thus, occasion no surprise that Bangladesh's very same arguments were decisively rejected by the ITLOS in its recent judgment in the dispute between Bangladesh and Myanmar.

7.2 As the Arbitral Tribunal will need to address Bangladesh's claims concerning the continental shelf beyond 200 nautical miles, **Section I** will set out the correct meaning of article 76 in light of the findings of the ITLOS, based on a survey of the law applicable to the delimitation of the continental shelf beyond 200 nautical miles. **Section II** will then show that Bangladesh's application of the law to the continental shelf beyond 200 nautical miles in the case at hand is incorrect, and will correctly apply article 76 to the area beyond 200 nautical miles in dispute between the parties.

I. The Correct Meaning of Article 76 of UNCLOS

7.3 In its judgment of 14 March 2012, the ITLOS dealt in some detail and with great care with the claims of Bangladesh and Myanmar concerning their respective entitlements and rights on the continental shelf beyond 200 nautical miles from their coasts³⁴². The main findings of the Tribunal in this matter were as follows:

- (i) the Tribunal found "that it has jurisdiction to delimit the continental shelf in its entirety"³⁴³, including beyond the 200 nautical miles limit;
- (ii) it considered that "[t]here is a clear distinction between the *delimitation* of the continental shelf under article 83 and the *delineation* of its outer limits under

³⁴² See *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 341-476.

³⁴³ *Ibid.*, para. 363.

article 76”³⁴⁴ and that “in order to fulfil its responsibilities under Part XV, Section 2, of the Convention in the present case, it has an obligation to adjudicate the dispute and to delimit the continental shelf between the Parties beyond 200 nm. Such delimitation is without prejudice to the possible establishment of the outer limits of the continental shelf in accordance with article 76, paragraph 8, of the Convention”³⁴⁵;

- (iii) the Tribunal considered that it could determine the existence of entitlement to the continental shelf – a question which it defined as “predominantly legal in nature”³⁴⁶ – 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”³⁴⁷;
- (iv) to this end, the Tribunal analysed the notion of “natural prolongation” and was “of the view 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”³⁴⁸; and it found on this basis that both Bangladesh and Myanmar were entitled to a continental shelf beyond 200 nautical miles³⁴⁹;
- (v) as for the method of delimitation applicable for the continental shelf beyond 200 nautical miles, it “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”³⁵⁰; and
- (vi) the Tribunal firmly rejected “‘the most natural prolongation’ argument made by Bangladesh”³⁵¹.

7.4 India submits that these findings apply *mutatis mutandis* in the present case.

³⁴⁴ *Ibid.*, para. 376.

³⁴⁵ *Ibid.*, para. 394.

³⁴⁶ *Ibid.*, para. 413.

³⁴⁷ *Ibid.*, para. 410.

³⁴⁸ *Ibid.*, para. 437.

³⁴⁹ *Ibid.*, para. 449.

³⁵⁰ *Ibid.*, para. 455.

³⁵¹ *Ibid.*, para. 460.

7.5 Bangladesh relies heavily on the 1969 ICJ judgment, notwithstanding the fact noted by the ITLOS in its judgment of 14 March 2012, that “while the reference to natural prolongation was first introduced as a fundamental notion underpinning the regime of the continental shelf in the *North Sea* cases, it has never been defined”³⁵². Bangladesh asserts that “geophysical elements, including both geology and geomorphology, are the essential determinants of natural prolongation”³⁵³. Yet this conclusion is anything but self-evident and Bangladesh’s subsequent focus on the pertinence of geology is misguided and misleading.

7.6 First, the Court’s 1969 definition itself was far from being exclusively “geological and geomorphological” as alleged by Bangladesh. Rather, the Court saw the geological structure as one among several factors to be taken into consideration – and only “so far as known or readily ascertainable”³⁵⁴. The subsequent case-law (including that of the Court itself) has largely excluded considerations of a geological nature from the definition, culminating in the recent judgment of the ITLOS on 14 March 2012³⁵⁵.

7.7 Notably, the Court went one step further. While interpreting its 1969 judgment it explained that:

“The fact that the legal concept, while it derived from the natural phenomenon, pursued its own development, is implicit in the whole discussion by the Court in that case of the legal rules and principles applicable to it.”³⁵⁶

Additionally, in spite of the insistence of the Parties before it on the geological aspect of “natural prolongation”, the Court refused to enter “into the question of the correct geological classification of any feature” and limited itself to noting “that this broader submarine region

³⁵² *Ibid.*, para. 432.

³⁵³ MB, para. 7.18.

³⁵⁴ *North Sea Continental Shelf, Judgment, I.C.J. Reports 1969*, pp. 53-54, par. 101.D.2); see also p. 51, para. 94.

³⁵⁵ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1982*, p. 18, para. 60 and p. 46, para. 42; *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 437; See also *Delimitation of the Continental Shelf between France and the United-Kingdom*, Decision of 30 June 1977, UNRIAA, Vol. XVIII, p. 192, para. 108; *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, UNRIAA, Vol. XXVII, p. 211, paras. 224-225.

³⁵⁶ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1982*, p. 46, para. 42.

is inclined at a gentle slope from west to east”³⁵⁷. In other words, the Court essentially ignored the geological aspects so vehemently debated by the Parties, and based itself exclusively on the geomorphological character of the disputed area.

7.8 Second, while it is true that the International Court of Justice’s formula in its 1969 judgment played a role in the drafting of article 76 of the 1982 Convention on the Law of the Sea, this role was not dominant, let alone exclusive, as Bangladesh struggles unsuccessfully to demonstrate throughout its Memorial. The vague notion of “natural prolongation” was joined by the concept of “continental margin”³⁵⁸, although the expressions “natural prolongation” and “continental margin” were included very early in the negotiating texts³⁵⁹, they were always considered too vague, requiring further precision³⁶⁰. As noted by the ITLOS in its recent judgment,

“while the reference to natural prolongation was first introduced as a fundamental notion underpinning the regime of the continental shelf in the *North Sea* cases, it has never been defined.”³⁶¹

7.9 It is against this backdrop and in this particular context that the complex provisions of article 76 of UNCLOS were elaborated, essentially on the basis of the proposals of the Irish and the Soviet delegations³⁶², by the Chairman of the Second Committee³⁶³. Paragraphs 2, 3,

³⁵⁷ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1982*, p. 41, para. 32 ; see also p. 85, para. 120 where the Court dismisses the “geologically-based contention of the northward thrust”.

³⁵⁸ *Ibid.*, Vol. I, Plenary, 32nd meeting, 8 July 1974, p. 132, para. 67 (Bahamas); 39th meeting, 12 July 1974, p. 169, para. 36 (Turkey).

³⁵⁹ See, e.g., point 68 of the Main trends working paper of the Second Committee, A/CONF.62/L.8/REV.1, Appendix I, *ibid.*, Vol. III, pp. 117-118. See also article 62 of the Informal Single Negotiating Text (1975), Part II, A/CONF.62/WP.8/PartII, *ibid.*, Vol. IV, p. 162; article 64 of the Revised Single Negotiating Text (1976), Part II, A/CONF.62/WP.8/Rev.1/PartII, *ibid.*, Vol. V, p. 164; article 76 of the Informal Composite Negotiating Text (1977), A/CONF.62/WP.10, *ibid.*, Vol. VIII, p. 16.

³⁶⁰ See variant C to provision 68 of the Main trends working paper of the Second Committee: “The continental shelf of a coastal State extends beyond its territorial sea to a distance of 200 miles from the applicable baselines and throughout the natural prolongation of its land territory where such natural prolongation extends beyond 200 miles to the outer limit of its continental margin, as precisely defined and delimited in accordance with article . . .” (A/CONF.62/L.8/REV.1, Appendix I, *ibid.*, Vol. III, p. 117). See also provision 81 of the same text concerning the outer limit of the continental shelf (*ibid.*, p. 119).

³⁶¹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 432.

³⁶² Reproduced in Study of the implications of preparing large-scale maps for the Third United Nations Conference on the Law of the Sea, A/CONF.62/C.2/L.99, Annexes II and III, *ibid.*, Vol. XI, pp. 123-124. There was also an alternative proposal made by a group of Arab States which clearly established the understanding that also a legal continental shelf defined solely on a distance criterion is to be considered to be the “natural prolongation” of the coastal State’s territory (Annex I, *ibid.*, p. 123). See also Report to the

4, 5 and 6 of article 76 are essential elements of the definition of the continental shelf contained in paragraph 1³⁶⁴, which, by itself, was considered too vague.

7.10 The *travaux préparatoires* of article 76 of UNCLOS therefore demonstrate that “natural prolongation” does not correspond to any particular scientific concept. Scientific definitions, insofar as they are relevant, are only part of the general legal definition that is contained in this provision taken as a whole.

7.11 Paragraph 1 of article 76 describes the continental shelf as “the natural prolongation of [the] land territory” but, contrary to the assertions of Bangladesh, this provision does *not* mean, as Bangladesh contends, “that entitlement is determined by the geological and geomorphological factors that inform the juridical concept of ‘natural prolongation’”³⁶⁵. Article 76 makes no such reference to geological prolongation and provides no basis for geological natural prolongation. The limited relevance of geomorphological factors is specifically enumerated and confined in the following paragraphs of article 76, as discussed below.

7.12 As aptly explained by the ITLOS, the expression “natural prolongation of [the coastal State’s] land territory” in paragraph 1 of article 76 cannot be read in clinical isolation and can only be understood in light of the provisions which follow³⁶⁶.

7.13 Paragraph 1 provides that, when the distance between baselines and the outer edge of the continental margin is greater than 200 nautical miles, this “natural prolongation” extends up to the outer edge of the continental margin. The “outer edge of the continental margin”, however, is undefined in paragraph 1. Yet, the language of paragraph 4(a) makes clear that “natural prolongation” cannot be understood without reference to the outer edge of the continental margin, as noted by the ITLOS:

Plenary by the Chairman of the Second Committee, A/CONF.62/RCNG.1, *ibid.*, Vol. X, p. 83, paras. 6-7; and A/CONF.62/RCNG.2, *ibid.*, Vol. X, p. 164, para. 6.

³⁶³ Compromise suggestions by the Chairman of Negotiating Group 6, A/CONF.62/L.37, *ibid.*, Vol. XI, pp. 100-101.

³⁶⁴ Report of the Chairman of the Second Committee (1979), A/CONF.62/L.38, *ibid.*, pp. 101-102, para. 9.

³⁶⁵ MB, para. 1.23; see also para. 7.57.

³⁶⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 428-437.

“Thus, the notion of natural prolongation and that of continental margin under article 76, paragraphs 1 and 4, are closely interrelated. They refer to the same area.”³⁶⁷

7.14 Only paragraph 3 describes both positively and negatively the morphological component elements of the continental margin, again without making the slightest allusion to geological continuity. Paragraphs 4 to 6 then go on to provide a precise definition of the concept of the outer edge, which defines the extent of the continental shelf to which a coastal State may lay claim³⁶⁸.

7.15 This was made clear by the ITLOS in its 2012 judgment in *Bangladesh/Myanmar*:

“one of the principal objects and purposes of article 76 of the Convention is to define the precise outer limits of the continental shelf, beyond which lies the Area. The Tribunal therefore finds it difficult to accept that natural prolongation referred to in article 76, paragraph 1, constitutes a separate and independent criterion a coastal State must satisfy in order to be entitled to a continental shelf beyond 200 nm.”³⁶⁹

7.16 Specifically, paragraph 4(a) states that when establishing the outer edge of the continental margin, wherever the margin extends beyond 200 nautical miles from baselines, States have a choice between two alternative formulas, the “Hedberg formula” and the “Gardiner formula”. The Hedberg formula, found in paragraph 4(a)(ii), is based solely on distance³⁷⁰. The Gardiner formula, embodied in paragraph 4(a)(i), does include a geological element, inasmuch as it mentions the thickness of sedimentary rocks. Thus the thickness of the rocks is the only geological element relevant to the Gardner formula, as provided for in paragraph 4(a)(i)³⁷¹. No reference is made to the origin or the nature of the sediments.

³⁶⁷ *Ibid.*, para. 434.

³⁶⁸ See point 2.2.6 of the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf, adopted by the CLCS on 13 May 1999 at its fifth session, doc. CLCS/11 (available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N99/171/08/IMG/N9917108.pdf?OpenElement>), the relevant abstracts are reproduced in Volume II of this Counter-Memorial (Annex IN-25).

³⁶⁹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 435.

³⁷⁰ According to this formula, the outer edge of the continental margin can be established by “a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.”

³⁷¹ According to the Gardiner formula, the line may be “a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope”.

Examining “the significance of the origin of sedimentary rocks in the interpretation and application of article 76 of the Convention” the ITLOS observed:

“that the text of article 76 of the Convention does not support the view that the geographic origin of the sedimentary rocks of the continental margin is of relevance to the question of entitlement to the continental shelf or constitutes a controlling criterion for determining whether a State is entitled to a continental shelf.”³⁷²

7.17 Article 76(4)(b), which identifies “the foot of the continental slope [with] the point of maximum change in the gradient at its base” allows “evidence to the contrary” to identify the foot of the slope. Depending on the case, this *may* be based on geological factors³⁷³. But, in any case, under point 5.4.6 of the Scientific and Technical Guidelines of the CLCS:

“as a general rule, whenever the base of the continental slope can be clearly determined on the basis of morphological and bathymetric evidence, the Commission recommends the application of that evidence.”

7.18 Therefore, the ITLOS stated the obvious when it held:

“Under article 76, paragraph 1, of the Convention, the continental shelf of a coastal State can extend either to the outer edge of the continental margin or to a distance of 200 nm, depending on where the outer edge is situated. While the term ‘natural prolongation’ is mentioned in this paragraph, it is clear from its language that the notion of ‘the outer edge of the continental margin’ is an essential element in determining the extent of the continental shelf.”³⁷⁴

The above interpretation of article 76 is in line with the drafting history of that provision³⁷⁵ and is confirmed by subsequent practice, in particular the practice of the CLCS. The “test of appurtenance”, i.e., the process by means of which the application of article 76 of the Convention is examined by the CLCS, of which the ITLOS has taken note in its judgment of

³⁷² *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 447.

