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Thank you.



Baselines under the UN Convention on the Law of the Sea

IBRU Training Workshop No.71
An Introduction to Technical Aspects
of Maritime Boundary Delimitation
11 September 2023

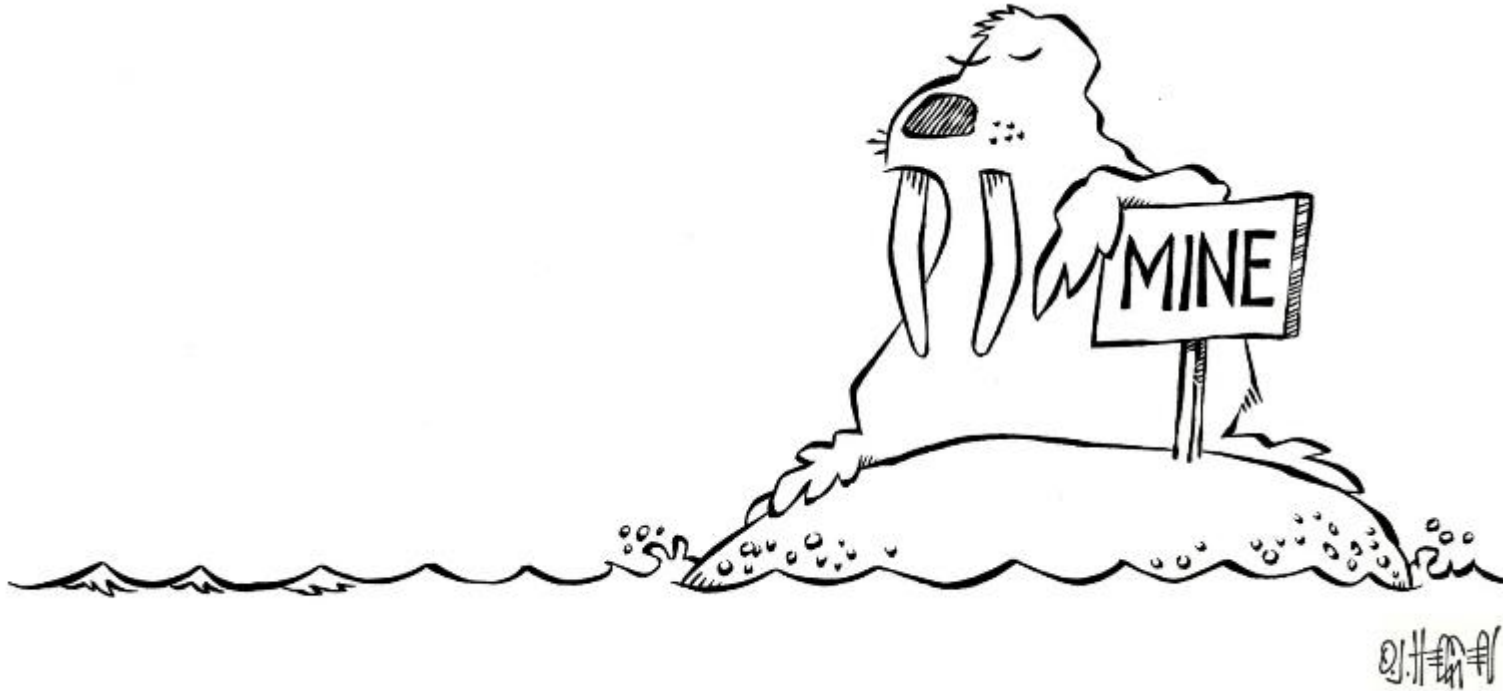
Professor Clive Schofield, chs@wmu.se
Head of Research, WMU/Sasakawa Global Ocean Institute
World Maritime University, Sweden



Baselines

- **Why are baselines important?**
 - Delineation of the outer limits of maritime zones
 - Delimitation of maritime boundaries
- **Types of Baseline under the LOS Convention:**
 - Normal (Article 5)
 - Reefs (Article 6)
 - Islands (Article 121)
 - Low-tide elevations (Article 13)
 - Straight (Article 7)
 - Mouths of rivers (Article 9)
 - Bays (Article 10)
 - Harbour works (Article 11)
 - Combination of methods (Article 16)
 - Archipelagic (Article 47)
- **Publicising baseline claims (Article 16)**

Maritime claims depend on sovereignty over coastal territory...



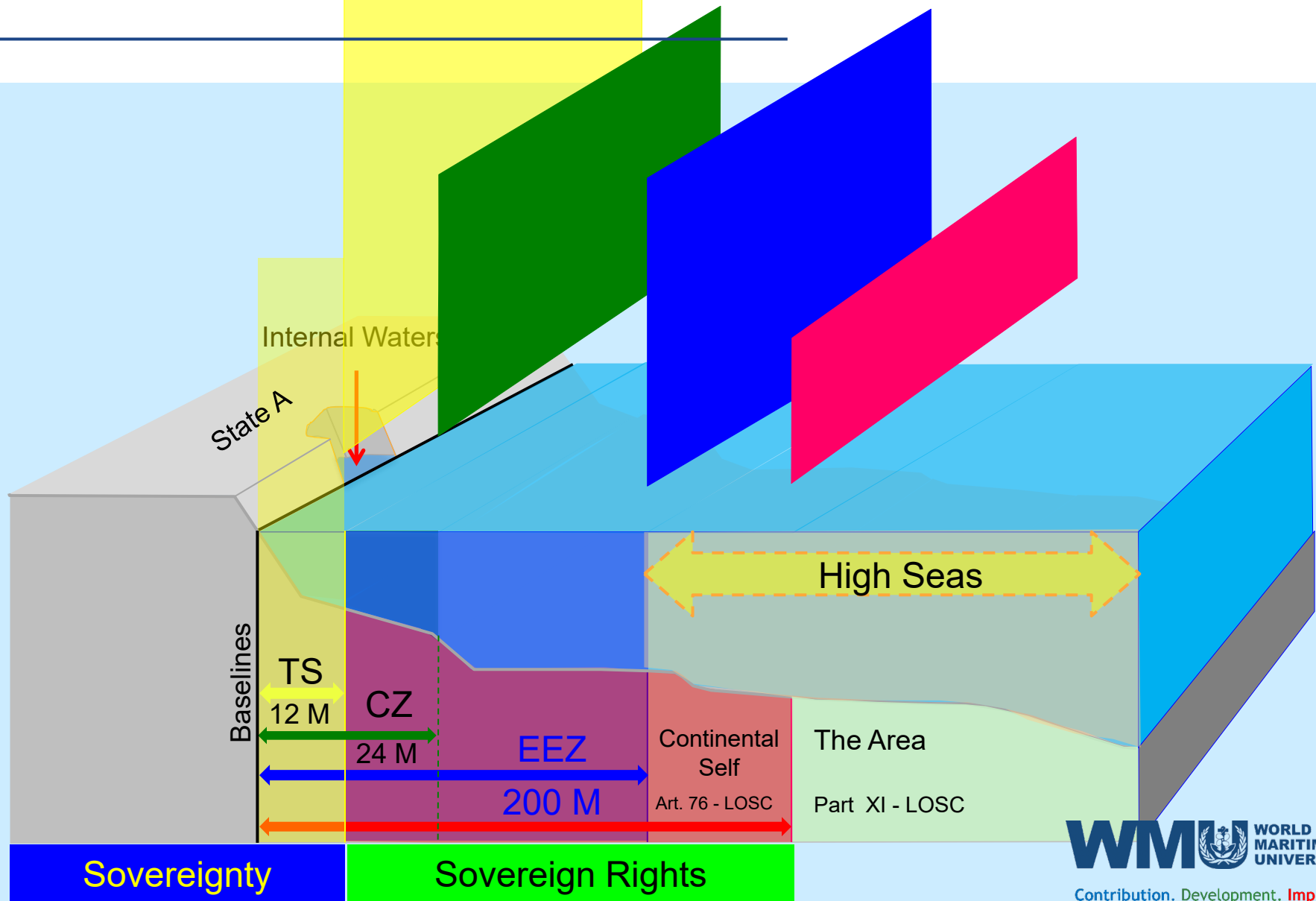
The land dominates the sea and it dominates it by the intermediary of the coastal front.

- Prosper Weil, 1989

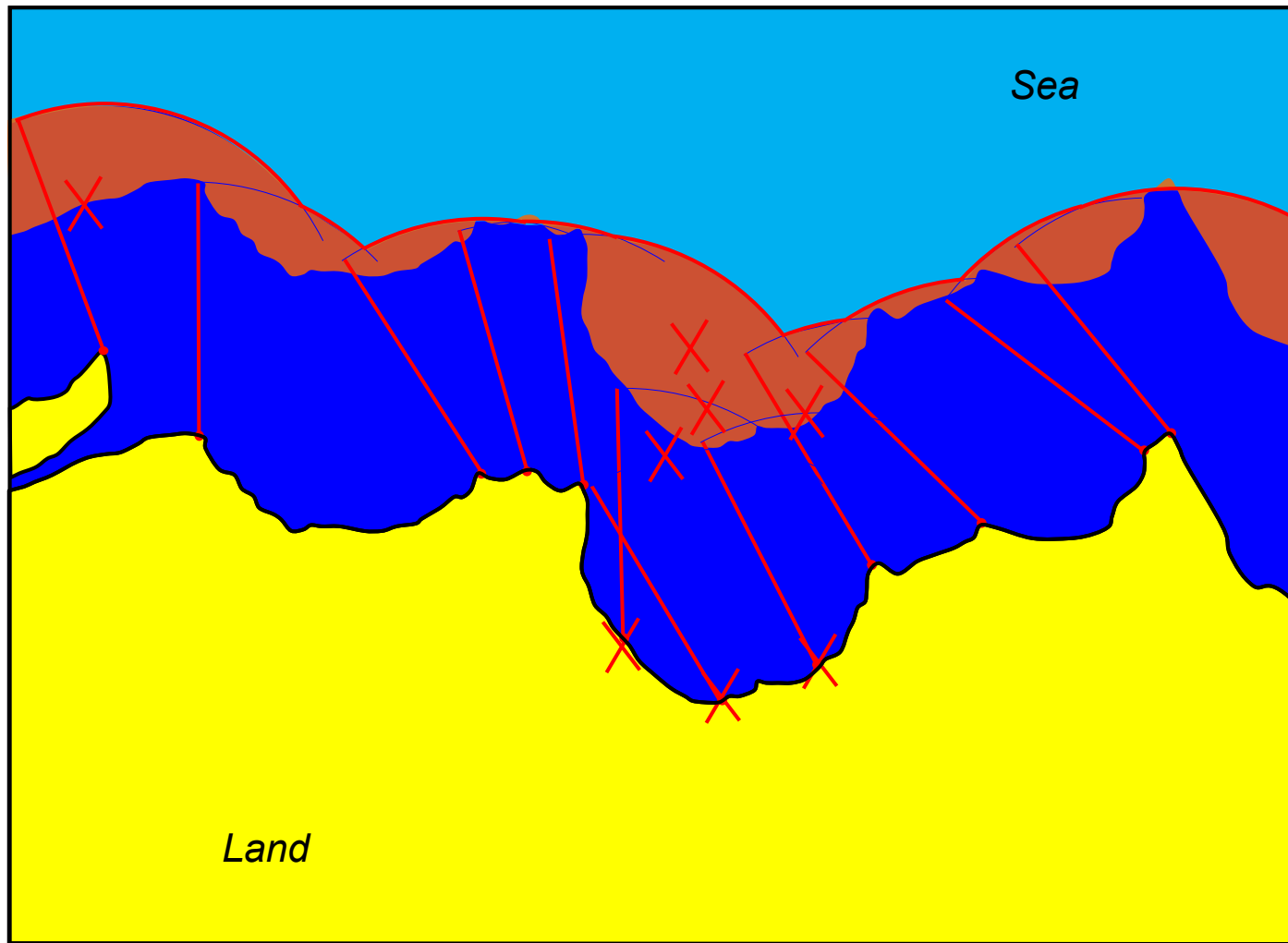
The Importance of Baselines

- **Define the land/sea interface**
 - The seaward 'edge' of territory at the coast
- **Fundamental to delineating the limits of maritime claims**
 - Provide the 'starting line' for claiming maritime zones
 - Provide **basepoints** for generation of limits of national maritime claims

Baseline and Maritime Zones



Normal Baselines and Maritime Limits



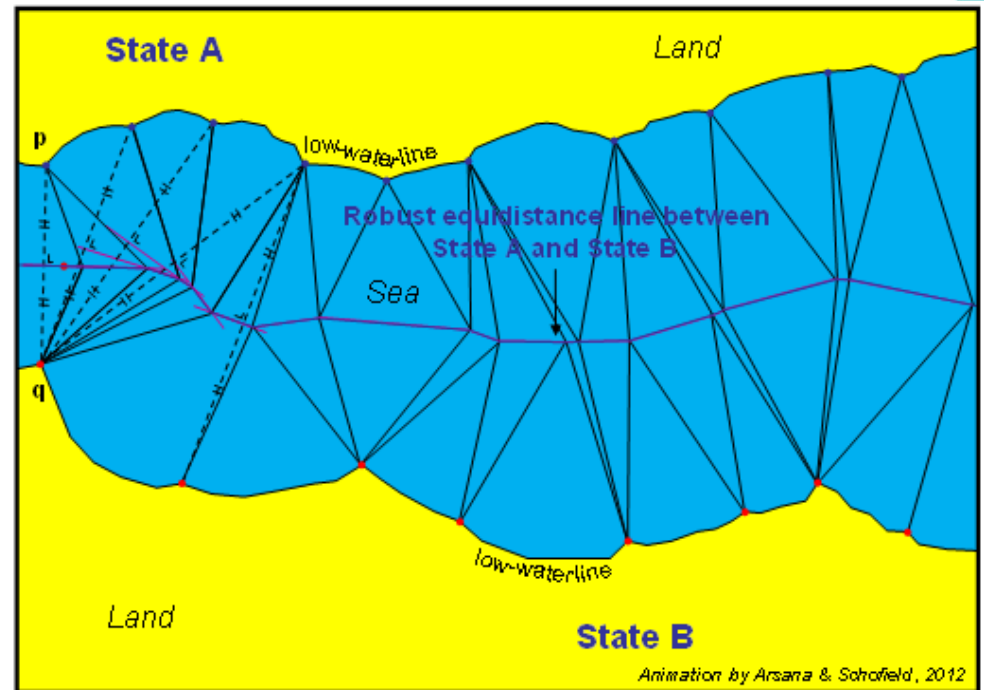
I Made Andi Arsana (c) 2013

Baselines versus Basepoints:

Not all of the baseline contributes to defining the limits of maritime jurisdiction

The Importance of Baselines

- **Fundamental to maritime boundary delimitation**
 - Determine basepoints for construction of median/equidistance lines
 - Equidistance lines often used at least as the starting point for maritime boundary delimitation
 - Majority of maritime boundary agreements wholly or partially based on equidistance



Source: TALOS Manual (5th edition, October 2014)

“Normal” Baselines

1958 Convention on the Territorial Sea and the Contiguous Zone, Article 3

LOSC, Article 5

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 recognised by the coastal State.

“Normal” Baselines

Article 5 of the UN Convention on the Law of the Sea:

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 recognised by the coastal State.

