

THE ROLE OF THE ARCHIPELAGIC BASELINES IN MARITIME BOUNDARY DELIMITATION

Sora Lokita

The United Nations-Nippon Foundation Fellowship Programme 2009 - 2010



Oceans and Law of the Sea

Division for Ocean Affairs and the Law of the Sea

**DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA
OFFICE OF LEGAL AFFAIRS, THE UNITED NATIONS
NEW YORK, 2010**

DISCLAIMER

The views expressed herein are those of the author and do not necessarily reflect the views of the Government of Indonesia, the United Nations, the Nippon Foundation of Japan, or the Australian National Centre for Ocean Resources and Security (ANCORS) of the University of Wollongong or those of the Indonesian National Coordinating Agency for Survey and Mapping (BAKOSURTANAL).

© 2010 Sora Lokita. All rights reserved.

Abstract

The codification of the concept of the archipelagic State through the United Nations Convention on the Law of the Sea of 1982 (hereafter: LOSC) represented a significant development of the international legal status of waters within and around certain States which can be geographically and legally considered as archipelagos. Once a country has satisfied all the requirements to qualify as an archipelagic State, as prescribed by Article 46 of LOSC, then it may have the right to draw straight archipelagic baselines. There are, however, a number of conditions to fulfil in the construction of archipelagic baselines in accordance with Article 47 of LOSC. Where such archipelagic baselines are defined in accordance with Article 47 of LOSC, the maritime area enclosed becomes archipelagic waters and is under the sovereignty of the coastal State. Moreover, archipelagic States can also generate their maritime zones from their archipelagic baselines, as long as there are no overlapping claims with neighbouring States. If there are, then the parties should negotiate the boundaries in order to achieve an equitable solution.

In the context of maritime boundary delimitation involving archipelagic States, it can be anticipated that such a State will argue that archipelagic baselines should be given full effect, for instance, in the construction of an equidistance based maritime boundary delimitation line. However, in many agreed boundary cases, it is unclear whether the system of straight archipelagic baselines in question had any real significance in determining the final location of the maritime boundary delimitation line.

This research identifies and critically analyses the role of archipelagic baselines in maritime boundaries delimitation. The first part of the research identifies the evolution of the concept of the archipelagic State in international law together with the associated international legal rules concerning the application of archipelagic baselines. The second part analyses the legal and technical aspects of maritime boundary delimitation. In the third part of the research, discussion turns to practical consideration and, in particular, how archipelagic States have defined their baselines and delimited their maritime boundaries with their neighbours. The research also identifies and analyses legal and technical issues, case studies are provided, in order to illustrate and highlight key complexities in maritime boundary delimitation facing archipelagic States, particularly with reference to their archipelagic baselines. At the end of the discussion, it can be concluded that there is still a gap between the law and the practice, especially on the technical aspect, on how archipelagic baselines can be used in maritime boundary delimitation.

SUPERVISORS:

Dr. Clive Schofield

Dr. François Bailet

Acronyms

BAC	British Admiralty Chart
EEZ	Exclusive Economic Zone
GIS	Geographic Information System
ICJ	The International Court of Justice
ILC	The International Law Commission
ITLOS	International Tribunal for the Law of the Sea
LOSC	Law of the Sea Convention
UN	United Nations
UNCLOS I	The First United Nations Conference on the Law of the Sea (1958)
UNCLOS II	The Second United Nations Conference on the Law of the Sea (1960)
UNCLOS III	The Third United Nations Conference on the Law of the Sea (1973-1982)
TALOS	Technical Aspects of the Law of the Sea
UK	United Kingdom
US	United States
WGS-84	World Geodetic System 1984

Dedication

For Mama, Papa and Indonesia

Acknowledgements

It has been a great opportunity for me for being awarded the United Nations - Nippon Foundation of Japan Fellowship. I would like to convey my sincere gratitude to the Division for Ocean Affairs and Law of the Sea (DOALOS), Office of Legal Affairs, United Nations and The Nippon Foundation of Japan for this opportunity.

I thank Mr. Serguei Tarassenko (Director of DOALOS), Dr. Francois Bailet (Program Adviser and supervisor), and all DOALOS staff members for their support and warm welcome. I also appreciate my all UN-Nippon 2009-2010 fellow for our warm friendship and mutual collaboration.

I thank Dr. Clive Schofield for being such a great supervisor for me. I also thank Prof. Martin Tsamenyi and Myree Mitchell from the Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong for their assistance during my first-phase placement. I also have to highly acknowledge the support, assistance and friendship given to me by I Made Andi Arsana.

I would not be part of this program if it is not based on the support given by the Indonesian government, especially the Indonesian National Coordinating Agency for Surveys and Mapping (Bakosurtanal) and the Department of Foreign affairs of the Republic of Indonesia. I am indebted to those institutions.

I dedicate this work to Papa, Mama, *Eyangkung*, Novi, *Mas* Ipul, Henry and Gita for their supports, prayers, endless courage and love. Supports from my family are undisputable so I can achieve this far. I am indebted to them all.

Astrit Rimayanti, the woman that I love has always been my source of encouragement and inspiration. Her constant love and support was the reason for me to always move forward. Without support from her, I would not have been able to accomplish this.

Finally, I acknowledge everybody whose name cannot be mentioned one by one in this acknowledgement page. However, their supports never lose their meaning.

Table of Contents

Abstract.....	ii
Acronyms.....	iv
Dedication.....	v
Acknowledgements.....	vi
Table of Contents.....	vii
List of Figures and Maps.....	x
1 Introduction.....	1
1.1 Background and Context.....	2
1.2 Scope and Objectives.....	4
1.3 Achievements.....	5
1.4 Overview of the Report.....	5
2 The Evolution of Archipelagic State and Archipelagic Baselines Concept.....	6
2.1 Definition.....	6
2.1.1 Historical Perspective.....	6
2.1.1.1 Institut de Droit International.....	7
2.1.1.2 International Law Association.....	8
2.1.1.3 The Hague Codification Conference of 1930.....	9
2.1.1.4 International Law Commission.....	10
2.1.1.5 1958 United Nations Conference on the Law of the Sea (UNCLOS I)....	12
2.1.1.6 1960 United Nations Conference on the Law of the Sea (UNCLOS II)...	14
2.1.1.7 Third United Nations Conference on the Law of the Sea (UNCLOS III).	14
2.1.2 Legal Perspective.....	15
2.1.3 Technical Perspective.....	17
2.2 State Practice.....	22
2.3 Concluding Remarks.....	26
3 Maritime Boundary Delimitation.....	28
3.1 The Evolution of Maritime Boundary Delimitation.....	28
3.1.1 The work of the International Law Commission.....	29
3.1.2 Formulation of the rules in the UNCLOS I.....	31
3.1.3 Relevant Jurisprudence Pre-1982.....	33
3.1.3.1 The 1909 Grisbadarna Arbitration.....	33

3.1.3.2	The North Sea Continental Shelf Cases	35
3.1.3.3	The Anglo-French Continental Shelf Arbitration	38
3.1.4	Maritime Boundary Delimitation in the UNCLOS III and the LOSC	40
3.2	Principles and Methods of Delimitation	43
3.2.1	Equidistance Method	44
3.2.2	Method Derived From the Equidistance Principle.....	46
3.2.2.1	Simplified Equidistance Line	47
3.2.2.2	Coastal Length Comparison	47
3.2.2.3	Partial Effect.....	49
3.2.2.4	General Direction of the Coastline.....	49
3.2.2.5	The Equi-ratio Method	50
3.2.3	Other Methods	51
3.2.3.1	Enclaving and semi-enclaving	51
3.2.3.2	Thalweg Concept.....	52
3.2.3.3	Prolongation of Land Boundaries	52
3.2.3.4	Arbitrary Line.....	52
3.2.4	The Three Stages Approach	55
3.3	The Technical Aspects of Maritime Boundary Delimitation.....	55
3.3.1	Nautical Charts.....	56
3.3.1.1	Chart Scale	56
3.3.1.2	Chart Projection.....	57
3.3.2	Straight Lines	58
3.3.3	Datum issues	59
3.4	Concluding Remarks.....	61
4	Archipelagic Baselines in Boundary Delimitation	62
4.1	Key Problems in Practice.....	62
4.2	Legal Analysis.....	63
4.2.1	Archipelagic Straight Baseline in Case Law.....	64
4.2.2	Straight Baselines in Case Law and State Practice	66
4.3	Technical Analysis	68
4.4	Categorisation Analysis of State Practice.....	71
4.4.1	Category 1 Agreements: Negotiated Lines	72
4.4.2	Category 2 Agreements: Baselines Disregarded.....	80
4.4.3	Category 3 Agreements: Full Effect.....	83

4.4.4 Analysis of the Three Categories	84
4.5 Concluding Remarks	85
5 Concluding Remarks.....	87
5.1 Summary	87
5.2 Evaluation / Recommendations.....	89
5.3 Future Work	90
BIBLIOGRAPHY	91

List of Figures and Maps

Figure 1.	Zones of maritime jurisdiction	3
Figure 2.	A Large island State – water:land ratio < 1:1.	19
Figure 3.	An Archipelago – water:land ratio between 1:1 and 9:1.	19
Figure 4.	An illustration of Archipelagic baselines.....	21
Figure 5.	Norway – Sweden territorial sea Boundary around Grisbadarna banks.....	35
Figure 6.	The North Sea Cases.....	36
Figure 7.	The Anglo-French Continental Shelf boundary.....	39
Figure 8.	Schematic map of maritime zones, limits and boundaries.....	44
Figure 9.	The Equidistance line	45
Figure 10.	US-Mexico Boundary Line in the Pacific Segment	48
Figure 11.	1985 Guinea/Guinea-Bissau arbitration.....	50
Figure 12.	The Equi-ratio Method.....	51
Figure 13.	The Canada-France (St. Pierre et Miquelon) delimitation	53
Figure 14.	The UK – Ireland Delimitation	54
Figure 15.	Comparison between a loxodrome and a geodesic connecting two points	58
Figure 16.	Maritime Boundary Line between Trinidad and Tobago and Barbados.....	65
Figure 17.	Illustration of a Median line generated by ignoring the archipelagic baseline.....	70
Figure 18.	Illustration of a Median line generated from the archipelagic baseline.	71
Figure 19.	The 1973 Indonesia-Singapore Territorial Sea delimitation	81

1 Introduction

Managing the maritime domain is not an effortless issue for all coastal States, nonetheless for those who have more waters than land and their land is scattered and divided by the waters. For those States, which nowadays are known as archipelagic States, managing their maritime area is surely a must and, arguably, to some extent more important than their land. It is undisputable that oceans are one of the sources of valuable and exploitable natural resources. However, it is worth noting that for archipelagic States, managing this maritime area is not only about the possession of natural resources, but it is also about the national integration and security issue. Therefore they needed legal instruments that internationally codify those concerns which were very difficult to understand and accept for most continental States.

Therefore, the recognition given to the concept of the archipelagic State can be considered as one of the innovative aspects of the United Nations Convention on the Law of the Sea of 10 December 1982 (hereafter: LOSC)^{1,2} For archipelagic States, which benefit from this development, it can be considered as the end of a long journey to promote the archipelagic concept to the international community so that it can be finally legally accepted.

As of 28 May 2008, archipelagic status had been claimed by 20 States.³ Their claims were based on the provisions stipulated in Part IV of the LOSC. Archipelagic status offers a number of advantages to these States, which are not available to other States. One of the key benefits of archipelagic status is that archipelagic States have the right to draw archipelagic baselines and the waters within the baselines are categorised as 'archipelagic waters' where the coastal State exercises sovereignty over the water column, seabed, subsoil and the airspace above.⁴

¹ United Nations, *United Nations Conventions on the Law of the Sea*. Entered into force 16 November 1994, available at <http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm>.

² Tsamenyi, M, *et.al.*, *Navigation Through Archipelagos: Current State Practice*, in Nordquist, Myron H, *et.al.* (ed), *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention*. (Leiden, Martinus Nijhoff Publishers, 2009) p.413.

³ See Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations, *Table of Claims to Maritime Jurisdiction* (2008) available at: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/table_summary_of_claims.pdf>

⁴ It should be noted that archipelagic States are also able to define closing lines and areas of internal waters within their archipelagic waters in accordance with Article 50 of LOSC.

Furthermore, archipelagic States have the right to designate the limits and boundaries of their maritime zones from their archipelagic baseline.

However, for any coastal States, in particular archipelagic States, designating limits and boundaries is not always as easy as it looks. Even though LOSC had succeeded in codifying the principles of maritime boundary delimitation, there is still a gap between the law and the practice of the application of its provisions, this especially with respect to the role of archipelagic baselines in defining boundary lines. The International Courts and Tribunals are still silent on this particular question.

This paper will identify and analyse the legal and technical issues related to maritime boundary delimitation involving archipelagic States with particular reference to the role played by their archipelagic baselines. Cases of boundaries will be used to illustrate and highlight key complexities in this context.

1.1 Background and Context

LOSC codified that seaward of archipelagic baselines, the coastal State has the right to claim the outer limits of its territorial sea, contiguous zone, the exclusive economic zone (hereafter: EEZ) and continental shelf from archipelagic baselines.⁵ It is worth noting that baselines, including archipelagic baselines, constitute an essential aspect in the LOSC, since the breadth of the zones under national jurisdiction is to be measured from baselines. The breadth of the territorial sea, which can not exceed 12 nautical miles (hereafter: nm)⁶, is measured from baselines determined in accordance with LOSC.⁷ The breadth of contiguous zone may not extend beyond 24 nm from the baselines from which the breadth of territorial sea is measured.⁸ The same formula is used to determine the breadth of the EEZ, which shall not exceed 200 nm from the baselines from which the breadth of territorial sea is measured.⁹ Last but not least, Article 76 which defines the continental shelf also uses a distance criterion

⁵ LOSC, Article 48

⁶ Technically the correct abbreviation for nautical mile is 'M'; and 'nm' refers to nanometres. However, for the purpose of this paper, 'nm' is used to denote nautical miles since the same approach is used by many authorities, e.g. the United Nations Division for Ocean Affairs and the Law of the Sea.

⁷ LOSC, Article 3

⁸ LOSC, Article 33

besides the criterion of natural prolongation. The distance criterion of 200 nm is calculated from the baselines used for measuring the territorial sea where the outer edge of the continental margin does not extend up to that distance.

The above provisions are unlikely to give rise to problems where coastal States, including archipelagic States, are defining the outer limits of these zones to their full extent. That is, where no potential overlapping claims exist with neighbouring States. However, the drawing and role of archipelagic baselines may have a significant impact on the delimitation of maritime boundaries between States, especially when archipelagic States need to delimit their maritime boundaries with neighbouring States that are not archipelagic States.

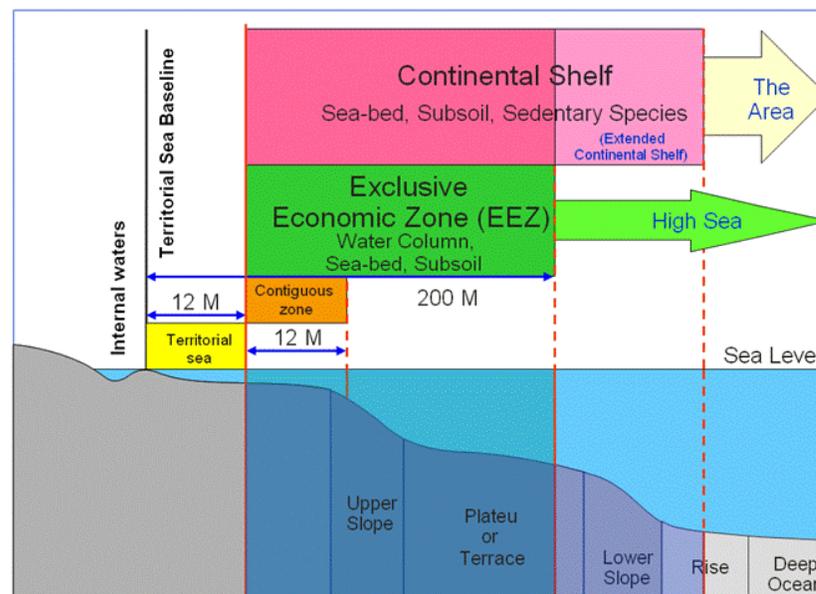


Figure 1. Zones of maritime jurisdiction
(Source: Schofield & Arsana (2009), p. 30)

In a negotiation on the delimitation of maritime boundaries involving an archipelagic State and a non-archipelagic State, both parties tend to enter into an often long series of discussions relating to the method of delimitation to be applied. On the one hand, archipelagic States are highly likely to prefer that its archipelagic baselines be given full effect on the construction of any boundary line. However, on the other hand, the non-archipelagic State is similarly likely

⁹ LOSC, Article 57

to favour the use of baselines advantageous to it, including the use of normal rather than archipelagic baselines by the archipelagic State. Alternatively, the non-archipelagic State may have constructed straight baselines of its own, at least partially with a view to ‘balancing’ or countering the potential impact of archipelagic baselines on the delimitation line.

This paper is aimed at addressing technical and legal aspects related to the use of archipelagic baselines in maritime boundary delimitation. The applicable provisions of the generally accepted international legal framework provided by LOSC,¹⁰ selected State practice and relevant international jurisprudence is examined with a view to facilitating a critical analysis of the background, trends and use of archipelagic baselines in maritime boundary delimitation. Pertinent examples of the application and non-application of archipelagic baselines in this context are provided. Furthermore, a simulated maritime boundary delimitation case-study designed to explore legal and geospatial aspects of this critical issue for archipelagic States is offered.

1.2 Scope and Objectives

The scope of the present research is the development of archipelagic baselines with particular attention to the practices of archipelagic States in delimiting their maritime boundaries. It has to be stated clearly that this research is based on a literature review rather than a desktop study. Particular attention has been devoted to legal aspects of these issues, while at the same time this paper addresses technical and other non-technical matters to support the discussion.

The objective of this research is to provide an assessment and constructive critique as to the role of archipelagic baseline in maritime boundary delimitation. Wherever possible, this is also intended to provide possible practical recourses for identified problems to be, if possible, considered by the parties dealing with the law of the sea, especially those charged with delimiting maritime boundaries involving archipelagic States.

¹⁰ LOSC has gained widespread international acceptance. At the time of writing there were 159 parties to LOSC, comprising 158 States and the European Community. See United Nations, *Status of the United Nations Convention on the Law of the Sea, of the Agreement relating to the implementation of Part XI of the Convention and of the Agreement for the implementation of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks*, New York, updated to 10 July 2009, available at <www.un.org/Depts/los/reference_files/status2008.pdf>.

1.3 Achievements

In discussing the role of archipelagic baselines in maritime boundary delimitation, there are two subjects that should be discussed in conjunction with this important topic. They are the evolution of the concept of archipelagic States and basic principles of maritime boundary delimitation which cover not only legal issues but also technical ones. The extensive academic research conducted to complete this report has, it is hoped, succeeded in identifying, analysing and summing up key issues in respect of all of those subjects.

1.4 Overview of the Report

This report consists of five chapters, each of which covers a different topic. Chapter 1, the present chapter, provides an introduction and brief background to this current research. Chapter 2 follows with an overview of the evolution of the concept of the archipelagic State in international law together with the associated international legal rules concerning the application of archipelagic baselines. After the archipelagic baselines are defined, then the archipelagic States should determine their maritime limits and boundaries according to the legal and technical aspects of maritime boundary delimitation which are described in Chapter 3. This Chapter will also analyse jurisprudence and State practice in respect of maritime boundary delimitation.

Chapter 4 is the focus of this report as it focuses on the pattern of how archipelagic States have delimited their maritime boundaries with their neighbours. The research will also identify and analyse the legal and technical issues, including case studies, in order to illustrate and highlight key complexities in maritime boundary delimitation faced by archipelagic States in respect of their archipelagic baselines. The last chapter, Chapter 5, concludes the report with a summary of findings and recommendations. Future work that is required to be accomplished is also addressed in this chapter.

2 The Evolution of Archipelagic State and Archipelagic Baselines Concept

The codification of the concept of the archipelagic State through the LOSC represented a significant development of the international legal status of waters within and around certain States which can be geographically and legally considered as archipelagos. This chapter discusses in particular the development of the concept of archipelagic State and archipelagic baseline from the perspective of in legal and technical terms. In addition, a brief discussion on State practice will be included.

2.1 Definition

The definition of an archipelagic State and archipelagic baselines are set out in Article 46 and 47 of the LOSC. These provisions resulted from discussions and negotiations in many forums over a long period of time. They contain not only legal, but also technical aspects (See subsection 2.1.2 and 2.1.3).

2.1.1 Historical Perspective

It is worth noting, as a starting point of for discussion, the historical genesis of the definition of the term of archipelago. On 29 November 1957, Jens Evensen, an advocate at the Supreme Court of Norway, was asked by the Secretariat of the United Nations to submit a paper on certain legal aspects concerning the delimitation of the territorial waters of archipelagos. He divided archipelagos into two types, coastal archipelagos and outlying (mid-ocean) archipelagos and also raised a question as to whether the same rules of international law should apply to these two highly different geographical formations.¹¹ He explained:

Coastal archipelagos are those situated so close to a mainland that they may reasonably be considered part and parcel thereof, forming more or less an outer coastline from which it is natural to measure the marginal seas. The most typical example of such coastal archipelagos is the Norwegian "Skjaergard" stretching out almost all along the coast of Norway forming a fence — a marked outer

¹¹ Jen Evensen, "Certain Legal Aspects concerning the delimitation of the territorial Waters of Archipelagos" UNCLOS I official Records (New York, UN, 2009) p 290

coastline — toward the sea. Other typical examples of such coastal archipelagos are offered by the coasts of Finland, Greenland, Iceland, Sweden, Yugoslavia, and certain stretches on the coasts of Alaska and Canada, just to mention a few of many examples.

Outlying (mid-ocean) archipelagos are groups of islands situated out in the ocean at such a distance from the coasts of firm land as to be considered as an independent whole rather than forming part of or outer coastline of the mainland. A few examples suffice in this connexion: the Faeroes, Fiji Islands, Galapagos, Hawaiian Islands, Indonesia, Japan, Philippines, Solomon Islands, the Svalbard archipelago.¹²

The definition seems had brought more complexities in every discussion to formalize the provisions in international law that can be applied on archipelagos. One of that complexities rose in the discussion was the fact that the legal aspects are mingled with and dependant upon various factors of a geographical, historical, economical and political nature.

The question of coastal archipelagos was taken up mostly in connection with the question of coastal baselines in several academic and interGovernmental forums after the turn of the century.¹³ The question was discussed, without conclusive results, at the 1889, 1927 and 1928 session of the *Institut de Droit International*, the 1924 and 1926 meetings of the International Law Association, and the 1930 Hague Codification Conference.

2.1.1.1 Institut de Droit International

As far as it is recorded, the problems concerning the delimitation of the territorial waters of coastal archipelagos was firstly discussed, as one of the agenda items, in the 1889 session of the meeting of the *Institut de Droit International*. However, no conclusion was reached during the session. It was not until 1927, that the same question was seriously discussed in the *Institut*. The 5th committee of the *Institut* proposed an article to the meeting which read as follow:

Where a group of islands belongs to one coastal State and where the islands of the periphery of the group are not further apart from each other than the double breadth of the marginal sea, this group shall be considered a whole and the extent

¹² Ibid

¹³ UN DOALOS, *Practice of Archipelagic State*, (New York, United Nations, 1992), p.iii

of the marginal sea shall be measured from a line drawn between the uttermost parts of the islands¹⁴

The draft was then discussed by the *Institut* during a conference held in Stockholm in 1928. As a result, the final resolution of the *Institut* contained the following proposal:

Where archipelagos are concerned, the extent of the marginal sea shall be measured from the outermost islands or islets provided that the archipelago is composed of islands and islets not further apart from each other than twice the breadth of the marginal sea and also provided that the islands and islets nearest to the coast of the mainland are not situated further put than twice the breadth of the marginal sea.¹⁵

2.1.1.2 International Law Association

The draft proposed by the 5th committee of the *Institut de Droit International* was also submitted to the 15th conference of the International Law Association which was held at Genoa (Italy) in 1892 for further discussion. In 1924, the International Law Association appointed a "Neutrality Committee", with Professor Alvarez as Chairman, to consider questions concerning territorial waters.¹⁶ At the Association meeting in Stockholm in 1924, the Committee presented a report and draft convention on "The Laws of Maritime Jurisdiction in Time of Peace". The draft of the committee contained no specific provisions concerning archipelagos. However, Professor Alvarez submitted a special draft convention differing in certain respects from the Committee's proposal. In his proposal, in Article 5, he recommended provision:

As to islands situated outside or at the outer limit of a State's territorial waters, a special zone of territorial waters shall be drawn around such islands according to the rules contained in Article 4.