³⁷³ See para. 6.1.10 of the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf, adopted by the CLCS on 13 May 1999 at its fifth session, doc. CLCS/11 (available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N99/171/08/IMG/N9917108.pdf?OpenElement>) (Annex IN-25).

³⁷⁴ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 429.

³⁷⁵ See para. 7.3 above.

14 March 2012³⁷⁶, does not make any further reference to “natural prolongation”. In order to satisfy the test of appurtenance and, consequently, to be entitled to a continental shelf extending beyond 200 nautical miles, a coastal State has to demonstrate that the outer edge of its continental margin extends beyond 200 nautical miles³⁷⁷.

7.19 Only the application of article 76 of UNCLOS in its entirety can determine the existence and the outer limit of the legal continental shelf extending beyond 200 nautical miles. “Natural prolongation” is not the criterion; it is the legal conclusion of the application of the criteria. In this regard, it is not relevant whether or not there is a “marked disruption or discontinuance of the sea-bed”³⁷⁸ or not, as Bangladesh argues in its Memorial³⁷⁹. Neither the legal concept of “natural prolongation”, nor the more scientific concept of “continental margin” incorporated into the Convention makes any reference to such disruption or to the geological distinction of continental and oceanic crust³⁸⁰. Article 76 of UNCLOS retains an essentially geomorphic definition of the margin, by enumerating its components, i.e., the shelf, the slope and the rise (see figure No. 7.1 (a) at page 215)³⁸¹. Under the Convention, the

³⁷⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 436.

³⁷⁷ CLCS Guidelines, 13 May 1999, CLCS/11, point 2.2.8, quoted in *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 436.

³⁷⁸ *Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1982*, p. 57, para. 66.

³⁷⁹ MB, paras. 7.23 and 7.54.

³⁸⁰ United Nations, Office of Legal Affairs, *The Law of the Sea: Training Manual for Delineation of the Outer Limits of the Continental Shelf Beyond 200 Nautical Miles and for Preparation of Submissions to the Commission on the Limits of the Continental Shelf*, New York, 2006, p. I-17.

³⁸¹ R. J. Dupuy and D. Vignes, *Traité du Nouveau Droit de la Mer*, Economica, Paris, 1985, p. 300 (“On doit noter enfin que l’article 76 de la Convention donne primauté à la géomorphologie sur la géologie en ce qui concerne la définition de la marge continentale, ainsi qu’on le verra ci-après. Le concept de prolongement naturel doit être ainsi entendu dans un sens géomorphologique plus que géologique.”)[It must finally be noted that in article 76 geomorphology prevails over geology for the definition of the continental margin as will be seen below. Therefore, the concept of natural prolongation must be envisaged in a geomorphological more than in a geological perspective] See also P. A. Symonds *et al.*, “Characteristics of Continental Margins”, in P. J. Cook and C. M. Carleton (eds.), *Continental Shelf Limits, The Scientific and Legal Interface*, Oxford University Press, 2000, pp. 27-29.

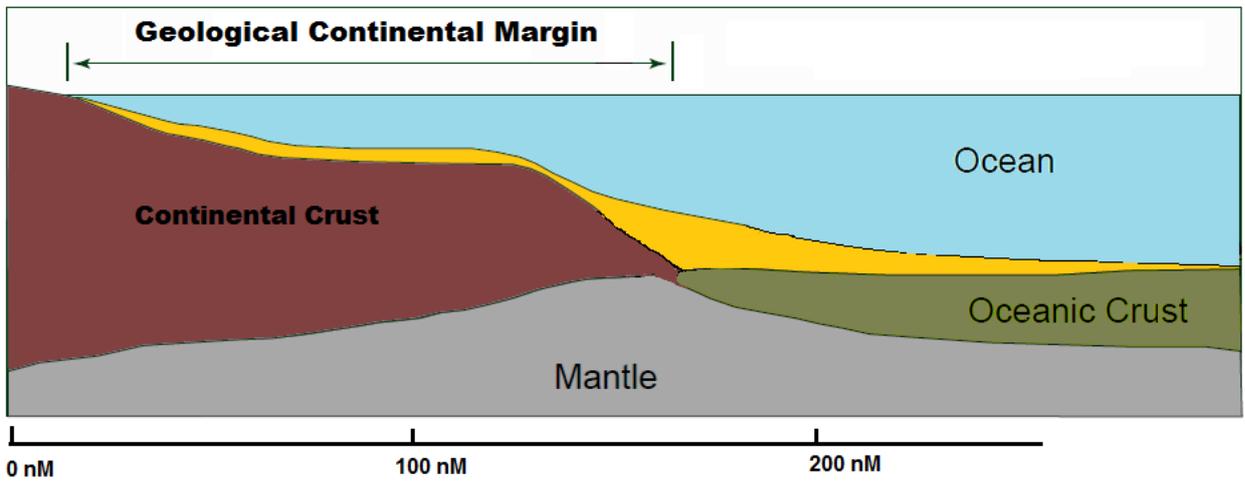


Figure No. 7.1 (a) Geological Continental Margin

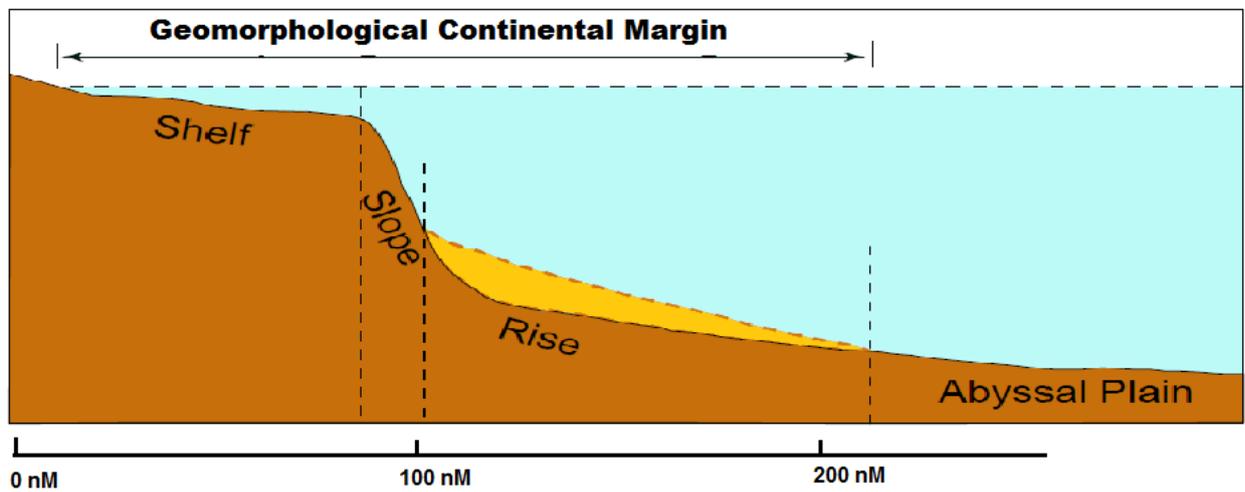


Figure No. 7.1 (b) Geomorphological Continental Margin

actual boundary between continental crust and oceanic crust – which constitutes the geological limit of the natural prolongation of the land mass (see figure No. 7.1 (b) at page 215)³⁸² – does not play any role. Only the location of the foot of the continental slope and the implementation of the formula lines are relevant for the determination of the entitlement of a coastal State to a continental shelf extending beyond 200 nautical miles, and for the delineation of the corresponding limits.

7.20 Having taken note of this test of appurtenance, the ITLOS declared that it was:

“of the view 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. To interpret otherwise is warranted neither by the text of article 76 nor by its object and purpose.”³⁸³

7.21 To summarize the correct understanding of article 76:

- (i) geological elements play a very limited role in the definition of the continental shelf. The expression “natural prolongation of its land territory” in paragraph 1 of article 76 is to be interpreted in light of the subsequent provisions, paragraph 4 in particular;
- (ii) the provisions following paragraph 1 of article 76 do not exclude consideration of some geological elements, but in no case is a State legally obligated to rely upon geological elements when it establishes the outer edge of its continental margin;
- (iii) in particular, neither the nature nor origin of the sediments forming the continental margin is in any way a criterion for the definition of the continental shelf as the natural prolongation of the land territory. Therefore, an argument based on the “most natural prolongation”, as Bangladesh would have it, (even if it were sustained by the facts) is devoid of legal merit. Consequently, the legal concept of “natural

³⁸² See, e.g., P. A. Symonds *et al.*, “Characteristics of Continental Margins”, in P. J. Cook and C. M. Carleton (eds.), *op. cit.* (fn. 381), p. 27 and p. 55.

³⁸³ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 437.

prolongation” must be understood by reference to the formulae in Article 76(4)(a) of UNCLOS and their starting-point, i.e., the foot of the continental slope, determined in accordance with article 76(4)(b) of the Convention as the point of maximum change in the gradient at the base of the slope. Even if the definition of the legal continental shelf makes reference to scientific concepts, like continental margin, slope, rise, foot of the slope and edge of the margin, all of these terms must be understood in accordance with their legal definitions – employed and authoritatively redefined for the purpose of article 76.

7.22 The CLCS confirmed this interpretation of the concept of “natural prolongation” in its recommendations.

7.23 In its recommendations concerning Australia’s submission, the CLCS noted:

“The outer edge of the continental margin, as generated from the foot of the continental slope of the Argo Region by applying the provisions of article 76, paragraph 4, extends beyond the 200 M limits of Australia. On this basis, the Commission recognizes the legal entitlement of Australia to establish continental shelf beyond its 200 M limits in this Region.”³⁸⁴

This formula has also been used in the recommendations concerning New Zealand’s submission³⁸⁵, those concerning the joint submission made by France, Ireland, Spain and the

³⁸⁴ Summary of the Recommendations of the CLCS in regard to the Submission made by Australia on 15 November 2004, 9 April 2008, para. 10 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/aus04/aus_summary_of_recommendations.pdf). See also *ibid.*, paras. 21, 38, 58, 71, 80, 94-95, 108, and 121.

³⁸⁵ Summary of the Recommendations of the CLCS in regard to the Submission made by New Zealand on 19 April 2006, 22 August 2008, paras. 134, 150, 169, and 180 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/nzl06/nzl_summary_of_recommendations.pdf).

United Kingdom³⁸⁶; and those concerning Norway's³⁸⁷ and Mexico's respective submissions³⁸⁸.

7.24 Interestingly, in its submission concerning Ascension Island, the United Kingdom argued that

“Article 76 provides that the first consideration to be addressed is the extent of the natural prolongation of the coastal State's land territory, which, in accordance with Article 76 (1) extends to the outer edge of the continental margin. It is only then that it is possible to identify in what region the formulae in Article 76 (4) must be applied. The United Kingdom does not consider that natural prolongation, an inherent property of any landmass, can be defined by applying Article 76 (4). Whether there is any natural prolongation of the submerged component of a land territory can only be established by an assessment of all of the available geoscientific data as a whole.”³⁸⁹

The Commission replied that

“(i) The ‘natural prolongation of [the] land territory’ is based on the physical extent of the continental margin to its ‘outer edge’ (article 76, paragraph 1) i.e. ‘the submerged prolongation of the land mass...’ (article 76, paragraph 3);

(ii) The outer edge of the continental margin in the sense of article 76, paragraph 3, is established by applying the provisions of article 76, paragraph 4, through measurements from the [foot of the continental slope];

(iii) The FOS determined for this purpose is always associated with an identifiable base of continental slope, pursuant to article 76, paragraph 4 (b) (see also paragraphs 5.4.5 and 6.2.3 of the Guidelines);

³⁸⁶ Summary of the Recommendations of the CLCS in regard to the Joint Submission made by France, Ireland, Spain and the United Kingdom of Great Britain and Northern Ireland in respect of the Area of the Celtic Sea and the Bay of Biscay on 19 May 2006, 24 March 2009, para. 10 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/frgbires06/fisu_clcs_recommendations_summary2009.pdf).

³⁸⁷ Summary of the Recommendations of the CLCS in regard to the Submission made by Norway in respect of Areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea on 27 November 2006, 27 March 2009, paras. 14, 26, and 44 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/nor06/nor_rec_summ.pdf).

³⁸⁸ Summary of the Recommendations of the CLCS in regard to the Submission made by Mexico in respect of the Western Polygon in the Gulf of Mexico on 13 December 2007, 31 March 2009, para. 9 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/mex07/summary_recommendations_2009.pdf).

³⁸⁹ Summary of Recommendations of the CLCS in regard to the Submission made by the United Kingdom of Great Britain and Northern Ireland in respect of Ascension Island on 9 May 2008, 15 April 2010, para. 20 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/gbr08/gbr_asc_isl_rec_summ.pdf).

(iv) The principle of crustal neutrality applies: i.e. article 76 is neutral regarding the crustal nature of the land mass of a coastal State. . .”³⁹⁰.

In addition, the Commission confirmed that “for the purposes of the Convention, any kind of land mass (irrespective of crustal type, size etc.) of a coastal State has a continental margin that can be delineated in accordance with article 76, paragraph 4 of the Convention”³⁹¹. This entails that article 76(4) is applicable independently of the question whether the continental margin is or is not the geological natural prolongation of the land mass. It is the application of the written provision which determines if a coastal State is entitled to a continental shelf extending beyond 200 nautical miles.

II. Bangladesh’s Erroneous Application of Article 76 of UNCLOS

7.25 Bangladesh’s misinterpretation of article 76 is compounded by its erroneous application of the provision. Bangladesh applies article 76 in a threefold manner. It challenges the entitlement of India to a continental shelf beyond 200 nautical miles from the Andaman Islands because of an alleged discontinuity. It then attempts to establish a hierarchy between the different coastal regions in the Bay of Bengal, first, by diminishing the relevance of India’s portion of the Bengal Delta and, second, by alleging that peninsular India does not enjoy the same degree of physical continuity with the continental shelf as Bangladesh³⁹².

