The Disproportionality Test: Myth or Method?

Robin Cleverly
Marbdy Consulting
Acknowledgments

To be published:
Oxford University Press
March 2016
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.

• The above provision does not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance therewith.
Article 74 and 83: Delimitation of the EEZ/Continental Shelf between States with opposite or adjacent coasts

1. . . . shall be effected by agreement on the basis of international law, . . . . . in order to achieve an equitable solution.

2. If no agreement can be reached within a reasonable period of time, the States shall resort to the procedures provided for in Part XV.
Recipe for Delimitation: Three Stage Process

1. Draw **equidistance line** as a provisional boundary
2. Adjust provisional line as necessary for equitable solution in light of **relevant/special circumstances**
3. Check for proportionality ("Disproportionality Test")
   Does the result show any marked disproportion between the ratio of the maritime areas allocated and the ratio of the coastal lengths?
Coastal concavity: Germany (North Sea)
Relevant Coast (Black Sea case)
Relevant Area: Black Sea
Relevant Coasts

Graphic from:
A Practitioner’s Guide to Maritime Boundary Delimitation
by S Fietta & R Cleverly. OUP March 2016
The Coastal Length Paradox

<table>
<thead>
<tr>
<th>Filter</th>
<th>Coastal length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1M</td>
<td>770 km</td>
</tr>
<tr>
<td>12M</td>
<td>346 km</td>
</tr>
<tr>
<td>200M</td>
<td>312 km</td>
</tr>
</tbody>
</table>

Relevant Coasts: Gulf of Maine

Bay of Bengal: Bangladesh in a concavity
ITLOS’s Relevant Area and Relevant Coasts

Relevant Area: 238,471 km²

Ratio of Relevant Coasts: 1:1.42
Length-Area Relationship
Proportionality: Constant Extent

200M / median line

<table>
<thead>
<tr>
<th>State A</th>
<th>State B</th>
<th>State C</th>
<th>State D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x200</td>
<td>8</td>
<td>8 x 200</td>
</tr>
</tbody>
</table>
ITLOS’s Relevant Area and Relevant Coasts

- Bangladesh
- Myanmar
- India

**RELEVANT AREA**

- 238,471 km²

**Ratio of Relevant Coasts = 1:1.42**
ITLOS’s Disproportionality Test

Ratio of Relevant Coasts = 1:1.42 (for Myanmar)
Ratio of Relevant Areas  = 1:1.54 (for Myanmar)
Bangladesh’s Disproportionality Test

Bangladesh’s Bisector (215°) Proposal

- Bangladesh 510 km
- Myanmar 600 km

Coast ratio = 1:1.18

- Bangladesh 107100 km²
- Myanmar 145300 km²

Area ratio = 1:1.36

Bangladesh’s graphic from oral pleadings
Myanmar’s Disproportionality Test

**AREA RATIO**
Bangladesh 80,400 km²
Myanmar 133,900 km²
1 : 1.66

**COASTAL LENGTHS RATIO**
Bangladesh 364 km
Myanmar 740 km
1 : 2.03

Myanmar’s graphic from oral pleadings
Proportionality Calculations: Trapezium Models

- **A**: Equidistance and equal area
- **B**: Proportional and equidistance, equal area
- **C**: Proportional and equidistance, equal area
- **D**: Equidistance and equal area
- **E**: Proportional and equidistance, equal area
- **F**: Proportional and equidistance, equal area
Recipe for Delimitation: Three Stage Process

1. Draw **equidistance line** as a provisional boundary
2. Adjust provisional line as necessary for equitable solution in light of relevant/special circumstances
3. Check for proportionality ("Disproportionality Test")
   Does the result show any marked disproportion between the ratio of the maritime areas allocated and the ratio of the coastal lengths?
Recipe for Delimitation: Three Stage Process

1. Select basepoints
2. Draw equidistance line as a provisional boundary
3. Adjust provisional line as necessary for equitable solution in light of relevant/special circumstances and proportionality