Where there are archipelagos the islands thereof shall be considered a whole, and the extent of the territorial waters laid down in Article 4 shall be measured from the islands situated most distant from the centre of the archipelago.

¹⁴ Institut de Droit International, *Annuaire de L'intitut*, 1927, vol 33 p.81

¹⁵ Ibid

¹⁶ Jen Evensen, *supra note* 11, p. 291

In his draft, Article 4, Professor Alvarez proposed a zone of marginal seas of six nautical miles as measured from low water marks.¹⁷ He also proposed a twelve-mile maximum length limit for baselines across the mouths of bays (Article 5), no maximum was suggested regarding the distance between the islands of an archipelago.¹⁸

2.1.1.3 The Hague Codification Conference of 1930

In the Hague Codification Conference of 1930, convened by the League of Nations, the question of archipelagos was also raised. As the basis of the discussion, Portugal submitted a proposal on this issue as follows:

In the case of an archipelago, the islands forming the archipelago shall be deemed to be a unit and the breadth of the territorial sea shall be measured from the islands most distant from the centre of the archipelago.

Certain States rejected the idea that archipelagos should be considered as a single unit. They were of the view that each island should have its own territorial waters. The territorial waters of two islands might overlap, when they are situated near to each other, but in the view of those states this had no legal bearing whatsoever.¹⁹ Other States were of the opinion that a single belt of territorial waters could be drawn around archipelagos provided that the islands and islets of the archipelago were not further apart than “a certain maximum”. The proposals on the criteria of that “certain maximum” varied.²⁰

Some other States were of the opinion that archipelagos must be regarded as a whole where the geographical irregularities warranted such treatment. They advocated no particular maximum distance, but held that the geographical facts of each concrete case must be taken into account.²¹ Thereafter, the question of this matter was not taken up for discussion in the plenary meeting of the Conference and the Conference did not attempt to draft an Article for this subject.

¹⁷ Jen Evensen, *supra note 11* p. 292

¹⁸ *Ibid*

¹⁹ Official Documents of Conference for the Codification of International Law, First Report Submitted to the Council by the Preparatory Committee for the Codification Conference, The Hague, March 13, 1930, *available at* <<http://www.uniset.ca/naty/maternity/24AmJIntLSpSup1.pdf>> p. 33

²⁰ *Ibid*, p. 34

²¹ *Ibid*

2.1.1.4 International Law Commission

Within the framework of the United Nations, the International Law Commission (hereafter: ILC) was responsible for the codification of international law and for its progressive development. When the ILC began to draft its text on the law of the sea, only brief attention was given to the question of archipelagos.²²

The drafting process was also influenced by the first important legal development regarding straight baselines involving coastal archipelagos: the judgment of the International Court of Justice (Hereafter: ICJ) in the Anglo-Norwegian Fisheries case in 1951.²³ In rejecting the contention of the United Kingdom, which was based on an analogy with the “general rule” of 10 nm relating to bays, whereby the length of the straight baseline drawn between outermost islands off the Norwegian coast must not exceed 10 nm, the ICJ stated that State practice did not justify the formulation of any such general rule.²⁴ The ICJ went on that the attempts “to subject groups of islands or coastal archipelagos to conditions analogous to the limitations concerning bays (distance between the islands not exceeding twice the breadth of the territorial waters, or ten or twelve sea miles) have not got beyond the stage of proposals”.²⁵ The ICJ concluded that the method of straight baselines employed by Norway in connecting the outermost islands adjacent to its coast (as appeared in Norwegian fisheries zone by the 1935 Decree) was not contrary to international law.²⁶

Although that case only dealt with straight baseline for coastal archipelagos, some scholars and Governments were of the view that the method of straight baselines should be applied also to mid ocean archipelagos.²⁷ Based on that view, a Special *Rapporture* of the ILC, J.P.A. François, included in his first draft Article 10 (group of islands) referring to coastal island as well as “*un groupe d’îles (archipel)*”²⁸ providing for baseline of up to 10 nm in length with

²² Hungdah Chiu, Some Problems Concerning the Delimitation of Maritime Boundary Between the Republic of China and the Phillipines, (Chinese Yearbook of International Law and Affairs, The Chinese Society of International Law, 1983) p.11

²³ Fisheries case (United Kingdom v. Norway), Judgment of December 18th, 1951:I.C.J.Reports 1951, p. 116

²⁴ Ibid, p. 131

²⁵ Ibid

²⁶ Ibid, p 132

²⁷ UN DOALOS, *supra note* 13 p.iii

²⁸ ILC, Yearbook of the International Law Commission, (United Nations Publication sales No.59.V.4, Vol II, 1953.) p.77

regard to such islands. During the discussion in the ILC, this was revised several times, until in Prof. François' third report on the regime of the territorial sea, a new provision was proposed illustrating in an interesting way the complexity and uncertainty involved in regard to the rules governing archipelagos:²⁹

1. The term 'groups of islands', in the juridical sense, shall be determined to mean three or more islands enclosing a Portion of the sea when joined by straight lines not exceeding five miles in length, except that one such line may extend to a maximum of ten miles.
2. The straight lines specified in the preceding paragraph shall be the baselines for measuring the territorial sea. Waters lying within the area bounded by such lines and the islands themselves shall be considered as inland waters.
3. A group of islands may likewise be formed by a string of islands taken together with a portion of the mainland coastline. The rules set forth in paragraphs 1 and 2 of this Article shall apply *pari passu*

Because of divergent views expressed by several members of the Commission and time consideration, in 1956 François suggested leaving the matter to the diplomatic conference to address. His proposal was adopted by the Commission, therefore this matter was shelved.³⁰

Relating to this, the Commission stated:

The Commission had intended to follow up this Article with a provision concerning groups of islands. Like The Hague Conference for the Codification of International Law of 1930, the Commission was unable to overcome the difficulties involved. The problem is similarly complicated by the different forms it takes in different archipelagos. The Commission was also prevented from stating an opinion, not only by disagreement on the breadth of the territorial sea, but also by lack of technical information on the subject³¹

The Commission's final draft only contained provisions relating to fringes of islands in the immediate vicinity of a coastal State. These provisions, which had taken into account the above-mentioned judgment, became the basis for Article 4 of the Convention on the Territorial Sea and the Contiguous Zone adopted at the first United Nations Conference on the

²⁹ Third Report on the Regime of Territorial Sea by Mr. J.P.A. François, Special Rapporteur, ILC Report (A/CN.4/77) available at: <http://untreaty.un.org/documentation//french/a_cn4_77.pdf>

³⁰ Hungdah Chiu, *supra note* 22, p.96

³¹ Official Records of the General Assembly, Ninth Session, Supplement No. 9 (A/3159)

Law of the Sea (UNCLOS I) in 1958.³² That Article was followed closely in the drafting of Article 7 of LOSC dealing with straight baselines.

2.1.1.5 1958 United Nations Conference on the Law of the Sea (UNCLOS I)

The draft Articles on the Law of the Sea prepared by the ILC were then submitted to the 1958 UNCLOS I held in Geneva. In that draft, there was no provision regarding the question of archipelagos. However, the Philippines and Yugoslavia put forward proposals on the application of straight baseline methods to archipelagos distant from the coast, but these proposals were eventually withdrawn due to lack of support.³³ Besides that, there was also a debate, between the representative of the Government of Indonesia and the representative of the United States on a Declaration proclaimed by the Government Indonesia in just two months before UNCLOS I started.³⁴

The Declaration, which later became known as the Juanda Declaration, proclaimed that all waters surrounding, between and connecting the islands constituting the Indonesian State are integral parts of the territory of the Indonesian State and therefore integral parts of the internal or national waters which are under the exclusive sovereignty of the Indonesian State. The Declaration revoked the colonial three-nm territorial waters in favour of territorial model whose outer limits circumscribed the archipelago, thereby placing under the country's sovereignty a predominant portion of the inland seas within the archipelagos.³⁵

The Declaration was not unopposed internationally. The first and strongest rejection came from the US which knew well that the strategic posture of its extensive network of allies in South Asia to the Southeast Pacific and the Far East was contingent upon assured naval mobility, including crucially unimpeded transit rights through the Indonesian straits and inland seas. The US position was generally supported by other western maritime powers. On 3

³² The United Nations Convention on the Territorial Sea and the Contiguous Zone, done at Geneva 29 April 1958, Entered into force on 10 September 1964. *available at* <http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_1_1958_territorial_sea.pdf>

³³ UN DOALOS, *Archipelagic States: Legislative History of Part IV of the United Nations Convention on the Law of the Sea*. (New York, United Nations, 1990), p. 2

³⁴ The Declaration of the Government of Indonesia on Indonesian Territorial Waters, 13 December 1957.

³⁵ Dino Pati Djalal, *Geopolitical Concepts and Maritime Territorial Behaviour in Indonesian Foreign Policy*, (Simon Fraser University, 1990) p.iii

January, 1958, three days after Washington's protest, Britain notified the Indonesian Government that the new concept of Indonesian territorial limit was invalid and thus not applicable to its citizens, ships and airplanes.³⁶ Other Governments followed suit: Australia (January 3, 1958), the Netherlands (January 7), France (January 8) and New Zealand (January 11).³⁷ Objections raised by these Governments based by and large on arguments similar to those voiced by the US.³⁸ The objection of the US was repeated during one of the sessions of UNCLOS I where the representative of the US stated:

The Committee should bear in mind that whatever was added to an individual State's territorial waters must inevitably be subtracted from the high seas, the common property of all nations. For example, if islands were treated as an archipelago and a twelve-mile belt was drawn round the entire archipelago according to the straight baseline system, then areas of the high seas formerly used by ships of all countries would be unilaterally claimed as territorial waters or possibly even internal waters. It would be a misnomer to describe such restrictions on the free use of the high seas as "progressive " measures.³⁹

In response to the US representative, Mr. Subardjo, the representative of Indonesia stated that:

The traditional method of measuring the territorial sea from the low-water mark was based on the assumption that the coastal State possessed a land territory forming part of a continent. In the case of archipelagos, such a system could not be applied without harmful effects. An archipelago being essentially a body of water studded with islands rather than islands with water round them, the delimitation of its territorial sea had to be approached from a quite different angle. In the opinion of the Indonesian Government, an archipelago should be regarded as a single unit, the water between and around the islands forming an integral whole with the land territory. [...] the United States representative asserts that the action of the Indonesian Government amounted to unlawful appropriation because the seas were held in common for the benefit of all mankind. The fact that the seas were the common property of all nations did not preclude the possibility of a special regime for archipelagos of a unique nature.⁴⁰

³⁶ Ibid p.64

³⁷ Ibid

³⁸ Ibid

³⁹ United Nations, United Nations Conferences on the Law of the Sea, Official Records, First Committee on Territorial Sea and Contiguous Zone, Geneva 1958 *available at*:

<http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1958/vol/english/1st_Cttee_vol_III_e.pdf> p.25

⁴⁰ United Nations, United Nations Conferences on the Law of the Sea, Official Records, First Committee on Territorial Sea and Contiguous Zone, Geneva 1958 *available at*:

<http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1958/vol/english/1st_Cttee_vol_III_e.pdf> pp.43-44

It is worth underlining that no conclusion or agreement was reached from the debate. The Convention on the Territorial Sea and Contiguous Zone, which was adopted by the UNCLOS I, is silent on this matter.

2.1.1.6 1960 United Nations Conference on the Law of the Sea (UNCLOS II)

At UNCLOS II, Indonesia and the Philippines⁴¹ raised the question of archipelagos again, but the Conference ended without agreement on the matter.⁴² Thereafter, there were no major developments on the codification of the legal regime of archipelagos until the issue was discussed in the third United Nations Conference on the Law of the Sea.⁴³ In the early 1960s, scholars of international law began to pay attention to the special problems of archipelagos and in the meantime a number of former archipelago colonies had become independent and likely to make archipelagic claims to protect their maritime interest.⁴⁴

2.1.1.7 Third United Nations Conference on the Law of the Sea (UNCLOS III)

The meetings of UNCLOS III extended over nine years, from 1973 until 1982. During that time, support for the archipelagic concept had become “irresistible”⁴⁵ even though in the early sessions of UNCLOS III, there was extensive debate concerning the concept of an archipelagic State.⁴⁶ In 1975 the Informal Single Negotiating Text was issued and Part VII of the document, which entitled “archipelagos”, contained two sections: the first related to archipelagic States, i.e., States constituted wholly by one or more archipelagos which may include other islands, and the second to oceanic archipelagos belonging to continental States.⁴⁷ The later section

⁴¹ Through Republic Act No. 3046 of 17 June 1961, the Philippines claimed the archipelagic status by designating its first archipelagic baselines consisting of straight lines joining appropriate points of the outermost islands of the archipelago. Furthermore, it was also stated in that Republic Act that all the waters around, between and connecting the various islands of the Philippines archipelago, irrespective of their width or dimension, have always been considered as necessary appurtenances of the land territory, forming part of the inland or internal waters of the Philippines.

⁴² UN DOALOS, *supra note* 33 p. 2

⁴³ UN DOALOS, *Practice of Archipelagic State*, (New York, United Nations, 1992), p.iii

⁴⁴ Hungdah Chiu, *supra note* 22 p. 11

⁴⁵ J.R.V. Prescott and C.H Schofield, *The Maritime Political Boundaries of the World*, (Leiden: Martinus Nijhoff Publisher, 2005), p.168.

⁴⁶ John G. Butcher, *Becoming an Archipelagic State: The Juanda declaration of 1957 and the ‘Struggle’ to Gain International Recognition of the Archipelagic Principle*, in Robert Cribb and Michele Ford, *Indonesia Beyond the Water’s Edge*, (Singapore, Institute of Southeast Asian Studies, 2009), p. 44

⁴⁷ Hungdah Chiu, *supra note* 22 p. 12

contained the proposal that continental States' archipelagos can also apply the so-called archipelagic principle to their archipelagos.

After discussion at the Fourth Session of UNCLOS III, held between 15 March and 7 May, 1976, the informal text was revised and distributed on 6 May 1976. In the revised text, the title of that Part was changed to "Archipelagic States".⁴⁸ The revised text contains no article on oceanic archipelagos of a continental State.⁴⁹ This means a continental State cannot apply the archipelagic principle in constructing baselines around its oceanic archipelagos.

The culmination of the negotiations was when agreement was reached to adopt specific provisions on archipelagic States, leading to the drafting of Part IV of LOSC. LOSC opened for signing in December 1982 and entered into force in 1994.

It is worth noting, regarding the rules related to the construction of archipelagic baselines stipulated in Part IV of LOSC, that Indonesia, in 1960, more than a decade before UNCLOS III began, had designated its archipelagic straight baselines. It is highly likely that Indonesia's baselines were adopted as a key example in the drafting process of the LOSC provisions of archipelagic baselines.

2.1.2 Legal Perspective

Part IV of the LOSC, especially the definition of archipelagic States, contained in Article 46, contains political as well as technical aspects.⁵⁰ Article 46 stipulates that for the purposes of the Convention:

- (a) "archipelagic State" means a State constituted wholly by one or more archipelagos and may include other islands;
- (b) "archipelago" means 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.

⁴⁸ Ibid

Article 46 (a) legally and politically allows any States whose territories “constituted wholly by one or more archipelagos” to claim archipelagic status.⁵¹ The words “including parts of islands” contained in paragraph (b) of Article 46 appears to have been adopted in order to take into account the political and geographical realities of some archipelagic States.⁵² Some Scholars observe that the phrase is intended to accommodate situations such as that of Indonesia, which shares the islands of Borneo with Brunei and Malaysia and New Guinea with Papua New Guinea.⁵³

The phrase “interconnecting waters” is intended to emphasize the unifying role of waters in an archipelago.⁵⁴ If an archipelagic State was unable to draw archipelagic baselines, it would not be impossible to envisage a scenario where areas of high seas lie between the islands making up the archipelago – an undesirable situation from the archipelagic State’s perspective, notably in respect of exercise effective control over its territory.

It is interesting to correlate the words “interconnecting waters” with the last words of the paragraph (b) which reads: [archipelagos should] “form an intrinsic geographical, economic and political entity, or which historically have been regarded as such”. With the reference of the later words, one may argue that politically a State can claim archipelagic status without being entitled to claim archipelagic waters.⁵⁵ For example, while Kiribati qualifies as an archipelagic State under that term; it however does not seem that Kiribati would be able to satisfy the technical aspects stipulated in the Article 47, namely the land-water ratio within the archipelagic baseline.⁵⁶

Furthermore, the definition provided by Article 46 clearly prevents mainland States which possess non-coastal archipelagos from claiming archipelagic status. Such States include

⁴⁹ Ibid

⁵⁰ M. Tsamenyi et al, *Supra note 2* p. 418

⁵¹ *Ibid*, pp. 418-419

⁵² Comment of the Indonesian delegation to the draft of the provision of archipelagic State in the second session of the third Conference. *See UN DOALOS, supra note 33, p.57*

⁵³ J.V. Prescott and C.H Schofield, *supra note 45* p 169

⁵⁴ *See UN DOALOS, supra note 33 p.57*

⁵⁵ M. Tsamenyi et al, *supra note 2*, p.419

⁵⁶ *Ibid*

Ecuador (Galapagos Islands)⁵⁷, Spain (the Canaries),⁵⁸ and China (Paracel Islands).⁵⁹ However, in some cases, it may be possible to draw straight baselines around the coasts of these non-coastal archipelagos in conformity with Article 7 of the LOSC and the aforementioned States have availed themselves of this option.⁶⁰ The option provided by Article 7 seems to be one of the reasons why continental States with archipelagos finally agreed on the draft of Part IV. The UNCLOS III official records and press releases do not disclose why agreement on the draft was reached.

2.1.3 Technical Perspective

As stated above, Articles 46 and 47 should be considered as a single package for the definition of archipelagic State status. While Article 46 primarily contains legal and political aspects, Article 47 sets out the technical requirements for the definition of archipelagic baselines.

The development of the archipelagic baseline concept in the LOSC appears, to a considerable extent, to have been inspired by the ‘prototype’ archipelagic baselines claimed by Indonesia in 1960 through Indonesian Act No.4/1960 concerning Indonesian Waters.⁶¹ LOSC define the archipelagic baseline in Article 47 which consists of nine paragraphs. Five of the paragraphs deal with the definition of archipelagic baselines (paras 1,2,3,4 and 7) with the remaining provisions dealing with the rights of other States (para 5 and 6) and publicising claims to archipelagic baselines. Article 47 (1) stipulates that:

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

⁵⁷ In the eleventh session of the third Conference, in the plenary session where delegations given an opportunity to make their Statement on the last draft of specific provision of Archipelagic State, Ecuador delegation Stated that the waters around Galapagos Island deserved ‘special treatment’ since it was already described as the natural heritage of mankind by UNESCO also was in order to preserve its wealth for prosperity. *See*: UN DOALOS, *supra note* 33, p. 111

⁵⁸ The head of the Spanish delegation, Stated that this provision was ‘unfair’ during the plenary session of the eleventh session of the third Conference. *See*, UN DOALOS, *supra note* 33 p.111

⁵⁹ Prescott and Schofield, *supra note* 9, p.169, and R.R. Churchill and A.V Lowe, *The law of the Sea*, (3rd edition, Manchester, Manchester University Press, 1999) p. 120. It should be noted that sovereignty over the Paracel Islands is also claimed by Vietnam.

⁶⁰ Ecuador enclosed the Galapagos islands with eight straight baselines and China also draw some straight baselines around Paracel Islands, though it should be noted that some of those baselines have been subject to protests. *See* J.V. Prescott and C.H Schofield, *supra note* 9, p.169

⁶¹ M. Tsamenyi et al, *supra note* 14 p 420

the area of the water to the area of the land, including atolls, is between 1 to 1 and 9 to 1.

Besides regulating how an archipelagic State can designate its baselines, this first paragraph also provides a critical objective test of the validity of a proposed system of archipelagic baselines through the calculation of the water to land ratio. The first part of the paragraph was designed to accommodate various proposals relating to archipelagos which explain that the primary object of an archipelagic claim is to encompass the whole of an archipelago within a single baseline system, including all insular features which form part of that archipelago.⁶² However, it is worth noting as well that separate systems of archipelagic baselines can be applied to outlying islands of an archipelagic State.

The second part, which is the ratio requirement, provides an objective criterion as an expression of the perception of geographic integration.⁶³ The precise numerical ratio was adopted after discussions during the early sessions of UNCLOS III. The United Kingdom proposed 5:1 for a sea:land ratio, which seemed could be accepted by archipelagic States.⁶⁴ However, the negotiation resulted in the present formulation.

In the context of measuring the ratio, the LOSC provides that “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” may be considered as part of land.⁶⁵ The ratio requirement was presumably codified to prevent coastal States which dominated with large islands even though they also have some other small islands, such as the United Kingdom, Japan Canada and New Zealand. The ratio is also designed to exclude States composed of especially dispersed groups of islands from consideration, for example Kiribati.⁶⁶

Article 47 provides that the length of archipelagic baselines shall not exceed 100 nm with the exception of three percent of the total number of the baseline segments drawn, with an

⁶² H.W. Jayewardene, *the Regime of Island*, (Dordrecht, Martinus Nijhoff, 1990) p. 143

⁶³ *Ibid*, p. 145

⁶⁴ *Ibid*

⁶⁵ LOSC, Article 47 (7)

⁶⁶ M. Tsamenyi et al, *supra note* 14 p 419

absolute maximum baseline segment length of 125 nm.⁶⁷ In drawing archipelagic baselines, low tide elevations are not to be used unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is located wholly or partly inside the territorial sea of the coastal State.⁶⁸ A particular low tide elevation can be used, however, as long as there is international recognition for this. The baseline also shall not depart to any appreciable extent from the general configuration of the archipelago.⁶⁹

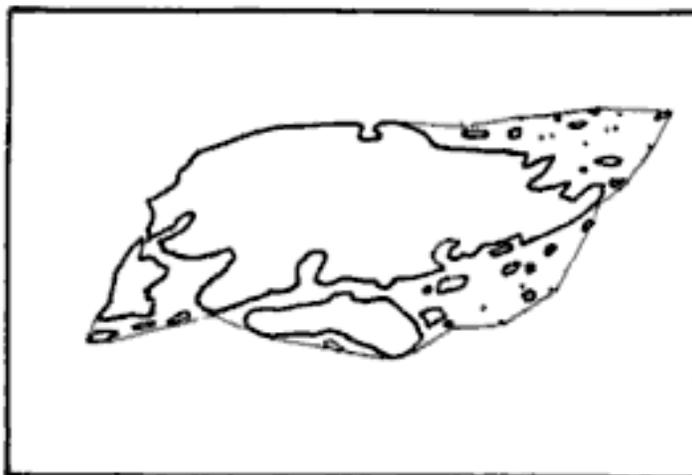


Figure 2. A Large island State – water:land ratio < 1:1.
(Source: Jayewardene, 1990, p. 143)

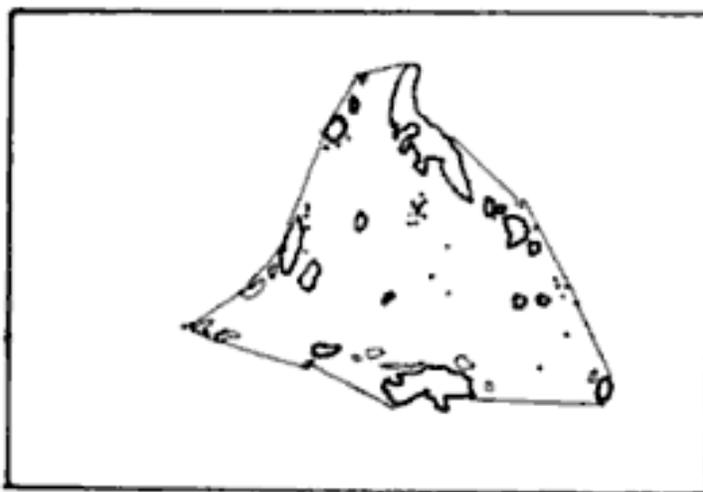


Figure 3. An Archipelago – water:land ratio between 1:1 and 9:1.
(Source: Jayewardene, 1990, p. 143)

⁶⁷ LOSC, Article 47 (2)

⁶⁸ LOSC, Article 47 (4)

⁶⁹ LOSC, Article 47 (3). More interpretation and technical discussion relating to general configuration of the archipelago, *See*, J.V. Prescott and C.H Schofield, *supra note* 9 pp. 172-173

In relation to the rights of States located in the vicinity of archipelagic States, LOSC stipulates that the archipelagic baselines must not be drawn in such a way as to cut off the territorial sea of another State from the high seas or its EEZ.⁷⁰ Furthermore, an archipelagic State also has an obligation to continue and respect all of its neighbouring States' rights stipulated in agreements between them, including all other legitimate interests which the neighbouring States have traditionally exercised in its archipelagic waters which lies between two parts of, and immediately adjacent to, latter State.⁷¹

The last two paragraphs of Article 47 require the archipelagic State to publish its archipelagic baselines by drawing its baselines on charts of a scale or scales adequate for ascertaining their position or, alternatively, putting the geographical coordinates of the baselines in a list which also specifies the geodetic datum.⁷² The chart and/or the list of coordinates then shall be deposited with the Secretary-General of the United Nations.⁷³

Where States qualify for constructing archipelagic straight baselines in accordance with Part IV, such baselines would mark the division between archipelagic waters and the territorial sea.⁷⁴ With regard to determining the boundary between archipelagic waters and inland waters, LOSC stipulates that “within its archipelagic waters, the archipelagic State may draw closing lines for the delimitation of internal waters, in accordance with Articles 9, 10 and 11”.⁷⁵ The closing lines are permitted in this matter only relate to mouth of rivers, bays and ports. Article 7 on straight baseline is excluded. In other words, straight baselines cannot be drawn around component islands of such an archipelago even where the coast of such islands may be deeply

⁷⁰ LOSC, Article 47 (5)

⁷¹ LOSC, Article 47 (6), This provision was presumably set up to overcome any potential conflict between the terms of LOSC and previously existing bilateral agreements. For example, the Jakarta Treaty of 1982 between Indonesia and Malaysia which provides for navigational and over flight corridors through Indonesian archipelagic waters for Malaysian shipping and aircraft passing between peninsula Malaysia and the Malaysian parts of Borneo, Sabah and Sarawak. The Treaty also allows Malaysian fisherman to fish areas east of the Anambas Islands using traditional method. Furthermore, the treaty protects the submarine cables linking the two parts of Malaysia. *See*: Tsamenyi, et al, *supra note* 14 p. 424; Churchil and Lowe, *supra note* 12, p. 126; Prescott and Schofield, *supra note* 9, pp 11-12. The full name of the treaty is the Treaty Between Malaysia and the Republic of Indonesia Relating to the Legal Regime of Archipelagic State and the Rights of Malaysia in the Territorial Sea and Archipelagic Waters as well as in the Airspace above the Territorial Sea, Archipelagic Waters and the Territory of the Republic Indonesia lying between East and West Malaysia, signed 25 February 1982 and entered into force 25 May 1984. Full text *available at*, UN DOALOS, *supra note* 8, pp 144-155.