7.26 Based on the correct interpretation of article 76 (explained in Section I above), Subsection A of the present Section will show that

- (i) the entitlement of India in respect of peninsular India is undisputed;
- (ii) in any case, even if the Tribunal were to apply Bangladesh’s misconceived notion of natural prolongation, India would be entitled to a continental shelf beyond 200 nautical miles; and

³⁹⁰ *Ibid.*, para. 22.

³⁹¹ *Ibid.*, para. 23 (ii).

³⁹² MB, paras. 7.42-7.56.

(iii) India has an entitlement to a continental shelf beyond 200 nautical miles from the Andaman Islands; the fact that the islands lie behind a subduction zone is legally irrelevant.

7.27 Bangladesh's misconstruction of article 76 also leads it to invoke "circumstances" which are irrelevant and inapplicable to the delimitation of the continental shelf beyond 200 nautical miles. Section III will rebut Bangladesh's claims and show the same rules are applicable both within and beyond 200 nautical miles.

7.28 Bangladesh challenges India's entitlement to a continental shelf in the Andaman region extending beyond 200 nautical miles. Concerning India's deltaic landmass, Bangladesh concedes that:

"The factual and legal analysis that supports the existence of Bangladesh's entitlement in the outer continental shelf also applies to India's deltaic land territory."³⁹³

7.29 As for India's continental shelf off peninsular India, Bangladesh does not expressly allege that India's claim in this region is not valid. It accepts that:

"There is no 'marked discontinuity' between the land territory of peninsular India and the seabed and subsoil of the Bay beyond 200 M of the sort that the jurisprudence suggests is sufficient to indicate 'the limits of two separate continental shelves, or two separate natural prolongations'."³⁹⁴

But then goes on to assert:

"It is clear, however, that the seafloor of the Bay beyond 200 M, in the words of the ICJ, 'does not constitute a natural — or the most natural — extension of the land territory of' peninsular India 'even though that area may be closer to it than it is to the territory of' the Bengal Delta."³⁹⁵

"Compared to the Bengal Delta (including the Indian portion), there is a lack of physical continuity between the peninsular land mass and

³⁹³ MB, para. 7.42.

³⁹⁴ MB, para. 7.47 (footnotes omitted).

³⁹⁵ MB, para. 7.47.

the seafloor. It is in this sense that peninsular India can be described as adjacent to, but distinct from, the Bengal Depositional System.”³⁹⁶

And finally Bangladesh claims that:

“In contrast to Peninsular India, India’s Andaman Islands are separated from the seabed and subsoil of the Bay of Bengal beyond 200 M by just the sort of ‘marked discontinuity’ that indicates the limits of two separate natural prolongations. The Andamans cannot therefore contribute in any way to any Indian entitlement in the outer continental shelf.”³⁹⁷

7.30 Contrary to Bangladesh’s assertions, and in line with the ITLOS judgment of 14 March 2012, the application of article 76 of UNCLOS entitles India to a continental shelf beyond 200 nautical miles. India’s continental margin satisfies the appurtenance test of article 76(4) of UNCLOS, i.e., the edge of India’s continental margin established in accordance with the Convention is situated beyond 200 nautical miles measured from its baselines. Consequently, India is entitled to delineate the outer limit of its continental shelf in conformity with article 76(8) of UNCLOS³⁹⁸.

A. The Foot of the Continental Slope Points

7.31 In order to implement article 76(4) of UNCLOS, it is necessary to determine the foot of the continental slope. Both the Gardiner and the Hedberg formulas take the foot of the continental slope as the starting-point. UNCLOS defines the foot of the continental slope in article 76(4)(b):

“In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.”

The CLCS has noted:

“As a general rule, whenever the base of the continental slope can be clearly determined on the basis of morphological and bathymetric evidence, the Commission recommends the application of that

³⁹⁶ MB, para. 7.48.

³⁹⁷ MB, para. 7.49.

³⁹⁸ See paras. 7.31-7.43 below.

evidence. Geological and geophysical data can also be submitted by coastal States to supplement proof that the base of the continental slope is found at that location.³⁹⁹

7.32 India has determined the foot of the continental slope points by bathymetric and morphological evidence, i.e., on the basis of sea-bed profiles. The base of the continental slope can be determined on such profiles at the point where the steeper slope merges into the continental rise which usually has a smaller gradient. For the purpose of the appurtenance test, only six of them are relevant. These points are shown on sketch-map No.7.2 at page 225.

7.33 In addition, the bathymetric profiles show that there is no visible marked disruption of the continental margin in the Andaman area, contrary to Bangladesh's assertion. Despite the fact that the Andaman continental margin is situated on the subduction zone (the Indian tectonic plate subducting under the Burma tectonic plate), the bathymetric profiles do not show a marked trench⁴⁰⁰. There is no visible interruption of the prolongation of India's landmass seawards. In fact, the Andaman margin shows a classical shelf-slope-rise configuration. This is explained by the sedimentary processes which, over time, have filled the trench from the north to the south. The abundance of sediments makes it almost impossible to determine with accuracy the plate boundaries and the trench in the region⁴⁰¹. These difficulties have been rendered even greater by the fact that the Andaman continental margin is built up with an accretionary complex, comprising an accretionary prism and an accretionary wedge, which thrusts upon the thick sedimentary sequence of the subducted plate and is, through the tectonic and sedimentary processes, advancing seawards, increasingly covering the plate boundary and the subduction zone.

³⁹⁹ CLCS Guidelines, 13 May 1999, CLCS/11, point 5.4.6.

⁴⁰⁰ C. Nielsen *et al.*, "From Partial to Full Strain Partitioning Along the Indo-Burmese Hyper-Oblique Subduction", *Marine Geology*, Vol. 209, 2004, p. 307 (MB, Vol. IV, Annex B70) ("A set of bathymetric sections across the West Burma Scarp . . . clearly shows that the morphology is not typical of a trench.")

⁴⁰¹ M. Alam *et al.*, "An Overview of the Sedimentary Geology of the Annex B66 Bengal Basin in Relation to the Regional Tectonic Framework and Basin-fill History", *Sedimentary Geology*, Vol. 155, No. 3-4 (2003), p. 184 (MB, Vol. IV, Annex B66) ("Thick sediment cover in the Bengal Basin conceals the basement configuration and makes the reconstruction or exact location of plate boundaries and sutures more difficult.") See also C. Nielsen *et al.*, "From Partial to Full Strain Partitioning Along the Indo-Burmese Hyper-Oblique Subduction", *op. cit.* fn. 401, p. 312 ("A large deep sea fan outlines the very unstable tectonic front, but no clear fault geometry can be observed there. Absence of significant deformation at the toe of the scarp is illustrated along seismic line Andaman 50 (Fig. 11). The trench does not appear either in the morphology. The Bengal fan sediments actually lap gently the base of the WBS [West Burma Scarp].")

7.34 In the case of Myanmar, situated on the same subduction zone as the Andaman Islands, the ITLOS unequivocally determined that entitlement to a continental shelf beyond 200 nautical miles is to be determined by reference to the outer edge of the continental margin, in accordance with article 76, paragraph 4⁴⁰². The Tribunal explicitly rejected Bangladesh’s argument on the significance of the subduction zone in this respect:

“The Tribunal therefore cannot accept Bangladesh’s contention that, by reason of the significant geological discontinuity dividing the Burma plate from the Indian plate, Myanmar is not entitled to a continental shelf beyond 200 nm.”⁴⁰³

7.35 In the case of the wedge building up the Andaman continental margin, as has been confirmed by the CLCS regarding other submissions⁴⁰⁴, it is neither necessary nor appropriate to establish the foot of the continental slope by a method different from the general rule, i.e., the maximum change in the gradient. The foot of the continental slope can be clearly determined on the basis of geomorphological and bathymetric evidence only.

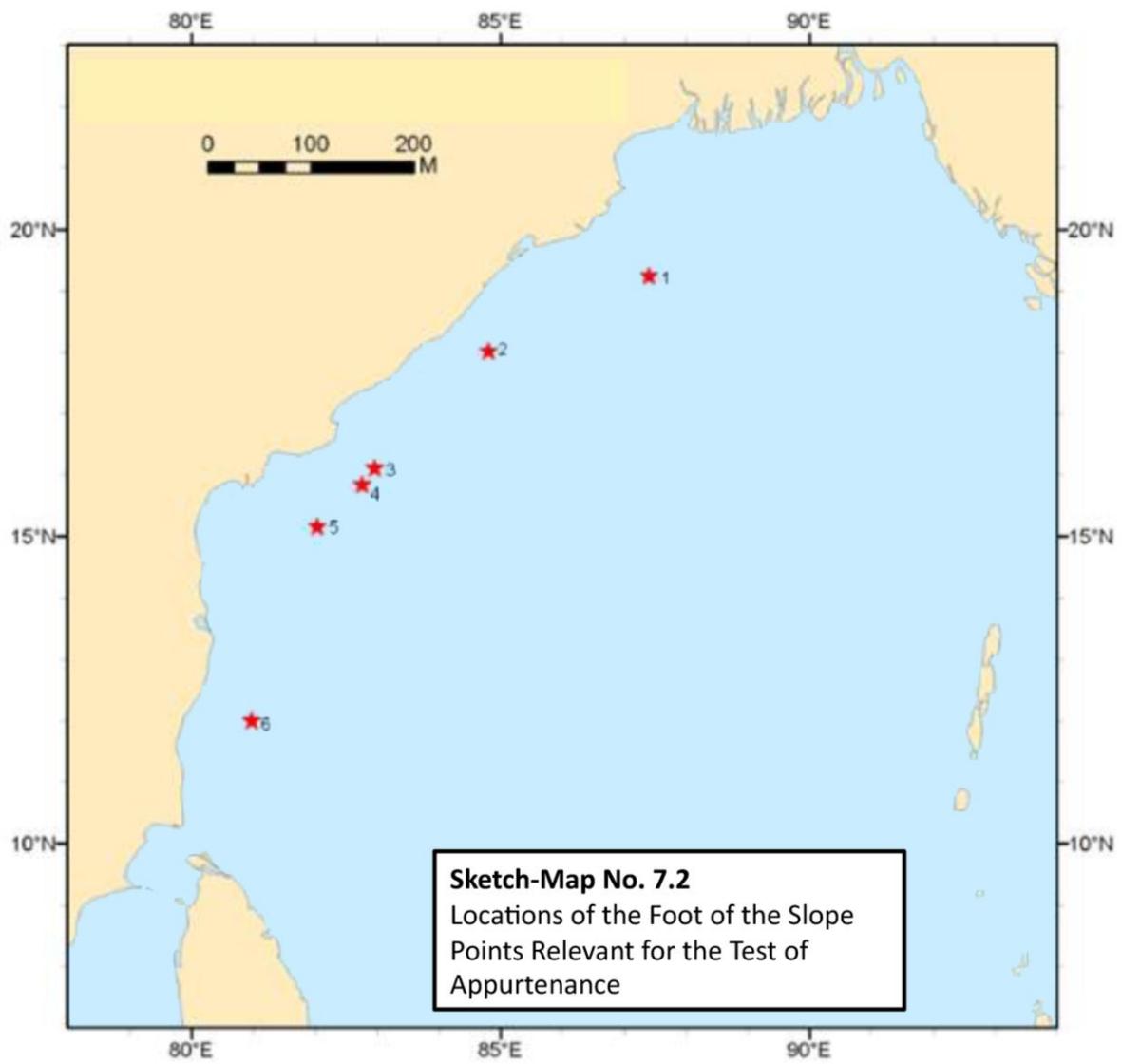
7.36 Bangladesh attaches much significance to the origin of the sediments, and in its Memorial goes into a lengthy discussion of this issue and its relevance⁴⁰⁵. Yet, as Bangladesh itself and its expert note, the sediments deposited, even if they have been transported through the Bengal Delta into the Bay of Bengal, do not *originate* in Bangladesh, but in the Himalaya region, i.e., Nepal, India, China, and Bhutan. No one would reasonably conclude that, therefore, the Bay of Bengal constitutes the “natural prolongation” of all of these States. In addition, sedimentation within the Bay of Bengal does not originate exclusively through the

⁴⁰² *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 437.

⁴⁰³ *Ibid.*, para. 438.

⁴⁰⁴ Summary of Recommendations of the CLCS in regard to the Submission made by Barbados on 8 May 2008, 15 April 2010, paras. 11–14 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/brb08/brb08_summary_recommendations.pdf); Summary of Recommendations of the CLCS in regard to the Submission made by Barbados on 8 May 2008, 15 April 2010, para. 14 (available at http://www.un.org/Depts/los/clcs_new/submissions_files/brb08/brb08_summary_recommendations.pdf).

⁴⁰⁵ MB, paras. 250-272, 7.46-7.48.



Bengal Delta (to which both Bangladesh and India contribute), but also derives from the Rakhine-Chin-Naga Ranges (also known as Indo-Burman Ranges)⁴⁰⁶ and peninsular India⁴⁰⁷.

7.37 In any case, Bangladesh's novel argument regarding the "most natural prolongation" of the continental shelf finds no basis in UNCLOS, and was clearly rejected by the ITLOS⁴⁰⁸. It is sufficient that the sediment layer between India's foot of the continental slope is undisrupted up to the 1 per cent thickness points. This is indeed the case, as the entire Bay of Bengal is covered with sediments, a matter undisputed between the parties⁴⁰⁹. In its Memorial, Bangladesh notes that

"Today, the sedimentary rock in the Fan ranges in thickness from more than 16.5 km near the base of the continental slope to less than one km south of the Equator, beyond the limits of the Bay of Bengal."⁴¹⁰

Similar sentiments can be found in the expert opinions annexed to its Memorial⁴¹¹. In its judgment of 14 March 2012, the ITLOS concluded, partially based on expert reports produced by Bangladesh, that

"the thick layer of sedimentary rocks covers practically the entire floor of the Bay of Bengal."⁴¹²

7.38 Therefore, India is entitled to establish the outer edge of its continental margin in accordance with the formulae enumerated in article 76(4) of the Convention.