- In effect the State’s default baseline
- The “low-water line”
 - Which one?
- Other key terms:
 - “charts”
 - “large-scale”
 - “officially recognized”

The meaning of “low-water line”

- Low-water line dependent on choice of **vertical datum**
- Vertical datum = level of reference for vertical measurements (depths, height of tide, elevations) – the ‘zero’ line
- Many options – **Lowest Astronomical Tide (LAT)** the most popular
- A particularly conservative low-water line:
 - normal baseline advanced further ‘down the beach’
 - land territory/internal waters increased
 - maritime zones potentially increased
- Critically, conservative vertical datums favoured by chart-makers for the sake of safety of navigation

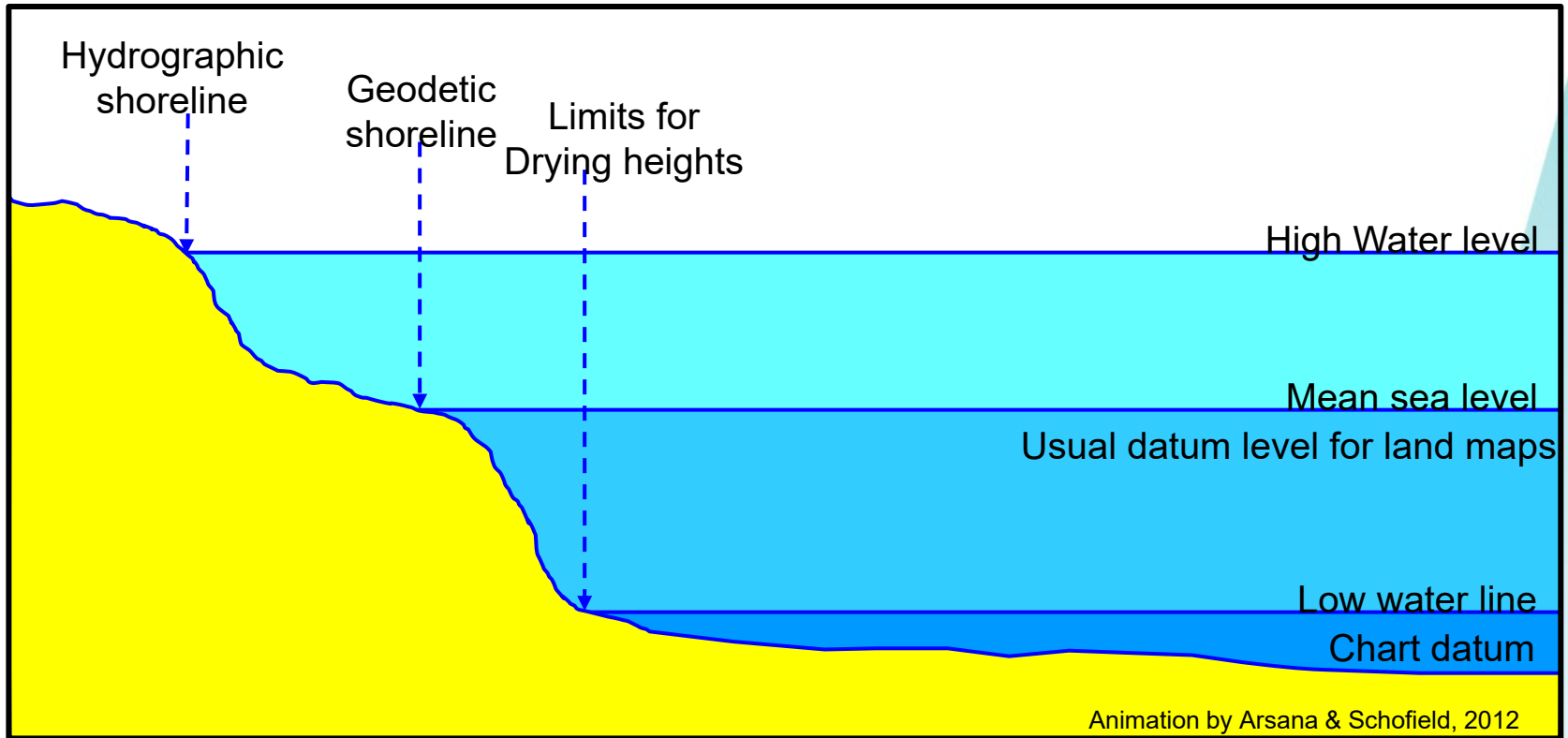
Lowest Astronomical Tide (LAT)

Defined as:

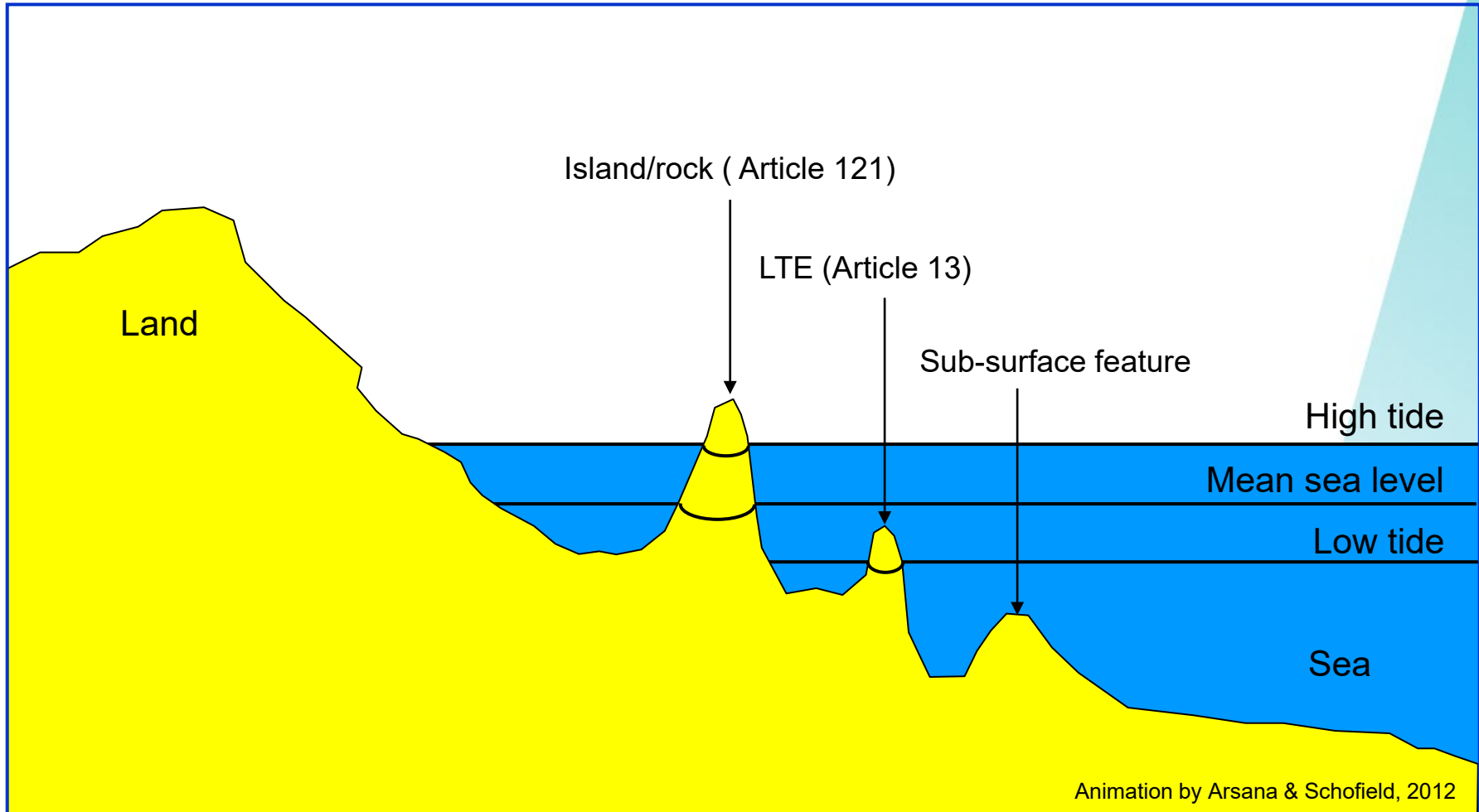
The lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.

- However, there are many alternatives and if used on large scale charts recognised by the coastal state then they are valid.
- Choice left up to the coastal State

Vertical Datum



Baselines of Islands and Low-tide Elevations



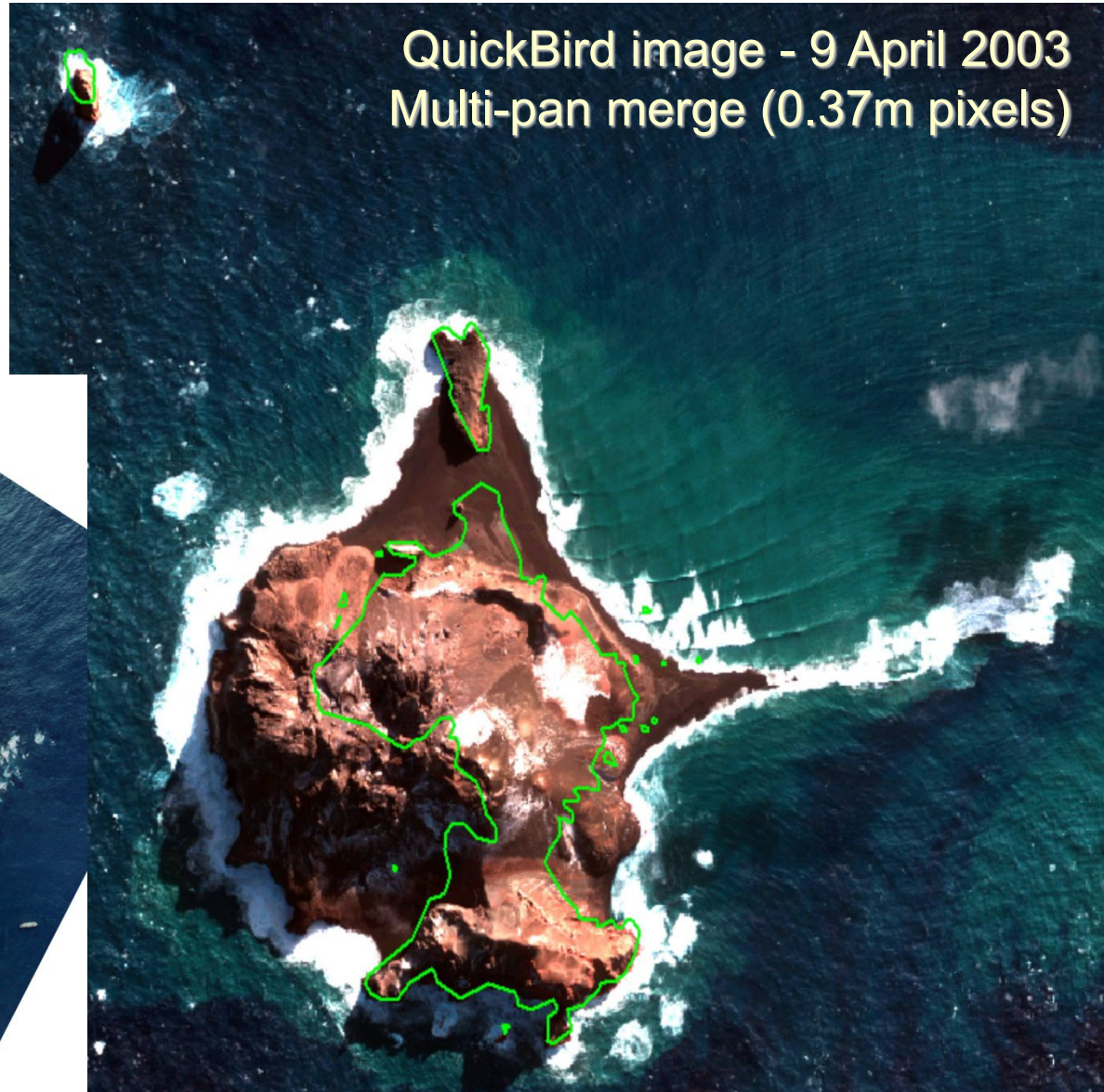
Source: TALOS Manual (5th edition)

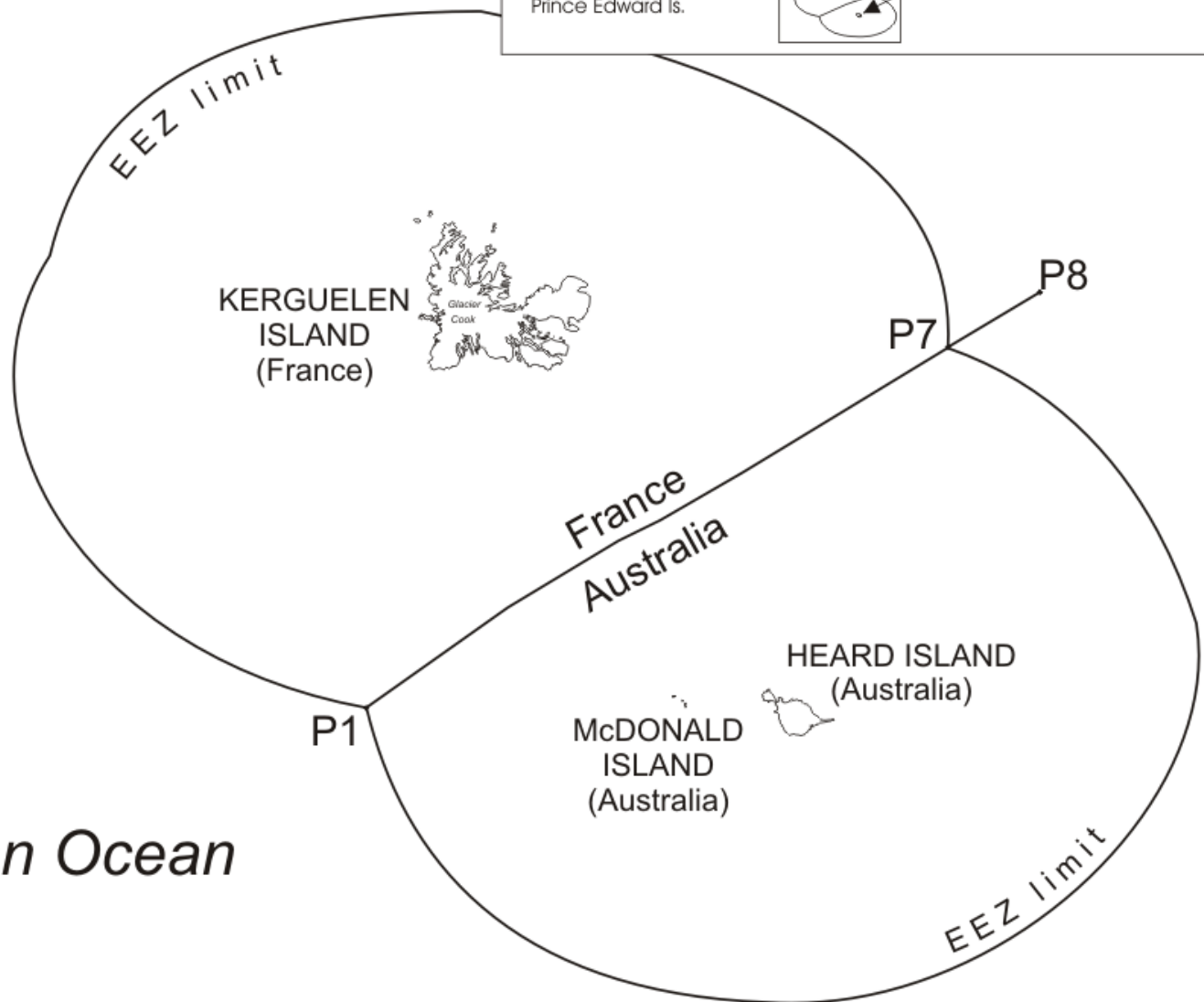
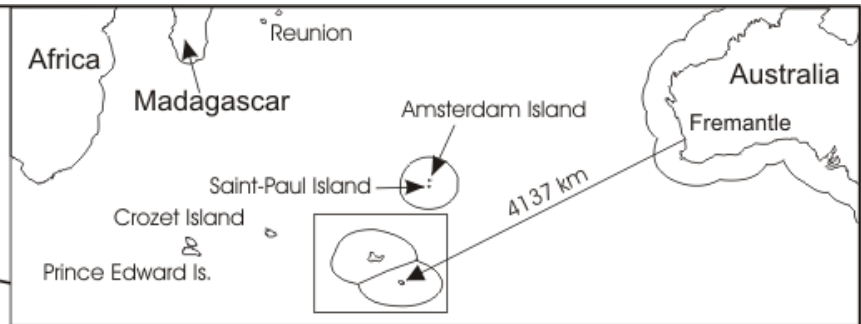
Implications of Dynamic Coastlines