⁷² LOSC, Article 47 (8)

⁷³ LOSC, Article 47 (9)

⁷⁴ H.W. Jayewardene, *supra note* 62, p 78

indented or cut into or where there are fringe of islands. The rationale appears to have been the need to preserve the maximum possible area of interstitial waters as archipelagic waters in the interests of navigation⁷⁶

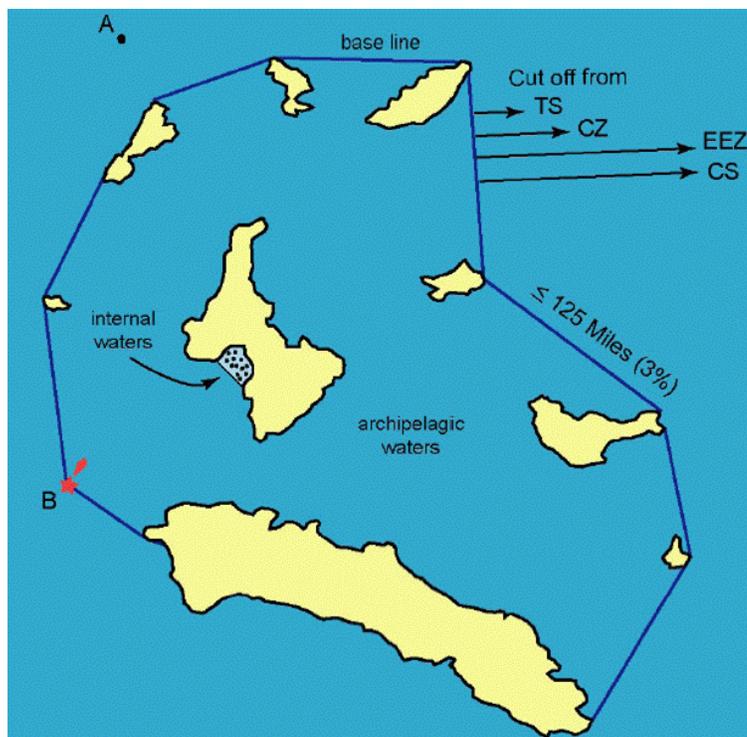


Figure 4. An illustration of Archipelagic baselines

(Source: IHB, TALOS MANUAL, p. 4-7)

After designating its archipelagic baselines, the coastal State can exercise its sovereignty over the waters enclosed by those baselines, termed ‘archipelagic waters’. The archipelagic State’s sovereignty over archipelagic waters extends not only to the water column but to the airspace above the waters, as well as the seabed and subsoil and the resources contained therein.⁷⁷ However, in exercising its sovereignty over the archipelagic waters, the archipelagic State should also respect the rights of other States in relation to existing agreements on traditional fishing rights,⁷⁸ existing submarine cables,⁷⁹ rights to innocent passage⁸⁰ and the right of archipelagic sea lanes passage.⁸¹

⁷⁵ LOSC, Article 50

⁷⁶ H.W. Jayewardene, *supra note* 62, p 78

⁷⁷ LOSC, Article 49

⁷⁸ LOSC, Article 51

2.2 State Practice

The current provisions in Part IV LOSC, especially on archipelagic status and archipelagic baselines, arguably resulted from the practice of the various coastal States in defining their archipelagos. Among the 20 States which have already claimed archipelagic States status, only Indonesia, the Philippines and the Dominican Republic had already designated what are nowadays known as archipelagic baseline prior to the start of UNCLOS III. Indonesia proclaimed its archipelagic status through the Juanda Declaration on 13 December 1957 which was followed by the establishment of the baselines through Act No.4 of 1960. The Philippines designated its baselines through Republic Act No. 3046 of 17 June 1961. The 1960 Indonesian archipelagic baselines were in accordance with the subsequently codified provisions of Article 47, while the 1961 Philippines baselines were not. The 1961 Philippines' baseline system appeared to be archipelagic in character. However, it was unclear whether these baselines were intended to be archipelagic baselines or not, since the relevant Philippines legislation referred to straight baselines rather than archipelagic straight baselines and also referred to internal waters within the baselines.⁸² Furthermore, there was also a segment exceeded the 125 nm (approximately 140 nm) eventually laid down under LOSC.⁸³

It should be noted that both States' archipelagic baseline had been revised by each Government in accordance with Article 47 and subsequently deposited with the UN Secretary-General. The Indonesian Government revised its 1960 baselines by enacting Law No.6 of 1996 which become the legal basis for the enactment of Government Regulation No.38 of 2002. To keep the baselines up to date with some recent developments related to Indonesian territory, namely the ICJ's decision on the sovereignty over the Sipadan and Ligitan Islands⁸⁴ and also the independence of East Timor, the latter Government Regulation was also revised

⁷⁹ LOSC, Article 51

⁸⁰ LOSC, Article 52

⁸¹ LOSC, Article 53

⁸² Republic Act No. 3046 of 17 June 1961 on the Definition of Baselines of the Territorial Sea of the Philippines, available at: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/PHL_1961_Act.pdf>

⁸³ Tsamenyi M, et al, *supra* note 2 p. 442

⁸⁴ *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)*, Judgment, I. C. J. Reports 2002, p. 625, available at: <<http://www.icj-cij.org/docket/files/102/7714.pdf>>

through Government Regulation No.37 of 2008.⁸⁵ Indonesia duly deposited information on its archipelagic baseline on 11 March 2009 to the Secretary-General of the United Nations.⁸⁶ The current archipelagic baseline of Philippine is based on Republic Act No. 9522 which was enacted on March 10 2009. The Act was also deposited to the Secretary General of the UN on 1 April 2009.⁸⁷ It is worth to noting that the new archipelagic baselines of the Philippines already comply with the provisions of LOSC on this matter.

In 1967, through Act No.186 of 13 September 1967,⁸⁸ the Dominican Republic designated its baselines which enclosed an extensive body of coastal waters. However, these did not appear to be archipelagic in character, indeed being more of a system of straight baseline.⁸⁹ The baselines claim was not recognized by the United States.⁹⁰ The 1967 baselines were then amended by Law 66-07 of 22 May 2007.⁹¹ The law also proclaimed the archipelagic status of the Dominican Republic.⁹² The 2007 baseline unfortunately is still contrary to Article 47. The water:land ratio of the archipelagic baseline system proclaimed by the Dominican Republic is 1:1.03.⁹³ As a result, the Government of United Kingdom and the United States filed their objections on 18 October 2007.⁹⁴ Arguably, it is difficult for the Dominican Republic to define a legitimate set of archipelagic baselines in line with Article 47.

⁸⁵ Further discussion on Indonesia's archipelagic baselines, *See*: C. Schofield and I.M.A. Arsana, Closing the loop, Indonesia's Revised Archipelagic Baseline System, (Australian Journal of Maritime and Ocean Affairs, Vol 1 No.2, 2009) pp. 57-62

⁸⁶ United Nations, Deposit by the Republic of Indonesia of a list of geographical coordinates of points pursuant to article 47/9of the Convention, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/mzn_s/mzn67.pdf>

⁸⁷ United Nations, Deposit by the Republic of the Philippines of a list of geographical coordinates of points pursuant to article 47/9of the Convention, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/mzn_s/mzn69.pdf>

⁸⁸ Dominican Republic Act No.186 of 13 September 1967, *available at*:
<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DOM_1967_Act.pdf>

⁸⁹ Tsamenyi M, et al, *supra note 2* p. 438

⁹⁰ Roach, J.A. and Smith, R.W., *Excessive Maritime Claims* (US Naval War College, International law Studies, vol 66, 1994), p. 46

⁹¹ Law 66-07 of 22 may 2007 Proclaiming archipelagic status of the Dominican Republic and containing the list of geographical coordinates of points for drawing the archipelagic baselines and the outer limits of the exclusive economic zone, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DOM_2007_Act_frombulletin65.pdf>

⁹² *Ibid*, Article 1

⁹³ Sophia Kopela, 2007 Archipelagic Legislation of the Dominican Republic: an Assessment, (the International Journal of Marine and Coastal Law 24, 2009) p. 510

⁹⁴ *Ibid*, p. 502

During the UNCLOS III, some other States proclaimed their archipelagic baselines. Most likely this was prompted by the negotiations on the archipelagic provisions at UNCLOS III which indicated that archipelagic status was likely to be accepted. However, surprisingly, the baselines published by Fiji,⁹⁵ Papua New Guinea in 1977,⁹⁶ the Solomon Island in 1978,⁹⁷ Antigua and Barbuda on August 1982,⁹⁸ and Vanuatu on October 1982⁹⁹ were already in accordance with Article 47. Arguably, those three countries were adequately convinced that the proposed provisions on archipelagic baselines would be adopted in LOSC.

In 1972, the Maldives enacted a maritime claim to a rectangular area of water surrounding the Maldivian archipelago.¹⁰⁰ The Maldivian Government constructed the rectangle lines situated from 2.75 to more than 55 nautical miles from the coastline to be a national baseline.¹⁰¹ This claim was also protested by the US which stated that:

Such claims have no basis in international law. In asserting jurisdiction over areas extending seaward from its land territory, a coastal State must measure the breadth of any such areas from baselines drawn in accordance with international law. The normal baseline is the low water line along the coast, and the limited exceptions to this rule only allow for the use of straight baseline to connect coastal features in certain circumstances.¹⁰²

The 1972 baselines were then revised by Act No.6/1996 on Maritime Zones of Maldives. However, this baseline also contravened LOSC as the United States Government commented:

Article 47.2 of the LOS Convention provides that the length of the baselines shall not exceed 100 miles, except that up to 3 per cent of the total number of baseline segments enclosing any archipelago may exceed that length, up to a maximum length of 125 miles. The Maldives archipelagic straight baseline system is composed of 37

⁹⁵ Fiji Marine Spaces Act of 15th December 1977, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/FJI_1978_Act.pdf>

⁹⁶ Papua New Guinea National Seas Act 1977, Act No. 7, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/PNG_1977_Act7.pdf>

⁹⁷ Solomon Island Declaration of Archipelagic Waters, *Available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/SLB_1979_Notice.pdf>

⁹⁸ Antigua and Barbuda Maritime Areas Act 1982, Act No. 18 of 17 August 1982, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/ATG_1982_18.pdf>

⁹⁹ The Vanuatu maritime Zones Act No.23 of 1981, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VUT_1981_Act.pdf>

¹⁰⁰ Roach, J.A. and Smith, R.W, *supra note* 90 p. 74

¹⁰¹ *Ibid*

¹⁰² *Ibid* p. 77

segments, permitting only one segment to be over 100 miles long. However, three baseline segments exceed 100 miles in length (segments 14-15, 28-29 and 36-37). Therefore, the Maldives does not meet this requirement of Article 47.2 of the LOS Convention.¹⁰³

In 1977, Cape Verde declared its archipelagic base points through Law No.126/77 of 1977.¹⁰⁴ However, the baseline configuration contravened Article 47 since two baseline segments exceeded 125 nm and the water enclosed by the baseline exceeded the maximum allowable water to land ratio of 9:1.¹⁰⁵

After 1982, some other States designated their archipelagic baseline in accordance with LOSC; they are Trinidad and Tobago in 1986,¹⁰⁶ Seychelles in 2003,¹⁰⁷ Jamaica in 1996,¹⁰⁸ and Sao Tome and Principe in 1998¹⁰⁹. The last two countries, at first glance, do not appear to be an obvious candidate for archipelagic status. However, by maximizing the role of outlying rocks and cays for Jamaica, and designating multiple short segments together with two long archipelagic straight baselines for Sao Tome and Principe, the two States are able to fulfil the requirements stipulated in Part IV.¹¹⁰

At the time of writing, there are six States which have already claimed archipelagic status through their national legislations, but have yet to designate archipelagic baselines. They are

¹⁰³ US Department of State, Maldives Maritime claims and Boundaries, Limits in the Seas No. 126, *available at*: <<http://www.State.gov/documents/organization/57678.pdf>>

¹⁰⁴ Tsamenyi M, et al, *supra note 2* p. 438

¹⁰⁵ *Ibid*

¹⁰⁶ Archipelagic Waters and Exclusive Economic Zone Act 1986 No. 24 of 11 November 1986, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TTO_1986_Act.pdf> and Archipelagic Baseline of Trinidad and Tobago Order, 1988, Notice No. 206 of 31 October 1988, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TTO_1988_Order.pdf> Trinidad and Tobago deposited its archipelagic baseline on 14 May 2004, See Law of the Sea Bulletin No. 55 p.29

¹⁰⁷ Seychelles maritime Zones Act and maritime zone notification, *available at*:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/SYC.htm>>

¹⁰⁸ Jamaican Maritime Areas Act of 28 November 1996 declares Jamaica to be an archipelagic State. See: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/JAM_1996_Act.pdf> Jamaica deposited its archipelagic baseline to the Secretary General of the United Nations on 15 October 1996, see: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/mzn_s/mzn11.pdf>

¹⁰⁹ Sao Tome and Principe Law No.1/98 on delimitation of the territorial sea and the exclusive economic zone, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/STP_1998_Law.pdf>

¹¹⁰ Tsamenyi M, et al, *supra note 2* pp. 433-434

Comoros,¹¹¹ Bahamas,¹¹² Kiribati,¹¹³ Marshal Islands,¹¹⁴ Tuvalu¹¹⁵ and Saint Vincent and the Grenadines.¹¹⁶ Most of their national legislations stated that the designation of archipelagic baselines will be conducted “in accordance with the rules of international law”. However, none of them have enacted national legislation to establish archipelagic baselines. These States may be categorised as archipelagic States in the symbolic political sense which consequently they are only entitled to territorial seas around each island constituting the archipelago in accordance with LOSC Article 5 and 7.¹¹⁷

2.3 Concluding Remarks

The LOSC had important implications for some States in relation to the codification of the archipelagic State regime that recognized the unity of the islands and surrounding waters that comprise the archipelago. The regime itself had been discussed in many forums since the early of 20th century until it reached its culmination when it is adopted as Part IV of LOSC.

The provisions on archipelagic State contain not only political and legal aspects but also technical aspects. Most of the legal aspects are described in Article 46, while the technical aspects are contained in Article 47. At the time of writing, of 20 States which have already claimed archipelagic status, only eleven States have already designated their archipelagic baseline in accordance with Article 47. Three other States already designated their baselines

¹¹¹ Comoros claimed the status through Law No. 82 - 005 relating to the delimitation of the maritime zones of the Islamic Federal Republic of the Comoros of 6 May 1982, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/COM_1982_Law.pdf>

¹¹² Bahamas Claimed the status through Act No. 37 of 1993 respecting the territorial sea, archipelagic waters, internal waters and the exclusive economic zone, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/BHS_1993_37.pdf>

¹¹³ Kiribati claimed the status through maritime Zones (Declaration) Act 1983 – No. 7 of 16 May 1983. an Act to make provision in respect of the Internal Waters, the Archipelagic waters, the territorial Sea and the exclusive economic zone of Kiribati. *Available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/KIR_1983_Act.pdf>

¹¹⁴ Marshall Islands claimed the status through Marine Zones (Declaration) Act 1984 (An Act To make provision in respect of the Internal Waters, the Archipelagic Waters, the Territorial Sea, the Exclusive Economic Zone and the Contiguous Zone of the Republic), *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/MHL_1984_Act.pdf>

¹¹⁵ Tuvalu claimed the status through Marine zones (declaration) Act, 1983, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TUV_1983_Act.pdf>

¹¹⁶ Saint Vincent and the Grenadines claimed the status through Maritime Areas Act, 1983 (Act No. 15 of 19 May 1983) *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VCT_1983_Act.pdf>

¹¹⁷ Tsamenyi M, et al, *supra note* 2 p. 452

but these are not in conformity with the provisions of the Article 47. Six archipelagic States have not proclaimed their baselines.

Archipelagic baselines are important for the relevant States as a starting point to draw the limits and boundaries of their national maritime zones as will be examined further in Chapter 3 and 4.

3 Maritime Boundary Delimitation

Historically, maritime boundaries were already to be significant in the 20th Century.¹¹⁸ A key reason for this was that States were increasingly starting to secure jurisdiction over off shore natural resources; thanks to in large part advances in technology that made new methods of exploiting the resources of the oceans possible and profitable.¹¹⁹ Accordingly, maritime boundaries, similar to territorial or land boundaries increasingly represented a politically sensitive subject, given their impact on the coastal State's jurisdiction concerning fishery, petroleum and other resources of the sea as well as concerning the other use of the sea.¹²⁰

This chapter examines the development of the regime of maritime boundary delimitation codified through the provisions formulated at UNCLOS I up to UNCLOS III. Furthermore, it also discusses the principles and methods of the delimitation which have been developed through jurisprudence, States practice and conventions.

3.1 The Evolution of Maritime Boundary Delimitation

It is worth noting that the start of the development of maritime boundary delimitation far predates UNCLOS I. However, State practice was inconsistent and no major codification effort took place before the draft of work of ILC was discussed at UNCLOS I. Prior UNCLOS I, especially before World War II, States practice showed that the median line, generally but not always, had been applied in the delimitation of boundaries in the lakes, straits, gulfs, bays and the territorial seas between States with opposite coasts; while for adjacent coast, the boundary lines were drawn using a variety of methods.¹²¹

¹¹⁸ Prescott and Schofield, *supra note* 45 p.215

¹¹⁹ Edward Collin Jr and Martin Rogoff, *The International Law of maritime Boundary delimitation*, (Maine Law Review Vol. 34:1) p.1

¹²⁰ S.P Jagota, , *Maritime Boundary*, (Dordrecht, Martinus Nijhoff Publisher, 1985), p.4

¹²¹ Sang-Myon Rhee, *Sea Boundary delimitation Between States Before World War II*, (American Society of International Law, *The American Journal of International Law*, Vol. 76, No.3 1982). p. 588

3.1.1 The work of the International Law Commission

Before discussing the work of the ILC, it should be noted that the Hague Codification Conference, held in 1930 had not dealt with the question of maritime boundary delimitation.¹²² Instead, the discussions took place during the conference were concentrated on the questions relating to the territorial sea and contiguous zone.¹²³

After World War II ended and the United Nations was established, there was a need to codify the rules on the delimitation of ocean boundaries. This requirement emerged in accordance with the development of technologies in oceans exploration which led to a race among States to secure their maritime jurisdiction, as exemplified by the Truman Proclamation.¹²⁴

When the ILC preparatory works started, the only agreement on delimitation of maritime areas beyond the territorial sea at the time was the 1942 Anglo/Venezuelan treaty concerning the Gulf of Paria.¹²⁵ This faced the ILC with a lack of precedents in the delimitation of the territorial sea.

In terms of the delimitation of continental shelf which was developing during that time, the ILC was faced by the precedents of unilateral acts by States triggered by the Truman Proclamation. The Proclamation made a reference to continental shelf delimitation by stating “in cases where the continental shelf extends to the shores of another State, or is shared with an adjacent State, the boundary shall be determined by the United States and the State concerned in accordance with equitable principles”.¹²⁶ The proclamation or the US Government did not, however, explain the meaning of equitable principles. The term of equitable principles was though used by States in their national legislations and unilateral claims concerning the continental shelf.¹²⁷ It is arguable that the equitable principle during this

¹²² S.P. Jagota, *supra note* 120 p. 49

¹²³ Official Documents of Conference for the Codification of International Law, *supra note* 19

¹²⁴ President Truman’s Proclamation on U.S. Policy concerning natural Resources of Sea Bed and Fisheries on High Seas (Truman Proclamation), 28 September 1945, *available at*: <http://www.ibiblio.org/pha/policy/1945/450928a.html>. The so called Truman Proclamation led to “race” among States to make multiple claims to extended maritime jurisdictions.

¹²⁵ Nuno, S.M. Antunes, *Towards the Conceptualisation of Maritime Delimitation; Legal and Technical Aspects of a Political Process*, (Leiden, Martinus Nijhoff Publisher, 2003) p. 17

¹²⁶ Truman Proclamation, *supra note* 124 para. 6

¹²⁷ For example: Nicaragua, Iran, Saudi Arabia and the Arab States of the Persian Gulf, See: Nuno, S.M. Antunes, *supra note* 125 appendix 2

period can be interpreted no more than “to provide for negotiation of a fair and reasonable boundary”.¹²⁸ This practice and interpretation were not disregarded by the ILC.

In its effort to codify the delimitation principles for territorial sea and continental shelf which are different in nature, the ILC established a committee of experts on technical questions relating to maritime delimitation of the territorial sea. However, this committee was also asked to construct a guideline that would be valid and appropriate for the delimitation of continental shelf.¹²⁹ The recommendations made by the committee were accepted by the commission which led to the completion of a study by the commission in 1956. The draft Articles codifying maritime boundary concerning the territorial sea and continental shelf read as follows:¹³⁰

Delimitation of the territorial sea in straits and off other opposite coasts
Article 12

1. The boundary of the territorial sea between two States, the coasts of which are opposite each other at a distance less than the extent of the belts of territorial sea adjacent to the two coasts, shall be fixed by agreement between those States. Failing such agreement and unless another boundary line is justified by special circumstances, the boundary is the median line every point of which is equidistant from the nearest points on the baselines from which the breadths of the territorial seas of the two States are measured.
2. If the distance between the two States exceeds the extent of the two belts of territorial sea, the waters lying between the two belts shall form part of the high seas. Nevertheless, if, as a consequence of this delimitation, an area of the sea not more than two miles in breadth should be entirely enclosed within the territorial sea, that area may, by agreement between the coastal States, be deemed to be part of the territorial sea.
3. The first sentence of the preceding paragraph shall be applicable to cases where both coasts belong to one and the same coastal State. If, as a consequence of this delimitation, an area of the sea not more than two miles in breadth should be entirely enclosed within the territorial sea, that area may be declared by the coastal State to form part of its territorial sea.
4. The line of demarcation shall be marked on the officially recognized large-scale charts.

¹²⁸ Nuno, S.M. Antunes, *supra* note 125 p. 18

¹²⁹ Yearbook of the ILC, 1952 vol. 1 p.185

¹³⁰ Yearbook of the ILC, 1956 vol 2 pp. 257-258

Delimitation of the territorial sea at the mouth of a river
Article 13

1. If a river flows directly into the sea, the territorial sea shall be measured from a line drawn *inter fauces terrarum* across the mouth of the river.
2. If the river flows into an estuary the coasts of which belong to a single State, Article 7 shall apply.

Delimitation of the territorial sea of two adjacent States
Article 14

1. The boundary of the territorial sea between two adjacent States shall be determined by agreement between them. In the absence of such agreement, and unless another boundary line is justified by special circumstances, the boundary is drawn by application of the principle of equidistance from the nearest points on the baseline from which the breadth of the territorial sea of each country is measured.
2. The boundary line shall be marked on the officially recognized large-scale charts.