⁴⁰⁶ See the Appendix to the present Counter-Memorial, "India's Contribution to the Sedimentary Processes of the Bay of Bengal"; see also: C. Nielsen *et al.*, "From Partial to Full Strain Partitioning Along the Indo-Burmese Hyper-Oblique Subduction", *op. cit.* (fn. 401), *passim*; Y. Najman, "The Detrital Record of Orogenesis: A Review of Approaches and Techniques Used in the Himalayan Sedimentary Basins", *Earth-Science Reviews*, Vol. 74, 2006, p. 11; C. Colin *et al.*, "Erosional History of the Himalayan and Burman Ranges during the Last Two Glacial-Interglacial Cycles", *Earth and Planetary Science Letters*, Vol. 171, 1999, pp. 647-660.

⁴⁰⁷ See, paras. 2.32-2.36 above.

⁴⁰⁸ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 447.

⁴⁰⁹ See MB, para. 2.38, 7.46-7.48.

⁴¹⁰ MB, para. 252.

⁴¹¹ J. R. Curray *et al.*, *Marine and Petroleum Geology*, Vol. 19, 2003, pp. 1191-1223, BM, Vol. IV, Annex B65: "The Bengal Delta has filled the Bengal Basin, and the sediment which has passed on through has been distributed across the entire Bay of Bengal to form the largest submarine fan in the world."

⁴¹² *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 445.

B. The Implementation of the Article 76(4)(a) Formulae

7.39 The next step for the implementation of article 76(4) of UNCLOS is the determination of the so-called formula lines. According to article 76(4)(a) of the Convention:

“For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

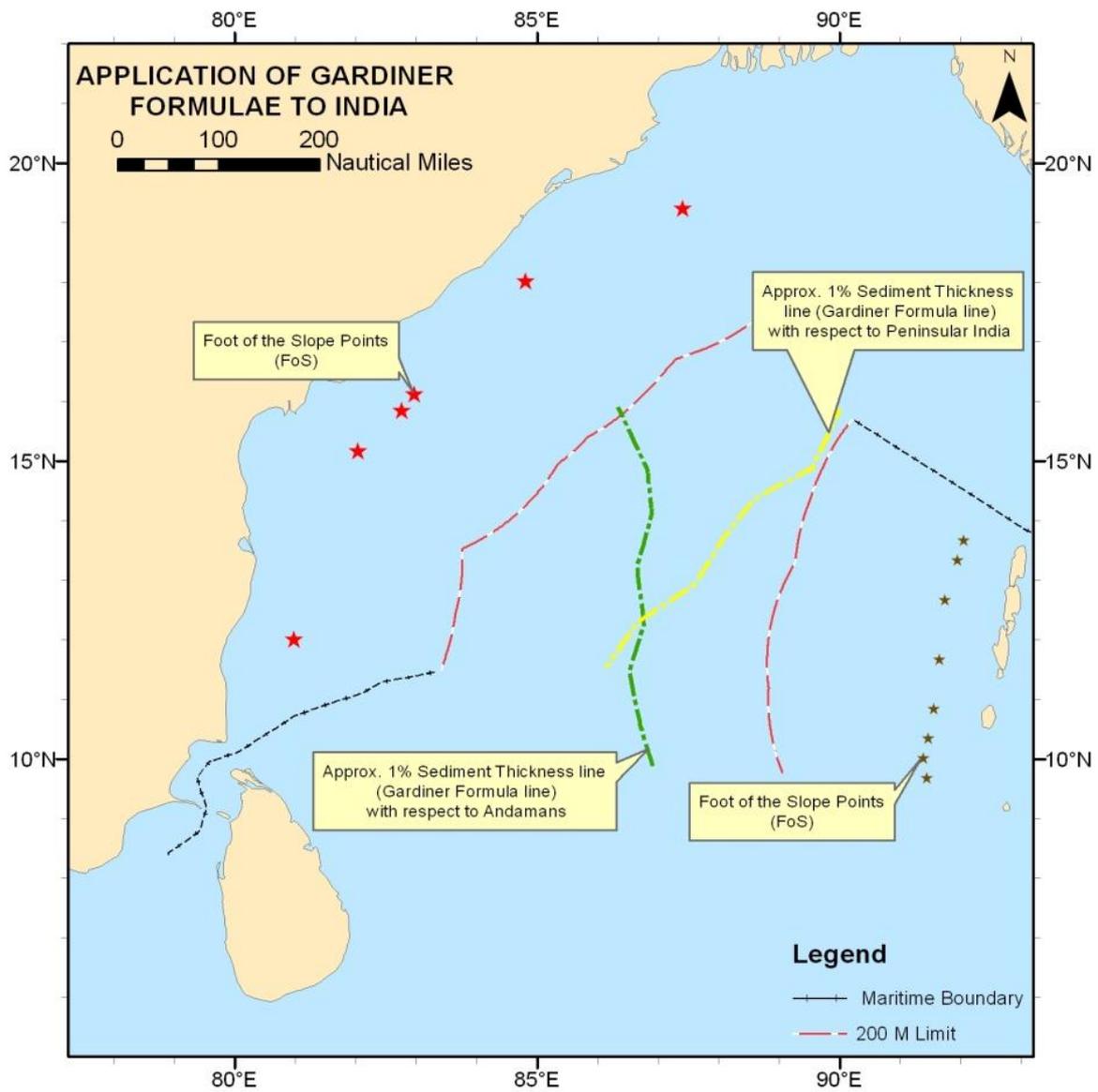
(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.”

7.40 Both formulae, the Gardiner formula (article 76(4)(a)(i)) and the Hedberg formula (article 76(4)(a)(ii)) were adopted in order to provide useful and accurate alternative tools to determine, for the purposes of the Convention, the edge of the continental margin, i.e., the limit of the continental shelf entitlement of a State under article 76.

7.41 The Gardiner formula is based on the assumption that the sediments constituting the continental rise gradually decrease in the seaward direction. Under article 76(4)(a)(i), the outer edge of the continental margin is to be found at any point where the thickness of the sediments on the basement represents at least one per cent of the distance of the point to the foot of the continental slope. The thickness of sediments is defined by the CLCS as the “vertical distance of from the sea floor to the top of the basement at the base of the sediments regardless of the slope of the sea floor or the slope of the top basement surface.”⁴¹³ This can be determined from seismic reflection data.

7.42 The implementation of the Gardiner formula results in a line depicted on sketch-map No. 7.3 at page 229. The one per cent sediment thickness line is situated at a distance beyond 200 nautical miles from India’s baseline.

⁴¹³ CLCS Guidelines, 13 May 1999, CLCS/11, point 8.1.8.



Sketch-Map No. 7.3 Approximate Locations of the Foot of the Slope Points and the Gardiner Formula Line for Peninsular India and Andamans

C. Conclusion

7.43 Given the fact that the one percent sediment thickness line, established in accordance with article 76(4) of UNCLOS, is situated beyond 200 nautical miles from India's baseline, India has satisfied the appurtenance test. Indeed,

“If either the line delineated at a distance of 60 nautical miles from the foot of the continental slope, or the line delineated at a distance where the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the slope, or both, extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, then a coastal State is entitled to delineate the outer limits of the continental shelf as prescribed by the provisions contained in article 76, paragraphs 4 to 10.”⁴¹⁴

Such is the present case. In accordance with article 76 of UNCLOS, India is consequently entitled to a continental shelf extending beyond 200 nautical miles, both from its peninsular landmass, which contains a portion of the Bengal Delta, and from its Andaman Islands in the east of the Bay of Bengal.

III. The Delimitation of the Continental Shelf beyond 200 Nautical Miles

7.44 The manner in which Bangladesh seeks to apply article 83 beyond 200 nautical miles is fundamentally wrong. There is only one continental shelf and therefore article 83 applies in the same manner to the delimitation of the continental shelf beyond, as Bangladesh acknowledges⁴¹⁵. The Tribunal must apply the equidistance/relevant circumstances method unless a compelling reason renders it unfeasible, which is not the case in the present proceedings.

7.45 As the ITLOS noted in *Bangladesh/Myanmar*,

“article 83 of the Convention addresses the delimitation of the continental shelf between States with opposite or adjacent coasts

⁴¹⁴ CLCS Guidelines, 13 May 1999, CLCS/11, point 2.2.8.

⁴¹⁵ MB, para. 7.57.

without any limitation as to area. It contains no reference to the limits set forth in article 76, paragraph 1, of the Convention. Article 83 applies equally to the delimitation of the continental shelf both within and beyond 200 nm.”⁴¹⁶

7.46 Bangladesh, though recognizing that article 83 does not differentiate between the continental shelf within and beyond 200 nautical miles, ignores the obvious conclusion stemming from this fact, and argues that the continental shelf beyond 200 nautical miles is an isolated and disconnected area, governed by its own set of rules appertaining to delimitation⁴¹⁷. It concludes that equity necessitates that the continental shelf beyond 200 nautical miles claimed by both parties belongs to Bangladesh in its entirety⁴¹⁸. Bangladesh’s reasoning is flawed. The task of the Tribunal is to delimit the relevant area. The relevant area consists of overlapping maritime projections of the Parties’ relevant coasts, excluding other possible areas of continental shelf possibly claimed by the parties.

7.47 The law of the sea does not work positive “equality” between states. The law of the sea does not “proportionally” distribute the earth’s natural resources between all inherently equal sovereign states. Indeed, one cannot read even the 1969 judgment in *North Sea Continental Shelf* to support the radically redistributive proposition that all should be given *some* access to the continental shelf beyond 200 nautical miles. As discussed above, even in this judgment, the high-point of the “equitable principles” approach, the Court was careful to note that law does not seek to “refashion” nature.

7.48 This core principle of maritime delimitation law is applicable irrespective of the nature of maritime zones to be delimited or the method applied to the delimitation. Therefore, the method applicable to the delimitation of the continental shelf is equally applicable to the entire shelf, whether within or beyond 200 nautical miles.

7.49 This was also the position of the ITLOS in *Bangladesh/Myanmar*:

“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

⁴¹⁶ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), Judgment*, para. 454; see also para. 361.

⁴¹⁷ MB, para. 7.57.

⁴¹⁸ MB, para. 7.65.

equidistance/relevant circumstances method continues to apply for the delimitation of the continental shelf beyond 200 nm. This method is rooted in the recognition that sovereignty over the land territory is the basis for the sovereign rights and jurisdiction of the coastal State with respect to both the exclusive economic zone and the continental shelf. This should be distinguished from the question of the object and extent of those rights, be it the nature of the areas to which those rights apply or the maximum seaward limits specified in articles 57 and 76 of the Convention.⁴¹⁹

7.50 Beyond 200 nautical miles, the course of the equidistance line is influenced by base point I-4 (Devi Point) on India's relevant coasts, with co-ordinates 19° 57' 33.1" N, 86° 24' 20.0" E, shown on sketch-map No. 7.4 at page 237.

7.51 Therefore, the delimitation line described at paragraph 6.114 above continues from point Y along the same azimuth until it meets point T7 with co-ordinates 17°22'08.8" N, 89°47'16.1" E, which is equidistant from base points I-3, I-4 and B-5 (see sketch-map No. 7.5 appearing on page 239). For the sake of completeness, the full delimitation line in the continental shelf with the respective influence of the base points is reproduced on sketch-map No. 7.6 appearing on page 241. From point T7 the delimitation line follows a geodetic azimuth of 172.3° until it meets the maritime boundary between Bangladesh and Myanmar. This line is depicted in sketch-map No. 7.7 appearing on page 243.

7.52 As this map shows, the delimitation line meets the maritime boundary between Bangladesh and Myanmar as decided by the ITLOS in its judgment of 14 March 2012. Since Bangladesh is bound by this decision and India has no objection to it, India is of the opinion that the Arbitral Tribunal could fix the end point of its common maritime boundary with Bangladesh at the point where it meets the Bangladesh-Myanmar boundary thus defined – that is at point Z with co-ordinates 17°15'12.8" N, 89°48'14.7" E.

7.53 It would also be open to the Arbitral Tribunal, were it so minded, to end the line with an arrow and give the general direction of the delimitation line as has been decided in several

⁴¹⁹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, para. 455.

cases either by the ICJ⁴²⁰ or by international tribunals⁴²¹, including the ITLOS in the recent case between Bangladesh and Myanmar⁴²².