- Coastlines have long been known to be dynamic features of the land/sea-scape
 - Depositional processes advance the position of the coastline
 - Glacial isostatic readjustment
 - Tectonic processes
 - Volcanism
 - Erosive forces
- Changing coast = **“ambulatory”** normal baselines?
- Exacerbated by **sea level rise**
- Implications for:
 - **Limits and extent of maritime claims**
 - **Status of insular features**
 - **Delimitation of maritime boundaries**
 - **Maritime surveillance and enforcement**

Remote Sensing: McDonald Island

Aerial photo –
1 March 1980





Indian Ocean

Actual or charted position

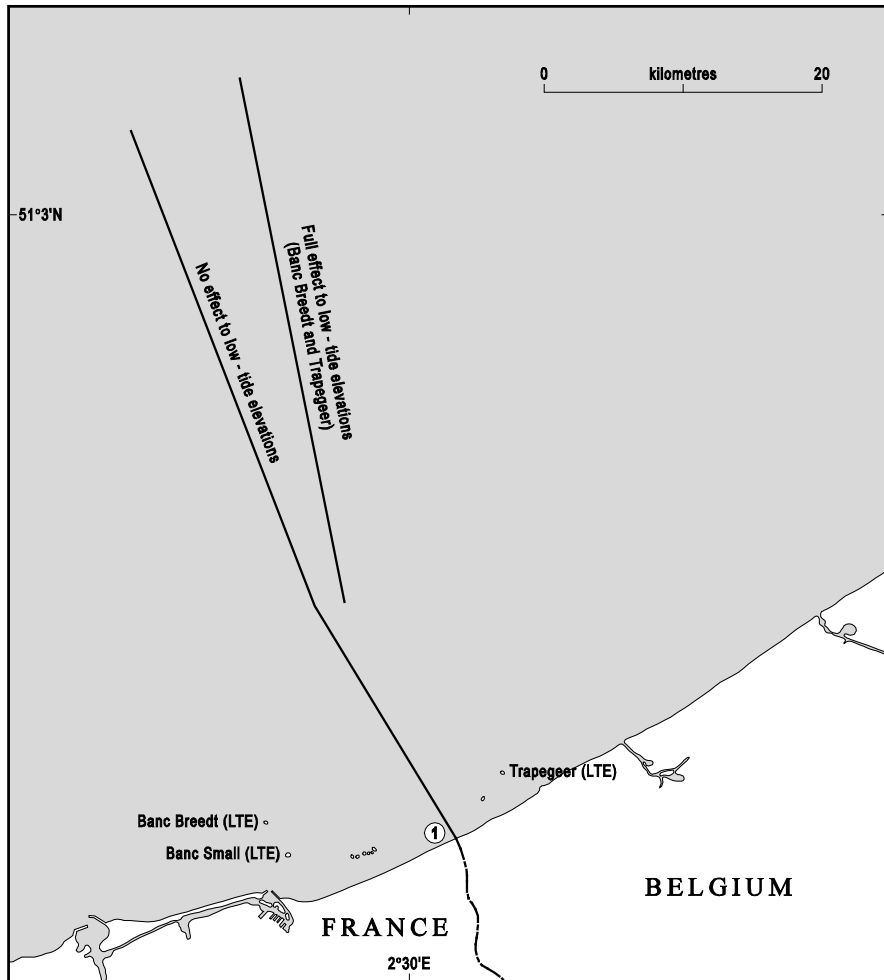
So is the baseline the actual location of the low water line or its charted position?

Commentators divided though many state that the **chart is the legal document** since Article 5 states that it is the low water line as “**marked on large-scale charts officially recognised by the coastal State.**”

Normal Baseline Disputes

- Choice up to the coastal State
- Choice of different vertical datum can lead to dispute over basepoints
- Disputes over low-tide elevations and islands
- Most significant where island status is threatened

Belgium – France: The Banc Breedt



- France used LAT on its charts
- Belgium used mean low-water spring tides
- Belgian datum c.30cm higher than French datum
- Dispute over suitability of Banc Breedt as a territorial sea basepoint
- Banc Breedt an LTE on French chart
- Permanently below low-water line on Belgian chart
- Dispute resolved in 1990 by agreement to split the difference

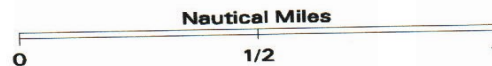
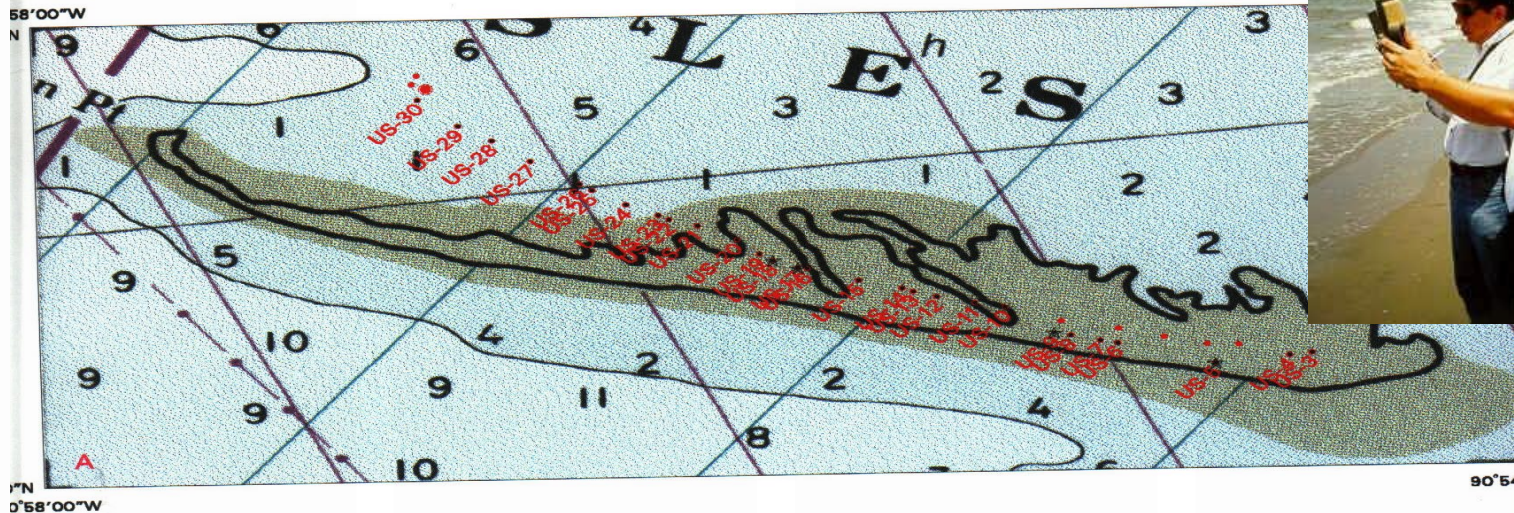
Mexico – United States: Joint Survey Work, Isles Derniere (Raccoon Island) Louisiana



Source: Courtesy of Robert Smith

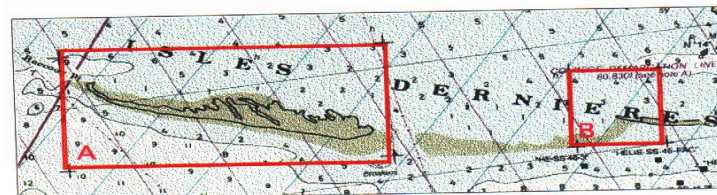
Isle Dernieres (Raccoon Island) Comparing Surveyed Points to Chart

GPS Survey of Isles Dernieres 30-JUNE-1998



Legend

- coast
- DGPS base stations
- ☆ contributing points
- included on baseline list

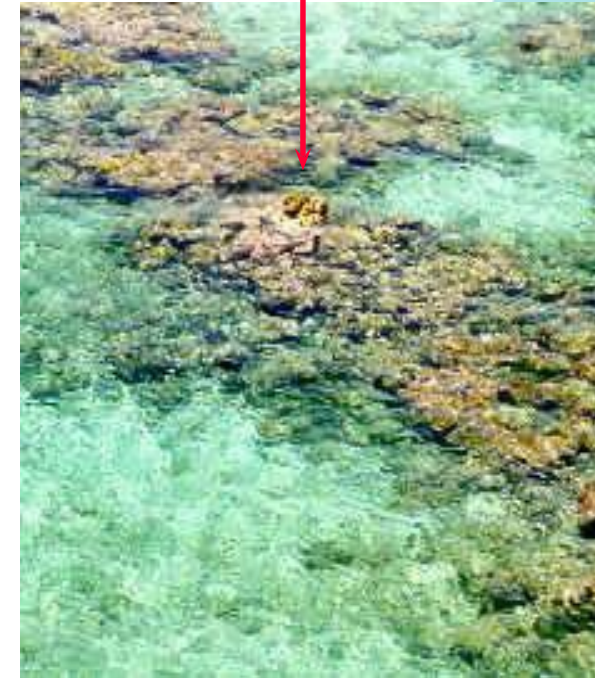


Arrecife Alacran, Mexico: Identifying basepoints

Submerged features



Rock
(above water)



Source: Courtesy of
Robert Smith

LOSC, Article 6

In the case of **islands** situated on **atolls** or of islands having **fringing reefs**, the baseline for measuring the breadth of the territorial sea is the **seaward low-water line of the reef**, as shown by the appropriate symbol on charts officially recognized by the coastal state.

- Need island to be present to apply Article 6
- The terms “**atoll**” and “**fringing reef**” have strict geomorphological meanings
- No evidence that the drafters of LOSC meant these terms to be restrictive
- Uncertainties over closing lines

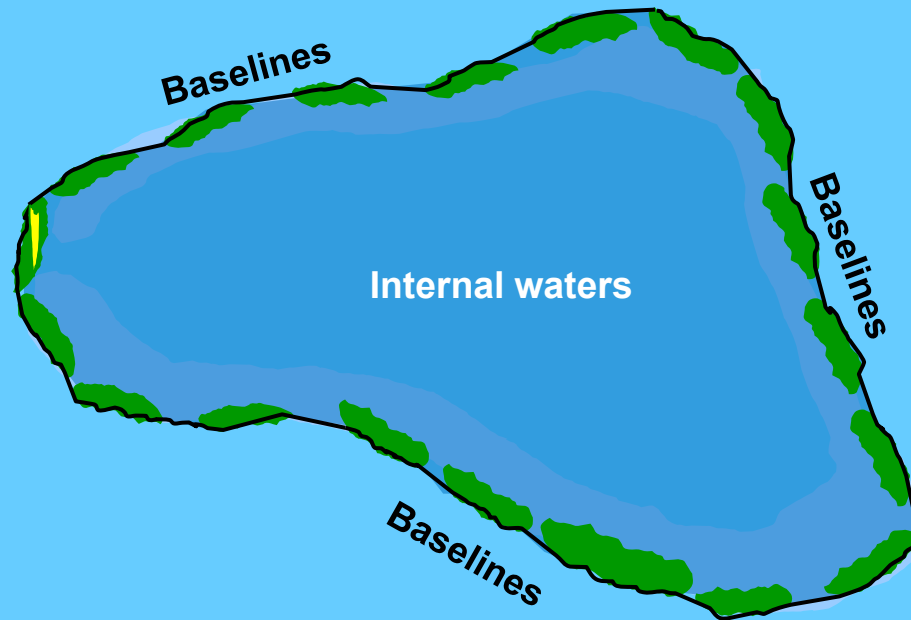
Atolls



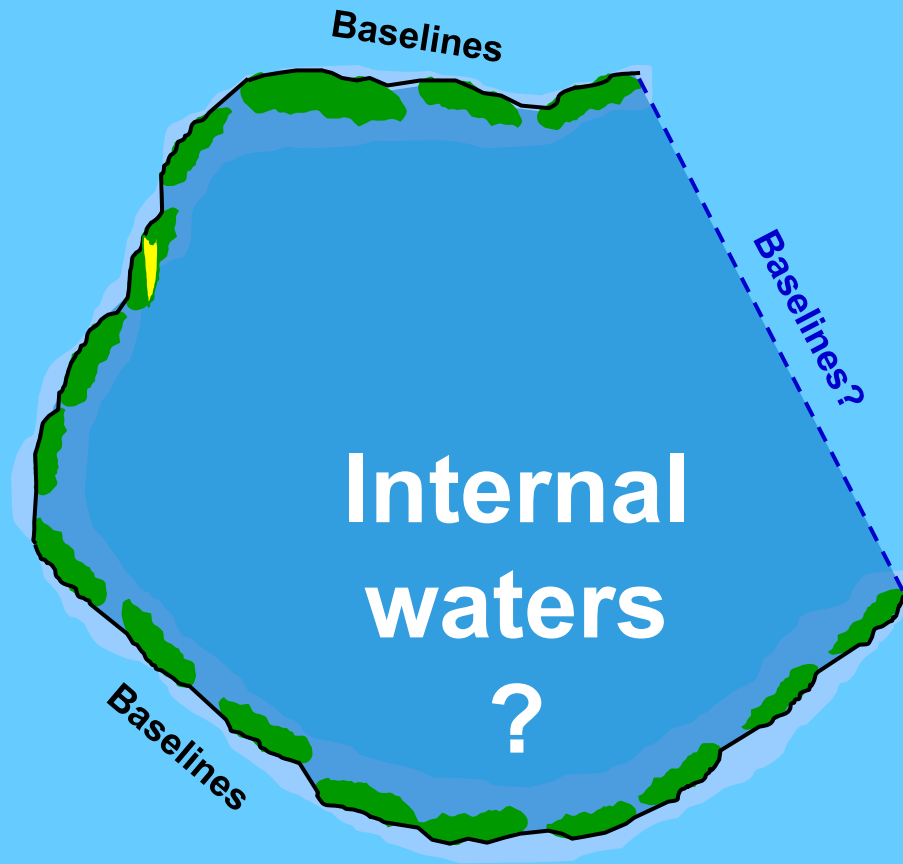
Scarborough Reef



Atolls



Almost Atolls



Straight Baselines

Geneva Convention on the Territorial Sea and the Contiguous Zone, Article 4 LOSC, Article 7

1. In localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.
2. 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.
3. The drawing of straight baselines must not depart to any appreciable extent from the general direction of the coast, and the sea areas lying within the lines must be sufficiently closely linked to the land to be subject to the regime of internal waters.
4. Straight baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or except in instances where the drawing of baselines to and from such elevations has received general international recognition.
5. Where the method of straight baselines is applicable under paragraph 1, account may be taken, in determining particular baselines, of economic interests peculiar to the region concerned, the reality and importance of which are clearly evidenced by long usage.
6. The system of straight baselines may not be applied by a State in such a manner as to cut off the territorial sea of another State from the high seas or an exclusive economic zone.

