

**Bisectors and Equidistance: Technical Aspects of Delimitation  
with reference to Bangladesh/Myanmar**

**Robin CLEVERLY (UK) <sup>1</sup>**

**Head, Law of the Sea Group, UK Hydrographic Office,**

**robin.cleverly@ukho.gov.uk**

**Abstract**

The geography and geology of the Bay of Bengal pose unique problems for delimitation that are being addressed by two cases involving Bangladesh: versus Myanmar (Burma) to the southeast, and India to the west. The Bangladesh/Myanmar boundary was resolved in March 2012 by ITLOS; the judgment in the case with India (before an Annex VII tribunal) is not expected before 2014. This paper will address the technical issues raised during the Bangladesh/Myanmar case: dealing with a concave coastline, delimiting the outer continental shelf, and the weighting of small islands.

This paper will review the technical options used by the Parties to resolve these issues and the approach used by the Tribunal to achieve an equitable delimitation through the territorial sea, EEZ and outer continental shelf.

**Geo-aspects**

*Concavity*

Firstly, it has long been recognised that Bangladesh is particularly disadvantaged by the deep concavity at the head of the Bay of Bengal. This was cited as an analogy by Germany in the North Sea cases as far back as 1969. Bangladesh's coast can be divided into two main segments – one running north-south adjacent to Myanmar, the other running east-west adjacent to India. The effect of this concavity is to cut-off Bangladesh about 180M from its coast based on equidistance lines.

*Natural Prolongation and the Outer Continental Shelf*

Secondly, all three of the coastal states have made submissions to the CLCS on their outer continental shelves beyond 200M. All three of the submissions overlap. The submissions all used the 1% sediment thickness formula based on the thick sedimentary deposits derived from the Ganges-Brahmaputra delta that forms the deep-sea Bengal Fan. Both Parties' objectives were to be able to access the OCS.

*St Martin's and Oyster Islands*

Thirdly, the relatively minor but significant feature of St Martin's Island. This is an undisputedly Bangladeshi island that lies about 5M offshore but inconveniently to the south of the land boundary terminus. The Parties differed on the weight to be applied to the island; the Tribunal gave it full weight in the territorial sea but no weight beyond.

---

<sup>1</sup> The opinions expressed are those of the author alone and do not necessarily represent those of the UK Hydrographic Office, the UK Government, or the Bangladesh Government.

### *Straight baselines*

Both states have proclaimed straight baselines along their coasts – and both have been subject to protest by the other Party. Neither Party used their straight baselines during the case.

### **Territorial Sea Delimitation**

The Territorial Sea (TS) delimitation turned out to be fairly straightforward, despite the Parties arguing over whether the TS boundary had been previously agreed or not. The land boundary terminus (LBT) had been agreed by both Parties prior to the case and was not at issue.

There are two small islands situated close to the LBT:

1. St Martin's Island is a Bangladesh island about 5M offshore and just south of the LBT. It is about 6km x 1km, has a population of about 70,000 and is an important tourist destination.
2. Oyster Island is a small sandy outcrop a few hundred metres long with a lighthouse but no permanent population. However it is situated more than 24M from St Martin's and does not influence the TS delimitation.

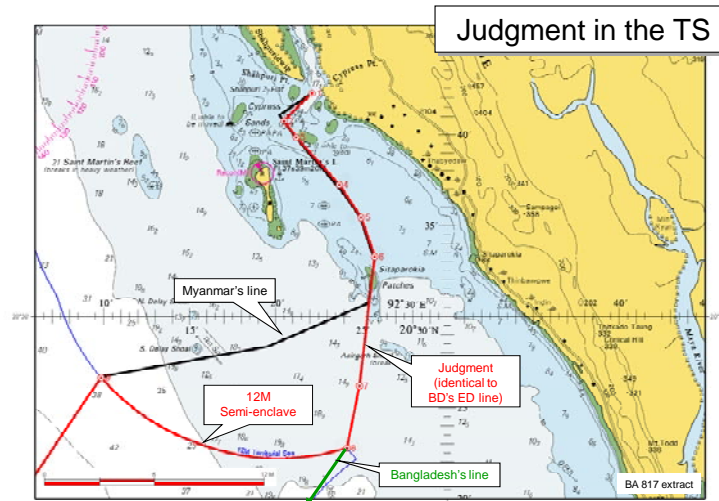
The Parties reached a technical agreement in "Agreed Minutes" over the TS boundary in 1974 but this never got any further as Myanmar wanted a formal agreement that covered all the maritime zones together. Myanmar maintained, and the Tribunal concurred, that these "Agreed Minutes" were not legally binding. The boundary "agreed" in 1974 was based on strict equidistance out to 12M – the final point being both 12M from St Martin's and 12M from the Myanmar mainland.