IV. Conclusions

7.54 In conclusion, India submits that

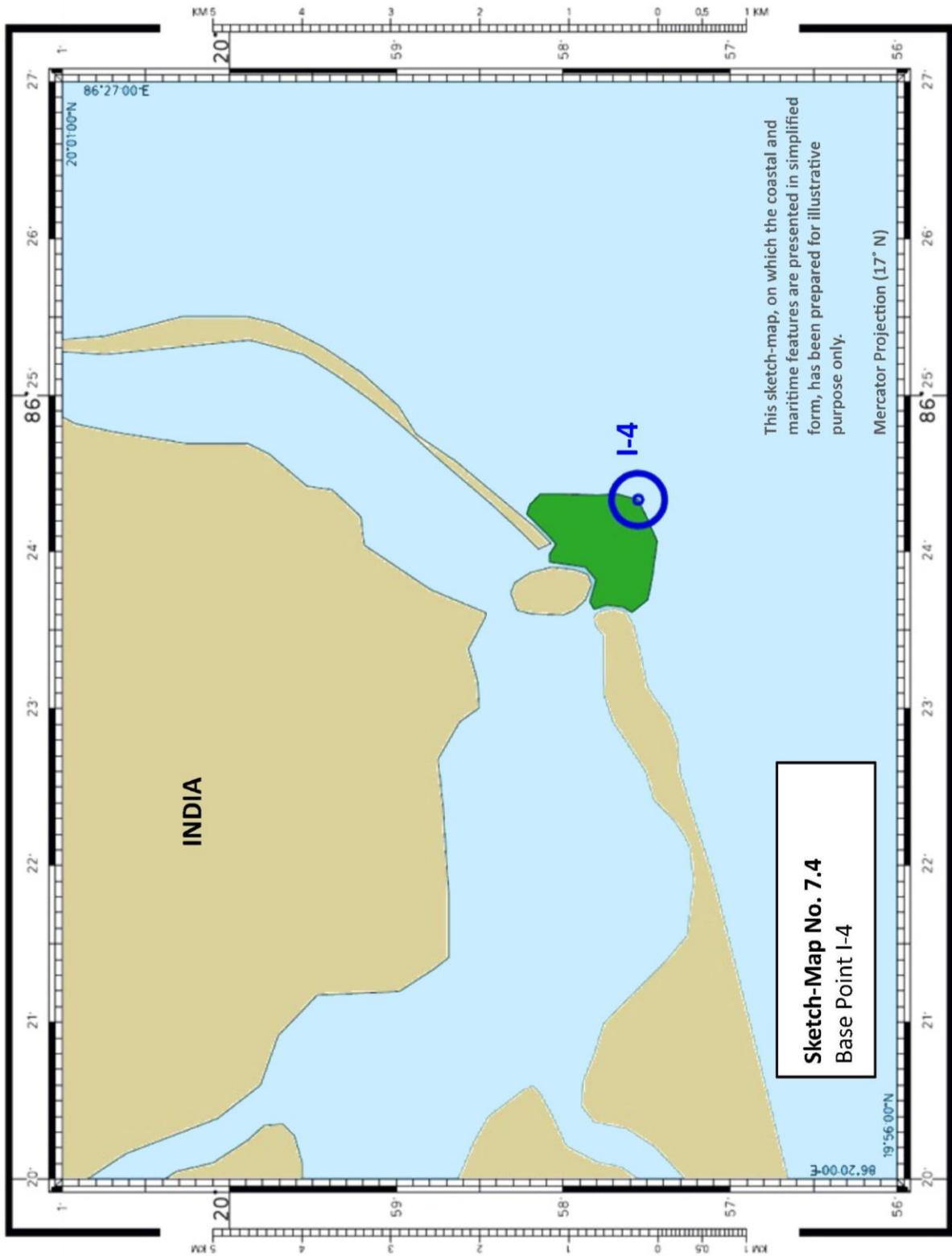
- (i) the expression “natural prolongation of [t]he land territory” in paragraph 1 of article 76 and other terms such as continental margin, slope, rise and foot of the slope are legal terms, and are to be interpreted in light of the formulae contained in article 76(4)(a) of UNCLOS;
- (ii) in particular, the nature or origin of the sediments forming the continental margin do not constitute a criterion for the definition of the continental shelf as the natural prolongation of the land territory.
- (iii) India is entitled to a continental shelf beyond 200 nautical miles both off its mainland coast and off the Andaman Islands, as India’s continental margin satisfies the appurtenance test of article 76(4) of UNCLOS;
- (iv) even if the Tribunal were to accept Bangladesh’s erroneous application of article 76, India would be entitled to a continental shelf beyond 200 nautical miles.

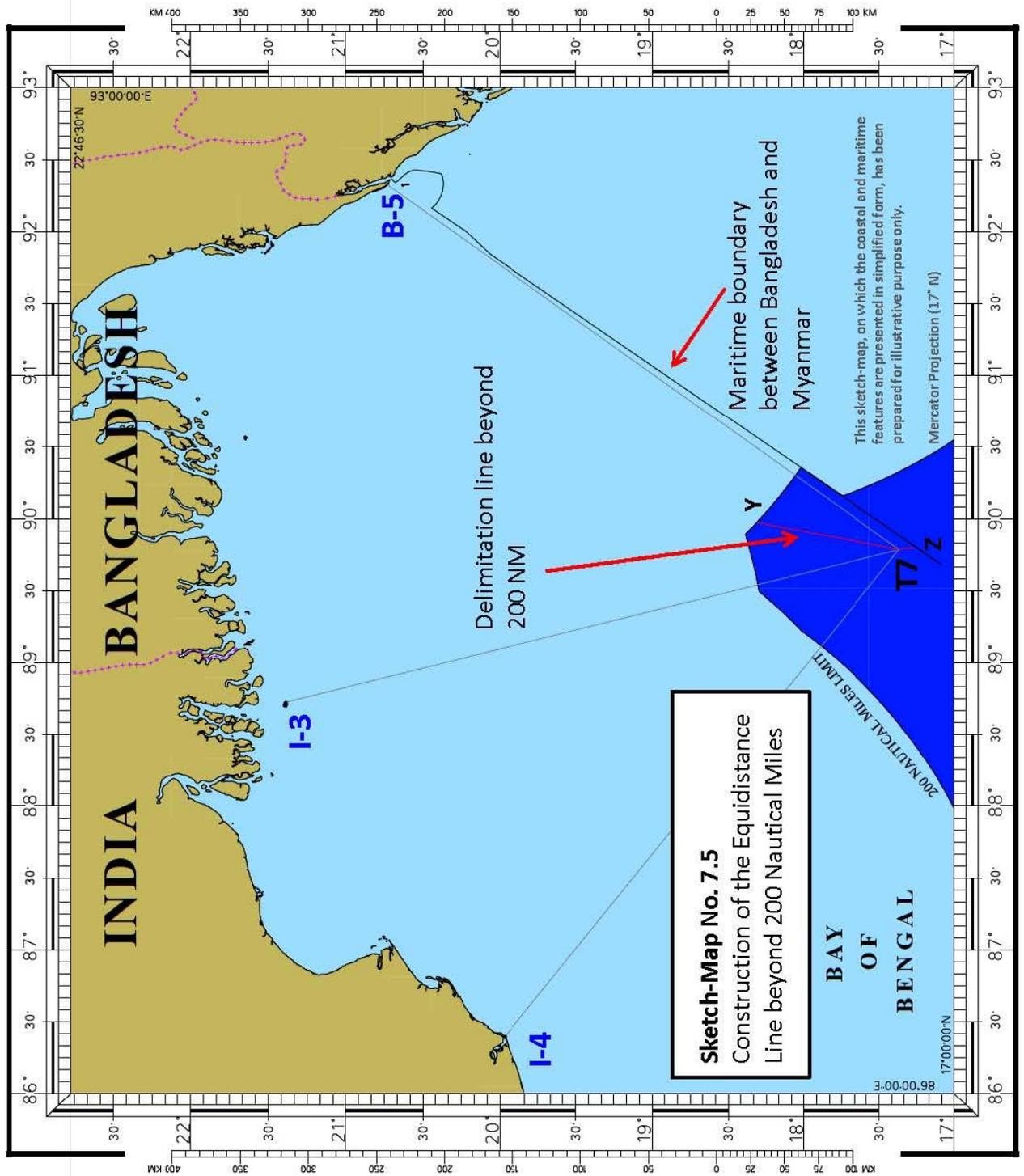
⁴²⁰ See e.g.: *Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, I.C.J. Reports 1985, pp. 26-27, paras. 21-22; or *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, I.C.J. Reports 2002, p. 421, para. 238; *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, pp. 755-759, paras. 312-318 or *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, I.C.J. Reports 2009, p. 130, para. 218 ; *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Application by Honduras for Permission to Intervene, para. 64 and *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, Application by Costa Rica for Permission to Intervene, paras. 88-89.

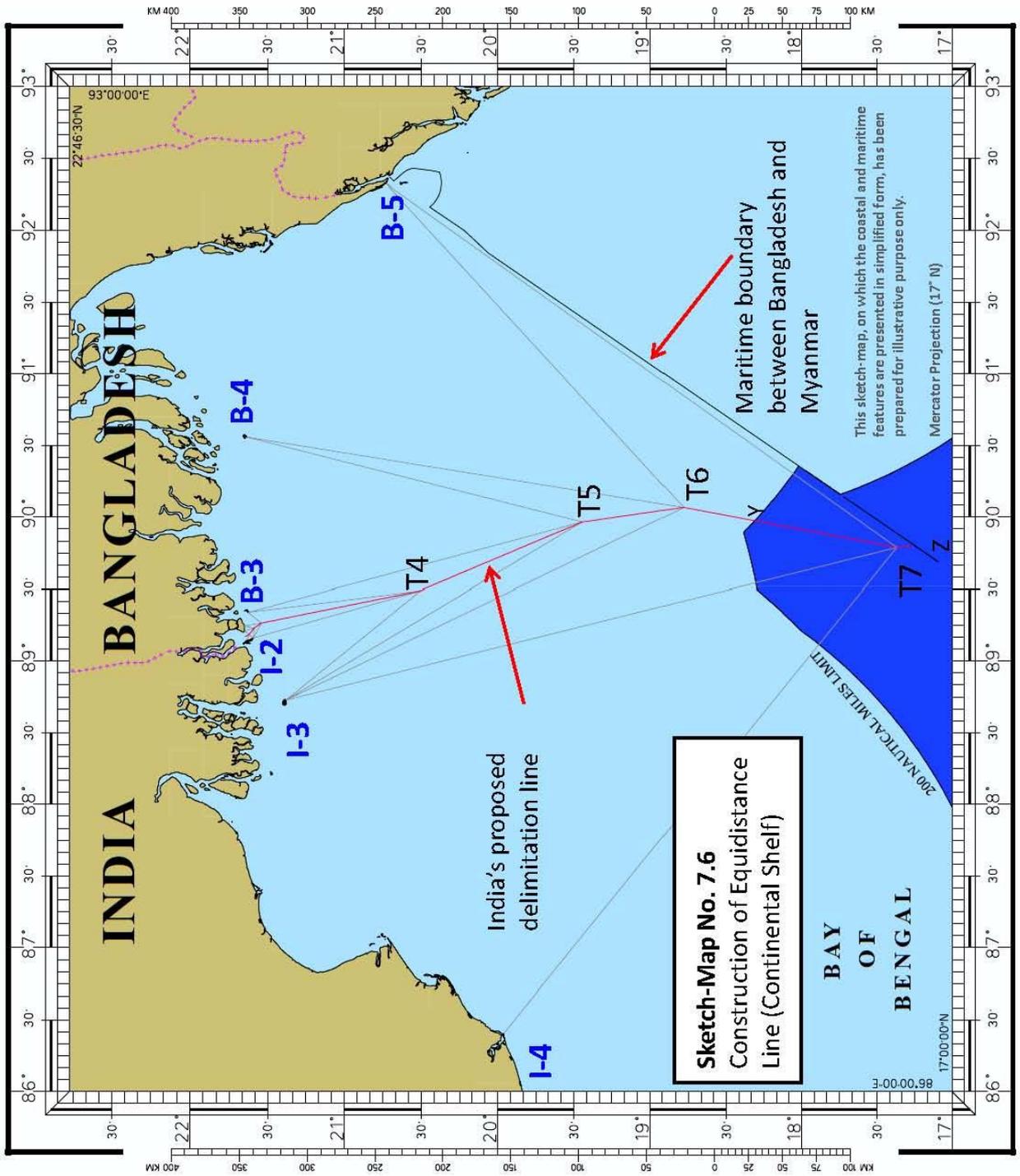
⁴²¹ *Arbitration between Barbados and the Republic of Trinidad and Tobago, relating to the delimitation of the exclusive economic zone and the continental shelf between them*, Award of 11 April 2006, UNRIAA, Vol. XXVII, pp. 244-245, paras. 381-382.

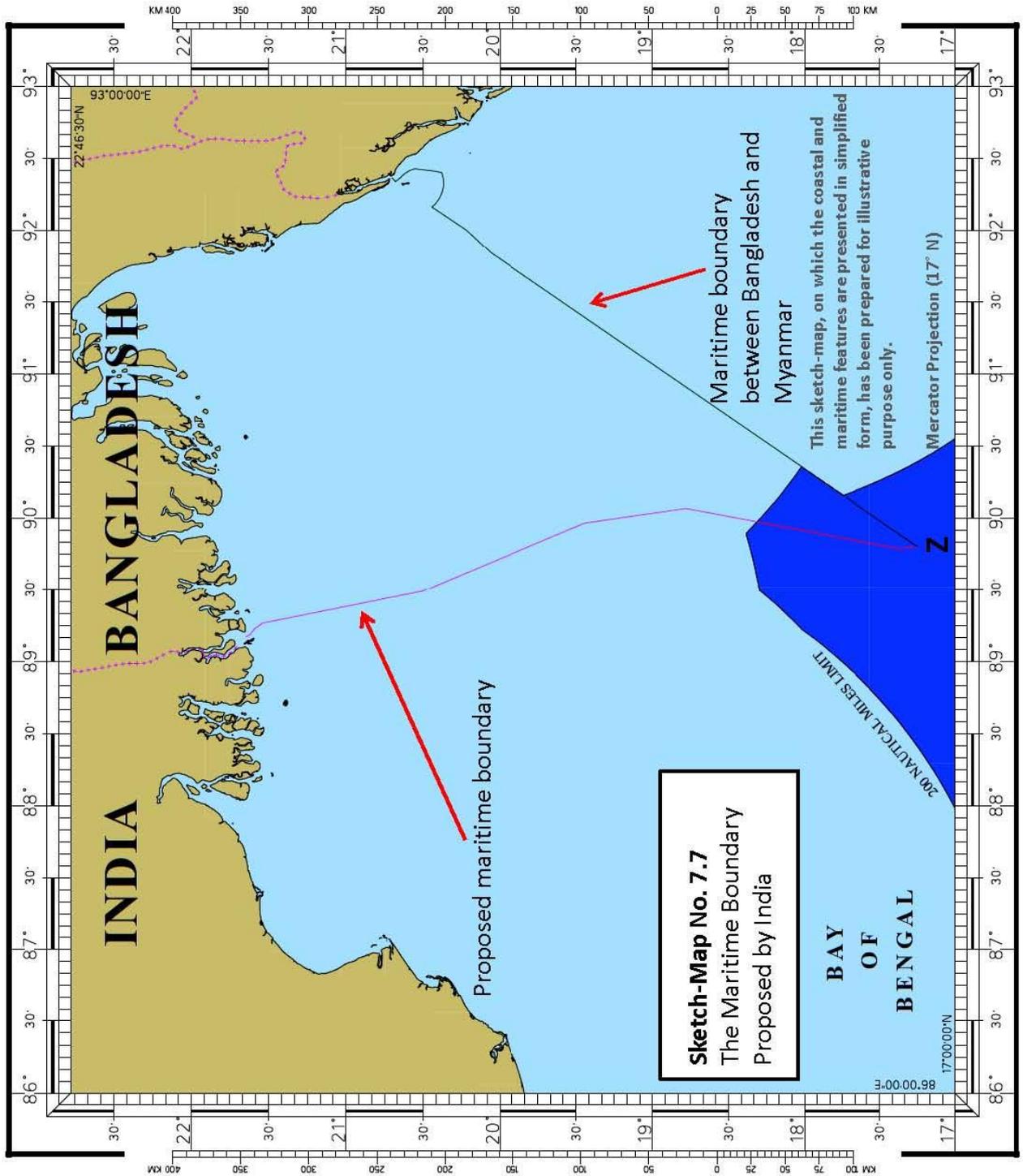
⁴²² See *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, paras. 462 and 505 and sketch-map No. 9 of the judgment.