Straight Baselines: The UK/Norway Case

- Norway claimed straight baselines along its northern coast from 1935
- 4 M fishery zone claimed from straight baselines
- Dispute with UK over 'extra' fishery zone claimed
- Case before ICJ, 1949-1951



The ICJ's 1951 Judgment

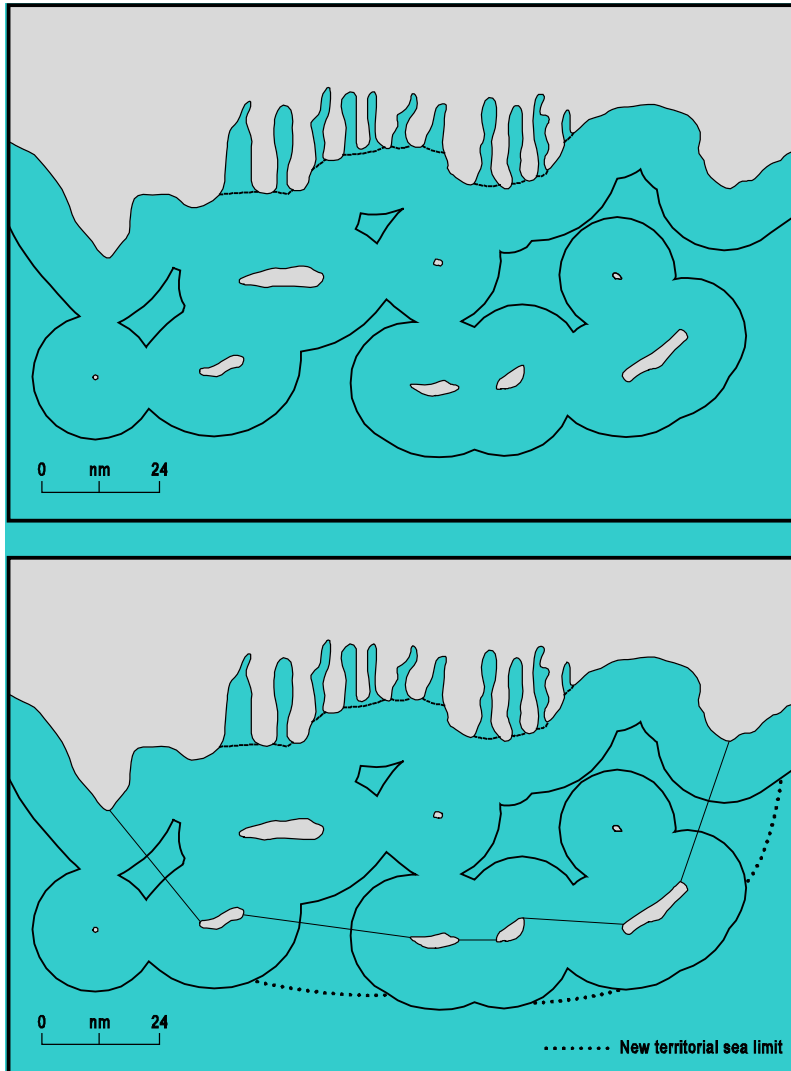
The ICJ found in favour of Norway, stating that:

“Where a coast is **deeply indented and cut into**... or where it is bordered by an archipelago such as the ‘skjaergaard’ along the western sector of the coast...”

“Such a coast, viewed as a whole, calls for the application of a different method; that is, the method of base-lines which **within reasonable limits**, may depart from the physical line of the coast.”

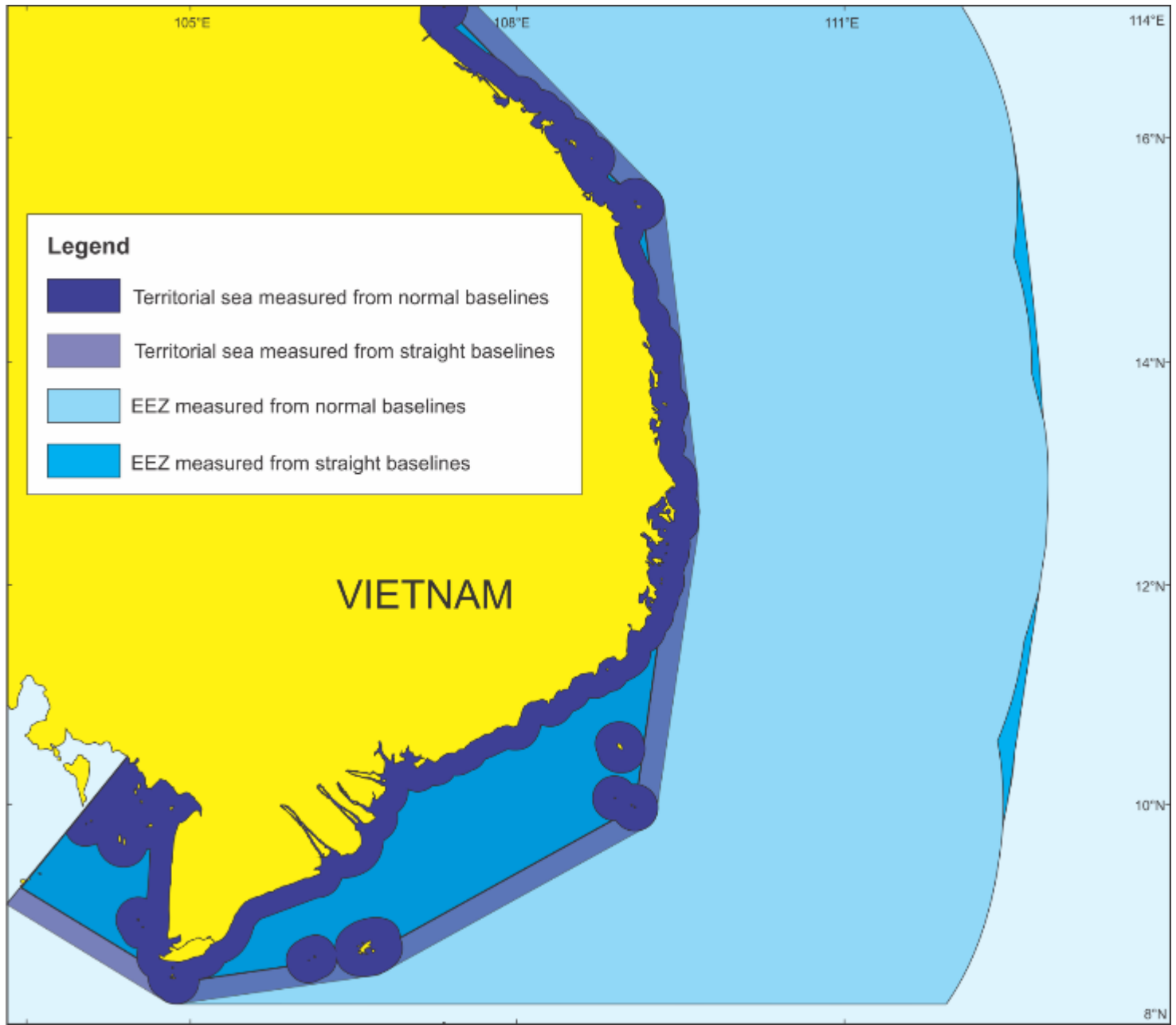
- Judgment fundamental to the introduction of the straight baselines concept
- Led directly to the drafting of Article 4 of Geneva Convention on the Territorial Sea and Contiguous Zone and subsequently Article 7 of the LOS Convention

Intentions of Article 7



- Cater for unusual coastal geography & allow the coastal State to enclose waters with a close interrelationship with the land
- Avoid situations where normal/bay closing lines result in enclaves of non-territorial sea
- Avoid complex mosaic of territorial sea and non-territorial sea areas
- Simplify marine management
- **NOT** to significantly extension in maritime claims seaward

Impact of Vietnam's Straight Baselines Claims



Deeply indented or Fringe of Islands

1. In localities where the coastline is **deeply indented and cut into**, or if there is a **fringe of islands** along the coast in its **immediate vicinity**, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.

Deeply indented or Fringe of Islands

1. In localities where the coastline is **deeply indented and cut into**, or if there is a **fringe of islands** along the coast in its **immediate vicinity**, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.
 - What constitutes a “deeply indented and cut into” coastline?
 - How is a “fringe” of islands defined and at what distance offshore is such a fringe of islands in the coastline’s “immediate vicinity”?
 - No objective tests provided
 - US Guidelines detailed:

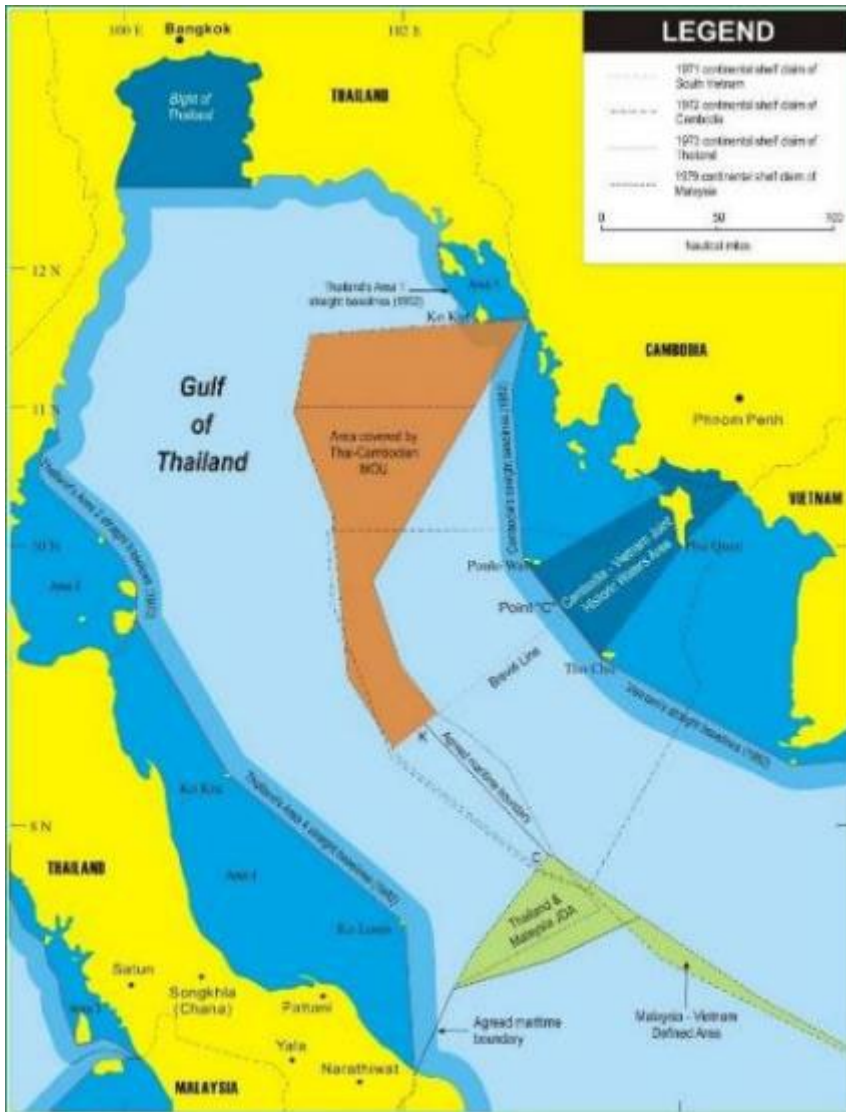
United States Department of State, *Developing Standard Guidelines for Evaluating Straight Baselines*, Limits in the Seas, No.106, Washington D.C.: Bureau of Oceans and International Environmental and Scientific Affairs (31 August 1987).

In sum:

“the imprecise language [of Article 7] would allow any coastal country, anywhere in the world, to draw straight baselines along its coast.”

(J.R.V. Prescott, *The Maritime Political Boundaries of the World*, 1985)

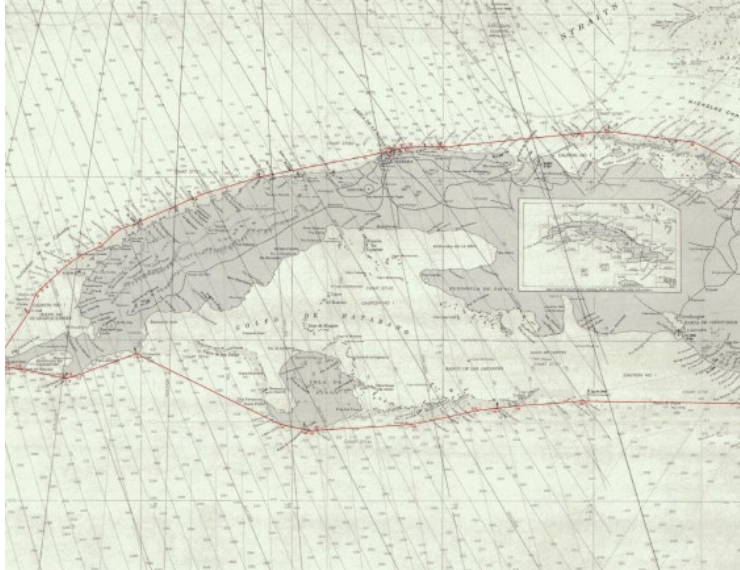
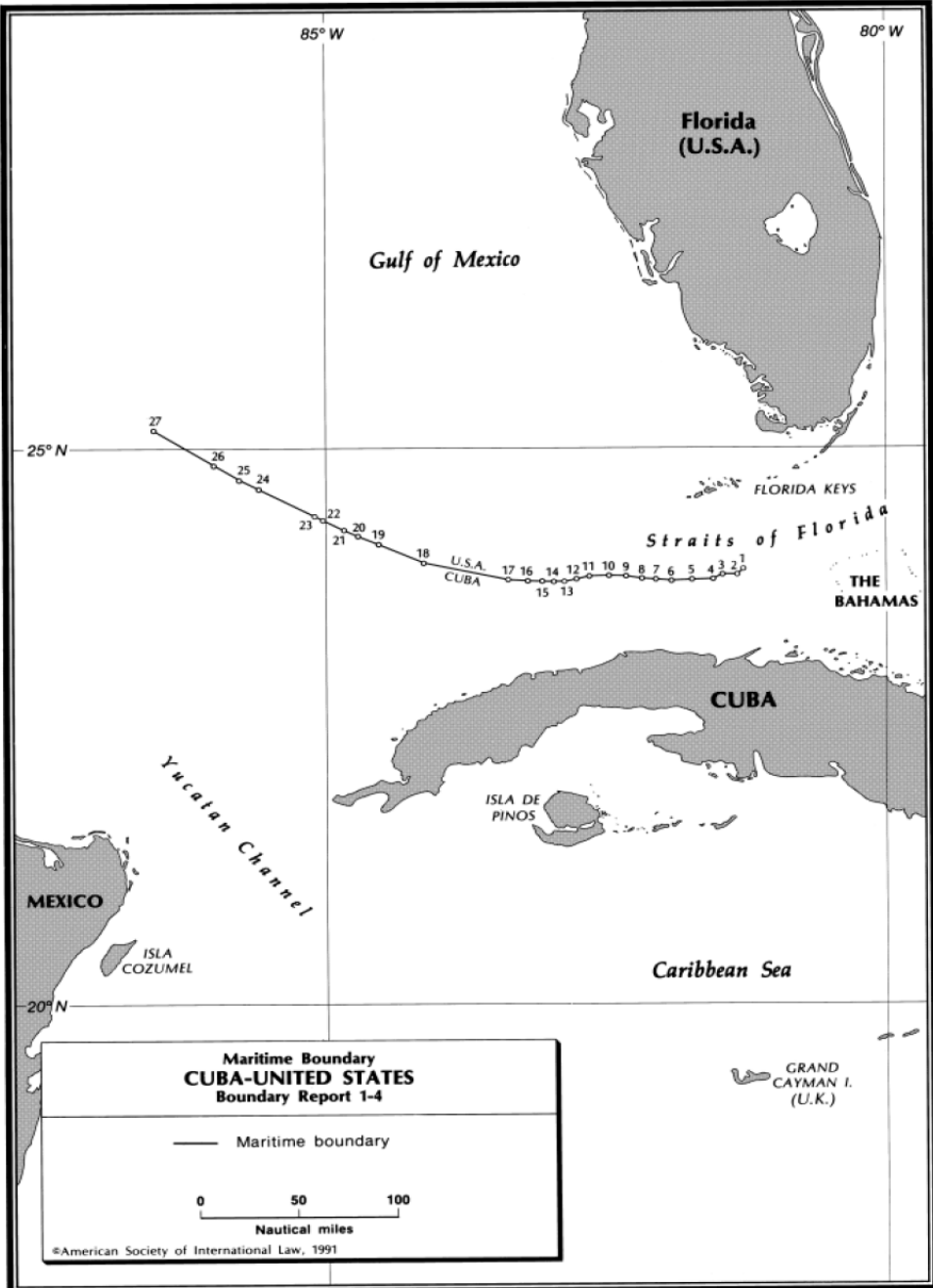
Straight Baselines Practice



Excessive straight baselines need not prevent boundary delimitation...