Article 72

1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite to each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary is the median line, every point of which is equidistant from the baselines from which the breadth of the territorial sea of each country is measured.
2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the baselines from which the breadth of the territorial sea of each of the two countries is measured.

3.1.2 Formulation of the rules in the UNCLOS I

The draft articles were reported by the ILC to the UN General Assembly. The ILC also called upon the General Assembly to arrange a diplomatic conference on the international law of the sea (UNCLOS I). The conference was convened based on a General Assembly's resolution N1009 (XI) of 21 February 1957.

The draft articles prepared by the ILC became the starting point of the discussions and negotiations for UNCLOS I. Several proposals of amendment to the draft articles were submitted by the parties to the conference.¹³¹ However, most of the suggested changes were rejected. The conference concluded the discussion by accepting the draft Articles with some minor changes.

The conference added a provision codifying contiguous zone delimitation, which had not been foreseen in the ILC draft, in a separate article. Relating to territorial sea boundary delimitation, it combined the draft articles into a single article, deleted the reference to straits and enclaves, drafted the median line negatively as a residual rule, and added a reference to “historic title” in addition to “special circumstances” for varying the application of median line.¹³² Relating to the delimitation of continental shelf, the conference reclaimed the ILC’s draft provisions dealing with the States with opposite and those with adjacent coasts.

As a result of the conference, the so-called Geneva Conventions of 1958 relating to respective maritime zones were finally adopted.¹³³ However, it is also worth noting that even though the Convention on the Territorial Sea and Contiguous Zone seems to differentiate between the delimitation of the territorial sea and the continental shelf, and also makes reference to States with opposite coasts and States with adjacent coasts, the basic principle of maritime boundary embodied in 1958 Convention was the median line or equidistance line unless another boundary line was justified by special circumstances or historic title.¹³⁴

¹³¹ Relating to provisions of continental shelf delimitation, Yugoslavia proposed to delete references to special circumstances. Venezuela suggested that the boundary between States concerned may be settled by agreement or by other means recognized in international law. Iran proposed to ignore the islands located within an enclosed sea between States with opposite coast and to delimit the continental shelf boundary with references to coastlines of the coastal States. See: S.P. Jagota, *supra note* 120. p. 55

¹³² See Article 12 1958 Convention on Territorial Sea and Contiguous Zone and S.P. Jagota, *supra note* 120. p. 55

¹³³ Convention on the Territorial Sea and Contiguous Zone, Convention on the Continental Shelf, Convention on the High Seas, and Convention on Fishing and Conservation of the Living Resources of the High Seas. Those conventions were adopted in Geneva, on 29 April, 1958.

¹³⁴ S.P. Jagota, *supra note* 120. p. 56

3.1.3 Relevant Jurisprudence Pre-1982

To understand the discussions that occurred during UNCLOS III on the provisions relating to maritime boundary delimitation which were eventually codified in the LOSC, it is worth examining related jurisprudence pre UNCLOS III. It is not to be doubted that case law played a significant role in the development of provisions, principles and methods of maritime boundary delimitation. With regard to this part, there are three cases in particular that will be discussed. These are the *Grisbadarna* Arbitration, the *North Sea Continental Shelf Cases* and the *Anglo/French* Arbitration. These three cases, arguably, played a major part in shaping the provisions on maritime delimitation in LOSC.

3.1.3.1 The 1909 Grisbadarna Arbitration

The 1909 Grisbadarna Arbitration was decided by the Permanent Court of Arbitration to resolve a dispute between Sweden and Norway.¹³⁵ This case concerned a dispute regarding the interpretation of the 1661 treaty which, in principle, defined the maritime boundary between the parties in the Grisbadarna region. The case may be considered as the first case on the delimitation of the territorial sea.

The case turned on fishing rights and activities in the Grisbadarna banks area seaward of the terminus of the two States land boundary on the coast. A key issue to highlight from the decision of the arbitration Court in this case is the effective presence of Sweden in the Grisbadarna banks area represented the main argument of the Court to delimit boundary in that area. The Court was of the view that from various circumstances, such as fishing, “it appears so probable as to be almost certain that the Swedes exploited the banks in question much earlier and much more effectively than the Norwegian”.¹³⁶ With regard to the survey of the sea area which had undertaken by both parties, the Court observed that

“Sweden took the first steps, about thirty years before the beginning of any dispute, toward making exact, laborious and expensive surveys of the regions of

¹³⁵ Permanent Court of Arbitration, *The Grisbadarna Case Norway v. Sweden Award of the Tribunal* (hereafter: *Grisbadarna case*), available at:

<<http://www.pca-cpa.org/upload/files/Grisbadarna%20award%20English%20edited.pdf>>

¹³⁶ *Ibid* p. 7

Grisbadarna, while the surveys made some years later by Norway did not even reach the limits of the Swedish survey”.¹³⁷

These facts led the Court to rule that “there is no doubt that the assignment of the Grisbadarna banks to Sweden is in absolute accord with the most important circumstances of fact”.¹³⁸

The fact that the Court relied not only to sovereign acts of Sweden on the banks, but also considering the fishing activities in reaching its judgment should be underlined. Arguably, the approach taken by the Court provides a good example of how provisions on historic title in the rule for territorial sea delimitation might be interpreted.¹³⁹

In terms of method of delimitation, the Grisbadarna arbitration also provides an example of how drawing a boundary line which is perpendicular to the general direction of the coast that can be used.¹⁴⁰ The Court emphasized the legitimacy of this method in its view by using phrase “just and lawful determination of the boundary”.¹⁴¹

¹³⁷ Ibid

¹³⁸ Ibid

¹³⁹ Nuno, S.M. Antunes, *supra note* 125 p. 45

¹⁴⁰ Grisbadarna case, *supra note* 135 p. 6

¹⁴¹ Grisbadarna case, *supra note* 135 p. 5 and See Nuno, S.M. Antunes, *supra note* 125 p. 45

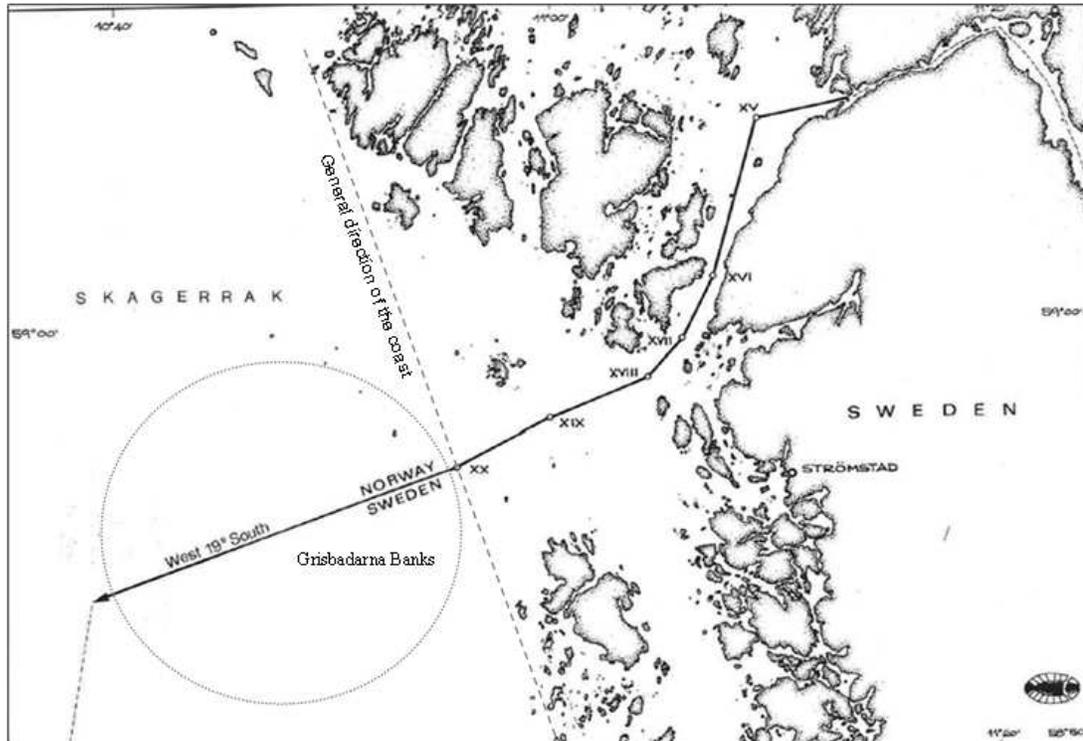


Figure 5. Norway – Sweden territorial sea Boundary around Grisbadarna banks
 (Adapted from: Francalanci, G. and Scovazzi, T, (1994))

3.1.3.2 The North Sea Continental Shelf Cases

The second case that played an important role in the development of maritime delimitation law is the North Sea Cases.¹⁴² The dispute related to the delimitation of the continental shelf between the Federal Republic of Germany and Denmark on the one hand, and between the Federal Republic of Germany and the Netherlands on the other. The three Parties asked the Court to state the principles and rules of international law applicable in continental shelf delimitation between them.

¹⁴² North Sea Continental Shelf (Federal Republic of Germany v. Denmark and Netherlands), Judgment, I.C.J. Reports 1969, p.3

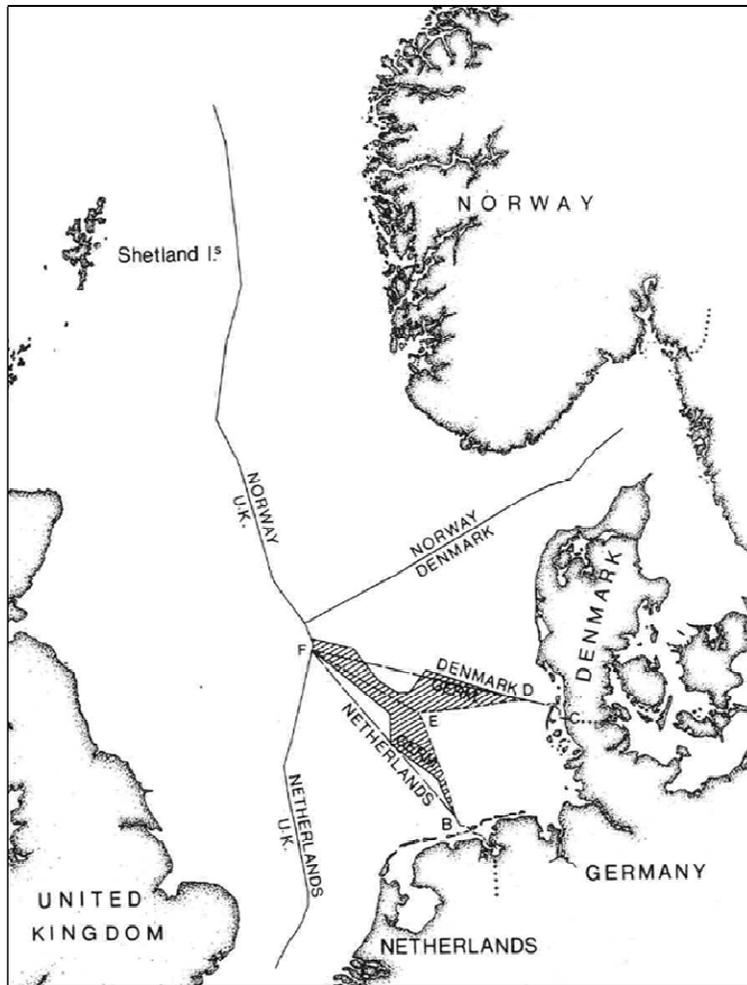


Figure 6. The North Sea Cases.

The shaded area is the German continental shelf based on the agreement between the parties. Lines connecting Points B, E and D were the strict equidistance lines rejected by the Court (Source: Francalanci. G. and Scovazzi. T (1994))

The Court, through its judgment, rejected the contention of Denmark and the Netherlands that the delimitations had to be carried out in accordance with the principle of equidistance as stipulated in Article 6 of the 1958 Geneva Convention on the Continental Shelf, holding that the Federal Republic was not the party of the Convention, therefore it was not legally bound by the provisions of Article 6.¹⁴³ The Court also ruled that the equidistance principle was not a necessary consequence of the general concept of continental shelf rights, and it was also not a rule of customary international law. Furthermore, the Court found that the boundary lines

¹⁴³ Ibid para 101

would be drawn by agreement between the Parties and in accordance with equitable principles and it indicated certain factors to be taken into consideration for that purpose. In particular the Court emphasized that the continental shelf was the natural prolongation of the land territory of the claimant States.¹⁴⁴

The first lesson that can be highlighted from this case is that the fact that the Court minimized the importance of the median equidistance line of Article 6 of the 1958 Continental Shelf Convention and, instead, emphasized the significant role of equitable principles. The Court observed that the equidistance method, in continental shelf delimitation can not be regarded as a rule of law as the Court explained as follows:

It emerges from the history of the development of the legal regime of the continental shelf, [...] that the essential reason why the equidistance method is not to be regarded as a rule of law is that, if it were to be compulsorily applied in all situations, this would not be consonant with certain basic legal notions which, [...] have from the beginning reflected the *opinio juris* in the matter of delimitation; those principles being that delimitation must be the object of agreement between the States concerned, and that such agreement must be arrived at in accordance with equitable principles. On a foundation of very general precepts of justice and good faith, actual rules of law are here involved which govern the delimitation of adjacent continental shelves-that is to say, rules binding upon States for all delimitations; in short, it is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles, in accordance with the ideas which have always underlain the development of the legal regime of the continental shelf in this field.¹⁴⁵

The judgment in this case indisputably brought a major development in maritime delimitation, especially on the question of equitable principles. However, unfortunately, the Court never explained why the principle is considered as one of general principles of and applicable law in maritime delimitation. Nuno Antunos states that it somewhat remain of a “mystery”.¹⁴⁶ However, it can be observed that by any standards, the case method is a remarkable exercise in law-making.¹⁴⁷

¹⁴⁴ Ibid

¹⁴⁵ Ibid para 85

¹⁴⁶ Nuno, S.M. Antunes, *supra note* 125 p. 56

¹⁴⁷ Ibid

3.1.3.3 The Anglo-French Continental Shelf Arbitration

The United Kingdom and France disagreed on the delimitation of the continental shelf between the two States and so submitted the issue to a special Court of Arbitration.¹⁴⁸ The Tribunal was asked to decide the boundaries of continental shelf between the parties in the English Channel and in the Atlantic Ocean. The United Kingdom had contended that the equidistance principles should be applied, considering that both parties were parties to the 1958 Continental Shelf Convention. While France argued that the delimitation should be carried out by reference to customary law, as stated by the ICJ in the 1969 North Sea Cases.

The Tribunal decided to apply two different methods. In the Atlantic region, the method of reduced effect to islands was applied to the Scilly Isles (UK), which are given a half-effect with respect to the equidistance line.¹⁴⁹ For the English Channel section, the Tribunal applied a mainland to mainland equidistance line to draw the primary boundary between the parties.¹⁵⁰ However, the Channel Islands were only attributed a 12 nm enclave.¹⁵¹

One of the differences between this Arbitration case and the North Sea Cases is the mandate given to the Court/Tribunal. In the North Sea Cases, the Court was only asked to determine relevant methods and principles that should be applied in delimiting continental shelf among the parties; while in this case, the Tribunal was asked to draw the boundary line. However, even though the mandates were different, this case, to some extent, successfully clarified certain issues arising from the North Sea Cases. For example, while in the North Sea Cases, the Court emphasized the natural prolongation in delimitation of the continental shelf, in this arbitration, the Tribunal drew attention to the fact that natural prolongation was not a suitable criterion for delimitation where the territories of two or more States abut on a single continuous area of continental shelf that problems of delimitation arise.

¹⁴⁸ The 1977 Arbitration between the United Kingdom and France on the Delimitation of the Continental Shelf, available at International Law Reports, Vol 54, pp.6-213

¹⁴⁹ Ibid. para 251

¹⁵⁰ Ibid. Para 103

¹⁵¹ Ibid. para 199-202

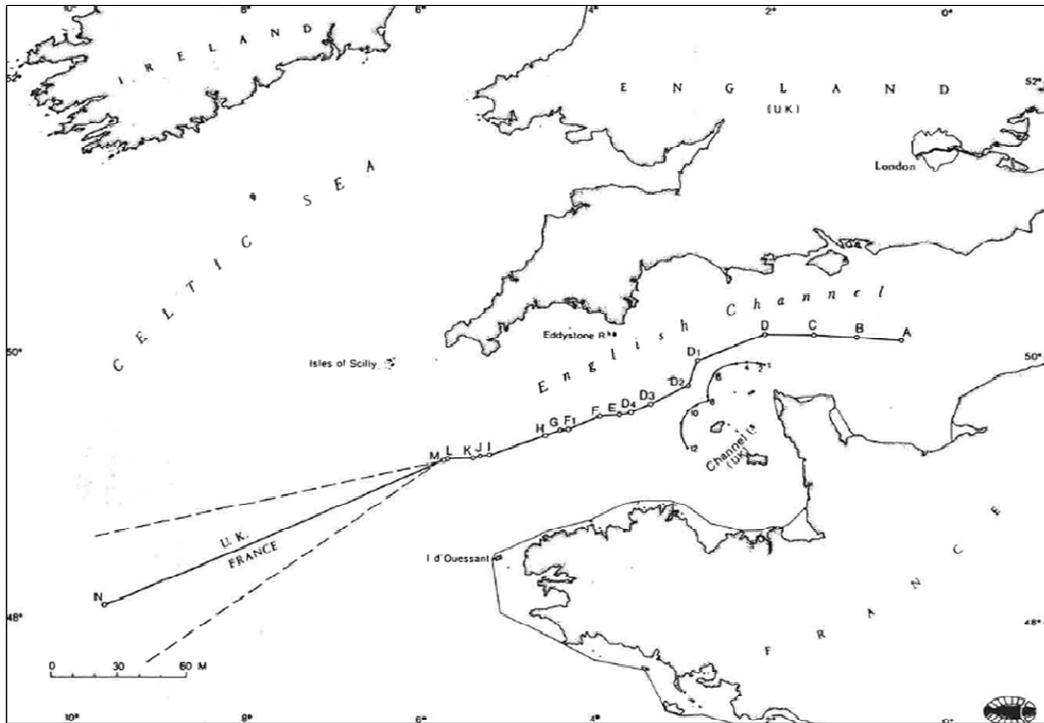


Figure 7. The Anglo-French Continental Shelf boundary

(Source: Francalanci, G. and Scovazzi, T (1994))

Furthermore, the Tribunal through this case also successfully bridged the gap, more specifically the gap between equitable principles and the equidistance line principle, emerged from the North Sea Cases by bringing together State practice, customary law and conventional law.¹⁵² State practice was combined with the equidistance line method by the Tribunal when delimiting the area around the Channel Islands. The enclaving solution was considered on the basis of precedents of semi enclaving solutions found in State practice, concerning situations where small islands lay close to the median line. It is worth noting that in the North Sea Cases, State practice was devalued in order to complete the rejection of equidistance in maritime delimitation. Ultimately, the Tribunal was of the view that equitable delimitations should, as appeared in State practice, rely on solutions grounded on the appropriate adjustment to the strict equidistance line, instead of totally rejecting it.¹⁵³

¹⁵² Nuno, S.M. Antunes, *supra note* 125 p. 73

¹⁵³ The Anglo-French Continental Shelf Arbitration, *supra note* 148 para 245-251

3.1.4 Maritime Boundary Delimitation in the UNCLOS III and the LOSC

The effort to codify provisions on maritime delimitation was made once again by the international community in the course of UNCLOS III. State practice, customary law, jurisprudence and conventional law, which most had been briefly discussed above, were all highlighted to some extent during the long discussions of the conference. UNCLOS III was the culmination of the codification effort which led to the establishment of LOSC.

In the context of territorial sea delimitation between opposite States, the normal practice had been to agree upon the median line or the equidistant line from the nearest points of the opposing States' shores, as the boundary. However, for practice of delimiting territorial sea between adjacent States has been varying since geographical configurations have a significant impact on the boundary line. In both cases, it is not impossible that other special circumstances, such as historic title, will also impacted on the agreed boundary line.

State practice and jurisprudence on this matter, arguably, had made the codification effort for territorial sea delimitation a lot easier than delimitation of the continental shelf and exclusive economic zone. This led to a consistency on the related provisions in the related conventions. Article 12 of the 1958 Territorial Sea Convention and Article 15 of LOSC which deal with the matter are in substance identical. Article 15 LOSC reads:

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.¹⁵⁴

With regard to provisions on continental shelf and EEZ delimitation, the parties of the conference ultimately took the position that these articles' principles should be the same. However, they were subject to lengthy debate during the conference. The parties of the conference generally were divided into two groups. The first group favoured a delimitation standard relying on "equitable principles" and the second favoured "median or equidistance

¹⁵⁴ LOSC Article 15

line. Some of those members of the first group were Algeria, Argentina, China, Ireland, Kenya, Libya, Mali, Nicaragua, Poland, Romania, Senegal, Somalia, Surinam, Syria, Turkey and Venezuela.¹⁵⁵ They submitted a suggestion supporting the equitable principles standard as follows:

1. The delimitation of the exclusive economic zone (or continental shelf) between adjacent or/and opposite States shall be effected by agreement, in accordance with equitable principles taking into account all relevant circumstances and employing any methods, where appropriate, to lead to an equitable solution.
2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures of settlement of disputes provided for in part XV of this convention or such other procedures agreed upon in accordance with Article 83 of the charter of the United Nations organization.
3. Pending agreement of settlement, the States concerned shall make provisional arrangements, taking into account the provisions of paragraph 1.
4. Where there is an agreement in force between the States concerned, questions relating to the delimitation for the exclusive economic zone (or continental shelf) shall be determined in accordance with the provisions of that agreement.¹⁵⁶

This group believe that the equitable principles standard represents the international law governing delimitation. This position was based on the decision of the ICJ in the North Sea Continental Shelf Cases and the decision of the Court of Arbitration in the Anglo-French continental Shelf Arbitration.¹⁵⁷ They also further argued that those two cases on the one hand minimized the importance of the median-equidistance line of Article 6 of 1958 Continental Shelf Convention, but on the other hand emphasized the equitable principles standard as the customary international law on delimitation.¹⁵⁸

Among the second group, which supported the application of the equidistance principles, were the Bahamas, Costa Rica, Cyprus, Yemen, Denmark, Ethiopia, Greece, Italy, Japan, Kuwait, Malaysia, Portugal, Korea, USSR and UK. The delegation of the Bahamas which was supported by other States submitted a proposal which read as follows:

¹⁵⁵ Hungdah Chiu, Some Problems concerning the Application of the Maritime Boundary Delimitation Provisions of the 1982 United Nations Convention on the Law of the Sea Between Adjacent or opposite States (Maryland Journal of International Law and Trade, Vol 9, 1985) p. 5

¹⁵⁶ Informal Suggestions on Articles 74 and 83 U.N. DOC. NG.7/10 (1978)

¹⁵⁷ A.O. Adede, Towards the Formulation of the rule of delimitation of Sea Boundaries Between States with Adjacent or opposite Coasts, (Virginia Journal of International Law, Vol.19 No.2, 1979) p 215

¹⁵⁸ Ibid

1. The delimitation of the exclusive economic zone and continental shelf between adjacent or opposite States shall be effected by agreement employing, as a general principle, the median or equidistance line, taking into account any special circumstances where this is justified.
2. If no agreement can be reached, within a period of [...] from the time when one of the interested parties asks for the opening of negotiations on delimitation, the States concerned shall resort to the procedures provided for in part [...] (settlement of disputes) or any other third party procedure entailing a binding decision which is applicable to them.
3. Pending agreement or settlement in conformity with paragraphs 1 and 2, the parties in the dispute shall refrain from exercising jurisdiction beyond the median or equidistance line unless they agree on alternative interim measures of mutual restraint.¹⁵⁹

Those States insisted that the median equidistance line standard is the principle of international law governing delimitation cases, relying on Article 6 of the 1958 Continental Shelf Convention.¹⁶⁰ They also suggested that the drafting history of Article 6 supported the median equidistance line standard being regarded as a general rule, the application of which is limited by the existence of special circumstances. They also added that equitable principles were vague and subjective.¹⁶¹

The lengthy discussions and negotiations on this matter reached a deadlock. In order to overcome the impasse, the President of UNCLOS III Mr. Tommy T. K. Koh from Singapore submitted a compromise proposal at the Resumed Tenth Session in August 1981 - the penultimate session of the conference. This proposal was eventually accepted by the conference and became Articles 74 and 83 of LOSC. Article 74 (Article 83 uses the same language as Article 74 to codify the continental shelf delimitation) stipulates:

The delimitation of the exclusive economic zone 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.