- (v) Article 83 of UNCLOS, concerning the delimitation of the continental shelf, applies equally to the continental shelf beyond 200 nautical miles, i.e., the equidistance/relevant circumstances method;
- (vi) the delimitation beyond 200 nm therefore continues until it meets the maritime boundary between Bangladesh and Myanmar as fixed by the ITLOS in its judgment of 14 March 2012. The maritime boundary proposed by India is reproduced on sketch-map No. 7.7 on page 243.









SUBMISSIONS

Having regard to the facts and law set out in this Counter-Memorial, the Republic of India requests the Tribunal to adjudge and declare that:

The maritime boundary between India and Bangladesh runs as follows:

Starting from the land boundary terminus at Point L ($21^{\circ}38'40.4''$ N; $89^{\circ}10'13.8''$ E), the boundary follows a geodetic azimuth of 149.3° until it reaches Point T1, with the co-ordinates $21^{\circ}37'15.7''$ N, $89^{\circ}11'07.6''$ E.

From Point T1, the boundary follows a geodetic azimuth of 129.4° until it reaches Point T2, with the co-ordinates $21^{\circ}35'12.7''$ N, $89^{\circ}13'47.5''$ E.

From Point T2, the boundary follows a geodetic azimuth of 144.2° until it reaches Point T3, with the co-ordinates $21^{\circ}32'25.7''$ N, $89^{\circ}15'56.5''$ E.

From Point T3, the boundary follows a geodetic azimuth of 168.6° until it reaches Point T4, with the co-ordinates $20^{\circ}30'17.9''$ N, $89^{\circ}29'20.9''$ E.

From Point T4, the boundary follows a geodetic azimuth of 157.0° until it reaches Point T5, with the co-ordinates $19^{\circ}26'40.6''$ N, $89^{\circ}57'54.9''$ E.

From Point T5, the boundary follows a geodetic azimuth of 171.7° until it reaches Point T6, with the co-ordinates $18^{\circ}46'43.5''$ N, $90^{\circ}04'02.5''$ E.

From Point T6, the boundary follows a geodetic azimuth of 190.7° until it reaches Point T7, with the co-ordinates $17^{\circ}22'08.8''$ N, $89^{\circ}47'16.1''$ E.

From Point T7, the boundary follows a geodetic azimuth of 172.342° until it meets the maritime boundary line between Bangladesh and Myanmar.

(The co-ordinates are referred to WGS 84 datum)

The Republic of India reserves the right to supplement or to amend these submissions in the course of the present proceedings.

31 July 2012

Dr. Neeru Chadha,
Joint Secretary and the Legal Adviser
Legal and Treaties Division,
Ministry of External Affairs, India
Agent of the Republic of India

APPENDIX

INDIA'S CONTRIBUTION TO THE SEDIMENTARY PROCESSES IN THE BAY OF BENGAL

A.1 After its drifting from Antarctica, the northward movement of the Indian plate and the formation of oceanic crust adjacent to the Indian continental margin provided necessary basinal settings in the Bay of Bengal for receiving significant amounts of sediments from the peninsular rivers of India between 120 and 40 million years ago, and from Ganges and Brahmaputra Rivers since only about 15 million years ago, when the uplift of the Himalaya occurred. The Himalaya was formed as a result of the collision between the Eurasian and Indian plates. The initiation of this collision known as “soft collision” occurred about 59 million years ago, whereas, the major collision, known as “hard collision” took place around 15 million years ago⁴²³. Prior to the collision, sediments into the Bay of Bengal were derived largely from the relatively smaller river systems of the peninsular India like Mahanadi, Godavari etc. The switch in the main river system source of sediments with time was not distinct but gradational. In the post-collision period, the sediment input from the peninsular India was less visible because of rapid sediment supply from the Himalayas to the north.

A.2 The entire suite of sediments in the Bay of Bengal can broadly be categorized into two major sedimentary packages: those sediments deposited in the Bay of Bengal prior to the collision of Indian plate against the Eurasian and the Burmese plates (“the pre-collision sediments”, older than about 59 million years before present-day) and those sediments deposited after the establishment of the contact of the Indian subcontinent with the Asian continent (“the post-collision sediments”, younger than ~ 15 million years). Prior to the soft collision (before about 59 million years ago), no active deposits came into the Bay from the north and the major sediment supply in this part was mostly from west. The existing Mahanadi and Godavari Rivers are considered as major sediment sources inpre-collisional

¹ R. Bastia, S. Das and M. Radhakrishna, “Pre- and Post-Collisional Depositional History in the Upper and Middle Bengal Fan and Evaluation of Deepwater Reservoir Potential along the Northeast Continental Margin of India”, *Marine and Petroleum Geology*, Vol. 27, 2010, pp. 2051-2061 (Annex IN-37). The ages of collision are a matter of ongoing academic debate, see for example D. J. J. van Hinsbergen, P. C. Lippert, G. Dupont-Nivet, N. McQuarrie, P. V. Doubrovinea, W. Spakmani and T. H. Torsvik, “Greater India Basin Hypothesis and a Two-Stage Cenozoic Collision between India and Asia”, *Proceedings of the National Academy of Sciences*, Vol. 109, 2012, pp. 7659-7664 who give an age of 50 million years and 25-20 million years for the pre- and post-collision sediments respectively.

time⁴²⁴. The switch in the main river system source of sediments with time was not distinct but gradational. In the post-collision period, the sediment input from the peninsular India was less visible because of rapid sediment supply from the Himalaya to the north.

A.3 As a part of India's major national endeavour of establishing the outer limits of its continental shelf beyond 200 nautical miles in the Bay of Bengal, Indian scientists have collected a wealth of high-quality geophysical data in and off India's EEZ. Analyses of this data has helped refine the earlier estimates of sediment thickness in the Bay of Bengal by Curray and others⁴²⁵ utilizing sparse data collected decades back (see figure No. A.1; compare with the figures Nos. A.2 to A.4 at the following pages). The studies establish that the thicknesses of pre-collision sediments are greater between the 85°E Ridge and peninsular India's east coast as compared to elsewhere in the Bay of Bengal. The maximum thickness of the pre-collision sediment package is ~ 5.0 km in the delta area of Krishna-Godavari basin figure No. A.2 at page 251). Very thin sediments are observed over the 85°E and 90°E Ridges. During the pre-collision period, the sediment supply was in general, higher in the western parts of the Bay of Bengal as the Mahanadi and Krishna-Godavari Rivers of peninsular India were very active and drained huge sediments from Deccan and other inland regions of India⁴²⁶.

A.4 The pattern of post-collision sediment distribution (figure No. A.3 at page 253) however, differs from the sediment pattern of total and pre-collision sediments in the Bay of Bengal. The thickness of the post-collision sediment package is more in the central parts of the Bay of Bengal than in the western parts bordering peninsular India. This would suggest that during the post-collision period, the sediment supply into the Bay was more from the Ganges-Brahmaputra-Irrawady river systems, relative to the peninsular rivers.

⁴²⁴ D. Gopala Rao, K. S. Krishna, and D. Sar, "Crustal Evolution and Sedimentation History of the Bay of Bengal since the Cretaceous", *Journal of Geophysical Research*, Vol. 102, 1997, pp. 17,747-17,768; K. S. Krishna, J. M. Bull and R. A. Scrutton, "Evidence for Multiphase Folding of the Central Indian Ocean Lithosphere", *Geology*, Vol. 29, 2001, pp. 715-718; T. Schwenk and V. Spieß, *Architecture and Stratigraphy of the Bengal Fan as Response to Tectonic and Climate Revealed from High-Resolution Seismic Data*, Society for Sedimentary Geology, 2009, pp. 107-131; L. Michael and K. S. Krishna, "Dating of the 85°E Ridge (Northeastern Indian Ocean) Using Marine Magnetic Anomalies", *Current Science*, Vol. 100, 2011, pp. 1314-1322.

⁴²⁵ J. R. Curray, F. J. Emmel, and D. J Moore, "The Bengal Fan: Morphology, Geometry, Stratigraphy, History and Processes", *Marine and Petroleum Geology*, Vol. 19, 2003, pp. 1191-1223.

⁴²⁶ D. Gopala Rao *et al*, 1997, *op. cit.*; R. Bastia, S. Das and M. Radhakrishna, 2010, *op. cit.*

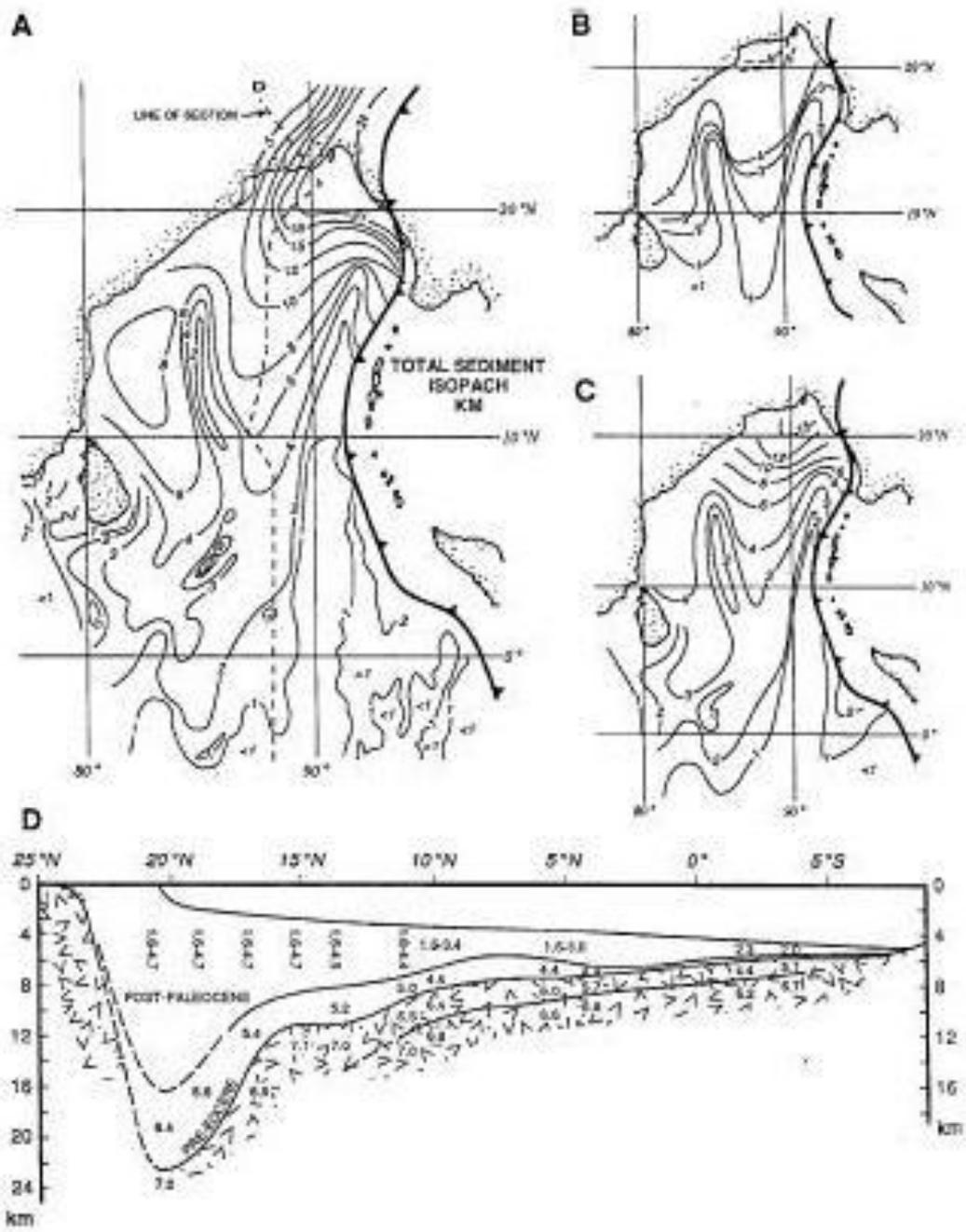


Figure No. A.1 Contour maps of (A) total sediment thickness, (B) pre-collision sediments, and (C) post-collision sediments in the Bay of Bengal. D is a longitudinal section along the Bay of Bengal indicating the suite of pre-collision and post-collision sediments (from J. R. Curray, F. J. Emmel and D. J. Moore, “The Bengal Fan: Morphology, Geometry, Stratigraphy, History and Processes”, *Marine and Petroleum Geology*, Vol. 19, 2003, pp. 1191-1223).