Thailand-Vietnam maritime boundary agreed despite expansive straight baselines on both sides.

Imaginary Baselines: Cuba-USA (1977)



Source: *Limits in the Seas 76*

Source: *International Maritime Boundaries*

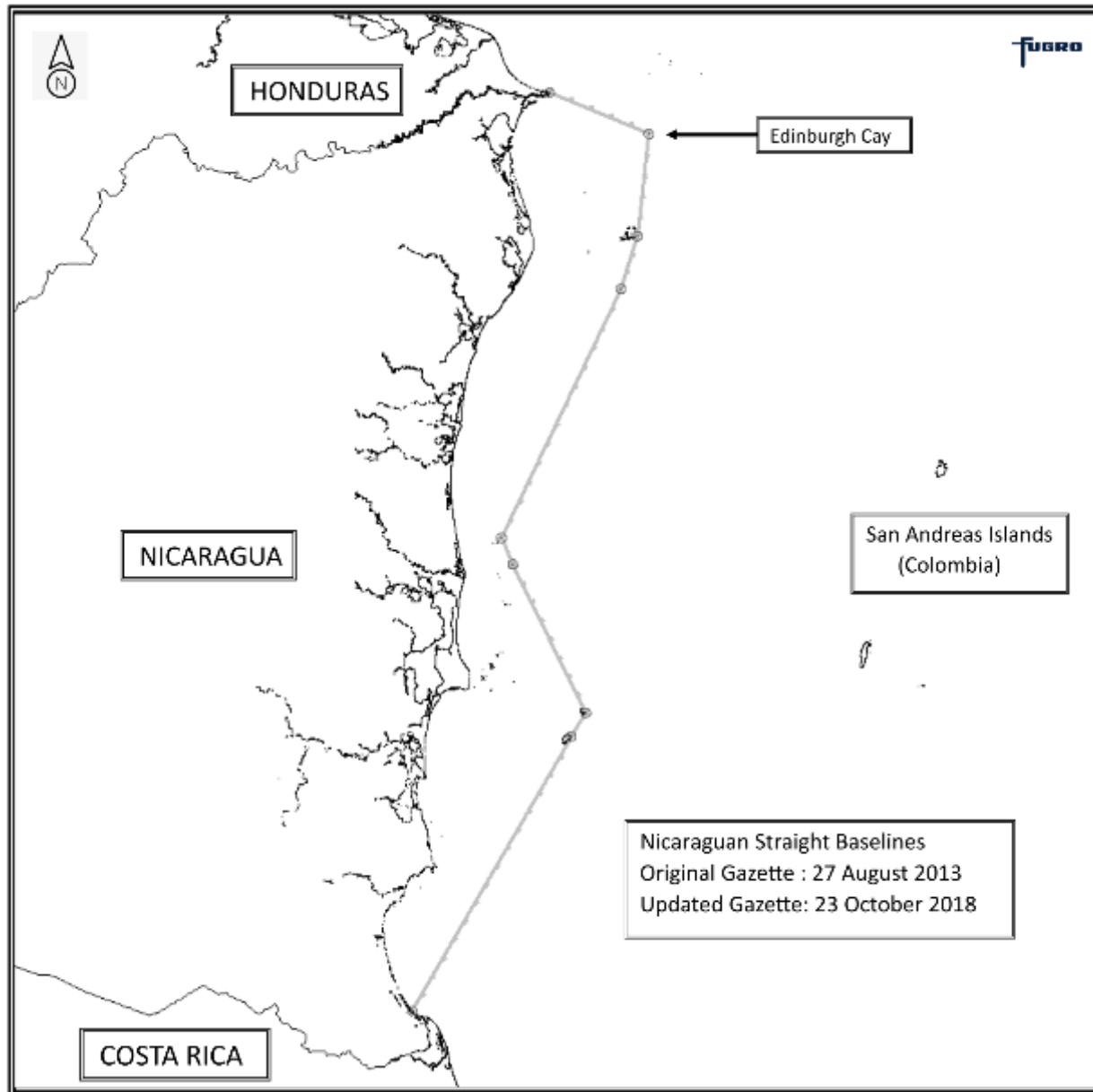
The International Court of Justice's View: Qatar-Bahrain Case (2001)

- Bahrain argued that straight baselines could connect its outermost islands
- ICJ responded that:
“...the method of straight baselines, which is an **exception to the normal rules** for the determination of baselines, may only be applied if a number of conditions are met. **This method must be applied restrictively.** Such conditions are primarily that either the coastline is deeply indented and cut into, or that there is a fringe of islands along the coast in its immediate vicinity.” (para.212)

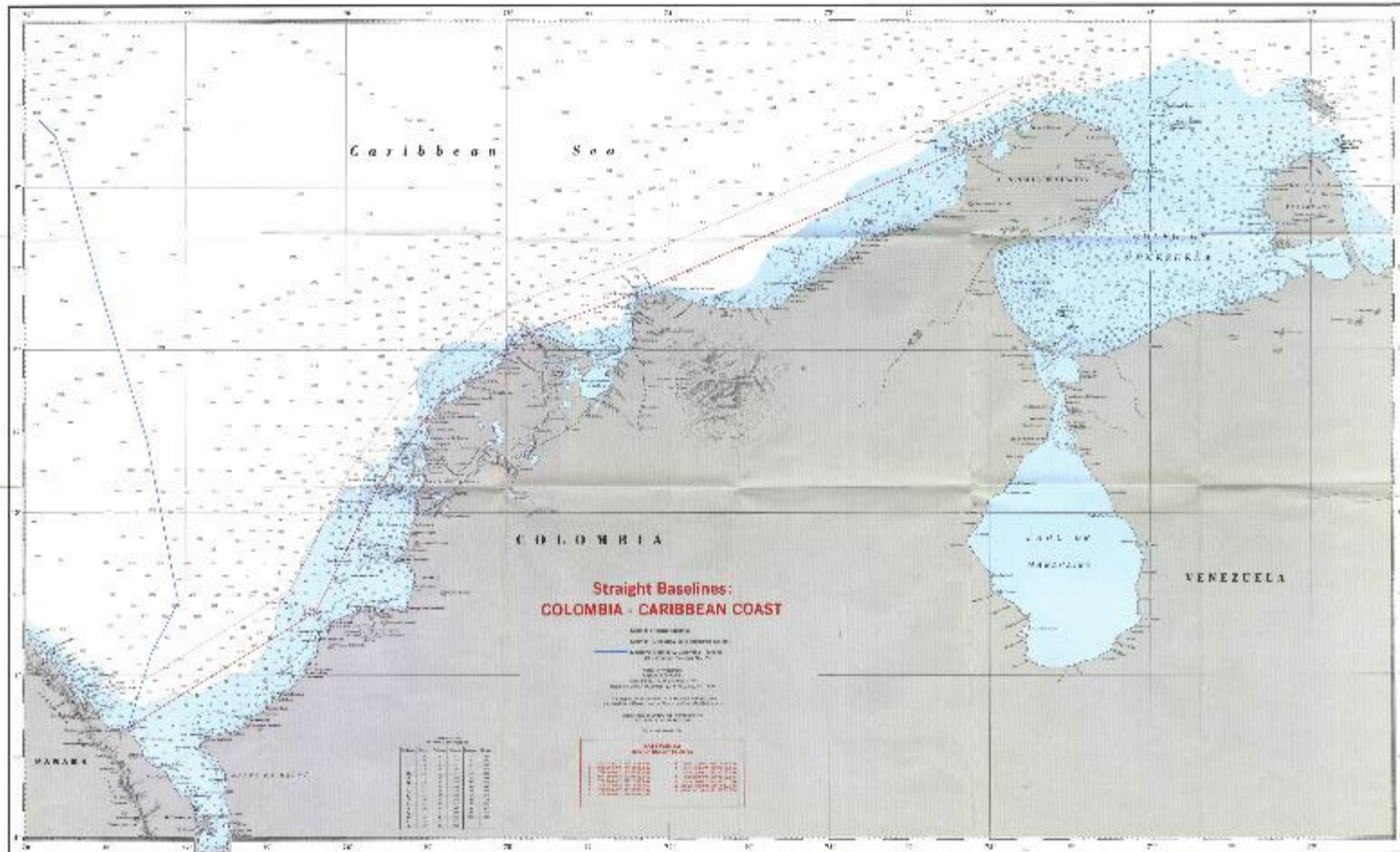
The International Court of Justice's View: Nicaragua vs. Colombia (2022)

- *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea, Judgment of 21 April 2022 (Nicaragua v. Colombia)*
- Colombian counter-claim regarding violation of its rights through Nicaragua's straight baselines:
 - Nicaragua's straight baselines do not meet the geographical criteria required under Article 7
 - Even if these criteria exist the baselines depart from the general direction of the coast and enclose areas not sufficiently close to the land domain to be internal waters
 - Nicaragua's claim "misappropriates significant maritime areas as internal waters" and expands Nicaragua's territorial sea, EEZ and continental shelf

Nicaragua's Straight Baselines



Colombia's Straight Baselines



ICJ's Ruling

- For portion of baselines justified on deeply indented and cut into coast:
 - Acknowledge that Nicaragua's coast "curves inward"
 - But, "it is not sufficient for a coast to have slight indentations and concavities"
- For baselines justified by fringe of islands:
 - Concern over the status of islands – conflicting evidence concerning Edinburgh Cay
 - No "specific rules" regarding a fringe of islands
 - ICJ view was that a fringe "must enclose a set or cluster of islands which represent an interconnected system with some consistency and continuity"
 - The terms "fringe of islands", "along the coast" and in its "immediate vicinity"
 - Should be "read together" such that the features are an integral part of its coastal configuration"

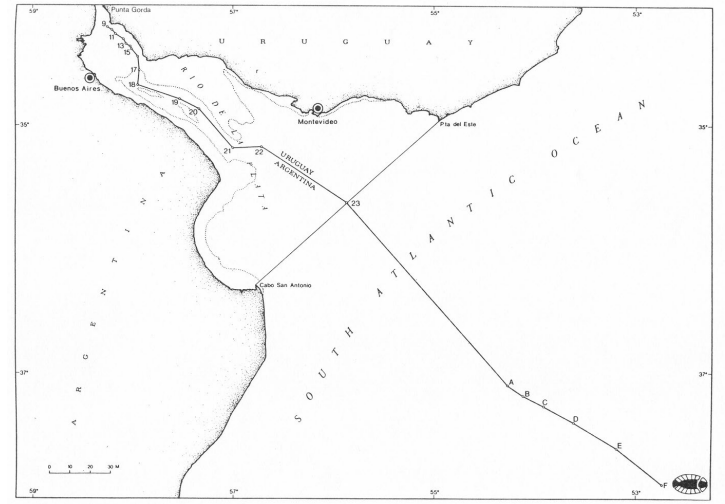
Dissenting Views

- Judge McRae suggested that the ICJ had provided alternative but equally precise language which will: “increase uncertainty in this area rather than providing clarification.”
- Criticised the absence of consideration of State practice:
 - “when viewed against that practice the straight baselines of Nicaragua do not seem to be out of line with the way States are interpreting Article 7.”
 - McRae suggested that the Court had not produced language that
 - “is any more precise” than the phrases in Article 7(1)”
 - Further, “what the Court has done...will leave States in considerable doubt about how to assess whether their straight baselines meet the requirements of Article 7.”

River Closing Lines



River closing line



LOSC, Article 9

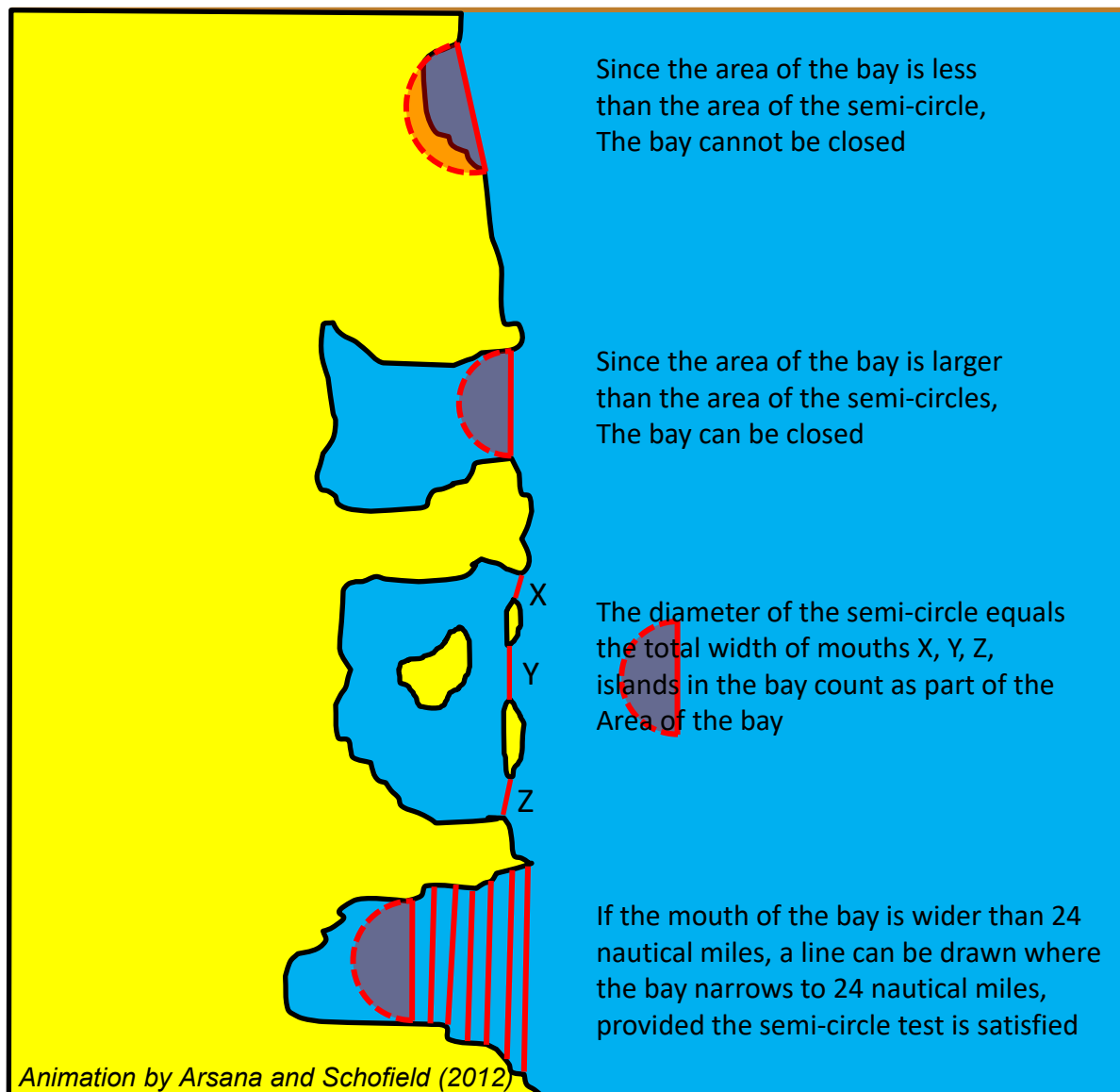
If a river flows directly into the sea, the baseline shall be a straight line across the mouth of the river between points of its low-water line.