¹⁵⁹ Bahamas informal suggestion on Article 74 and 83, U.N. Doc NG. 7/2 (1978)

¹⁶⁰ A.O. Adede, *supra note* 157p. 214

¹⁶¹ *Ibid*

3.2 Principles and Methods of Delimitation

The establishment of maritime zones such as the territorial sea, the EEZ and the continental shelf, as reflected in the LOSC, may create overlapping claims requiring maritime boundary delimitation. Between opposite States, boundary lines should be delineated if the breadth of the maritime area between opposing coasts is less than 24 nm for a territorial sea boundary and 400 nm for an EEZ boundary. Delimitation is also required for continental shelf if the breadth of a maritime area is less than 400 nm; or an area of continental shelf beyond 200 nm, which requires a recommendation from the Commission on the Limits of the Continental Shelf (CLCS),¹⁶² is claimed by more than one coastal State. Between adjacent States, maritime boundaries are usually delineated, besides using the equidistance method, as a continuation of line of land boundary, if it is not resulting to inequitable distribution of maritime space.

There is in theory no limit to the methods that may be employed to determine a maritime boundary providing only that either the parties agree to it and there are no impacts for other States or it is deemed by a Court or Tribunal to be equitable.¹⁶³ As already been discussed, LOSC basically only stipulates that in the case of the EEZ and Continental shelf delimitation, States are required to negotiate the boundary line on the basis of international law in order to achieve an equitable solution. In the case of the territorial sea, and failing agreement, neither party may extend beyond the equidistant line unless it is necessary by reason of historic title or other special circumstances to delimit differently. Apart from debates that LOSC provides unclear guidance to delineate a boundary line; there are some methods and principles, which have been developed through State practice or case law, which can be used to fill in the gap between the LOSC and the practical needs.

¹⁶² CLCS is established in accordance with Article 2 of Annex II to the LOSC to facilitate the implementation of Article 76 of the LOSC, particularly those related to the definition of the outer limits of the continental shelf beyond 200 nm measured from coastal States' baselines.

¹⁶³ Beazley, technical aspect of maritime boundary delimitation (IBRU, Maritime Briefing Vol 1 No.2, 1994) p.6

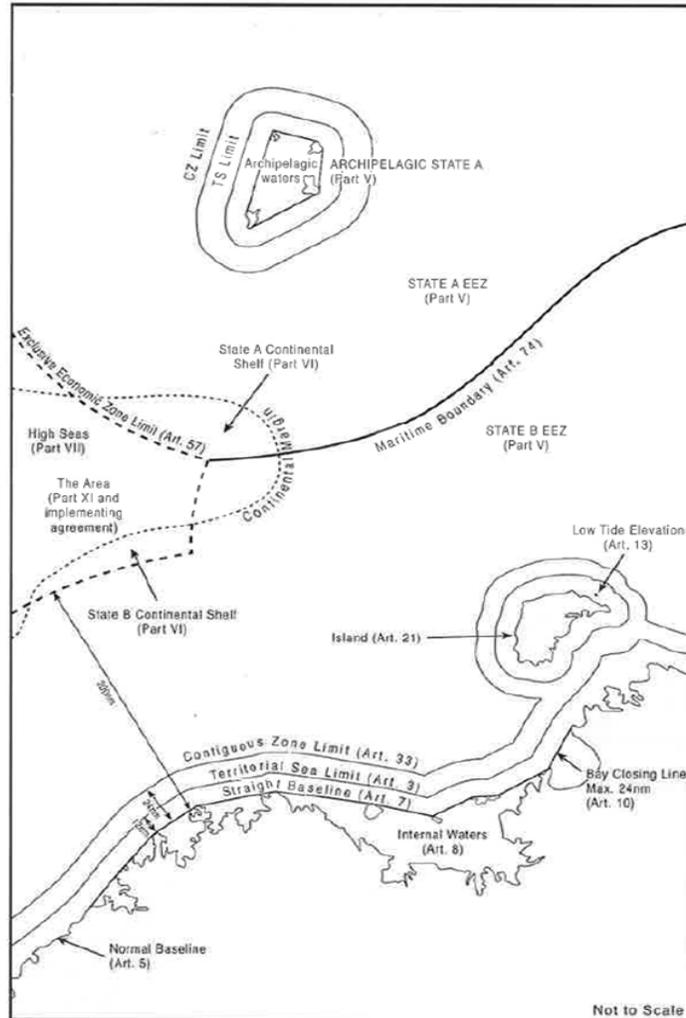


Figure 8. Schematic map of maritime zones, limits and boundaries
 (Source: Prescott and Schofield, (2005), p. 548)

3.2.1 Equidistance Method

The equidistance line can be defined as “every point of which is equidistant from the nearest basepoints on the territorial sea baselines” of the States concerned is a geometrically exact expression of the midline concept and is best illustrated graphically.¹⁶⁴ The definition is adopted, in character, in the 1958 Conventions on the Territorial Sea and Contiguous Zone and the LOSC.¹⁶⁵ The mechanism to construct the strict equidistance line between opposite and adjacent coasts is illustrated in figure 9 below. The midpoints on the equidistance line are

¹⁶⁴ V. Prescott and C. Schofield, *supra* note 45 p.224

¹⁶⁵ Article 12 of the 1958 Convention on the Territorial Sea and Contiguous Zone; Article 6 of the 1958 Convention on the Continental Shelf; and Article 15 LOSC.

resulted from using the nearest salient basepoints of opposite or adjacent coast as control points. The number of the basepoints that will be used is depending on the interplay of the relevant segment of baseline of both States and configuration of the coast. Each of the mid points is controlled by a minimum of two opposite basepoints, however most are controlled by three opposite basepoints (three points system).

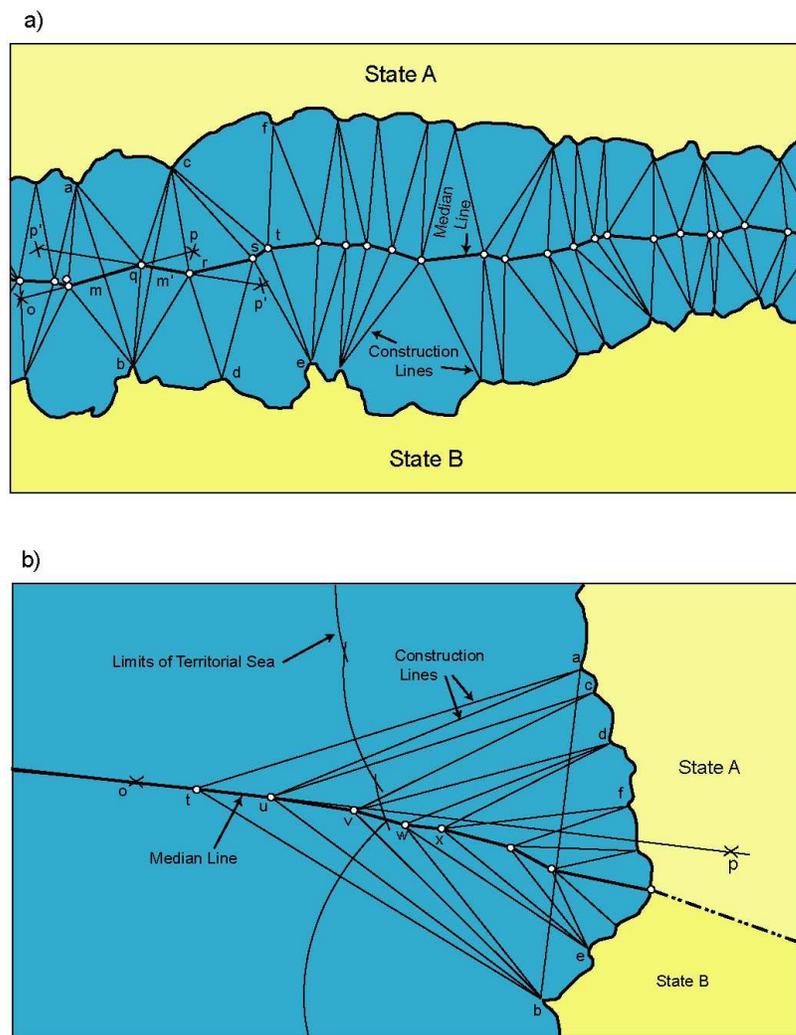


Figure 9. The Equidistance line
(Source: TALOS MANUAL, (2006), p. 6-5)

It is interesting to observe the development of the equidistance line method in the law of maritime delimitation. This has proved the most popular method of maritime delimitation. It can be seen in almost all discussions held by the ILC which culminated in the adoption of 1958 Conventions. However, the ICJ, firstly, through its North Sea Cases had diminished the

privileged status of this method. This ICJ's judgment then followed consistently, not only by the ICJ itself, but also by arbitral Tribunals. The equidistance method was considered as a method which in some cases may lead to inequitable and unreasonable results. In many cases, it was declared that equidistance was not a binding rule of law, but simply one method among others and it was not regarded as part of customary international law which plays the major role in delimitation process.

The rejection with the law's point of view on the application of equidistance method culminated in the adoption of the LOSC. Article 74 on delimitation of EEZ and Article 83 on delimitation of continental shelf do not mention the equidistance method as a preference in maritime delimitation; instead those Articles only mention that the boundary line should be affected by agreement in order to achieve equitable solution. In contrast, in the 1958 Conventions, the median line (equidistance method) would be applied in the absence of agreement. However, it is worth noting that the removal of references to the equidistance method/special circumstances as the approaches to be applied in the absence of agreement appears to deprive Article 74 and Article 83 of the LOSC of a great deal of their normative content, but that this is balanced by the development of international customary law through States practice and the jurisprudence of ICJ and Tribunal.¹⁶⁶ It is due to the fact that equidistant principles have maintained its stronger position in maritime boundary delimitation law, especially in territorial sea and opposite coasts delimitation.¹⁶⁷ Of the 157 maritime boundary agreements concluded by the year 2000, 124 of them (79%) were based on some form of equidistance, whether strict, simplified or modified for at least part of their length.¹⁶⁸

3.2.2 Method Derived From the Equidistance Principle

One of the advantages of equidistance lines is the fact that they can be constructed in an unambiguous manner according to mathematical principles.¹⁶⁹ This leads to, in the absence of outstanding geographical features, the establishment of equitable division of maritime area. However, if the outstanding geographical features do exist, equidistance lines, if used by the

¹⁶⁶ V. Prescott and C. Schofield, *supra* note 45 p.237

¹⁶⁷ *Ibid*

¹⁶⁸ *Ibid* p.239

¹⁶⁹ *Ibid* p.236

parties or a Court or Tribunal, will highly likely need to be simplified or modified. Simplifying the equidistance line usually will not be so much affecting the division of the relevant maritime area. In contrast, modifying the median line will lead to an unequal distribution of area for the parties. The latter method can be achieved by giving partial effect to certain natural features, comparing the relevant coastal lengths, observing the general direction of the coastline and applying the equi-ratio method.

3.2.2.1 Simplified Equidistance Line

Simplifying the equidistance lines is usually required if the relevant area of delimitation is quite large, thus involving many basepoints and resulting in many turning points on the boundary line. If this occurs, some turning points can be erased, leaving a more simple line which can result in easier maritime management along the boundary. Nevertheless, simplifying the median line can be fairly tricky, since erasing some turning points can lead to the need to compensate through areas exchanges among the parties. An example of a simplified equidistance line is the boundary line between Mexico and United States on the Pacific Coast. In this segment, both parties agreed to decrease the turning points from 16 to four.¹⁷⁰ (See Figure 10 below)

3.2.2.2 Coastal Length Comparison

This method of delimitation can be done in segments where one of the parties' coastal lengths, in the relevant area of delimitation, is longer or shorter than the other. The ratio which is resulted from measuring the parties' costal length will be used to determine the ratio of maritime space division. The party with longer coastal length will get a larger maritime space as the equidistance line is pushed toward to the other party's coast. Modern Geographical Information Systems (hereafter: GIS) can automatically calculate the ratio of the coastal length and automatically shifted the median line based on the ratio. This method is quite rarely used in practice.

¹⁷⁰ J.I Charney and L.M. Alexander (eds), *International maritime Boundaries*, (Volume 1, Netherland, Martinus Nijhof, 1993) p. 434

It is worth noting that this method was recently used by the Court, in the *Black Sea Case*,¹⁷¹ to verify the preliminary boundary line which was resulted from the application of two stages approach. The verification was conducted to avoid a significant disproportionality in maritime space division. In other words, this method is used as a check on the line, not to construct the line. (See subsection 3.2.4)

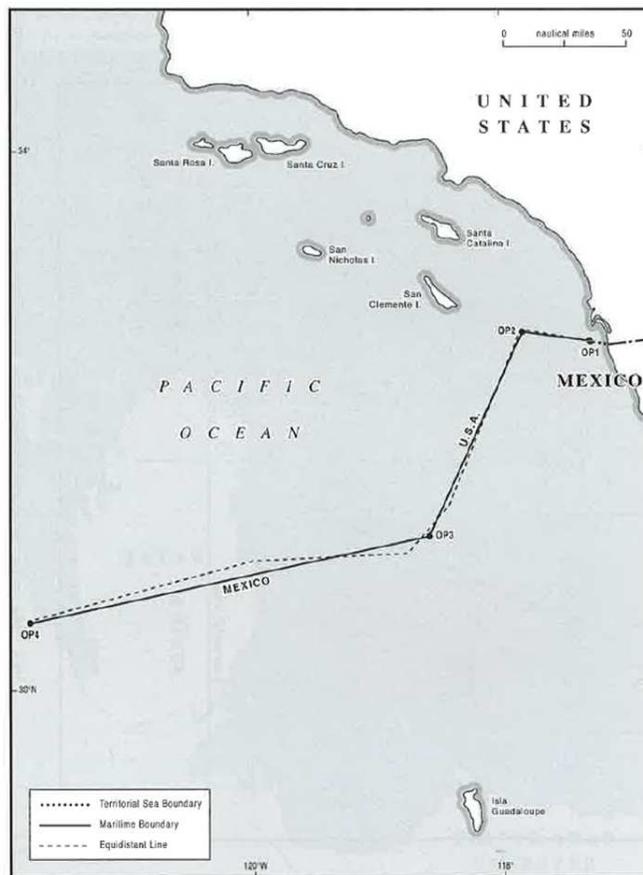


Figure 10. US-Mexico Boundary Line in the Pacific Segment
 The strict equidistance line was simplified by the parties
 (Source: Prescott and Schofield, (2005), p. 579)

¹⁷¹ International Court of Justice, *Case Concerning Maritime Delimitation in the Black Sea (Romania v. Ukraine)* Judgment 3 February 2009 (hereafter: *Black Sea Case*), Available at: <<http://www.icj-cij.org/docket/files/132/14987.pdf>>

3.2.2.3 Partial Effect

This method can be applied by giving a certain effect to any natural features that are considered to be prominent enough to affect the equidistance line. In theory, the effect to be given may be any desired ratio; however, in practice half effect is often applied. An example of this method is provided by the boundary lines offshore the Isles of Scilly in the Anglo-French Continental Shelf Arbitration which resulted from giving the Isles a half effect (see Figure 7).¹⁷² Another example of the application of the partial effect is the case between Malta and Libya. To designate the final boundary line, the strict equidistance line was shifted 18' of latitude northwards.¹⁷³ In this case, the Maltese islands were only given more than half effect (around $\frac{3}{4}$).¹⁷⁴

3.2.2.4 General Direction of the Coastline

The general direction of the coast may be determined on a limited length of coastline either side of the land terminus, or it may be determined on the basis of the whole of the coasts of both States, or even on the general direction of a section of the whole land mass embracing several States.¹⁷⁵ The final boundary line can be produced by shifting the equidistance line perpendicular to the general direction of the coast. This method was used by the Court of arbitration to draw the boundary line between Norway and Sweden¹⁷⁶ (see Figure: 5) and between Guinea and Guinea Bissau (see Figure 11).

¹⁷² J. Charney and L.M. Alexander, *International maritime Boundaries*, (Dordrecht, Martinus Nijhoff Publisher, Vol II, 1993) p. 1744

¹⁷³ *The Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgement, I.C.J. Reports 1985, p.13, para 73

¹⁷⁴ J. Charney and L.M. Alexander, *supra note* 172 p. 1649-1660

¹⁷⁵ International Hydrographic Bureau, *A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea – 1982*, Special Publication No.51, 4th Edition, March 2006 available at: <http://www.gmat.unsw.edu.au/ablos/TALOS_ed4.pdf> chapter 6-10

¹⁷⁶ *Grisbadarna case*, *supra note* 135

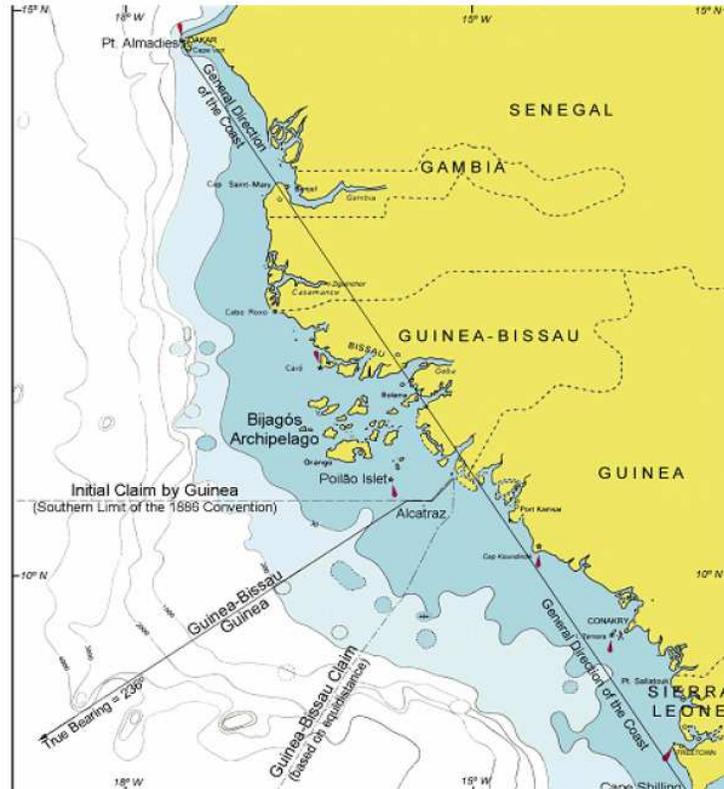


Figure 11. 1885 Guinea/Guinea-Bissau arbitration
 (source: Nuno, S.M. Antunes, 2003, p. 449)

3.2.2.5 The Equi-ratio Method

This method considers the equidistance line as the ratio of 1:1 of the distance between basepoints or baselines of the opposite/adjacent coast (see Figure 12). The parties can agree any ratio of distance may be chosen to draw the boundary line. At the time of writing, this method has not been identified to have been used in any case law or State practice.

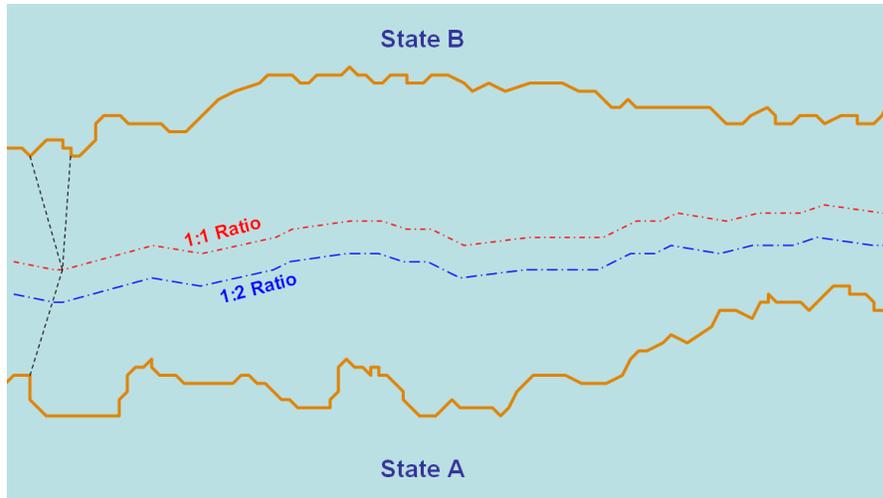


Figure 12. The Equi-ratio Method.
 The equidistance line is considered as the ratio 1:1
 (Adapted from IHB, TALOS Manual, (2006) p.6-5)

3.2.3 Other Methods

3.2.3.1 Enclaving and semi-enclaving

This method usually applied to certain islands which are located near the middle of the area to be delimited or on the wrong side of the equidistance line between the coasts or nearer to the coast of the opposite State. In such cases, islands may be given no more than a 12 nm territorial sea partially or full enclave. An excellent example of the application of this method is the boundary line drawn by the Court of Arbitration in the Anglo-French Continental Shelf Arbitration. The Court considered the Channel Islands to be not only on the wrong side of the mid-channel median line, but also wholly detached geographically from the United Kingdom¹⁷⁷ and due to this fact, the Court generated a 12 nm arc from their baseline to the north and west (See Figure: 7). It is worth noting that the Tribunal was only given a mandate to draw the continental shelf boundary. Since then, UK and France have signed a territorial sea agreement to complete the boundary.

¹⁷⁷ The Anglo-French Continental Shelf Arbitration, *supra note* 148, p. 183 and 199

3.2.3.2 Thalweg Concept

The TALOS Manual defines the thalweg as the line of maximum depth along a river channel or lake but the concept may also be considered in any coastal channel.¹⁷⁸ The boundary line which is produced by this method will follow the thalweg. This method can be used in segments where the parties do not wish an important navigation route to be controlled by one of the parties and leave the other party with no or limited access to the route. It is worth noting that if this method is applied, a special bathymetry survey should be conducted even though sometimes the parties can just rely on the latest chart available.

At the time of writing, there has been no case law or State practice which this method was used to draw a maritime boundary.¹⁷⁹

3.2.3.3 Prolongation of Land Boundaries

This method would seem to only be applicable in the absence of significant geographical features and the fact that the land boundary pursues a straight line. If those two requirements exist, the parties may agree to construct the maritime boundary by just continuing, in the same direction of the land boundary. It is however unlikely that such a prolongation will be satisfactory as a complete maritime boundary.¹⁸⁰

3.2.3.4 Arbitrary Line

Arbitrary lines may be drawn using any method, besides the methods discussed above, as long as they are accepted by the parties or prescribed by the Court. The lines can be generated for various reasons, for example historical or political, simple geodesics or loxodromes such as a parallel of latitude, a meridian, parallel lines forming a corridor, oil concessions and so on. It

¹⁷⁸ International Hydrographic Bureau, *supra note* 175 chapter 6-11

¹⁷⁹ It is worth noting that several land boundaries established using the thalweg of a river may extend into a small part of the territorial sea at the end section of the boundary. This is generally caused by the fact that the parties agreed to stop the land boundary somewhere between the low water line of the coasts of the parties. For example, see 1975 land boundary agreement between Iran and Iraq, especially the section of the boundary that follows the Shatt al Arab between the high- and low-water lines.