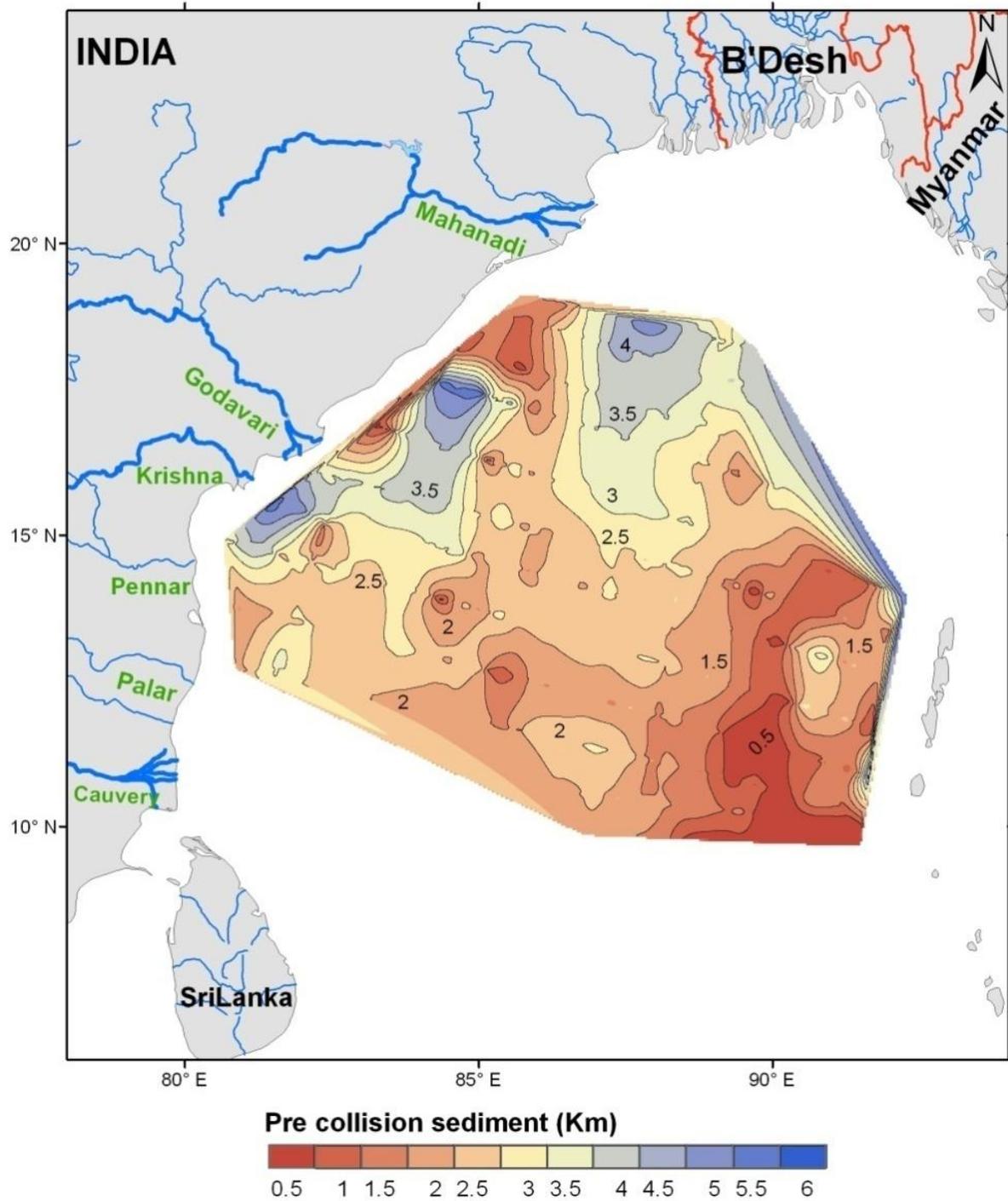


Figure No. A.2 Pre-collision sediment thickness (in km) map of the Bay of Bengal, based on seismic data collected for delineation of the outer limits of the Indian Continental Shelf.

The two-way-travel time values from seismic reflection data have been converted to thickness values using the wide-angle reflection velocities.

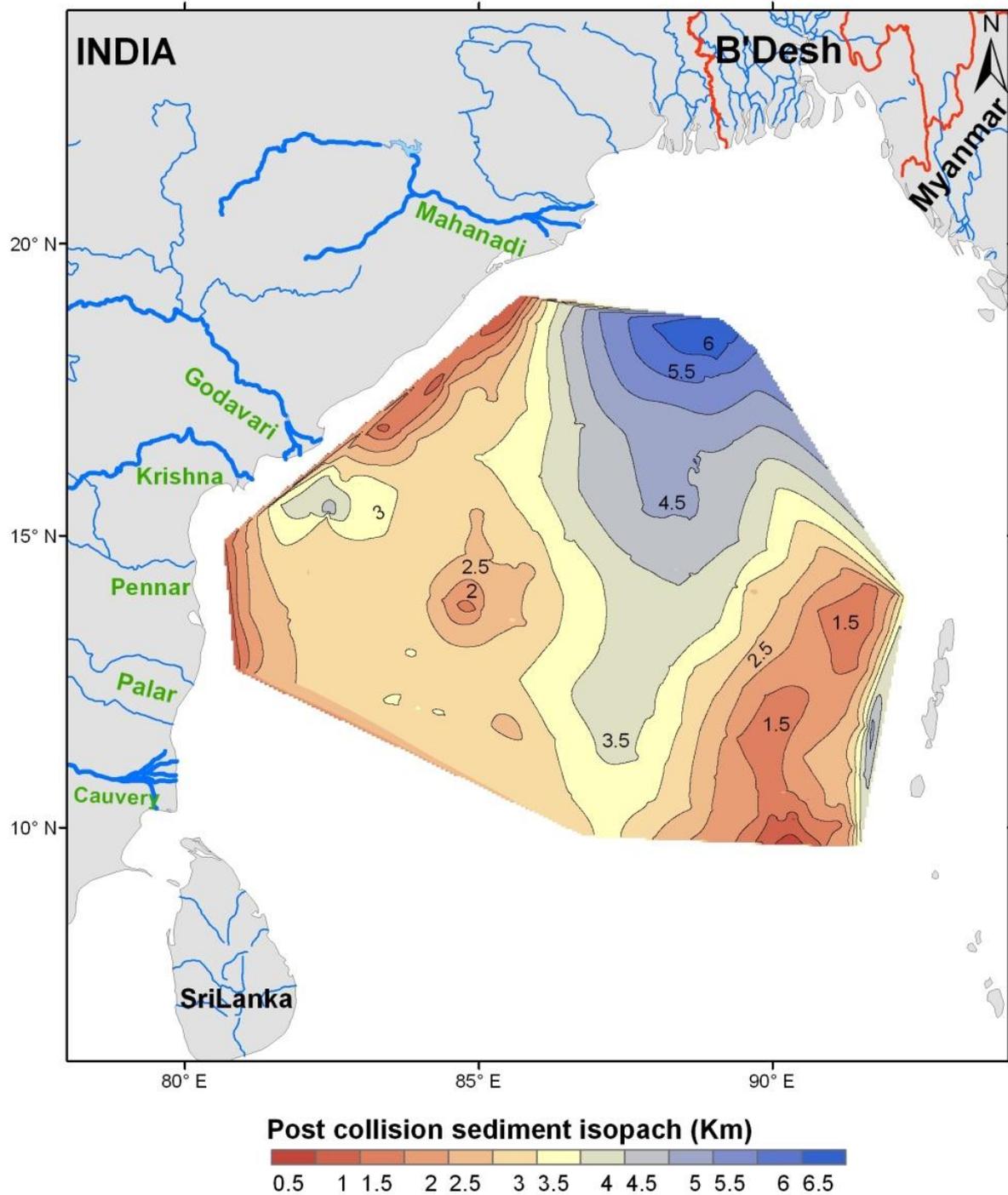


Figure No. A.3 Post-collision sediment thickness (in km) map of the Bay of Bengal, based on seismic data collected for delineation of the outer limits of the Indian Continental Shelf.

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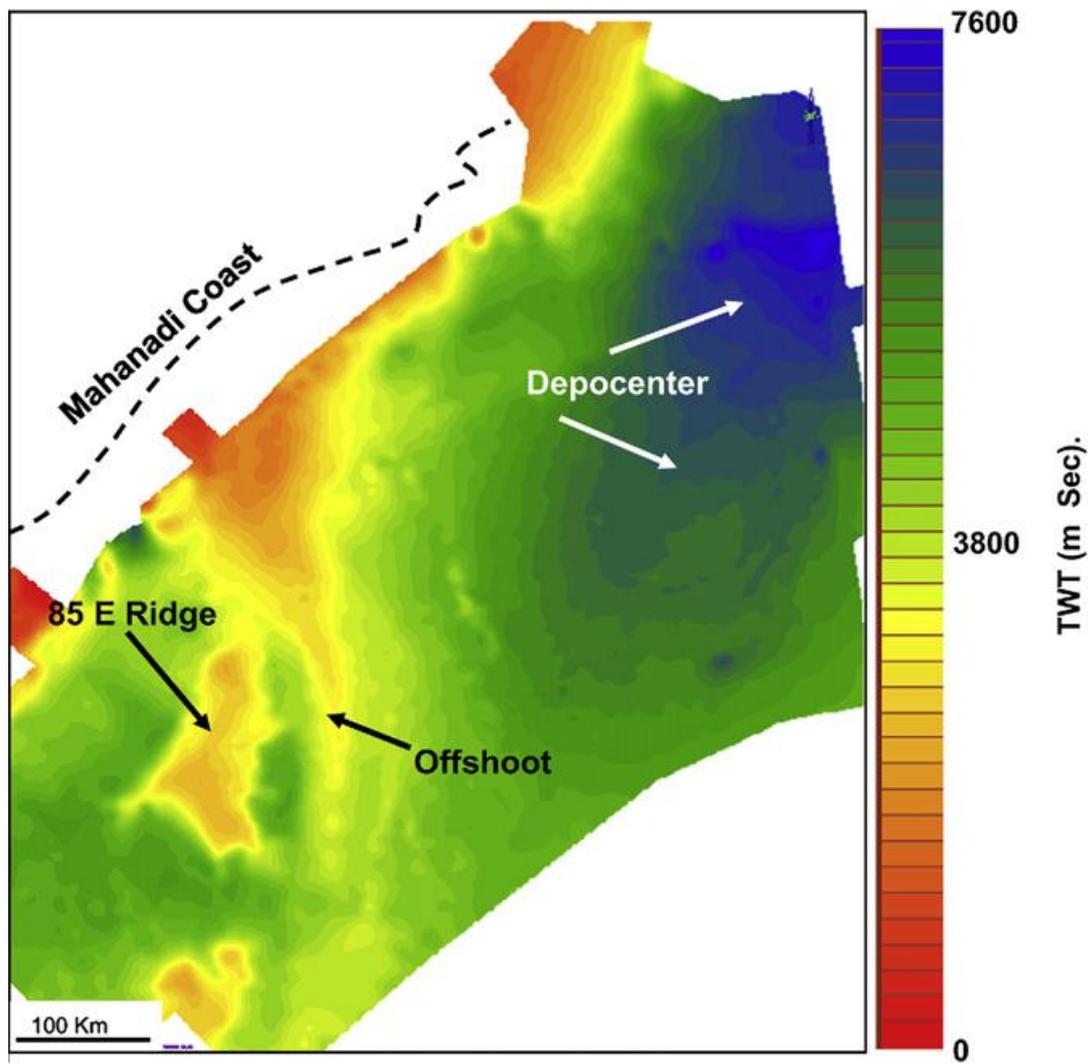


Figure No. A.4 Sediment isopach (in time) map showing the total sediment thickness.

Note the thickness increment towards the north (marked as depocenter) and thickness reduction over the 85°E ridge and its offshoot as well as towards Mahanadi shelf.

A.5 Notwithstanding the above, it has now been established that even during the post-collision period, there have been phases in the evolutionary history of the Bay of Bengal when peninsular rivers were more active in supplying sediments to the Bay of Bengal than the mighty river systems from the north⁴²⁷. These studies which are based on analyses of seabed and sub-seabed sediment samples retrieved from the Bay of Bengal conclusively establish that between about 6.5 and 0.9 million years ago, the supply of sediments from the peninsular India and Sri Lanka to the Bengal Fan was significantly higher than from the Higher Himalayas. These studies also establish that between 7.5 and 6.5 million years ago, the drainage system of the River Ganges was reorganized due to the tectonic movement in the Himalayas, with the result that from about 6.5 million years ago to about 900,000 years ago, most part of the sediments from the Himalayas were discharged to the Arabian Sea through the Indus River rather than to the Bengal Fan through the Ganges drainage.

A.6 Published studies by Sangode and others (1991) establish that even during the past 900,000 years, sediments brought in by the peninsular Godavari River have dominated the build-up of the Bengal Fan at certain discrete time intervals⁴²⁸. This dominance of the peninsular Indian River has been attributed to a weakening of the Himalayan sediment source (Ganges-Brahmaputra) after the Last Glacial Maxima, between 23,000 and 14,000 years before present. Surface sediment samples recovered from the western margin of the Bengal Fan as well as from the middle Fan also suggest that sediments from the continental shelf of peninsular India off the Krishna-Godavari deltas have contributed significantly to the Bengal Fan sediments⁴²⁹.

⁴²⁷ D. A. V. Stow, K. Amano, P. S. Balson, G. W. Brass, J. Corrigan, C. V. Raman, J. J. Tiercelin, M. Townsend and N. P. Wijayananda, "Sediment Facies and Processes on the Distal Bengal Fan, Leg 116", in J. R. Cochran, D. A. V. Stow *et al.* (eds.), *Proceedings of the Ocean Drilling Program, Scientific Results*, Vol. 116, 1990, pp. 377-396 (Annex IN-21); K. Amano and A. Taira, "Two-Phase Uplift of Higher Himalayas since 17 Ma", *Geology*, Vol. 20, 1992, p. 391-394 cited in D. K. Rea, "Delivery of Himalayan Sediment to the Northern Indian Ocean and its Relation to Global Climate, Sea Level, Uplift, and Seawater Strontium", in R. A. Duncan *et al.* (eds.), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, 1992, pp. 387-402 (Annex IN-22); P. D. Clift and J. Blustajn, "Reorganization of the Western Himalayan River System After Five Million Years Ago", *Nature*, Vol. 438, 2005, pp. 1001-1003 (Annex IN-30); A. A. Allen, "Volte-face in the Punjab", *Nature*, Vol. 438, 2005, pp. 925-926 (Annex IN-29).