- No maximum width of river mouth specified – most narrow but River Plate closing line >120 nautical miles
- No guidance on choice of closing line

Geneva Convention on the Territorial Sea and the Contiguous Zone, Article 7 LOSC, Article 10

1. This article relates only to bays the coasts of which belong to a single State.
2. For the purposes of this Convention, a bay is a well-marked indentation, whose penetration is in such proportion to the width of its mouth as to contain land-locked waters and constitute more than a mere curvature of the coast. An indentation shall not, however, be regarded as a bay unless the area is as large as, or larger than, that of a semi-circle whose diameter is a line drawn across the mouth of the indentation.
3. For the purpose of measurement, the area of an indentation is that lying between the low-water mark of its natural entrance points. Where, because of the presence of islands, an indentation has more than one mouth, the semi-circle shall be drawn on a line as long as the sum total of the lengths of the lines drawn across the different mouths. Islands within an indentation shall be included as if they were part of the water area of the indentation.
4. If the distance between the low-water marks of the natural entrance points of a bay does not exceed 24 nautical miles, a closing line may be drawn between these two low-water marks, and the waters enclosed thereby shall be considered as internal waters.
5. Where the distance between the low-water marks of the natural entrance points of a bay exceeds 24 nautical miles, a straight baseline of 24 nautical miles shall be drawn within the bay in such a manner as to enclose the maximum area of water possible with a line of that length.
6. The foregoing provisions so not apply to so-called “historic” bays, or in any case where the system of straight baselines provided for in article 7 applies

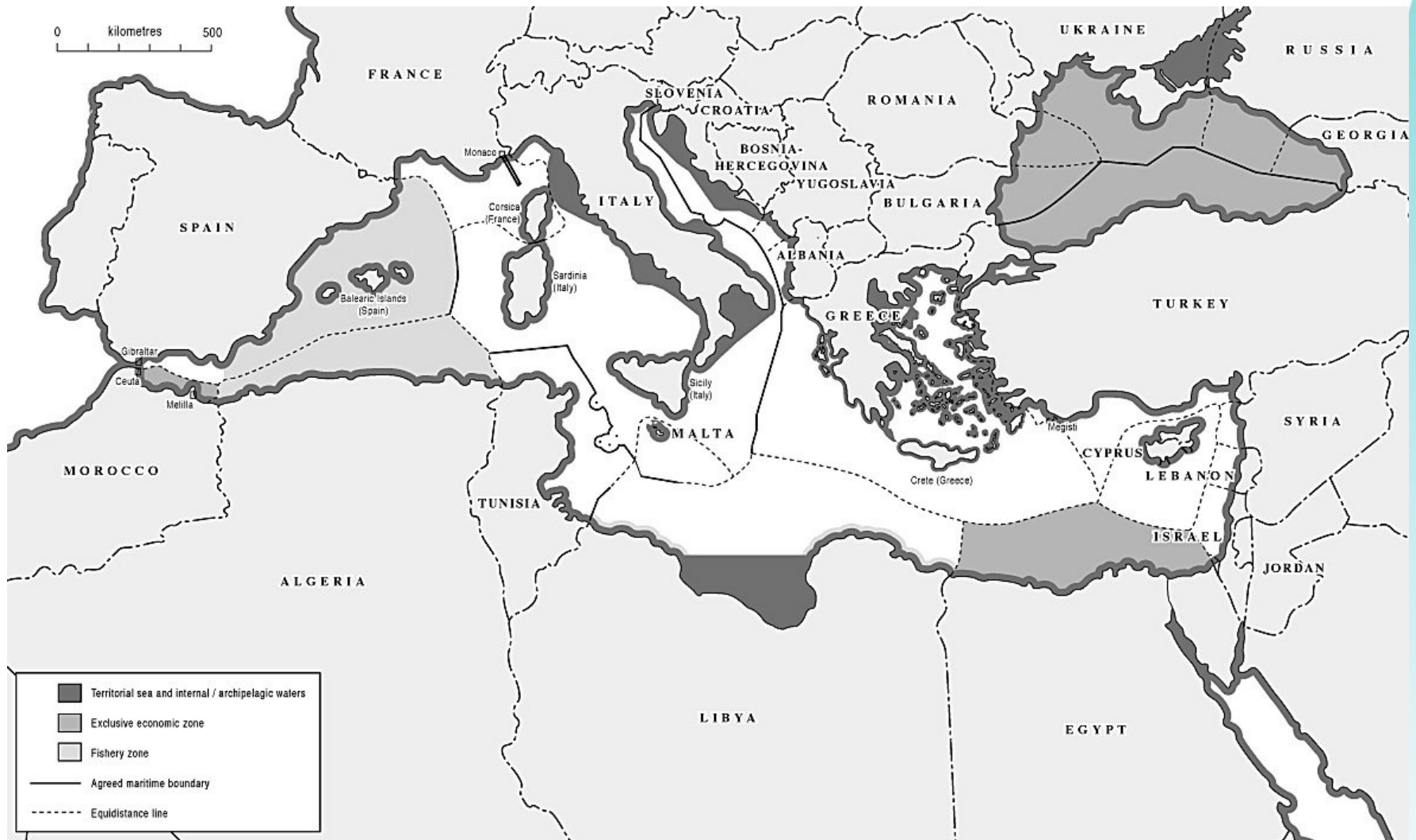
Bays



Historic Bays

6. The foregoing provisions so not apply to **so-called “historic” bays**, or in any case where the system of straight baselines provided for in article 7 applies.
 - US has protested over 15 of the 18 historic bay claims made
 - e.g. Gulf of Sirte

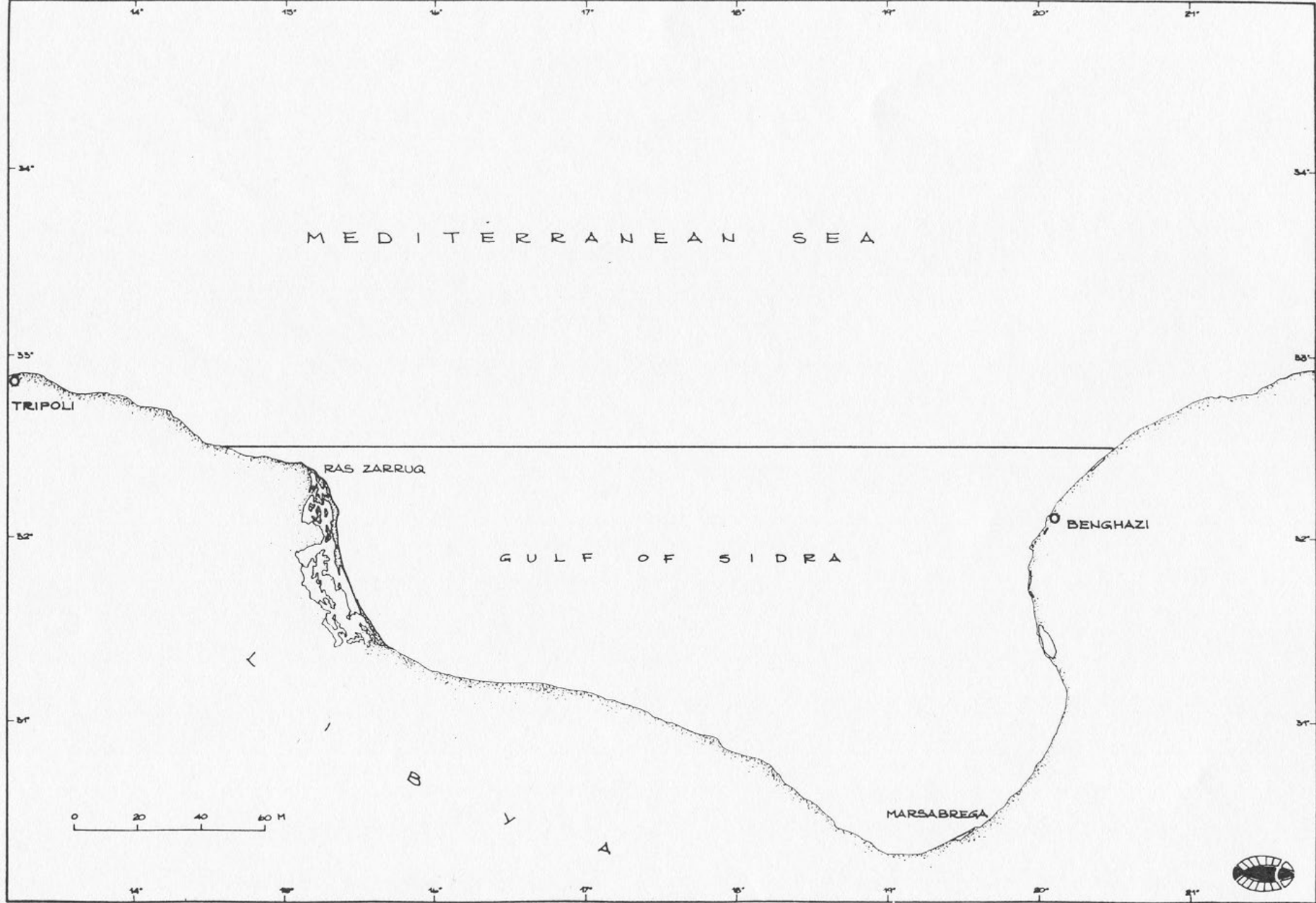
Gulf of Sirte (Sidra)



Source: IBRU

Contribution. Development. Impact.

WMU-Sasakawa Global Ocean Institute



US View on Historic Bays

“To meet the international standard for establishing a claim to historic waters, a State must demonstrate its **open, effective, long-term, and continuous exercise of authority over the body of water**, coupled with **acquiescence** by foreign States to the exercise of that authority. The United States takes the position that an actual showing of acquiescence by foreign States in such a claim is required, as opposed to a mere absence of opposition.”

(J. Ashley Roach, and R.W. Smith *United States Responses to Excessive Maritime Claims*, The Hague: Martinus Nijhoff Publishers, 2012, p.35.)

Permanent Harbour Works

LOSC Article 11 Ports

For the purpose of delimiting the territorial sea, the outermost permanent harbour works which form an integral part of the harbour system are regarded as forming part of the coast. Offshore installations and artificial islands shall not be considered as permanent harbour works.

Cherbourg

(Normandy, France)



Article 14: Combination of methods

“The coastal State may determine baselines in turn by any of the methods provided for in the foregoing articles to suit different conditions.”

The “foregoing articles” referred to are those relating to:

- normal baselines (Article 5)
- reefs (Article 6)
- straight baselines (Article 7)
- mouths of rivers (Article 9)
- bays (Article 10)
- ports and harbour works (Article 11).

Archipelagic States

According to Article 46 of the LOSC an archipelagic state is one constituted wholly by one or more archipelagos but may also include other islands.

Archipelagos themselves are defined in Article 46 as:

...**a group of islands, including parts of islands**, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographical, economic and political entity, or which historically have been regarded as such.

Article 47: Archipelagic Baselines

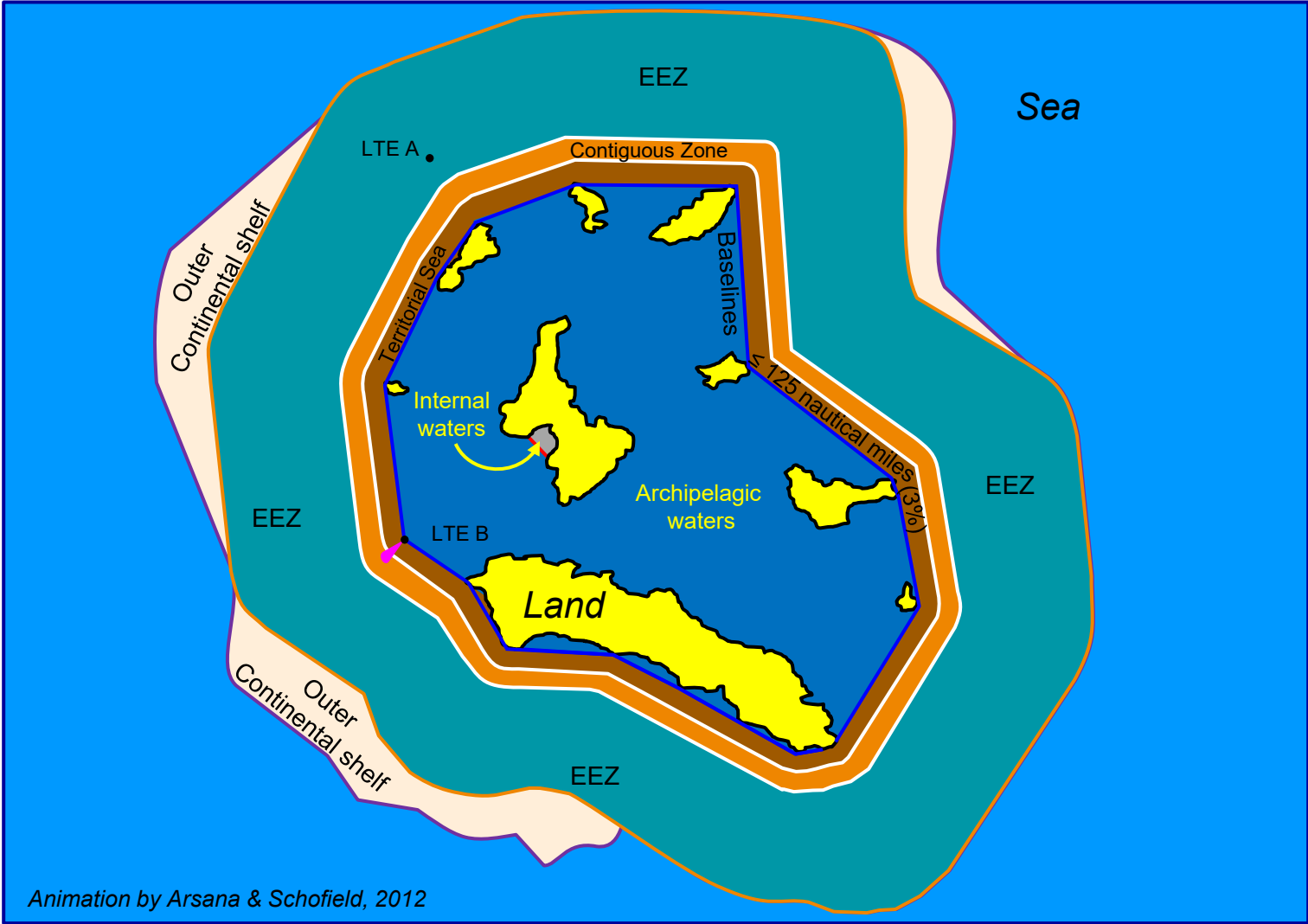
1. An archipelagic State may draw straight archipelagic baselines joining the outermost points of the outermost islands and drying reefs of the archipelago provided that within such baselines are included the main islands and an area in which the ratio of the area of the water to the area of the land, including atolls, is between 1 to 1 and 9 to 1.
2. The length of such baselines shall not exceed 100 nautical miles, except that up to 3 per cent of the total number of baselines enclosing any archipelago may exceed that length, up to a maximum length of 125 nautical miles.
3. The drawing of such baselines shall not depart to any appreciable extent from the general configuration of the archipelago.
4. Such baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the nearest island.
5. The system of such baselines shall not be applied by an archipelagic State in such a manner as to cut off from the high seas or the exclusive economic zone the territorial sea of another State.
6. If a part of the archipelagic waters of an archipelagic State lies between two parts of an immediately adjacent neighbouring State, existing rights and all other legitimate interests which the latter State has traditionally exercised in such waters and all rights stipulated by agreement between those States shall continue and be respected.
7. For the purpose of computing the ratio of water to land under paragraph 1, land areas may include waters lying within the fringing reefs of islands and atolls, including that part of a steep-sided oceanic plateau which is enclosed or nearly enclosed by a chain of limestone islands and drying reefs lying on the perimeter of the plateau.
8. The baselines drawn in accordance with this article shall be shown on charts of a scale or scales adequate for ascertaining their position. Alternatively, lists of geographical coordinates of points, specifying the geodetic datum, may be substituted.
9. The archipelagic State shall give due publicity to such charts or lists of geographical coordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations.