¹⁸⁰ *Ibid* chapter 6-12

should be underlined that, even though the term arbitrary line is used, however, they will always be supported by a sound rationale.¹⁸¹

Several boundary lines can be considered as arbitrary lines. For example, in the St. Pierre et Miquelon case between Canada and France,¹⁸² the special Court of Arbitration, constructed a pair of parallel straight lines which form a 10.5 nm corridors, from the 12 nm territorial sea which run due south to the 200 nm limit.¹⁸³ The Court primarily considered coastal geography, especially the frontal projection of the coastline and also proportionality considerations.¹⁸⁴ (See figure: 13)

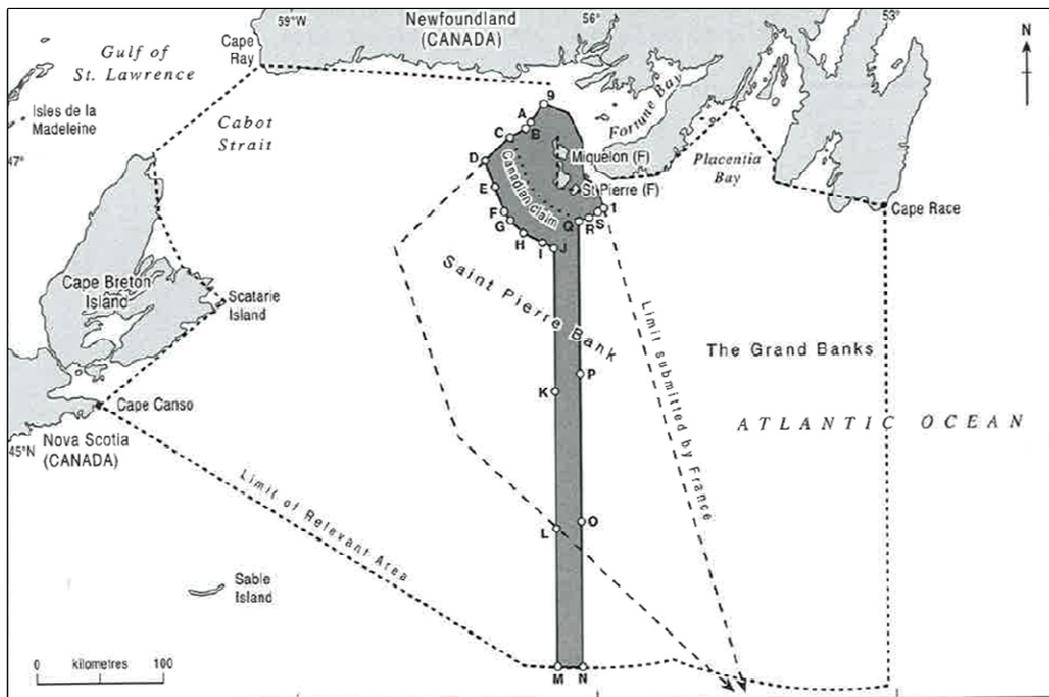


Figure 13. The Canada-France (St. Pierre et Miquelon) delimitation

(Source: Prescott and Schofield, (2005), p. 587)

¹⁸¹ Ibid

¹⁸² Court of Arbitration for the Delimitation of Maritime Areas between Canada and France, Case Concerning the Delimitation of Maritime Areas between Canada and the French Republic, 1992. available at J.I. Charney and Alexander, *supra note* 170, pp. 399-401

¹⁸³ J.I. Charney and Alexander, *supra note* 170, p. 399

¹⁸⁴ Ibid

From State practice, an example of an arbitrary line type of boundary is that agreed to by Ireland and the United Kingdom.¹⁸⁵ To some extent, both States can be considered to have applied a series of parallel of longitude and meridian of longitude to draw the line. This can be considered as representing a pragmatic solution in respect of natural resources exploitation in the relevant area.¹⁸⁶ (See figure: 12)

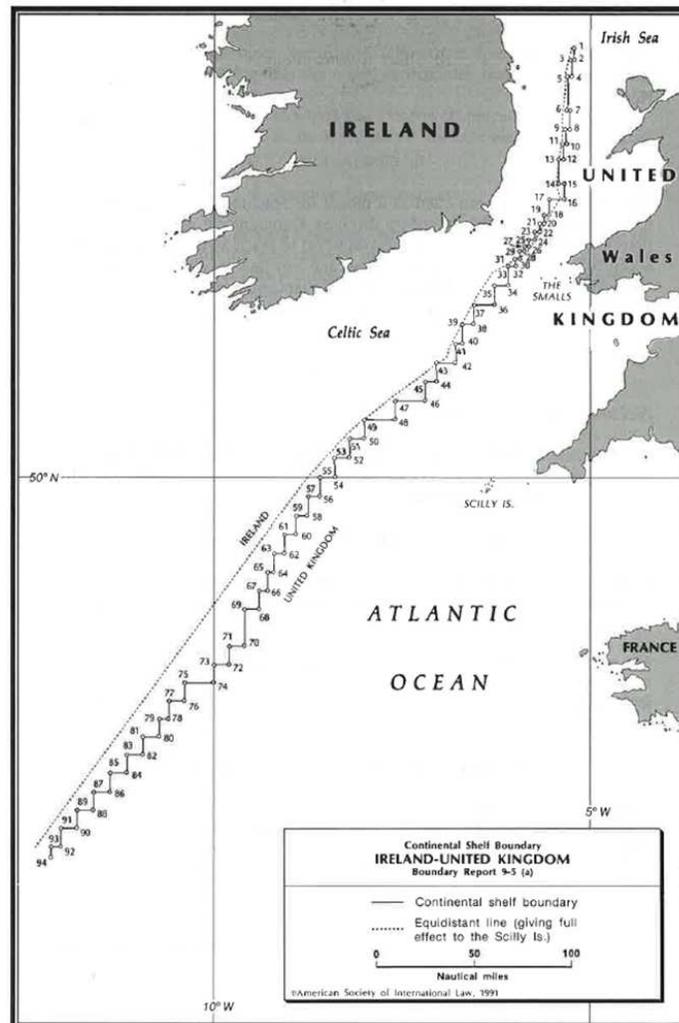


Figure 14. The UK – Ireland Delimitation
(Source: Charney and Alexander, (1993), p.1772)

¹⁸⁵ Agreement Between the Republic of Ireland and the United Kingdom of Great Britain and Northern Ireland Concerning the delimitation of the Continental Shelf between the Two Countries, entered into force 11 January 1990, available at:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GBR-IRL1988CS.PDF>>

¹⁸⁶ J. Charney and L.M. Alexander, *supra note* 172 p. 1770

3.2.4 The Three Stages Approach

From the discussions above, it is worth underlining that there are numerous methods of maritime delimitation which can be used by the parties, as long as they agree. Furthermore, even though the equidistance method is not obligatory in delimitation, however it is still the most popular method in State practice. In the practices of the Court, even though it is not used to draw the final boundary, the equidistance method is usually applied as the starting point to draw an equitable line. This use to be termed the two stage approach which was applied by the Court in several cases, for example: Denmark-Norway case concerning delimitation between Greenland and Jan Mayen Island of 1993 and Qatar Bahrain of 2001. In the two stage approach, the Court first draws a provisional equidistant line. This is then followed by the consideration of whether any circumstances exist which should lead to an adjustment of that line in order to achieve an equitable result.¹⁸⁷

Nonetheless, the Court recently has moved one step forward in order to achieve a clearer approach to maritime delimitation. In the latest ICJ case, the *Black Sea Case*,¹⁸⁸ the Court decided to adopt a three-stage process as a new development from the two stage approach. The first two stages of this new approach are similar from the previous approach. However, after considering factors that might lead to an adjustment of the equidistance line in order to achieve an equitable result, the Court decided to apply a third stage in which if checked any adjustment to that line to ascertain whether any inequitable disproportion in the maritime areas versus relevant coastal lengths had resulted.¹⁸⁹ This new approach underlines that the delimitation of maritime boundaries is still developing over time and is becoming increasingly clear

3.3 The Technical Aspects of Maritime Boundary Delimitation

The principles and methods of maritime delimitation cannot be separated from technical issues. In short, a maritime boundary line will settle division of maritime space between at least two coastal States. This maritime space is absolutely related with States' jurisdiction, or

¹⁸⁷ Maritime Delimitation and Territorial Questions between Qatar and Bahrain, Merits, Judgment, I.C. J. Reports 2001, p. 40, para 176

¹⁸⁸ Black Sea Case, *supra note* 171

¹⁸⁹ *Ibid*, para 123 - 216

even sovereignty, which is a sensitive matter in international law and international relations. Therefore, the boundary line must precisely represent the intention of the parties' during the negotiation or of the Court in terms of the precise position of the turning points, the nature of the lines joining those points, the angle or direction of the segments, and so forth. In this context, it is always useful to have experts in geography, geodesy, and hydrography involved in every maritime boundary negotiation. Their expertise not only will be useful during the determination of the boundary line, but also in the drafting of the text of the agreement and the implementation of the agreement in the field. Some key technical issues are highlighted below; namely nautical charts, geodetic datum and the nature of straight lines.

3.3.1 Nautical Charts

In maritime boundary delimitation, the existence of nautical charts is inevitable, since it is going to be the place where the parties or the Court draw the boundary line based on the agreed method of delimitation. The chart can also prove useful to show some important elements in delimitations, such as the base points and the baselines, the configuration of the coasts, all natural features in the relevant area and so on. Charts are not only useful in the process of the delimitation, but they also have an important role afterwards, i.e. the charts will be the annexes of the agreement, be a reference in any technical discussions later in the actual application of the agreed boundary and be also useful in terms of publishing the boundary agreement.

With regard to the significant role of the chart, choosing a suitable chart for maritime delimitation is not an easy task. It is undisputable that the chart is going to be used, should be firstly agreed upon the parties. Usually, the charts will be used are those produced by non-parties of the delimitation.

3.3.1.1 Chart Scale

The scale of a chart is an expression of the relationship between the distance measured on the earth's surface and the length that represents it on the chart. For example, a scale of 1:500,000 indicates that a length of 1 cm on the chart represents a distance of 500,000 cms (or 5,000 metres) on the surface of the earth. With regard to maritime delimitation, it is important, if

possible to use a chart with a certain scale that can cover the entire relevant area of delimitation. Furthermore, it is recommended to use large-scale charts, since the degree of accuracy of the boundary line on a small-scale chart may be small as well. Besides that, the larger scales allow greater detail and are usually kept more up-to-date with small changes as compared to those of smaller scales.

A study of the United Nations demonstrates that a limit depicted on a chart of scale 1: 500,000 by a line 0.3 mm thick will represent a line on the sea's surface nearly 1/10 of an international nautical mile (185 metres) in width.¹⁹⁰ This indicates the importance of an appropriate scale in maritime delimitation. It is suggested that the range of charts for EEZ and continental shelf delimitation may lie between 1:100,000 and 1:1,000,000.¹⁹¹ While the scale for territorial sea delimitation is suggested to be between 1:50,000 to 1:100,000.¹⁹² However, in the delimitation of a very long segment the parties may wish to show the entire boundary line in one single chart and thus it is always possible to use a medium or small-scale chart.

3.3.1.2 Chart Projection

Chart projection has been used to minimize or to eliminate distortion of distance, angles and shape in an effort to put the surface of the earth, which is a non-planar two dimensional surface, into a chart or map. This is important in maritime delimitation since it correlates with the actual shape and position of the boundary line on the earth surface, noting that the boundary line will always be drawn on a chart. Inappropriate projection can cause an “unwanted shifting” of the boundary line on the earth’s surface from where it was located on the chart.

It is suggested that charts using the conformal projection be used in boundary delimitation since this projection will provide the best angle measurements, distance and directions.¹⁹³ Mercator projection charts, which are used for navigation, emphasize direction rather than the

¹⁹⁰ United Nations, Study on the future functions of the Secretary-General under the draft convention and on the needs of countries, especially developing countries, for information, advice and assistance under the new legal regime, (Document A/CONF.62/L.76), *available at*:
<http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1982/docs/vol_XV/a_conf-62_1-76.pdf p.170>

¹⁹¹ International Hydrographic Bureau, *supra note* 175, chapter 3-17

¹⁹² *Ibid*

¹⁹³ *Ibid*, chapter 3-11

area. The measurement or length of a straight line joining two points on a Mercator projection chart, which is technically known as loxodrome, may be different from a geodetic line joining the same points on a conformal chart which takes into account the curvature of the earth. (See Figure 15)

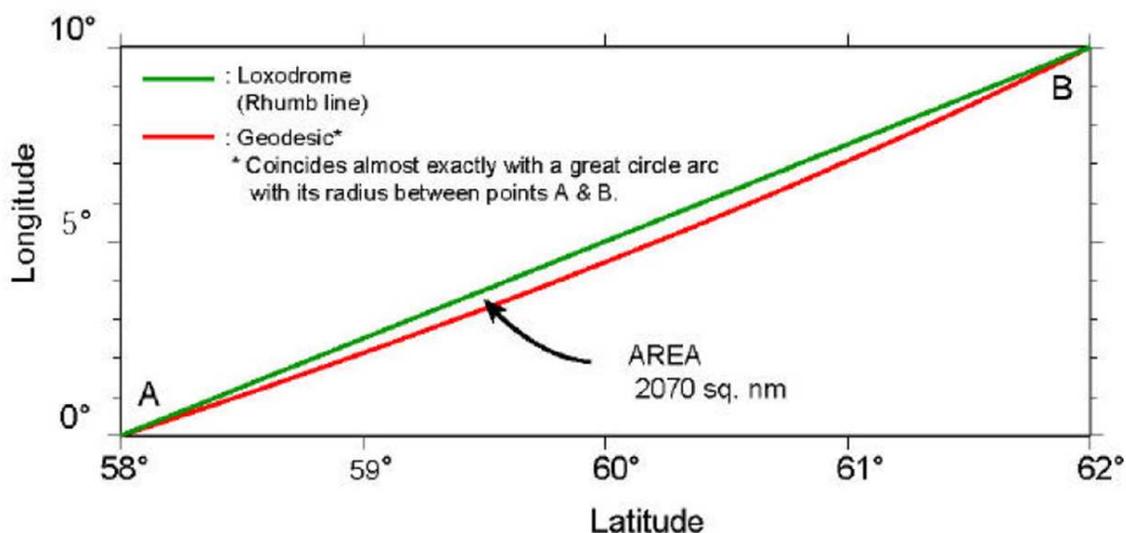


Figure 15. Comparison between a loxodrome and a geodesic connecting two points
(Source: TALOS Manual, (2006), p. 3-21)

3.3.2 Straight Lines

Straight lines are often mentioned in the determination of boundary line and baseline. They are frequently used to join two separated turning points or basepoints. It is, therefore, important to understand the nature of straight lines.

A straight line on the three-dimensional, spheroidal earth can be rendered in several different ways on a two dimensional chart. Some of these methods are arcs of great circle, loxodrome lines and geodetic lines. The latter is often termed the most accurate line, and as a result should be preferred in any delimitation involving the use of straight lines.¹⁹⁴ In light of the fact that multiple types of straight lines exist, it is vital that the precise type of the line is clearly specified as failure to do so can lead to subsequent dispute.¹⁹⁵

¹⁹⁴ S.P Jagota, *supra note* 120, p. 62

¹⁹⁵ J.V. Prescott and C.H Schofield, *supra note* 45 p. 300

Just such a dispute occurred in The Anglo-French Continental Shelf Arbitration¹⁹⁶. The Court decided that the boundary line between both States, more specific between point M and N in the western approaches to the English Channel, was to be determined by equidistance method by giving half effect to the Scilly Isles. The expert of the Court was not given any instruction with respect to which type of straight lines to draw nor which projection to be used. Unfortunately, the expert decided to draw a loxodrome or straight line on a Mercator chart. It should be underlined that the line might be straight on the chart, but absolutely not when it is brought to the surface of the earth.

The United Kingdom urged the Court to correct the error, arguing that the true equidistance line should be drawn on a Traverse Mercator Projection chart which would push the terminal point N four nautical miles toward France. The UK's request for rectification was rejected by the Court for the reason that the use of loxodrome on Mercator projection was not an obsolete method, nor inadmissible in law, nor incompatible with the wording of its decision.¹⁹⁷

3.3.3 Datum issues

It is most likely that all maritime boundaries are determined using geographic coordinates. However, such coordinates will be meaningless without reference to a geodetic (horizontal) datum.¹⁹⁸ Geodetic datums define the size and shape of the earth and the origin and orientation of the coordinate systems used to map the earth.¹⁹⁹ Hundreds of different datums have been used to frame position descriptions since the first estimates of the earth's size were made by Aristotle.²⁰⁰

The World Geodetic System 1984 (hereafter: WGS 84) is datum that is now commonly used worldwide. Besides WGS 84, some regional datums are still used in certain regions. However, the International Hydrographic Organization (IHO) has recommended WGS 84 be used for all nautical charts.

¹⁹⁶ The Anglo-French Continental Shelf Arbitration, *supra note* 148

¹⁹⁷ Further discussion on this case See: J. Charney and L.M. Alexander, *supra note* 172, pp. 1735-1745

¹⁹⁸ J.V. Prescott and C.H. Schofield, *supra note* 45 p. 291

¹⁹⁹ Peter H. Dana, Geodetic Datum Overview, (Department of Geography, University of Texas at Austin, 1995) available at: <<http://www.colorado.edu/geography/gcraft/notes/datum/datum.html>>

²⁰⁰ Ibid

In relation to maritime delimitation, the datum plays a significant role as it will determine how the geographic coordinates defining any boundary line are read or determined. The actual location on earth of the same coordinates will be different if the coordinates referred to a different datum system. It is important that this issue be agreed upon between the parties in delimiting their maritime space. The datum also must be stated in the agreement and the decision of the Court to ensure the existence of certainty and to avoid disputes in the future relating to the implementation of the boundary line.

An example of complexities concerning datum issues faced by States in maritime delimitation is provided by Indonesia and Singapore in relation to the delineation of their territorial sea boundaries which are continuations of the boundary agreed in 1973.²⁰¹ It is important to underline that the territorial sea boundary between the two States consists of three segments, the middle segment which was agreed in 1973, the western segment which was agreed upon in 2009, and the eastern segment which is still to be negotiated.

When delineating the boundary in the western segment, both parties agreed to use the latest British Admiralty Chart (BAC) which was on the WGS 84 datum. The problem occurred immediately after both parties agreed on the boundary line. They found that the 1973 treaty did not provide any reference as to which datum was used. The annexed chart of the 1973 treaty was also only a sketch of the chart adopted from the BAC which existed in 1973. Relating to this, both parties agreed that the 1973 boundary line could not be connected to the new boundary line without any adjustment, since both lines must be on a different datum system. The 1973 boundary line also could not be considered as in WGS 84 since this would shift the actual location of the boundary line on the surface of the earth. To solve this problem, both parties agreed to transform the 1973 boundary coordinates to the WGS 84 using the “chart fitting method”²⁰². The new coordinates of the 1973 boundary line, which are already in

²⁰¹ Agreement Stipulating the Territorial Sea Boundary Lines between Indonesia and the Republic of Singapore in the Strait of Singapore at <<http://www.State.gov/documents/organization/61500.pdf> >

²⁰² Two different printed charts (the BAC number 3833 of 1967 and 2005) were converted to digital format. It is worth noting that those charts had different datum and coordinate systems. The digital version of the charts were registered digitally using a GIS software so that they can be overlaid one on the other in WGS-84 datum. However, in overlaying the charts, several features on the charts should be used as common features to make sure. After this stage, the boundary coordinates of 1973 treaty which were plotted on the 1967 chart then read and extracted using the WGS-84 datum. Further discussion on this issue, see: Sugeng Supriyanto, *et.al.*, Geodetic and Chart Datum Problem Arising from the Map Annexure of the Maritime Boundary Treaties in Non-WGS 84

WGS 84, will not revise the 1973 Treaty. They will be used as guidance by both parties in any activities relating to implementation of the boundary line in its actual location, such as law enforcement and navigation.

3.4 Concluding Remarks

Maritime boundary delimitation has developed significantly since the 20th century, when States were becoming more aware of maritime resources off their coasts. Since then, the international community has been trying to establish a legal framework to codify this emerging issue. Legal jurisprudence, State practice and the codification of LOSC have positively contributed to the development of the area of maritime boundary delimitation.

It is worth noting that maritime boundary delimitation principles are governed by the rules of public international law, thus, they will keep developing in accordance with the development of international law. The codification of those principles in to conventional law, State practice and jurisprudence shows that development.

In maritime delimitation involving archipelagic straight baselines, the parties and the Court can always choose any method to be used to reach an equitable solution. However, the role of archipelagic straight baseline in delimitation is often in question. Chapter four will elaborate and analyse the role archipelagic baselines in maritime boundary delimitation, not only the legal and technical aspect, but also the State practice.

Datum; Lesson Learned from Indonesia-Singapore Case, (The paper was presented at the International Seminar on the Technical Aspects of the Law of the Sea, Bali, Indonesia, 3-5 August 2009)

4 Archipelagic Baselines in Boundary Delimitation

Even though archipelagic status has been adopted in the LOSC, including provisions on archipelagic baselines, and the existence of methods and principles in the delimitation of maritime space, it is still not clear that a system of archipelagic baselines will necessarily have any real significance in boundary delimitation. This chapter will identify and analyse the related legal and technical issues, in order to illustrate and highlight key challenges in maritime boundary delimitation faced by archipelagic States in respect of their archipelagic baselines. The pattern of how archipelagic States have delimited their maritime boundaries with their neighbours will also be considered. Furthermore, in the context of maritime boundary delimitation, the use of archipelagic baselines can be considered to be largely analogous to the application of straight baselines, thus, this chapter will also briefly highlight the law and State practice dealing with straight baseline in the delimitation of maritime boundaries.

4.1 Key Problems in Practice

In a negotiation, the parties are free to agree on any method of delimitation in order to achieve an equitable boundary line. Determining the method of delimitation can be considered as a key stage of the delimitation process. Once the method of delimitation is agreed upon, how that method is implemented in practice becomes critical.

If equidistance is used as the method of delimitation, as often is the case, though not always, one of the issues that is usually discussed at an early stage is how to choose and treat relevant base points and baselines. In a negotiation where one of the parties is an archipelagic State and the other is not, the discussion on this matter could well be time consuming and exhausting.

Essentially, issues can arise because archipelagic States are permitted to draw their baselines connecting their outermost islands, rocks, reefs and low tide elevations in accordance with Article 47 of LOSC. Consequently, there is a possibility that the non-archipelagic State will

argue that its archipelagic neighbour use its normal rather than archipelagic baselines, in other words, the delimitation method would employ the base point to base point method.²⁰³

If the relevant area of delimitation involves a very long segment of straight archipelagic baseline, connecting two distant base points, the base point to base point method will, most likely, result in a boundary line which lies significantly closer to the archipelagic State than would be the case had its archipelagic baselines been accorded full effect.

Another scenario that might occur is that the non-archipelagic State may have constructed straight baselines of its own. There is always a possibility that such straight baselines may have been defined with a view to “balancing” or countering the potential impact of archipelagic baselines on a potential delimitation line.²⁰⁴ With regard to this point, the author is of the view that the law and/or the technical aspects of maritime boundary delimitation involving straight archipelagic baselines are relatively underdeveloped.

4.2 Legal Analysis

Article 48 of the LOSC provides that the breadth of the territorial sea, the contiguous zone, the EEZ and the continental shelf of archipelagic States “shall be measured from archipelagic baselines drawn in accordance with Article 47”.²⁰⁵ However, the LOSC does not provide any further explanation of how archipelagic baselines can play a role in maritime boundary delimitation. Reference to the practice of international Courts and Tribunal, together with relevant State practice appears to indicate that the role of archipelagic baselines on this question remains somewhat unclear.

²⁰³ Discussion on basepoint to basepoint method *See* discussion on TALOS Manual concerning the construction of the equidistance line. *See* figure 9 and subsection 3.2.1 or International Hydrographic Bureau, TALOS MANUAL, *supra note* 175

²⁰⁴ This scenario was applied by Italy in the negotiation of territorial sea boundary delimitation between the Italy and Yugoslavia in 1975. Both States were not archipelagic States, but they negotiated their maritime boundary which was involving straight baselines. At the time of negotiations, Yugoslavia had defined its straight baseline while Italy had not. However, Italy had indicated that they would designate straight baseline. The “new designated” Italian straight baseline was proven played significant role in delimitation. The agreed boundary line was a modified equidistance line. Delimitation according to strict equidistance from both States’ straight baselines would have favoured Italy. In contrary, strict equidistance from coast to coast would have favoured Yugoslavia. Therefore, both States agreed that the boundary line was generally the median line between the two former baselines. further reading on this, *See*: J. Charney and L.M. Alexander, *supra note* 172 p. 1639-1645

²⁰⁵ LOSC Article 48

4.2.1 Archipelagic Straight Baseline in Case Law

At the time of writing, only one maritime boundary delimitation case involving an archipelagic State has been brought before, and settled by, an international Tribunal or Court: that is the case between Trinidad and Tobago and Barbados.²⁰⁶ The Tribunal, in that case constructed the boundary line between the parties merely using the base point to base point method. The Tribunal mentioned that it was using the turning point of Trinidad and Tobago's archipelagic baselines and Barbados' low water line to draw the line. The Tribunal provided that:

The delimitation shall extend from the junction of the line that is equidistant from the low water line of Barbados and from the nearest turning point of the archipelagic baselines of Trinidad and Tobago with the maritime zone of a third State that is to the west of Trinidad and Tobago and Barbados. The line of delimitation then proceeds generally south-easterly as a series of geodetic line segments, each turning point being equidistant from the low water line of Barbados and from the nearest turning point or points of the archipelagic baselines of Trinidad and Tobago until the delimitation line meets the geodetic line that joins the archipelagic baseline turning point on Little Tobago Island with the point of intersection of Trinidad and Tobago's southern maritime boundary, as referred to in paragraph 374 above, with its 200 nm EEZ limit. The boundary then continues along that geodetic line to the point of intersection just described.²⁰⁷

It is evident that the Tribunal acknowledged the existence of Trinidad and Tobago's archipelagic baselines with the mention of "turning point or points of the archipelagic baseline of Trinidad and Tobago". The phrase "points of the archipelagic baseline" can be interpreted that the Tribunal also recognised points along the archipelagic baseline segment. However, the facts of the case show that the Tribunal only utilised the turning points of Trinidad and Tobago's archipelagic base lines.²⁰⁸ It is also worth noting that the Tribunal, in its judgment,

²⁰⁶ Award of the Arbitral Tribunal Constituted pursuant to Article 287, and in accordance with Annex VII, of the United Nations Convention on the Law of the Sea in the Matter of an Arbitration between Barbados and the Republic of Trinidad and Tobago, 11 April 2006, *available at* <http://www.pca-cpa.org/showfile.asp?fil_id=178>

²⁰⁷ *Ibid* Para 381

²⁰⁸ Trinidad and Tobago deposited a list of geographical coordinates of its archipelagic baseline to the United Nations on 27 May 2004. For the purpose of the case, Trinidad and Tobago provided the Tribunal four geographic coordinates of its archipelagic baselines turning points. Those four coordinates were included in the list which deposited to the UN. *See*: Original of deposited geographical coordinates of points of Trinidad and Tobago, *available at*:

did not refer to Article 48 of LOSC in relation to relevant base points or baselines, even though one of the parties was an archipelagic State. This situation raises questions as to how international Tribunals and Courts will apply archipelagic baselines and Article 48. In short, are archipelagic baselines only applicable to the unilateral construction of the limit of maritime zones or applicable in bi- or multilateral maritime boundary delimitation?