Bangladesh argued that the Minutes represented a binding agreement or, in the alternative, that the TS boundary should be an equidistance line giving full weight to St Martin's Island.

Myanmar's claim was to give full weight where St Martin's coast is opposite Myanmar, but reduce this to a semi-enclave such that it has no effect at 12M, connecting to a proposed EEZ delimitation that ignored St Martin's.

Neither Party paid any attention to the numerous low-tide elevations and sandbanks in the area, and both used the full extents of the low water line. Admiralty chart 817 was accepted as definitive by both Parties.

The Tribunal adopted Bangladesh's proposal in its entirety.



*The Judgment in the Territorial Sea*

### EEZ and Continental Shelf

The effect of the concavity at the head of the Bay of Bengal affects the approach to the delimitation of the EEZ and, a fortiori, the delimitation of the outer continental shelf beyond 200M. One of Bangladesh's main objectives was to get access to the outer continental shelf.

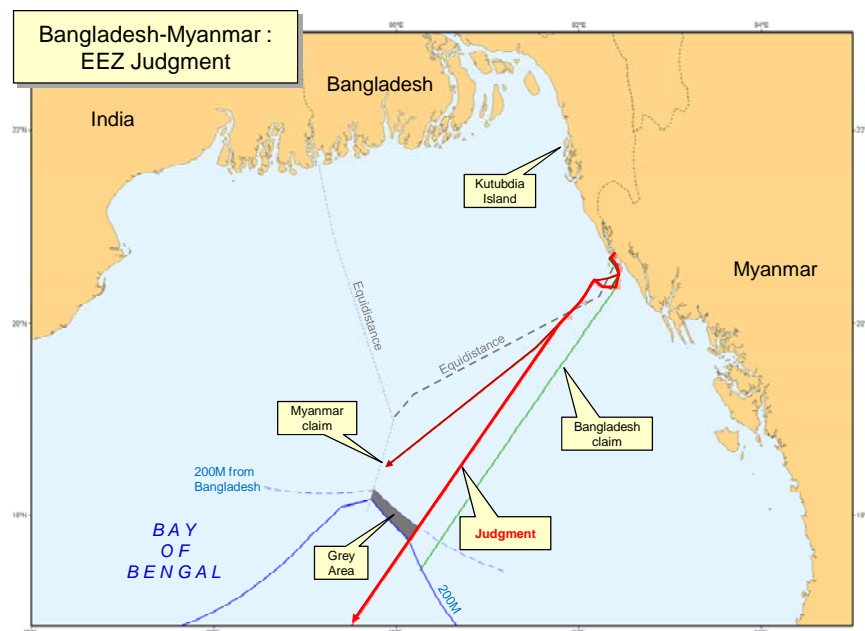
Bangladesh maintained that this concave coastline represented a significant factor that should be taken into account – and as a result equidistance could not produce an equitable solution. The problem was how to develop a method that could account for the concavity in a quantitative sense, and that could be robustly supported legally. Alternatives considered initially were variations on a median line using St Martin's and Oyster Island, giving them various weightings but this approach did not effectively take into account the full extent of the concavity. Bangladesh's final claim line used an averaged general direction of the coast – in effect a line joining the two end points – and used this as the basis for a bisector calculation giving an azimuth of  $215^\circ$  shifted to start at the end of the TS delimitation.