⁴²⁸ S. J. Sangode, N. Suresh and T. N. Bagati, "Godavari Source in the Bengal Fan Sediments: Results from Magnetic Susceptibility Dispersal Pattern", *Current Science*, Vol. 80, 2001, pp. 660-664 (Annex IN-27).

⁴²⁹ A. V. R. Sastry, K. V. Suresh, M. V. Ramesh and S. Kamalakaram, "Sediment Transport from the Outer Shelf into the Lower Bengal Fan", *Geological Survey of India*, Spl. Pub. No. 29, 1992, pp. 189-195 (Annex IN-23); N. P. C. Reddy and K. Mohano Rao, "Heavy Sediment Influx during Early Holocene: Inference from Clay Mineral Studies in a Core from the Western Bay of Bengal", *Current Science*, Vol. 81, 2001, pp. 1361-1364 (Annex IN-26).

TABLE OF SKETCH-MAPS AND FIGURES

Sketch-Map No. 2.1	Concavity in the Bay of Bengal.....	15
Sketch-Map No. 2.2	New Moore Island	17
Figure No. 2.3	Satellite Image (Jan 2012) New Moore Island	19
Figure No. 2.4	Ganges-Brahmaputra-Meghna Basin	27
Figure No. 2.5	Pre-Collision Sediment Thickness.....	31
Figure No. 2.6	Post-Collision Sediment Thickness	33
Figure No. 3.1	Oil Block Area Claimed by Bangladesh in 2008.....	49
Map No. 4.1	Radcliffe Map	55
Sketch-Map No. 4.2	Extract of Navigation Chart Showing Main Channel in Estuary.....	59
Sketch-Map No. 4.3	Closing Line.....	67
Figure No. 4.4	Satellite Image (Jan 2011)	69
Sketch-Map No. 4.5	Headlands and Closing Line	71
Sketch-Map No. 4.6	Land Boundary Terminus	79
Sketch-Map No. 5.1	Reproduction of Sketch-Map No. 8 from <i>Nicaragua v. Honduras</i> .	89
Sketch-Map No. 5.2	Proper Bisector Line	99
Sketch-Map No. 5.3	Base Points of Parties for Construction of Delimitation Line in the Territorial Sea	107
Sketch-Map No. 5.4	Construction of Delimitation Line in the Territorial Sea.....	109
Sketch-Map No. 5.5	The Delimitation Line in the Territorial Sea	111
Sketch-Map No. 6.1	Bangladesh's First Proposed Relevant Coasts (Reproduction of figure 6.17 of Bangladesh Memorial).....	125
Sketch-Map No. 6.2	Bangladesh's Second Proposed Relevant Coasts (Reproduction of figure 6.18 of Bangladesh Memorial).....	127

Sketch-Map No. 6.3	Bangladesh’s Different Approaches of the Relevant Coasts	133
Sketch-Map No. 6.4	ITLOS’ Measurement of the Relevant Coasts of Bangladesh and Myanmar (Extract from ITLOS Judgment, 14 March 2012, <i>Bangladesh/Myanmar</i> , p. 67)	135
Sketch-Map No. 6.5	The Relevant Coasts of Bangladesh	137
Sketch-Map No. 6.6	The Relevant Coasts of India.....	141
Sketch-Map No. 6.7	The Relevant Area for Delimitation	143
Sketch-Map No. 6.8	Base Points I-2 and I-3	149
Sketch-Map No. 6.9	Base Point B-3	153
Sketch-Map No. 6.10	Base Point B-4	155
Sketch-Map No. 6.11	Base Point B-5	157
Sketch-Map No. 6.12	Provisional Equidistance Line	159
Sketch-Map No. 6.13	India’s Proposed Line v. “India’s Claim Line” according to Bangladesh.....	161
Sketch-Map No. 6.14	Maritime Delimitation Agreements between India, Myanmar and Thailand in the Gulf of Martaban	169
Sketch-Map No. 6.15	Maritime Boundary between India and Myanmar in the Arakan Region.....	171
Sketch-Map No. 6.16	Concavities within the Concavity	175
Sketch-Map No. 6.17	Bangladesh’s Access to the Continental Shelf beyond 200 Nautical Miles	181
Sketch-Map No. 6.18	Cuts off Resulting from the Maritime Delimitation Agreements between India, Maldives and Sri Lanka	185
Sketch-Map No. 6.19	Cuts Off Resulting from the Maritime Delimitation Agreements between India, Myanmar and Thailand	187
Sketch-Map No. 6.20	Figure 1.2 of Bangladesh Memorial	191
Sketch-Map No. 6.21	Non-Disproportionality Test: Coastal Lengths Ratio	201

Sketch-Map No. 6.22	Non-Disproportionality Test: Maritime Areas Ratio.....	203
Sketch-Map No. 6.23	Course of the Maritime Boundary in the Exclusive Economic Zone and the Continental Shelf within 200 Nautical Miles.....	205
Figure No. 7.1 (a)	Geological Continental Margin	215
Figure No. 7.1 (b)	Geomorphological Continental Margin.....	215
Sketch-Map No 7.2.	Locations of the Foot of the Slope Points Relevant for the Test of Appurtenance	225
Sketch-Map No 7.3.	Approximate Locations of the Foot of the Slope Points and the Cardiner Formula Line for Peninsular India and Andamans.....	229
Sketch-Map No. 7.4	Base Point I-4	237
Sketch-Map No. 7.5	Construction of the Equidistance Line beyond 200 Nautical Miles	239
Sketch-Map No. 7.6	Construction of Equidistance Line (Continental Shelf)	241
Sketch-Map No. 7.7	The Maritime Boundary Proposed by India	243
Figure No. A.1	Contour Maps of Total Sediment Thickness, Pre-Collision Sediments, Post-Collision Sediments and Longitudinal Section along the Bay of Bengal	249
Figure No. A.2	Pre-Collision Sediment Thickness.....	251
Figure No. A.3	Post-Collision Sediment Thickness	253
Figure No. A.4	Sediment Isopach (in Time) Map Showing the Total Sediment Thickness	255

LIST OF ANNEXES

(VOLUME II)

- Annex IN-1** Government of Bengal, Notification No. 964 Jur., 24 January 1925.
- Annex IN-2** Bengal Boundary Commission Report (Radcliffe Award) to His Excellency the Governor General of India, including Annexure A and B, 12 August 1947.
- Annex IN-3** International Law Commission, Report of the Committee of Experts on Technical Questions Concerning the Territorial Sea, The Hague, 14 to 16 April 1953, reproduced in English in N. Nandan and S. Rosenne (eds.), *United Nations Convention on the Law of the Sea, 1982: A Commentary*, Vol. II, pp. 59-63 (the original French text of the report is reproduced in the *Yearbook of the International Law Commission*, Vol. II, 1953, pp. 77-79).
- Annex IN-4** United Nations General Assembly, Resolution 3067(XXVIII), Reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction and use of their resources in the interests of mankind, and convening of the Third United Nations Conference on the Law of the Sea, 16 November 1973.
- Annex IN-5** Bangladesh Territorial Waters and Maritime Zones Act, No. XXVI, 14 February 1974.
- Annex IN-6** Notification No. LT-1-3-74 of the Ministry of Foreign Affairs of Bangladesh, 13 April 1974.
- Annex IN-7** Summary Records of the 27th Plenary Meeting of the Third United Nations Conference on the Law of the Sea, Doc. A/CONF.62/ SR.27, 3 July 1974.
- Annex IN-8** Summary Records of the 5th Meeting of the Second Committee of the Third United Nations Conference on the Law of the Sea, Doc. A/CONF.62/C.2/SR.5, 16 July 1974.
- Annex IN-9** *Note Verbale* from the High Commission of India to the Joint Secretary, Ministry of External Affairs of India, 19 September 1974.
- Annex IN-10** *Note Verbale* from the High Commission of India to the Ministry of Foreign Affairs of Bangladesh, 31 October 1974.

- Annex IN-11** *Note Verbale* from the High Commission of Bangladesh to the Ministry of External Affairs of India, 13 December 1974.
- Annex IN-12** Press release of 2 April 1975 on the talks held between the Foreign Ministers of India and Bangladesh at New Delhi from 29 March to 2 April 1975.
- Annex IN-13** India's Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, No. 80, 28 May 1976.
- Annex IN-14** Joint press statement issued on the conclusion of Indo-Bangladesh talks on delimitation of maritime boundary, 24 March 1978 reproduced in A. S. Bhasin (ed.), *India - Bangladesh Relations: Documents 1971-2002*, Vol. IV, 2003, p. 1919.
- Annex IN-15** Report on the Indo-Bangladesh Talks on Maritime Boundary, 5 December 1980 reproduced in A. S. Bhasin (ed.), *India - Bangladesh Relations: Documents 1971-2002*, Vol. IV, 2003, pp. 1930-1931.
- Annex IN-16** Letter from the representative of Bangladesh to the President of the Conference, Doc. A/CONF.62/L.140, 28 April 1982.
- Annex IN-17** Letter from the representative of India to the President of the Conference, Doc. A/CONF.62/L.148, 30 April 1982.
- Annex IN-18** Letter from the representative of Burma to the President of the Conference, Doc. A/CONF.62/L.149, 30 April 1982.
- Annex IN-19** Summary Records of the 191st Plenary Meeting of the Third United Nations Conference of the Law of the Sea, Doc. A/CONF.62/SR.191, 9 December 1982.
- Annex IN-20** A. H. A. Soons, "The Effects of a Rising Sea Level on Maritime Limits and Boundaries", *Netherlands International Law Review*, Vol. 37, 1990, pp. 207-232.
- Annex IN-21** D. A. V. Stow, K. Amano, P. S. Balson, G. W. Brass, J. Corrigan, C. V. Raman, J. J. Tiercelin, M. Townsend and N. P. Wijayananda, "Sediment Facies and Processes on the Distal Bengal Fan, Leg 116", in J. R. Cochran, D. A. V. Stow *et al.* (eds.), *Proceedings of the Ocean Drilling Program, Scientific Results*, Vol. 116, 1990, pp. 377-396.
- Annex IN-22** D. K. Rea, "Delivery of Himalayan Sediment to the Northern Indian Ocean and its Relation to Global Climate, Sea Level, Uplift, and Seawater Strontium", in R. A. Duncan *et al.* (eds.), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, 1992, pp. 387-402.

- Annex IN-23** A. V. R. Sastry, K. V. Suresh, M. V. Ramesh and S. Kamalakaram, “Sediment Transport from the Outer Shelf into the Lower Bengal Fan”, *Geological Survey of India*, Spl. Pub. No. 29, 1992, pp. 189-195.
- Annex IN-24** P. Saenger and N. A. Siddiqi, “Land from the Sea: The Mangrove Afforestation Program of Bangladesh”, *Ocean and Coastal Management*, Vol. 20, 1993, pp. 23-39.
- Annex IN-25** Relevant Abstracts of the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf, Doc. CLCS/11, adopted at its fifth session on 13 May 1999.
- Annex IN-26** N. P. C. Reddy and K. Mohano Rao, “Heavy Sediment Influx during Early Holocene: Inference from Clay Mineral Studies in a Core from the Western Bay of Bengal”, *Current Science*, Vol. 81, 2001, pp. 1361-1364.
- Annex IN-27** S. J. Sangode, N. Suresh and T. N. Bagati, “Godavari Source in the Bengal Fan Sediments: Results from Magnetic Susceptibility Dispersal Pattern”, *Current Science*, Vol. 80, 2001, pp. 660-664.
- Annex IN-28** F. Blasco and M. Aizpuru, “Mangroves along the Coastal Stretch along the Bay of Bengal: Present Status”, *Indian Journal of Marine Sciences*, Vol. 31, 2002, pp. 9-20.
- Annex IN-29** A. A. Allen, “Volte-Face in the Punjab”, *Nature*, Vol. 438, 2005, pp. 925-926.
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- Annex IN-31** G. Prasetya, “The Role of Coastal Forests and Trees in Protecting against Coastal Erosion”, in S. Braatz, S. Fortuna, J. Broadhead and R. Leslie (eds.), *Coastal Protection in the Aftermath of the Indian Ocean Tsunami: What Role for Forests and Trees?*, *Proceedings of the Regional Technical Workshop, KhaoLak, Thailand, 28–31 August 2006*, FAO, 2007, pp. 103-130.
- Annex IN-32** Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources of the Government of The People’s Republic of Bangladesh and Bangladesh Oil, Gas And Mineral Corporation (Petrobangla), Notice Inviting Bids for Exploration of Oil and Natural Gas under Bangladesh Offshore Bidding Round 2008 (with map), February 2008.

- Annex IN-33** Y. Tanaka, “Reflections on Maritime Delimitation in the *Nicaragua/Honduras Case*”, *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht*, Vol. 68, 2009, pp. 903-937.
- Annex IN-34** *Note Verbale* from the Ministry of Foreign Affairs of Bangladesh to the High Commission of India, Notification under Article 287 and Annex VII, Article 1 of UNCLOS, 8 October 2009.
- Annex IN-35** *Note Verbale* from the Permanent Mission of Bangladesh to the Secretary-General of the United Nations, 29 October 2009.
- Annex IN-36** *Note Verbale* from the Ministry of External Affairs of India to the High Commission of Bangladesh, 6 November 2009.
- Annex IN-37** R. Bastia, S. Das and M. Radhakrishna, “Pre- and Post-Collisional Depositional History in the Upper and Middle Bengal Fan and Evaluation of Deepwater Reservoir Potential along the Northeast Continental Margin of India”, *Marine and Petroleum Geology*, Vol. 27, 2010, pp. 2051-2061.
- Annex IN-38** M. M. Rahman and S. K. Biswas, “Feasible Solution of Protection and Adaptation Strategy for Coastal Zone of Bangladesh”, *Pakistan Journal of Meteorology*, Vol. 8, 2011, pp. 9-19.
- Annex IN-39** List of Agreements concluded by India with neighbouring countries.