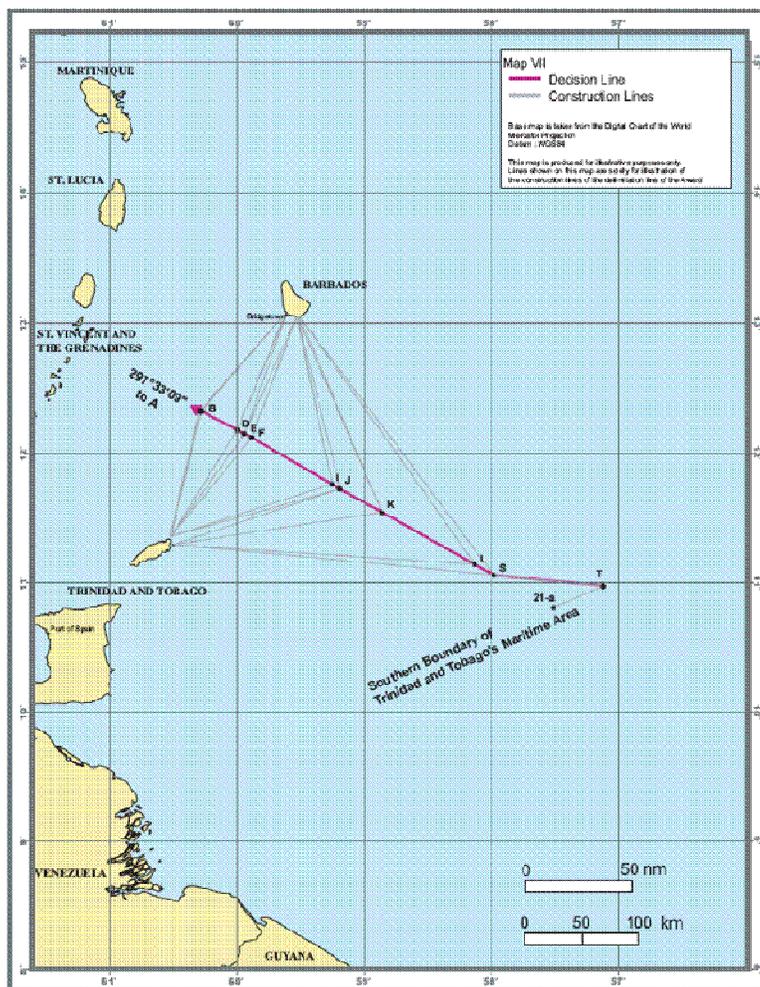


Figure 16. Maritime Boundary Line between Trinidad and Tobago and Barbados

(Source: Appendix of the Award of the Arbitral Tribunal, (2006), p.5)

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/tto_mzn49_2004.pdf>; and the Award of the Arbitral Tribunal between Barbados and the Republic of Trinidad and Tobago, *Supra note* 48, technical Report of the Tribunal's Hydrographer (APPENDIX)

However, it is also worth noting that in the Barbados-Trinidad and Tobago Case, the geographical configuration of Trinidad and Tobago is such that Trinidad and Tobago's archipelagic baselines were in any case not especially relevant to the delimitation of the maritime boundary in question. The area to be delimited was located to the northeast of Trinidad and Tobago. Consequently, only very small parts of Trinidad and Tobago's archipelagic baseline could potentially have influenced the construction of the delimitation line between the two States (*See* Figure 14). As a result, this case does not provide conclusive guidance on how archipelagic baselines should be treated in maritime boundary delimitation in the context of a case before an international Court or Tribunal, especially as the Tribunal did not directly address the issue of the role of Trinidad and Tobago archipelagic baselines.

4.2.2 Straight Baselines in Case Law and State Practice

Since the characteristics of archipelagic straight baselines are similar to straight baselines, it is worth observing how international Courts, Tribunals and State practice treat straight baselines in maritime delimitation. It is the case that international Courts and Tribunals have in the past had cause to consider the use of straight baselines and have generally tended not to use them in the delimitation of a maritime boundary. For example, in the recent *Black Sea Case*, the Court noted that:

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.²⁰⁹

The Court went on to state that in the first of these scenarios, it was up to the coastal State to determine the relevant base points, in conformity with the provisions of LOSC, including Article 7.²¹⁰ In the context of maritime boundary delimitation between two or more States, however, the Court asserted that 'it should not base itself solely on the choice of base points

²⁰⁹ *Black Sea Case*, *supra* note 171 para.137.

²¹⁰ *Ibid.* The provisions of LOSC that the Court noted that States should determine base points in conformity with were Articles 7, 9, 10, 12 and 15.

made by one of those parties' and should, instead, "select base points by reference to the physical geography of the relevant coasts".²¹¹

State practice has also often no clear indication as to whether straight baselines have actually been used to delimit maritime boundaries.²¹² Based on research conducted by Sohn in 1993, there were only 20 cases of bilateral delimitation agreements which took into account systems of straight baselines, while in some 50 instances they were disregarded in whole or in part.²¹³ Many reasons can cause parties to decide not to use their straight baselines in boundary delimitation negotiations in order to reach equitable solutions. Sometimes it is simply just because there is only one party who has adopted a system of straight baselines, while the other could but did not establish them. If this scenario occurs, the parties often disregarded these baselines, or balanced any advantages derived from them by various means.²¹⁴ It is also the case that often the basepoints used to generate the maritime boundary line also serve as the basepoints from which the straight baselines were drawn. In such cases it is not clear that the system of straight baselines had any real significance for the maritime boundary delimitation.²¹⁵

As straight baselines are claimed by States unilaterally, it follows that they are not binding upon other States and will not necessarily be accepted by neighbouring States in the context of maritime boundary delimitation negotiations. That said, it is a distinction which can be drawn between archipelagic baselines, which must conform to the fairly rigorous provisions of Article 47 of LOSC, and the straight baselines, which merely need to comply with the ambiguous language of Article 7 of LOSC. Consequently, while many straight baselines can

²¹¹ *Ibid.*

²¹² L.B. Sohn, 'Baseline Considerations', in J.I. Charney and L.M. Alexander (eds), *International maritime Boundaries*, (Volume 1, Netherland, Martinus Nijhof, 1993). p. 156

²¹³ *Ibid.* p. 157

²¹⁴ *Ibid.*, one of the examples of this type of case is the negotiation of the maritime boundary between Iran and United Arab Emirates (Dubai). Iran did claim a straight baselines system while UAE did not. Somehow the baseline did not affect the location of the boundary line. It seems that economic considerations, especially relating to offshore oil development, played a crucial part in the decision to delineate the boundary. Further discussion on this matter see J. Charney and L.M. Alexander, *supra note* 172 p. 1533-1537. Alternatively, one of the parties constructs theoretical straight baselines to balance the baselines of the State that does claim the straight baseline before the delimitation. See: Delimitation of Territorial Sea Boundary between Italy and Yugoslavia.

²¹⁵ L.B. Sohn *supra note* 212

be characterised as “excessive”, the same cannot be said of archipelagic baselines.²¹⁶ Arguably, therefore, there is greater justification for the application of archipelagic baselines in the delimitation of maritime boundaries than there is for many straight baselines based on a, to put it mildly, liberal interpretation of Article 7 of LOSC.

4.3 Technical Analysis

Strictly speaking, LOSC does not provide any definition regarding baselines and base points; it only provides details of several distinct types of baselines and some guidance how to construct those baselines. The International Hydrographic Bureau (IHB), through its TALOS Manual defines:

a base point is any point on the baseline. In the method of straight baselines, where one straight baseline meets another baseline at a common point, one line may be said to "turn" at that point to form another baseline. Such a point may be termed a "baseline turning point" or simply "basepoint".²¹⁷

Considering the above definition, Article 48 gives rise to another complexity in its application, that is in relation to how, technically, to measure the breadth of maritime zones or construct the maritime boundary line from archipelagic baseline. Article 48 clearly allows an archipelagic State to measure its maritime zones from its baselines, not only from base points along such baselines. However, it is common practice for a boundary line to be drawn only with reference to specified base points on the coastline or the islands as controlling points without any reference to archipelagic baselines. Consequently, the technical aspect of the use of archipelagic baselines in maritime delimitation also remains unclear.

One of the solutions that may be suitable for this technical matter is to refer to the definition of a median or equidistance line given by the Court, as it is also worth noting that the Court, in determining maritime boundary line, is likely to apply the so-called three-stages approach following the *Black Sea Case*. The first stage of this approach is to generate a provisional line, based on an equidistance line which is defined by the Court as “the line every point of which is equidistant from the nearest points on the baselines from which the breadth of the territorial

²¹⁶ Roach, J.A. and Smith, R.W., *United States Responses to Excessive Maritime Claims* (The Hague: Martinus Nijhoff Publishers, 1996), pp.57-161.

seas of each of the two States is measured”.²¹⁸ This definition presumably is originated from Article 15 LOSC concerning delimitation of the territorial sea between States with opposite or adjacent coasts.²¹⁹

The definition of the median line provided the by Court mentions “from the nearest points on the baselines”. This terminology, in relation to the method of straight or archipelagic baselines, can be interpreted technically in two ways. The first one is that “the nearest points on the baselines” are the nearest baselines turning points or simply base points. The second interpretation is that “the nearest points on the baseline” means the baseline is constructed from two or more points which are not necessarily base lines turning points. In practice, that would be an infinite series of points which form a segment of baseline.

In boundary delimitation, the first interpretation will lead to the use of base point to base point method which would give not any reference to the baselines. In contrast, the second interpretation will generate the median line equidistance from points which lie on a segment of archipelagic baseline on one side and several base points on the opposite/adjacent side.

However, the latter method will technically require a specific median line algorithm which is capable of identifying those points on the baseline and to use them to construct the boundary line. To apply this method, one may need tools provided by modern GIS system. This research shows that at least two agreed maritime boundary lines, involving archipelagic States and archipelagic baselines, were highly likely to have been generated using the method.

In practice, the application of the two methods outlined above, when applied to any particular boundary segment involving straight baselines, will generate two different equidistance lines. The first method, basepoint to basepoint, will generate an equidistance line which lies nearer to the coast of States with long straight baselines (See Figure 17). In contrast, the second

²¹⁷ See International Hydrographic Bureau, *supra note* 175, Appendix 1-7

²¹⁸ *Qatar v. Bahrain*, I.C.J. Reports 2001, p. 40. para. 177

²¹⁹ Article 15 LOSC stipulates: “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”.

method will generate an equidistance line which lies precisely in between the straight baselines of the archipelagic State and the basepoints of the opposite State and will therefore be more distant from the archipelagic State (See Figure 18).

Referring to the different results, it is highly likely that the discussion relating to which method is going to be used in the negotiation may be difficult. Each party absolutely will propose the method which favours its own interests should be used. However, it is always an option for the parties, in order to reach an equitable solution, to draw the boundary line in between the two equidistance lines resulting from the application of the two methods.

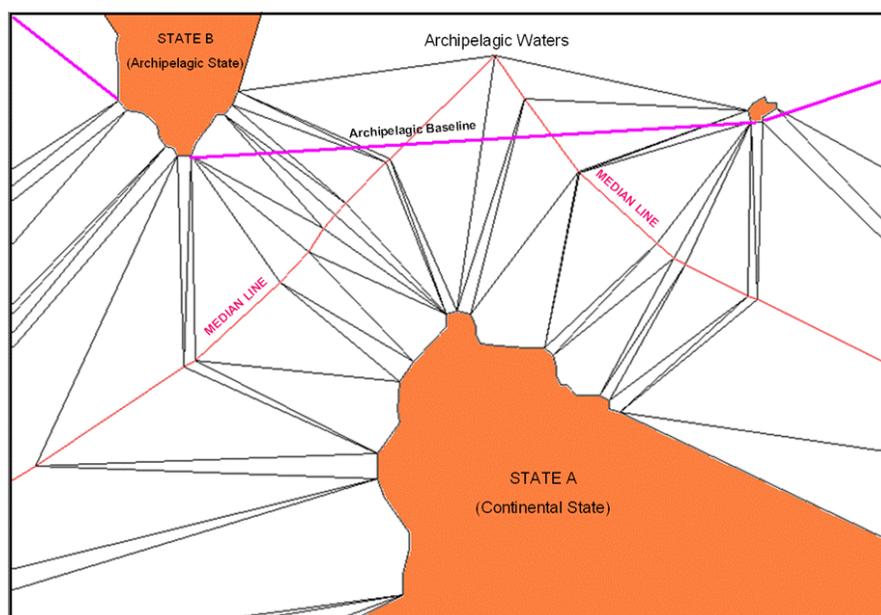


Figure 17. Illustration of a Median line generated by ignoring the archipelagic baseline

Note: Generated using CarisLOTS' median algorithm

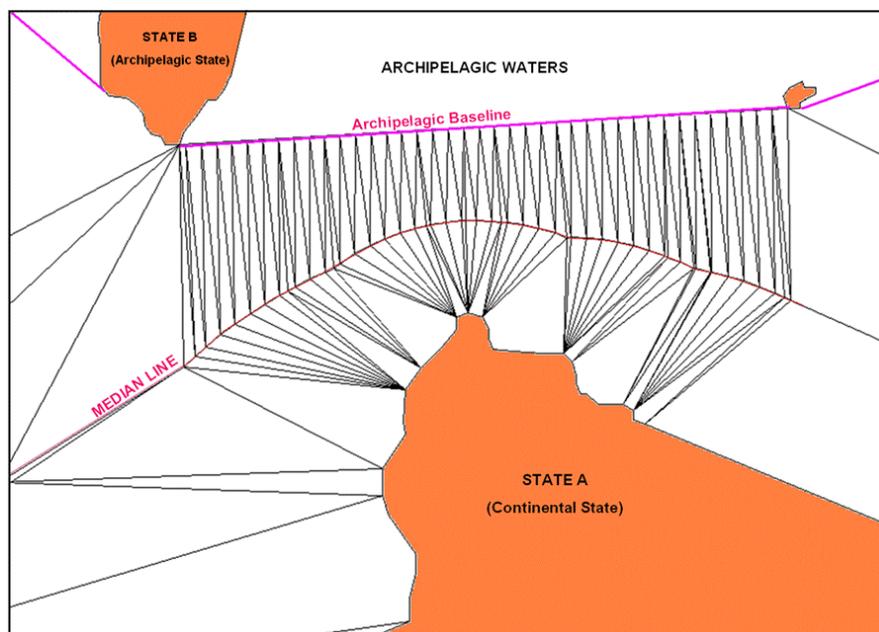


Figure 18. Illustration of a Median line generated from the archipelagic baseline.

Note: Generated using CarisLOTS' median algorithm²²⁰

4.4 Categorisation Analysis of State Practice

At the time of writing, based on Table of Claims to Maritime Jurisdiction prepared by the United Nations Division for Ocean Affairs and the Law of the Sea, there were twenty States claiming the archipelagic State status.²²¹ However, it is worth noting that this number can change as a number of States may be in a position to claim archipelagic status but have yet to formally do so, an example of this being Bahrain.²²²

Of those States, at least nine States had entered into some agreements with neighbouring States relating to the delimitation of maritime boundaries: Cape Verde, Fiji, Indonesia, Jamaica, Papua New Guinea, Sao Tome and Principe, Seychelles, the Solomon Islands and

²²⁰ CarisLOTS (Law of the Sea) software is specifically designed to comply with provisions of the LOSC, in particular for maritime zones delimitation. The software is equipped with a particular median algorithm that is able to maximizing the role of straight baseline by generating an infinite series of points along the straight baseline. The examples were generated by the Author and I.M.A. Arsana

²²¹ They are Antigua and Barbuda, Bahamas, Cape Verde, Comoros, Dominican Republic, Fiji, Indonesia, Jamaica, Maldives, Marshall Islands, Papua New Guinea, Philippine, Saint Vincent and the Grenadines, Sao Tome and Principe, Seychelles, Solomon Islands, Trinidad and Tobago, Tuvalu and Vanuatu. See : Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs (2008), *supra note 3*

²²² See *Qatar v. Bahrain supra note 218*

Trinidad and Tobago. For the purposes of this research, the boundary lines constructed in some of the agreements involving these States is analysed to identify whether the boundary lines are generated from their archipelagic baselines or if these baselines are not given any weight in the delimitation.

These agreements in question are divided into three categories. The first category consists of agreements where the agreed boundary lines were generated using methods which resulted in negotiated lines, thus it is not necessarily clear whether baselines are given weight in the delimitation. The second category consists of agreements the agreed boundary lines were generated by completely disregarding baselines. The third category consists of agreements where the boundary lines were presumably generated with full reference to the baseline. However, it is worth underlining that this is a preliminary survey based primarily on analysis of the texts of maritime boundary delimitation agreements and supported with only limited geospatial analysis. It is suggested that further geospatial analysis of each case would be useful and instructive.

4.4.1 Category 1 Agreements: Negotiated Lines

a. Cape Verde - Mauritania (2003)²²³

Cape Verde proclaimed its archipelagic baselines through Law No 60/IV/1992 of 21 December 1992.²²⁴ Cape Verde and Mauritania lie opposite to each other approximately 300 nm apart. Article 1 of the agreement asserts that the boundary line is “a median line the points of which are equidistant from the nearest points on the baselines of the two countries”. However, the agreed boundary line is located slightly to the east of the median line which is generated using Cape Verde’s archipelagic baselines, in favour of Cape Verde (from equidistance line, Cape Verde gets additional maritime space around 637 km²). It is therefore

²²³ Treaty on the Delimitation of the Maritime Frontier between the Islamic Republic of Mauritania and the Republic of Cape Verde, signed on 19 September 2003, *available at*:
<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/CPV_MRT2003MB.pdf>

²²⁴ See Cape Verde Law No 60/IV/1992 of 21 December 1992, *available at*:
<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/CPV_1992_Law.pdf>

unclear whether Cape Verde's archipelagic baselines contributed to the construction of the agreed line.

b. Cape Verde - Senegal (1993)²²⁵

This treaty delimits a maritime boundary between the two States which are located approximately 300 nm apart. It appears to be the first agreement to include definitions of the baselines used and to specify that the baselines are drawn in accordance with LOSC.²²⁶ However, apart from this statement in the treaty that the points defining boundary are equidistant from the nearest points on the baselines, there does not appear to be any compelling evidence that the baselines were used to produce the boundary that does not have the characteristics of an equidistance line. The median line was shifted $\pm 10 - 20$ nm eastward of the median line generated using the archipelagic baselines in favour of Cape Verde.

c. Solomon Islands - Australia (1988)²²⁷

The Solomon Islands defined its archipelagic baselines through Legal Notice No.41 of 1979 concerning Declaration of Archipelagic Baselines (the delimitation of Maritime Waters Act (No.32 of 1978)).²²⁸ The agreement between the two States delimits a boundary line which consists of only one mid point and two end points for two segments of boundary. It does not State the method used to draw the line. The boundary line is most likely a negotiated line which departs from an equidistance line generated using archipelagic baselines between small islands and reefs. Consequently, it is unclear whether archipelagic baselines had affected the agreed line.

²²⁵ Treaty on the delimitation of the maritime frontier between the Republic of Cape Verde and the Republic of Senegal, entered into force 25 March 1994, *available at*:
<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/CPV-SEN1993MF.PDF>>

²²⁶ See Article 2 of the Treaty; Further discussion see: J.I Charney and L.M. Alexander (eds), *International Maritime Boundaries*, (Volume III, Netherlands, Martinus Nijhof, 2004) p. 2283

²²⁷ Agreement between the Government of Solomon Islands and the Government of Australia establishing certain sea and sea-bed boundaries, entered into force on 14 April 1989, *available at*:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/SLB-AUS1988SB.PDF>>

²²⁸ Solomon Island Declaration of Archipelagic Waters, *supra note 97*

d. Jamaica - Colombia (1993)²²⁹

Jamaica deposited its geographical coordinates of the turning points of its archipelagic baselines with the United Nations on 16 October 1996.²³⁰ For Jamaica, this agreement was its first maritime boundary delimitation agreement to be concluded.²³¹ The agreement does not provide the method used to draw the boundary line. The median line, which is generated using the archipelagic baselines, is located southward of the agreed line therefore it is not clear Jamaica's baseline was given a full weight. It is highly likely that the line is a negotiated line to achieve an equitable solution.

e. Jamaica - Cuba (1994)²³²

The Agreement between the two States delineates a single boundary line for their exclusive economic zone and continental shelf. With regard to the method used to draw the line, Article 1 of the Agreement provides that both countries agree that "the equidistance method is the equitable solution for the establishment of the delimitation line".²³³ That principle it seems applied strictly by both States. It can be seen from the fact that the agreed equidistance line, approximately 175 nm in length, consists of 106 points defined by coordinates which presumably use all relevant base points along the coasts of the two States as control points. However, it is unclear from the agreement whether the archipelagic baseline of Jamaica was given a full affect to generate the equidistance line.

²²⁹ Maritime delimitation treaty between Jamaica and the Republic of Colombia, entered into force on 14 March 1994, *available at* :

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/JAM-COL1993MD.PDF>>

²³⁰ Jamaican official letter to the Secretary-General of the United Nations, 8 October 1996, *Available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/jam_mzn11_1996.pdf>

²³¹ J.I Charney and L.M. Alexander (eds), *supra note* 226, p 2179

²³² Agreement between the Government of the Jamaica and the Government of the Republic of Cuba on the delimitation of the maritime boundary between the two States, signed on 18 February 1994, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/JAM-CUB1994MB.PDF>>

²³³ *See* Article 1 of the Agreement., *Ibid*

f. Papua New Guinea - Australia (1978)²³⁴

Papua New Guinea deposited its geographical coordinates of points of archipelagic baselines to the United Nations on 8 October 2002;²³⁵ however Papua New Guinea had defined its archipelagic baseline since 1977.²³⁶

This treaty can be considered as a complex treaty since it delineate the boundaries of four maritime zones, namely the territorial sea, seabed, fisheries and a protected zone for the Torres Straits islanders. Based on that situation, it is unsurprising that the treaty concerned was so long and detailed. It consists of 32 Articles and nine annexes, including four maps. During the negotiation, Papua New Guinea argued that it is a much poorer country than Australia with a very restricted access to resources and therefore should be treated generously by Australia.²³⁷ Ultimately, the boundary lines agreed upon resulted from some modifications to the median lines in some parts. Due to the complexity of the nature of maritime zones that are delimited, the boundary lines are likely negotiated lines and it is not clear whether archipelagic baselines were given a full weight.

g. Indonesia - Malaysia (1969)²³⁸

Through this agreement, Indonesia and Malaysia agreed to draw undefined-type of straight lines connecting 25 agreed points that divide their continental shelf.²³⁹ The areas delimited

²³⁴ Treaty between Australia and the Independent State of Papua New Guinea concerning sovereignty and maritime boundaries in the area between the two countries, including the area known as Torres Strait, and related matters, entered into force on 15 February 1985, *available at*:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/AUS-PNG1978TS.PDF>>

²³⁵ See M.Z.N. 41. 2002. LOS of 8 October 2002: Deposit of the list of geographical coordinates of points of Principal Archipelago as specified in the Declaration of the baselines by methods of coordinates of base points for purposes of the location of the archipelagic waters of 25 July 2002, made pursuant to Section 8(1) of the National Seas Act 1977 and published in National Gazette No. G-124 of 1 August 2002, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/png_mzn41_2002.pdf>

²³⁶ See National Seas Act 1977, Act No. 7, *supra note 96*

²³⁷ V. Prescott and G. Boyes, *Undelimited Maritime Boundaries in the Pacific Ocean Excluding the Asian Rim*, (IBRU Maritime Briefing: Volume 2 Number 8, Durham, IBRU, 2000) p.35

²³⁸ Agreement between the Government of the Republic of Indonesia and the Government of Malaysia Relating to the delimitation of the continental shelves between the Two Countries. Entered into force on 7 November 1969. *available at*:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/MYS-IDN1969CS.PDF>>

²³⁹ *Ibid*, Article 1

are in the Strait of Malacca (Point 1-10), in the western part of the South-South China Sea (Point 11-20), and in the eastern part of the South-South China Sea (Point 20-25).