Key Requirements

In order to apply archipelagic baselines in accordance with the LOSC, therefore, five conditions have to be met:

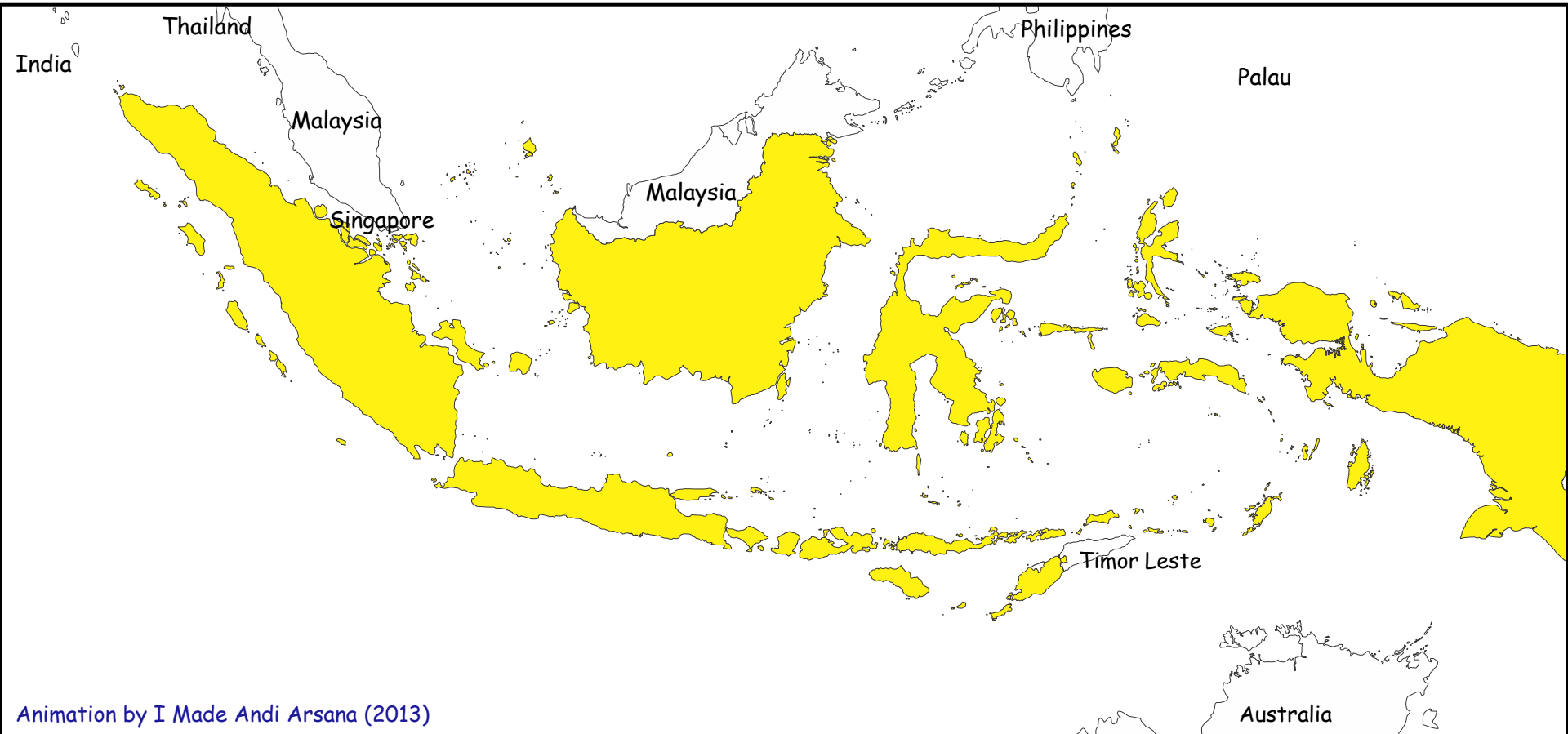
- Straight archipelagic baselines joining the **outermost points of the outermost islands and drying reefs** of the archipelago may be drawn so long as the claimant State's "**main islands**" are included within the archipelagic baseline system
- The **ratio of water to land** within the baselines must be **between 1:1 and 9:1**
- The **length of any single baseline segment must not exceed 125 M**
- **No more than three percent of the total number of baseline segments enclosing an archipelago may exceed 100 M**
- Such baselines "**shall not depart to any appreciable extent from the general configuration of the archipelago**"

Archipelagic Baselines and Maritime Zones



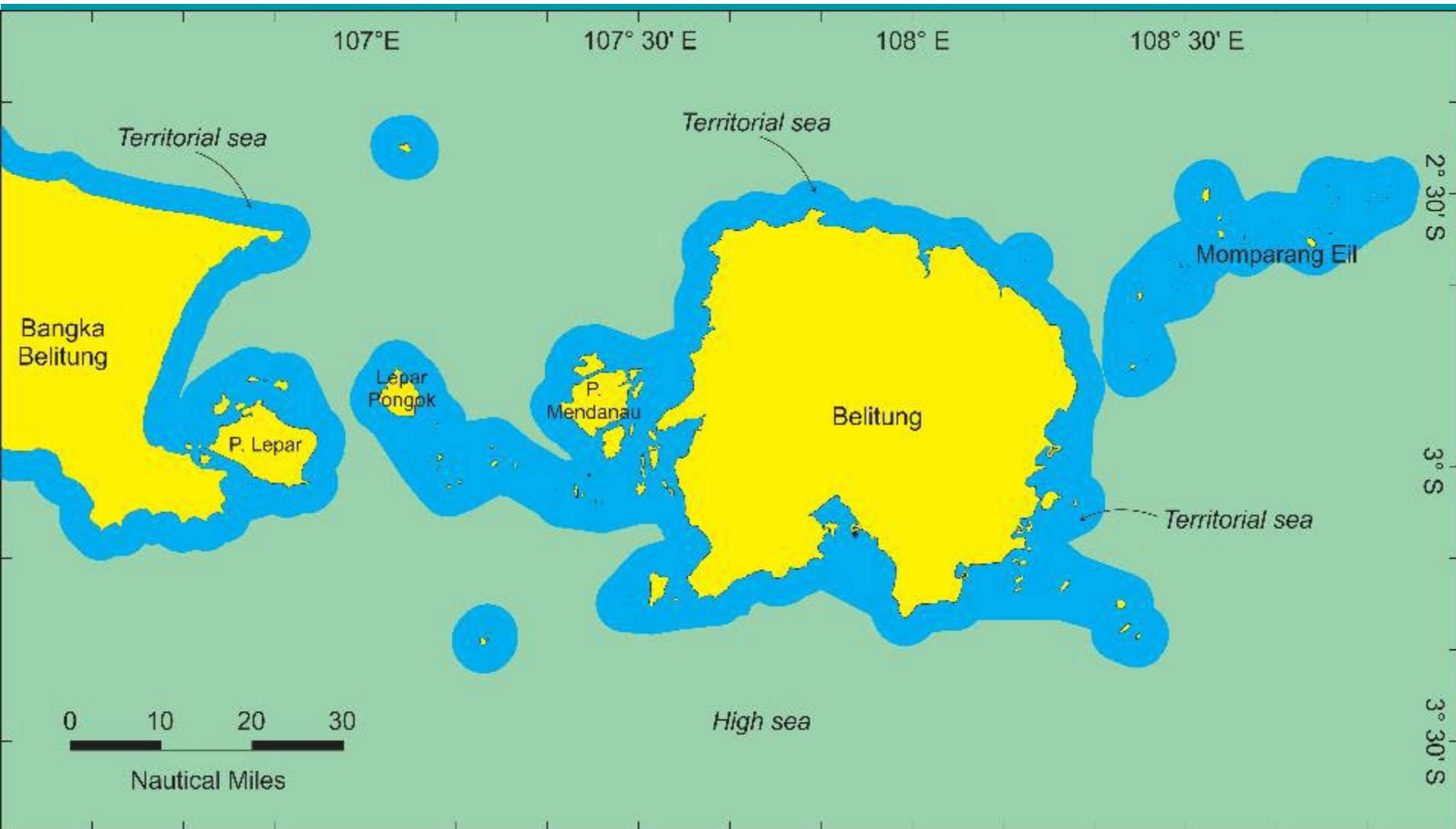
Source: TALOS Manual (5th edition, 2014)

Indonesia's Land Territory

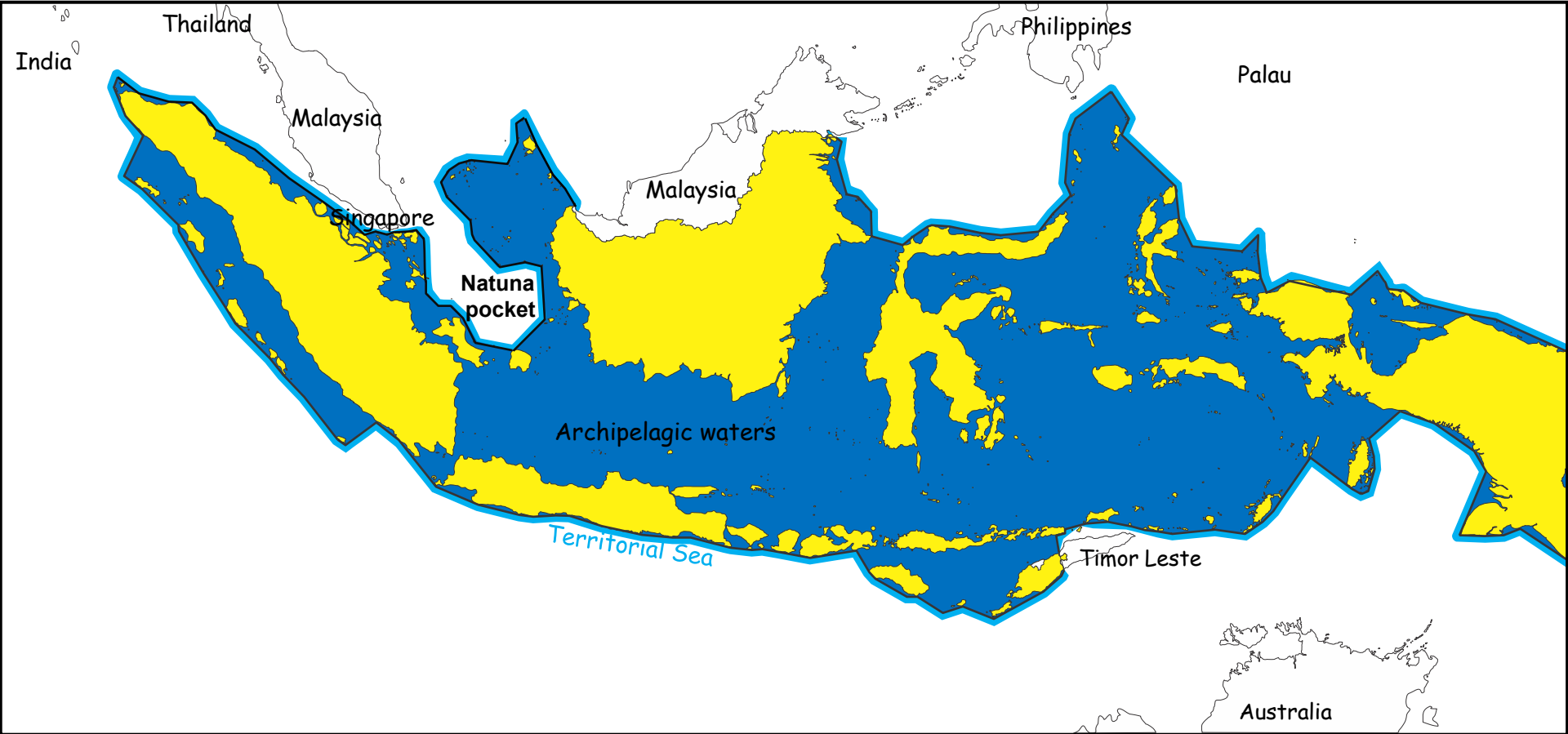


Animation by I Made Andi Arsana (2013)

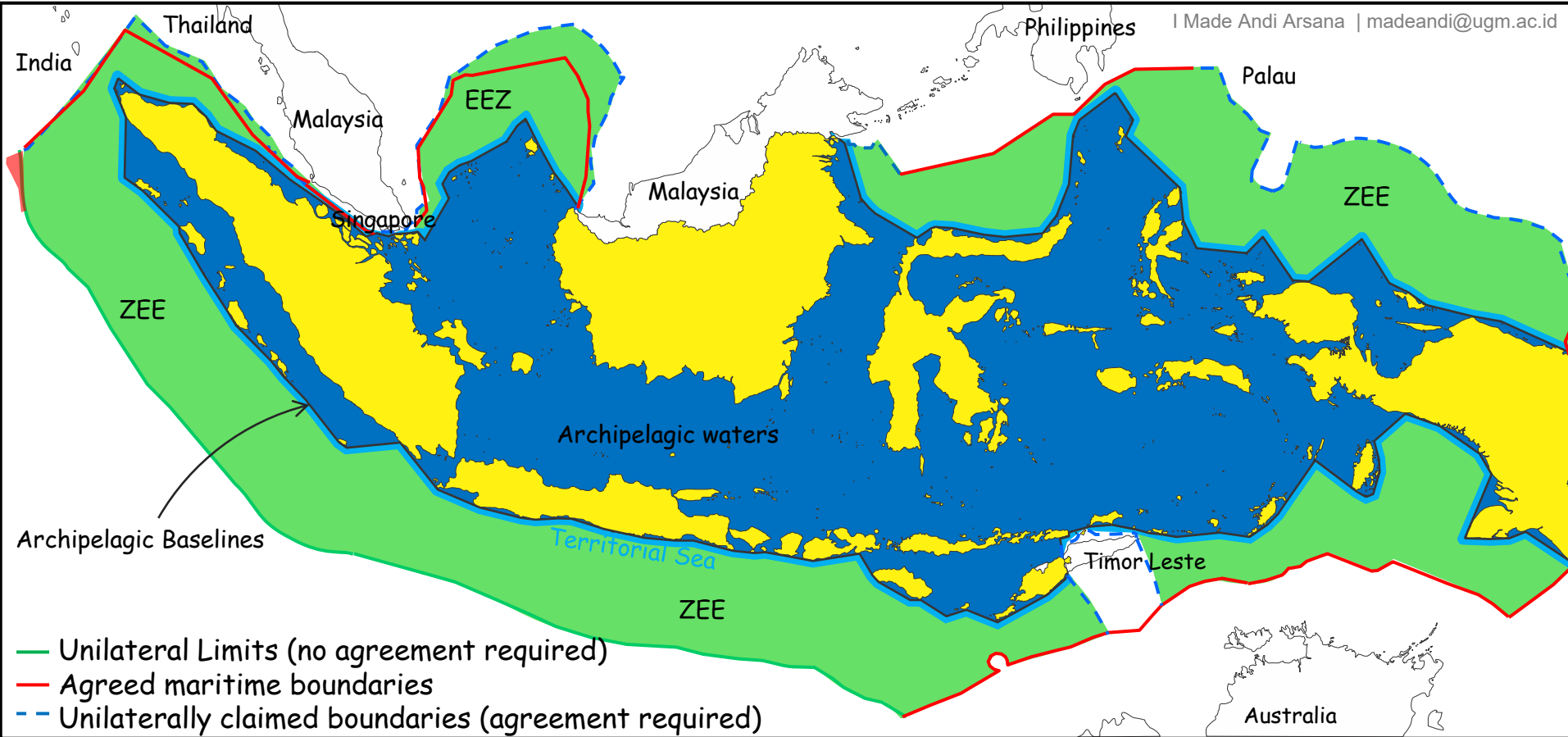
Indonesia's Territorial Sea – Ordinance 1939