Myanmar applied their reasoning consistently beyond the TS and proposed a strict equidistance line that ignored both St Martin's and Oyster Islands using mainland coast points only, with selected basepoints along the Myanmar coast and two points on the Bangladesh coast. This line connected with their proposed TS delimitation and had an approximate azimuth of  $232^\circ$ . This line intersects the Bangladesh-India median before 200M, thus cutting off Bangladesh from the outer shelf at about 180M.

The Tribunal followed Myanmar's logic and used the mainland basepoints to draw a strict equidistance line, ignoring the island features, and producing a 12M semi-enclave for St Martin's Island. They accepted that the concavity was a significant relevant circumstance that should be taken into account and modified the equidistance line. They took the longitude of Kutubdia Island as the point at which Bangladesh's coastline changed directly and deviated their EEZ line due south of this point. The Tribunal chose a bearing of  $215^\circ$  as being appropriate – but without any explanation. In practice this angle approximates the direction of the Bay.

A problem for Bangladesh's access to the outer continental shelf was the fact that Bangladesh's 200M limit falls short of the combined India/Myanmar 200M limit. This is due to Indian control points south of the Bangladesh coast, and a Myanmar basepoint on Oyster Island south of St Martin's. This produces a grey zone – which potentially gives Myanmar an area of EEZ beyond the 200M limit measured from Bangladesh.

Bangladesh addressed this issue in their pleadings – and took the position that the single maritime boundary would delimit the EEZ and continental shelf and that there is no priority for water column rights. Myanmar argued this case hypothetically (as their claim line would not produce a grey zone) saying that Myanmar had a right to extend its EEZ up to 200M. The Tribunal's line delimits the Parties' rights with respect to the continental shelf without limiting the rights of Myanmar to the superjacent waters. How this could work in practice has yet to be determined.



*The Judgment in the EEZ and Continental Shelf*

## Outer Continental Shelf

The Parties had radically different views on how to delimit the outer continental shelf.

Bangladesh maintained that Myanmar had no effective natural prolongation beyond 200M, or at best the “least natural”, and that all the area of overlapping claims should be allocated to Bangladesh. This was based largely on the geology of the area: there is a significant geological discontinuity (major subduction zone) running along the Myanmar coast that separates Myanmar from the central Bay geologically, and the extensive sediment that forms the floor of the Bay and the landmass of Bangladesh.

Myanmar in contrast maintained that equidistance cut-off Bangladesh well before 200M and thus the question of delimitation beyond 200M simply did not arise. They also maintained that they were fully entitled to an outer shelf on the basis of the article 76 sediment thickness

formula, and could demonstrate continuity of sediment and bathymetry across the tectonic plate boundary.

The Tribunal agreed with Myanmar on its entitlement to an outer continental shelf, but also decided that the line they drew in the EEZ should be continued through the outer continental shelf to such point where the rights of third states may be affected, with no relevant circumstances that could cause it to be deviated.

### **Significance of the Judgment**

This was the first maritime delimitation case to be decided by ITLOS. As is usual in such cases the judgment had an element of compromise and both Parties expressed some satisfaction with the Tribunal's line. Some elements of the judgment have clarified aspects of the applicable law:

1. The methodology follows the now standard three step process: firstly choose the basepoints and draw an equidistance line, secondly examine any relevant circumstances and adjust if necessary, and finally check for any disproportionality.
2. The Tribunal rejected the bisector approach as it is possible to draw an equidistance line, although their adjustment matched the direction of the bisector.
3. They clarified that paragraph 4 of article 76 was determinative of the outer edge of the margin, and that this also defined the extent of natural prolongation.
4. The azimuth of the adjusted equidistance line (215°) was not explained – other than it matched the Bangladesh proposal.
5. The Tribunal could determine entitlements of the Parties to the outer continental shelf, even in the absence of recommendations from the CLCS.
6. The equidistance/relevant circumstances method (in the present case) was considered applicable both within and beyond the 200M limit; the concavity has a continuing effect beyond 200M and hence the line can continue without deviation.
7. The direction of the line in the EEZ was continued through the outer continental shelf without deviation, though the judgment makes it clear that this approach fits the circumstances of this case. By implication in other cases other relevant circumstances may prevail such that the outer shelf delimitation can be considered separately from that in the EEZ.