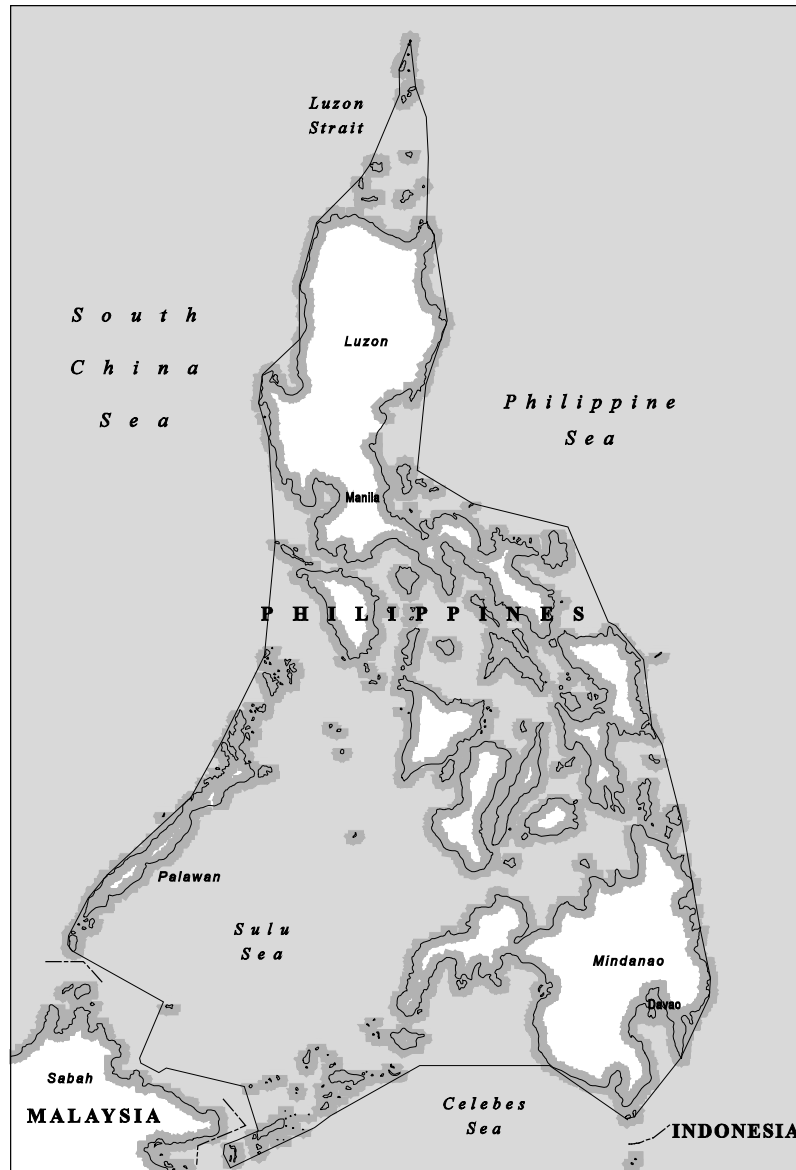
Djoeanda Declaration – 1957 – Law no 4/Prp/1960



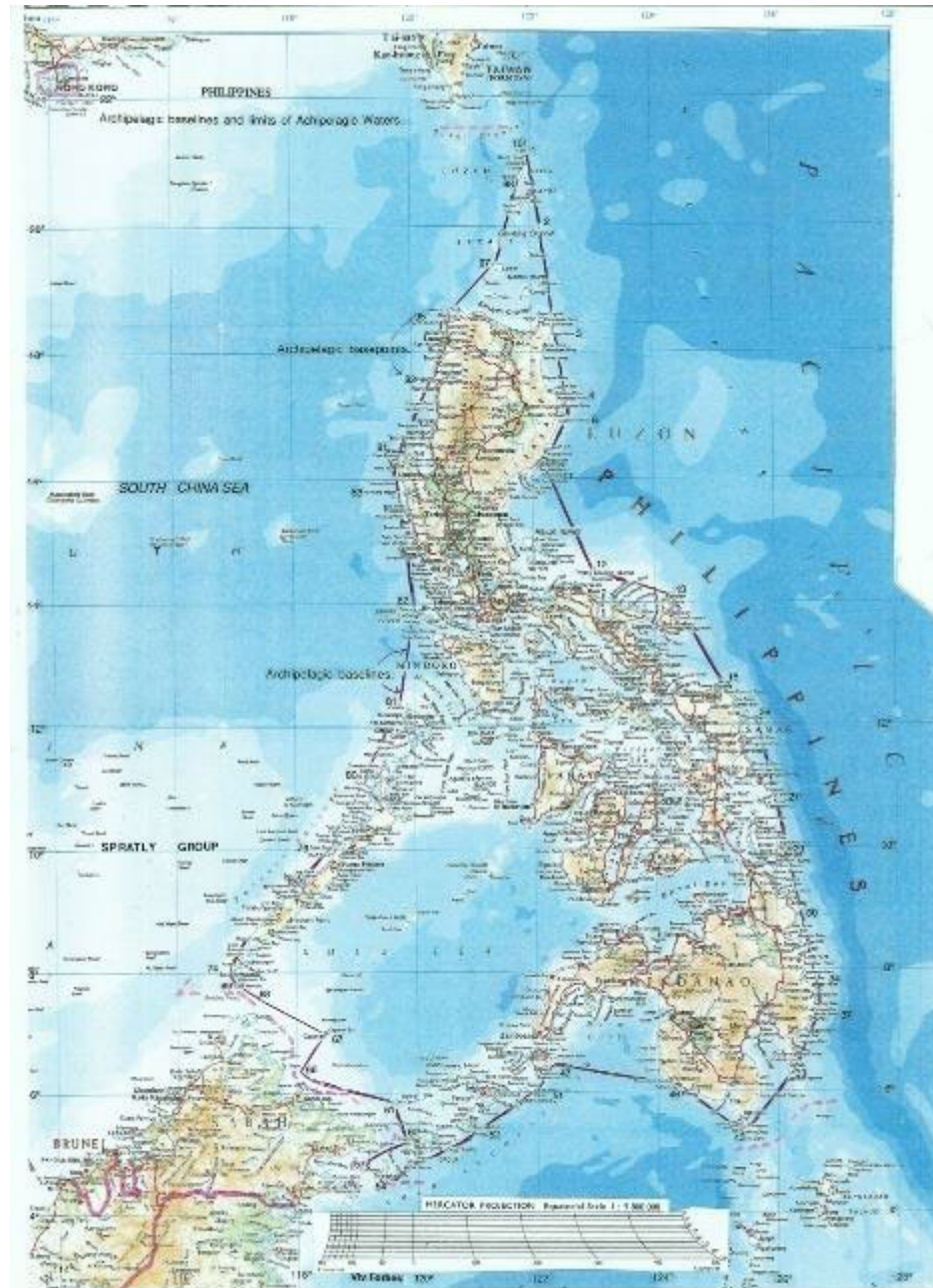
Indonesian Archipelagic Baselines and Maritime Claims



The Philippines



**Republic Act 9522,
10 March 2009**



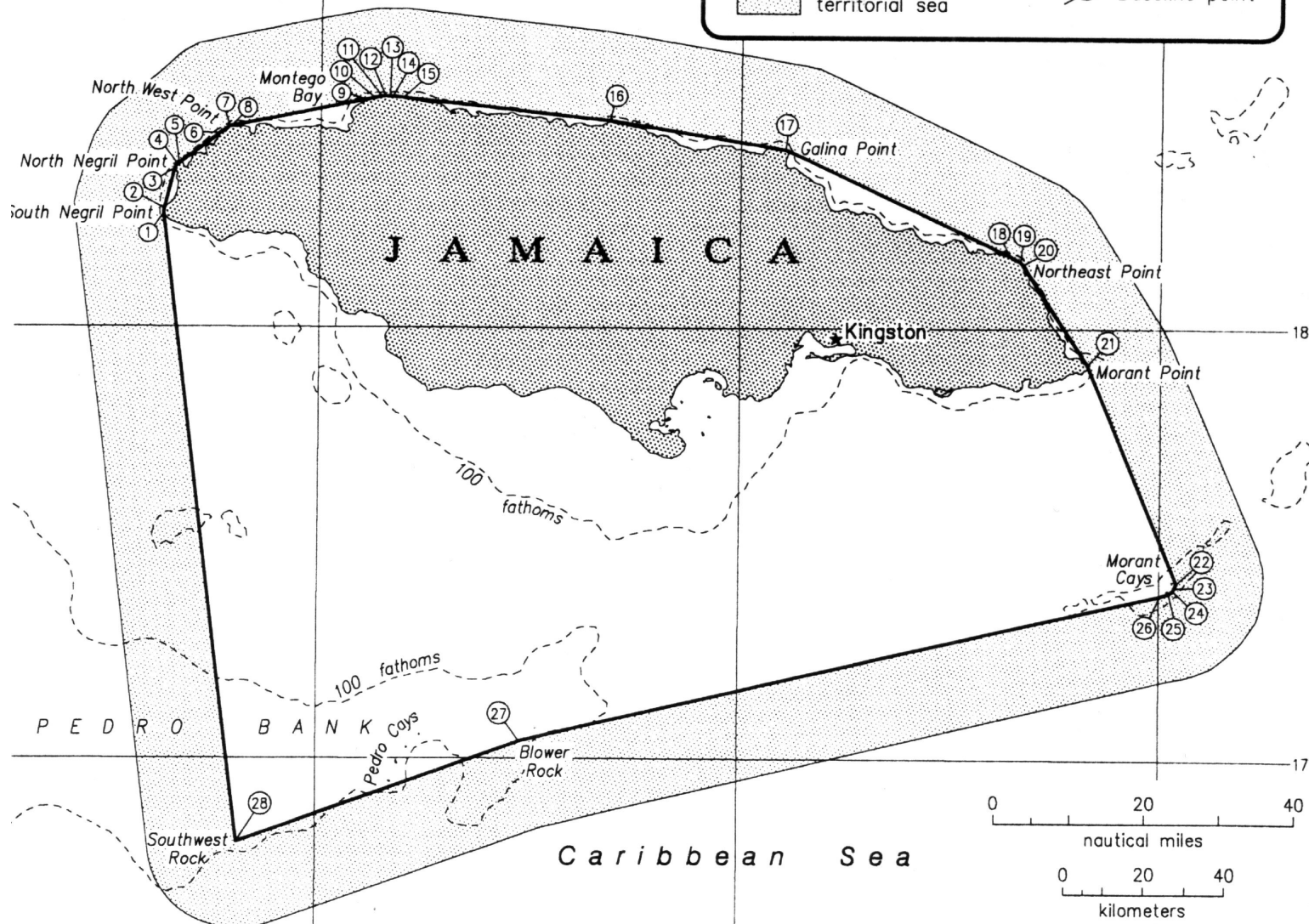
Jamaica

Archipelagic Straight Baseline Claim: Jamaica

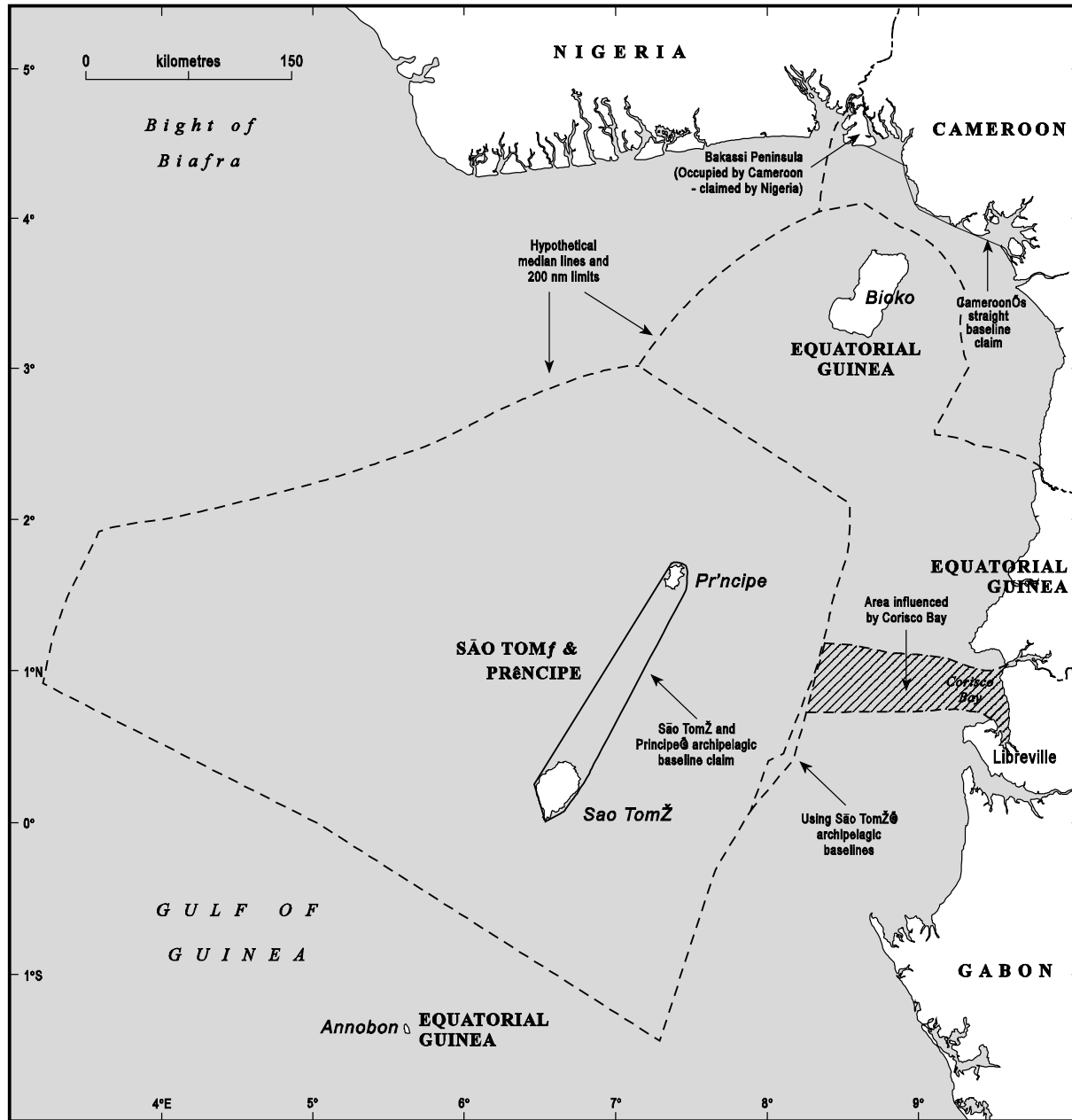
From The Exclusive Economic Zone Act
(Baselines) regulations, 12 October 1992

- Archipelagic straight baseline
- 100-fathom depth line
- ▨ 12 nautical mile territorial sea
- ⊙ Baseline point

C a r i b b e a n S e a



C a r i b b e a n S e a



Publicising Baseline Claims

Article 16 of the UN Convention states:

1. The baselines for measuring the breadth of the territorial sea determined in accordance with articles 7, 9, and 10, or the limits derived therefrom, and the lines of delimitation drawn in accordance with articles 12 and 15 shall be shown on charts of a scale or scales adequate for ascertaining their position. Alternatively, a list of geographical coordinates of points, specifying the geodetic datum, may be substituted.
2. The coastal State shall give due publicity to such lists of charts or lists of geographical coordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations.

Paras 8 and 9 of Article 47 of the UN Convention state:

8. The baselines drawn in accordance with this article shall be shown on charts of a scale or scales adequate for ascertaining their position. Alternatively, lists of geographical coordinates of points, specifying the geodetic datum, may be substituted.
 9. The archipelagic State shall give due publicity to such charts or lists of geographical coordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations
- No equivalent requirement to publicise location of normal baselines (but occurs when issuing charts).

Thank you!



Smiles