The agreement does not declare the method that the parties used to draw the line. However, it is most likely that both parties drew equidistance lines from their base points and disregarded the Indonesian archipelagic baselines. If both countries took into account the archipelagic baseline, then the boundary lines would have been shifted eastward in favour of Indonesia.²⁴⁰

h. Indonesia - Malaysia (1970)²⁴¹

Just a few months after the 1969 continental shelf boundary entered into force, both countries decided to negotiate and agree on their territorial sea boundary in the area what was describe in the preamble of the 1970 treaty as “the narrow part of the straits of Malacca”.²⁴² Most of the boundary lines which are designated in this agreement coincide with the 1969 continental shelf agreement. Only around 40 nm out of 174 nm boundary line (Point 5-7) which do not coincide and leave a triangular ‘gray zone’.²⁴³

In relation to the method used to draw the line, both counties agreed that the line would be at “centre drawn from base lines of the respective parties in said area”.²⁴⁴ However, it is questionable that both countries really gave weight to baselines. The boundary line is fixed at the median line to be drawn precisely half-way between the outermost points on each side of the islands, not the baselines. It should also be noted that it is difficult to reconstruct the median line since up to now Malaysia has never published its baselines. Therefore, the Malaysian baseline used in this analysis was inferred.²⁴⁵

²⁴⁰ It is believed that Indonesia approved the line since Indonesia needed Malaysian support for archipelagic State concept. See J.I Charney and L.M. Alexander (eds), *supra note* 170 p. 1022

²⁴¹ Treaty between the Republic of Indonesia and Malaysia Relating to the delimitation of the Territorial Seas of the Two Countries in the Strait of Malacca, entered into force 8 October 1971, *available at* J.I Charney and L.M. Alexander (eds), *Supra note* 170 pp.1035-1037

²⁴² See the preamble of the agreement.

²⁴³ The line connecting point 5-7 lies more southward than the 1969 agreement and it form the triangular gray zone in the Indonesian side. See Article I (2)(b) and Choon-ho Park, *Indonesia-Malaysia (Territorial Sea)* in J.I Charney and L.M. Alexander (eds), *supra note* 170, p. 1029

²⁴⁴ Article I (1)

²⁴⁵ In 1979, Malaysia published a series of map showing its maritime zones. However it does not show Malaysian baseline and how Malaysia draws its maritime zones.

i. Indonesia - Papua New Guinea (1980)²⁴⁶

The agreement delineates a lateral boundary between the two archipelagic States. For the purpose of the agreement, Indonesia used its archipelagic baselines declared in 1960, whilst Papua New Guinea its baselines under the National Seas Act No.7 which was proclaimed in 1977 and entered into force on 31 March 1978. The Agreement does not provide the method used to draw the boundary line. However, the boundary line appears to be based on a strict equidistance line between both States' relevant basepoints or basepoints along their archipelagic baselines.²⁴⁷

j. Indonesia - Vietnam (2003)²⁴⁸

It took 25 years for both countries to finally agree on a continental shelf boundary between them.²⁴⁹ The agreement delineates a boundary line that consists of four turning points, namely Point H, H1, A4 and X1, between Point 20 and 25 of the 1969 continental shelf boundary between Indonesia and Malaysia. The Agreement does not provide the method that was used to generate the boundary line. It is likely that most parts of the boundary line are negotiated boundary. It is unclear whether the archipelagic baseline was given a full effect.

²⁴⁶ Agreement between the Government of Indonesia and the Government of Papua New Guinea Concerning the Maritime Boundary between the Republic of Indonesia and Papua New Guinea and Cooperation on related Matters, signed on 13 December 1980, *available at* J.I Charney and L.M. Alexander (eds), *supra note* 170, pp.1045-1048

²⁴⁷ Choon-ho Park, in J.I Charney and L.M. Alexander (eds), *supra note* 170, p.1041

²⁴⁸ Agreement between the Government of the Socialist Republic of Vietnam and the Government of the Republic of Indonesia concerning the delimitation of the continental shelf boundary, entry into force on 29 May 2007.

²⁴⁹ The negotiation started on 5 June 1978 and the agreement signed on 26 June 2003. *See* Indonesian Law No.18 of 2007 concerning Ratification of the Agreement between the Government of the Republic of Indonesia and the Government of the Socialist Republic of Vietnam Concerning the delimitation of the Continental shelf Boundary, 2003, in Indonesian language, *available at*:

<http://www.setneg.go.id/index.php?option=com_perundangan&id=1593&task=detail&catid=1&Itemid=42&tahun=2007>

k. Trinidad and Tobago - Venezuela (1990)²⁵⁰

Trinidad and Tobago deposited the list of coordinates of its archipelagic baseline with the United Nations on 27 May 2004.²⁵¹ However, it had designated its archipelagic baseline since 1988 through Trinidad and Tobago Order, 1988 Notice no 206 of 31 October 1988(1).

The treaty between Trinidad and Tobago and Venezuela, signed on 18 April 1990, is actually a codification of the two treaties that both States had signed in 1942 and 1989. The boundary line in the Gulf of Paria, which was agreed in 1942, was clearly generated from both countries low water line. This is not surprising given that the agreement predate the archipelagic concept and Trinidad and Tobago's archipelagic claims. The archipelagic baseline designated 46 years later by Trinidad and Tobago lie perpendicular with the boundary line leaving 'a corridor' of territorial sea between the boundary line and the baselines.

In the 1990 Treaty, both States delineated their maritime zones eastward to the Atlantic Ocean. However, the boundary line, as stated by the Trinidad and Tobago's Minister of External Affairs is actually deliberately shifted northward from the original 'equidistance line' involving an area of around 870 nm², to anticipate a tri junction point with Guyana.²⁵² It is unclear whether the baselines were given weight in the delimitation.

²⁵⁰ Treaty between the Republic of Trinidad and Tobago and the Republic of Venezuela on the delimitation of marine and submarine areas, entered into force on 23 July 1991, *available at*:
<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/TTO-VEN1990SA.PDF>>

²⁵¹ *See* Geographical Coordinates of Points Used for Determining the Archipelagic Baselines of Trinidad and Tobago. *Available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/tto_mzn49_2004.pdf>

²⁵² K.G. Nweihed, Trinidad and Tobago – Venezuela, in J.I Charney and L.M. Alexander (eds), *Supra note* 170, (vol 1) p. 681

l. Fiji - France (1983 and 1990)²⁵³

Fiji deposited lists of geographical coordinates of the turning points of its archipelagic baselines to the United Nations on 17 December 2007.²⁵⁴ For the purpose of this maritime boundary delimitation, baselines that were used are, in the case of France, the baseline drawn in conformity with the Acts of 24 December 1971 and 28 December 1976 which used the regime of normal baselines. In the case of Fiji, the baseline is the archipelagic baseline drawn in accordance with the Fiji Marine Spaces Act of 15 December 1977.²⁵⁵

It should be noted that the 1983 Agreement was amended through the 1990 Agreement. However, the amendment affected only the boundary segment between Wallis and Futuna (France) and Fiji. In Article 1 of the 1983 Agreement, it was stated that the boundary line is “equidistance, with certain minor divergences for administrative convenience”.²⁵⁶ However, it is not clear from the text of the treaty which parts were modified for that purpose and how they constructed the equidistant lines. Therefore it is not clear whether Fiji’s archipelagic baselines were given full weight in the negotiation.

m. Seychelles - Tanzania (2002)²⁵⁷

A few months after signing a maritime boundary with France, the Seychelles also reached agreement on a maritime boundary with Tanzania. Just like that earlier agreement, Article 1 of

²⁵³ See Agreement between the Government of the Republic of France and the Government of Fiji relating to the Delimitation of their Economic Zone, entry into force on 21 August 1984, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-FJI1983EZ.PDF>> and Codicil modifying the Agreement of 19 January 1983 between the Government of the French Republic and the Government of Fiji relating to the delimitation of their economic zone, entry into force on 8 November 1990, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-FJI1990EZ.PDF>>

²⁵⁴ See. Original of deposited geographical coordinates of points, *available at*:

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/fji_mzn60_2007.pdf>

²⁵⁵ See Article 1

²⁵⁶ *Ibid*

²⁵⁷ Agreement between the Government of the United Republic of Tanzania and the Government of the Republic of Seychelles on the Delimitation of the Maritime Boundary of the Exclusive Economic Zone and Continental Shelf, entry into force 23 January 2002, *available at*:

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/TZA-SYC2002MB.PDF>>

this agreement also states that the boundary line “will be based on equidistance, considered, in this particular case, as an equitable solution, in conformity with international law” and “the line has been determined by using the baseline from which the territorial sea of each State is measured”. However, it is not clear from the agreement that the archipelagic baseline of Seychelles was given a full weight. Indeed, it appears that both countries used their normal baseline.²⁵⁸

4.4.2 Category 2 Agreements: Baselines Disregarded

a. Indonesia - Singapore (1973)²⁵⁹

This agreement entered into force on 29 August 1974. It delineated a territorial sea boundary between the two countries on one of the world’s most critical navigational bottlenecks, namely the Singapore Strait.²⁶⁰ The boundary line connects six agreed points and extends for a distance of 24.55 nm.²⁶¹ The agreement does not mention the method used to draw the line.

In relation to the archipelagic baseline, it is clear that both States decided to draw the line using the base point to base point method and disregarded the existence of Indonesian’s 1960 archipelagic baselines, especially that connecting Pulau Takong Besar and Batu Berhanti. As a result, Point 2 of the agreed boundary line is located on the landward side of the Indonesian archipelagic baseline. Some experts are of the view that Point 2 was agreed to accommodate the deep draft tanker route in that area.²⁶² However, it also could be argued that the Indonesian Government agreed to Point 2 as a trade off to getting support from the Government of Singapore in UNCLOS III in respect of the archipelagic State concept. The boundary lines forced the Government of Indonesia to amend its archipelagic baselines around that area.

²⁵⁸ V. Prescott, in D. A. Colson and R.W. Smith, *International Maritime Boundaries*, (Volume V, Netherlands, Martinus Nijhoff, 2005) p. 3798

²⁵⁹ Agreement Stipulating the Territorial Sea Boundary Lines between Indonesia and the Republic of Singapore in the Strait of Singapore at <<http://www.State.gov/documents/organization/61500.pdf> >

²⁶⁰ J.I Charney and L.M. Alexander (eds), *supra note* 170, p. 1052

²⁶¹ Article 1 of the Agreement, *Supra note* 259

²⁶² J.I Charney and L.M. Alexander (eds) *Supra note* 170 p. 1050.

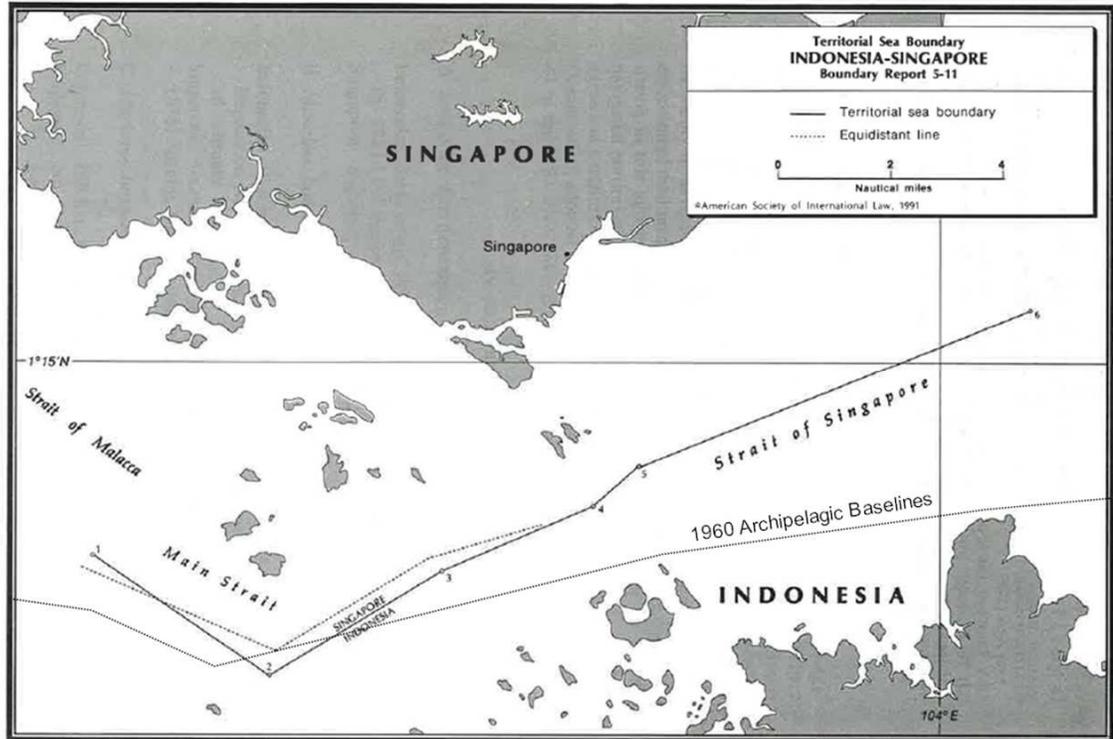


Figure 19. The 1973 Indonesia-Singapore Territorial Sea delimitation

(Source: Charney and Alexander, (1993), p. 1054, baseline added)

b. Solomon Islands - Papua New Guinea (1989)²⁶³

The treaty between these two archipelagic States delineates boundary lines for the territorial sea, EEZ and the continental shelf. The equidistant lines used in this delimitation were calculated on the basis of the mean low water line of the relevant land areas without regard to the archipelagic baselines.²⁶⁴ In some areas, non-equidistant lines were made to accommodate traditional uses of the sea, to simplify the boundary line and to approximate the division of the area that would have been the result of a strict equidistant line.²⁶⁵ It does not appear that the location of archipelagic baselines of both States affected the location of the boundary. In fact, Point 14 of the boundary line is located inside the archipelagic waters of the Solomon Islands

²⁶³ Treaty between the Independent State of Papua New Guinea and Solomon Islands Concerning Sovereignty, Maritime and Seabed Boundaries between the Two Countries, and Cooperation on Related Matters, signed on 25 January 1989, available at J.I Charney and L.M. Alexander (eds), *supra note* 170, pp.1162-1165.

²⁶⁴ J.I Charney and L.M. Alexander (eds), *supra note* 226 p. 2327

²⁶⁵ *Ibid*

by cutting the archipelagic baseline of Solomon Island connecting Ovau Island and Maifu Island.

c. Seychelles - France (2001)²⁶⁶

The Seychelles deposited its lists of geographical coordinates of points of archipelagic baseline with the United Nations on 31 March and 8 June 2009.²⁶⁷ The latter designation amended the previous one.

The agreement delineates continental shelf and EEZ of the two countries. In the Article 1 of the Agreement, it is stated that the boundary line “will be based on equidistance, considered, in this particular case, as an equitable solution, in conformity with international law”. Furthermore, it is also stated that the line “has been determined by using the nearest baselines from which the territorial sea of each State is measured”. However, it appears that the agreed boundary line was modified from equidistance since the agreed line consists of only three coordinates of points joined together with straight lines. Both countries use the normal baselines along the four features involved.²⁶⁸

d. Solomon Islands - France (1990)²⁶⁹

The agreement defines a maritime boundary consisting of four points joined by straight lines. The boundary line, to test, is a strict median line using normal baselines of both States. The agreement States that the boundary “line is approximately equidistant” between the two

²⁶⁶ Agreement between the Government of the French Republic and the Government of the Republic of Seychelles concerning Delimitation of the Maritime Boundary of the Exclusive Economic Zone and the Continental Shelf of France and of Seychelles, entry into force 19 February 2001, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-SYC2001MB.PDF>>

²⁶⁷ *See* Original of deposited geographical coordinates of points of Seychelles’ baselines, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/SYC.htm>>

²⁶⁸ D. A. Colson and R.W. Smith, *supra note* 258, p.3788

²⁶⁹ Agreement on maritime delimitation between the Government of the French Republic and the Government of the Solomon Islands, entered into force on 12 November 1990, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-SLB1990MD.PDF>>

States.²⁷⁰ It is unclear which segments which part was modified to arrive at ‘approximately equidistance’.

4.4.3 Category 3 Agreements: Full Effect

a. Sao Tome and Principe - Equatorial Guinea (1999)²⁷¹

Sao Tome and Principe designated its archipelagic baselines through Act No.1/98 of 23 March 1998 which, less than two months afterward, on 7 May 1998, was deposited with the United Nations.²⁷²

The treaty between Sao Tome and Principe and Equatorial Guinea provides two separate boundary lines between the two States. The first one is the boundary line between Annobon Island (Equatorial Guinea) and Sao Tome Island. In this segment, the boundary line consists of five points of coordinates joined by straight lines. The second boundary line is located between Bioko and Rio Muni Islands (Equatorial Guinea) and Sao Tome and Principe Islands. This boundary line consists of 15 points of coordinates which are joined by straight lines. The treaty does not specify the method used to generate the boundary line. However, it is highly likely that Sao Tome and Principe’s archipelagic baselines were given full effect. However, some points on the baseline, which are not baseline turning points, were used as control points to generate the boundary line. In the segment of the south east Principe Island, points on the baseline (rather than points on natural features) controlled the position of the equidistant line.²⁷³ The archipelagic baselines of Sao Tome and Principe, in this agreement, did have a full impact to the boundary lines.

²⁷⁰ See Article 1 Point 2

²⁷¹ Treaty concerning the Delimitation of the Maritime Boundary between the Republic of Equatorial Guinea and the Democratic Republic of Sao Tome and Principe, Signed on 26 June 1999, *available at*: <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GNQ-STP1999MB.PDF>>

²⁷² See Act No 1/98 on delimitation of the territorial sea and exclusive economic zone, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/stp_mzn17_1998.pdf>

²⁷³ D.A.Colson, *Equatorial Guinea – Sao Tome and Principe*, in J.I. Charney and R.W.Smith, *International Maritime Boundaries*, (volume IV, Netherlands, Martinus Nijhof, 2002) p. 2649

b. Sao Tome and Principe - Gabon (2001)²⁷⁴

Article 2 of the Agreement provides that the boundary line between the two States is “drawn equidistant from the baseline from which the territorial sea of each State is measured”. To implement this, the Agreement also provides the coordinates of base points used to construct the baselines of the two countries which are relevant with the area of delimitation.²⁷⁵ The baseline used by Sao Tome and Principe involved a very long straight archipelagic baseline connecting points on Ilhues Caroco and Ilheus Santana.

The agreed boundary line is therefore an excellent example of how archipelagic baselines have been given full effect in the delimitation of a maritime boundary. To construct the boundary line, the control points used are not only points on natural features or baseline turning points, but also points on the archipelagic baseline. Apart from both States’ agreement not to consider any other relevant circumstances to adjust the median line, this boundary line is a notable example of a delimitation where archipelagic baselines are given full effect.

4.4.4 Analysis of the Three Categories

A key objective of a maritime boundary negotiation is to delineate a boundary line that can be accepted by all the parties. Many such agreements therefore concentrate on the question of defining an acceptable delimitation line rather than explicitly mentioning the method used by the parties to generate the agreed boundary line. Some of the agreements just stipulate that the boundary line is drawn based on the equidistance method, or the boundary line is an equidistant line between the coastlines of the parties. This applies also to most of maritime boundary agreements involving archipelagic States.

Most of the agreements outline above, which can be considered as reflecting the practice of most archipelagic States, are not especially clear in terms of stating whether archipelagic baselines had a significant influence on the course of the delimitation line. Indeed, one may

²⁷⁴ Agreement on the Delimitation of the Maritime Border between the Gabonese Republic and the Democratic Republic of Sao Tome and Principe, signed on 26 April 2001, *available at*:
<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GAB-STP2001MB.PDF>>

²⁷⁵ See Article 2 of the Agreement, *Ibid*

argue that since most boundary agreements do not mention the delimitation method, there is always the possibility that archipelagic baselines were really given at least some consideration.

The agreements in the second and the third categories clearly illustrate that archipelagic baselines may be both disregarded or fully applied in the construction of maritime boundary delimitation lines. For example, the boundary lines agreed by Indonesia-Singapore in 1973 and by Papua New Guinea-Solomon Islands in 1989 demonstrated that their archipelagic baselines were not given a full effect. Indeed, the boundary line cut into and is located landward of the baseline. A contrasting example is provided by the agreements involving Sao Tome and Principe. The long straight archipelagic baselines of Sao Tome and Principe were accepted by the parties to the agreement to be given a full effect which lead to points on the baselines, which are not on natural features, being used as controlling points to generate the boundary line.

State practice indicate that even though LOSC has stipulated how archipelagic baselines should be treated in maritime boundary delimitations, it is clear that most States simply choose to ignore the provisions in order to achieve equitable solutions, which in many cases is to the disadvantage of the archipelagic States. This is arguably due to the lack of legal and technical guidance on how provisions of maritime boundary delimitation involving archipelagic baselines should be implemented.

4.5 Concluding Remarks

This chapter has highlighted the complexities of maritime boundary delimitation, from the perspective of legal and technical aspects, and with particular reference to the role of the archipelagic baselines. In terms of legal issues, reference to the Article 48 LOSC and also to the practice of the International Courts and Tribunal appears to indicate that the role of archipelagic baselines in maritime boundary delimitation remains somewhat unclear. With regard to technical issues, they are arguably not well developed yet. At the time of writing, there is minimal jurisprudence and technical guidance on how archipelagic straight baseline should be treated in maritime boundary delimitation.

However, this circumstance does not stop some archipelagic States from negotiating their maritime boundaries with their neighbours. State practice shows that the lack of legal and technical guidance is not necessarily an obstacle to reaching a notably acceptable and equitable solution, since those States and their neighbours are free to decide which method suit their particular maritime boundary.

5 Concluding Remarks

5.1 Summary

On 10 December 1982, LOSC was opened for signature. On that first day, Fiji, an archipelagic State, which is greatly benefited by Part IV of the Convention, deposited its ratification.²⁷⁶ The Convention's first achievement in its own right was unprecedented in the history of treaty law.²⁷⁷

Part IV of the LOSC represents one of the more innovative aspects of the Convention.²⁷⁸ It legally and politically confirmed the archipelagic State concept that had been campaigned for by a number of States, predominantly those whose territories consisting of archipelagos, since UNCLOS I.

One of the most important elements of the archipelagic State provisions contained in LOSC is those concerning archipelagic baselines. These provisions are not only useful to identify whether a State can be considered as an archipelagic State or not, but also fundamental for archipelagic States to generate their maritime limits and, potentially, delimit their maritime boundaries with neighbouring States.

At this point, it is worth noting that every coastal State, including archipelagic States, is entitled to define the outer limits of its maritime zones seaward provided by the LOSC. Those maritime zones are the territorial sea,²⁷⁹ contiguous zone²⁸⁰ and exclusive economic zone²⁸¹ and continental shelf.²⁸²

²⁷⁶ United Nations, Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements as at 20 July 2009, *available at*: [http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#The United Nations Convention on the Law of the Sea](http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#The_United_Nations_Convention_on_the_Law_of_the_Sea)

²⁷⁷ Gary Knight and Hungdah Chiu, *The International law of the sea: cases, documents and readings*, (London, Elsevier Applied Science, 1991) p.27

²⁷⁸ M. Tsamenyi, *supra note 2* p. 453

²⁷⁹ LOSC, Part II, Section 2

²⁸⁰ LOSC, Part II, Section 4

²⁸¹ LOSC, Part V

²⁸² LOSC Part VI, LOSC, does not, however, define specific breadth for a continental shelf. It defines that continental shelf of a coastal State 'comprises the seabed and subsoil of the submarine areas' beyond territorial

Given the breadth of those zones of maritime jurisdiction and the geographical proximity of many States to one another, overlapping maritime claims are inevitable. There is therefore a need for boundaries between such zones in order to avoid disputes and uncertainties over the rights to exercise sovereignty, sovereign rights or jurisdiction and to manage the resources.²⁸³ Such boundaries are often determined through an agreement between the parties. However, if the parties fail to reach an agreement, they also have the option to bring the delimitation case to a third party, for example the ICJ or the ITLOS.

Even though the LOSC stipulates that maritime zones of archipelagic States are measured from archipelagic baselines, however in terms of maritime boundary delimitation, it is often unclear from the research whether a particular system of straight archipelagic baselines had any real significance in determining the final location of the maritime boundary delimitation line.

It is also the case that international Courts and Tribunals have in the past had cause to consider the use of straight baselines and have generally tended not to use them in the delimitation of a maritime boundaries which may also apply to archipelagic baseline. However, archipelagic baselines are much less likely to be excessive in character since they have to comply with the fairly rigorous provisions of Article 47 of LOSC. In contrast the straight baselines only need to comply with the ambiguous language of Article 7 of LOSC. Arguably, therefore, there is greater justification for the application of archipelagic baselines in the delimitation of maritime boundaries than there is for many straight baselines based on a, to put it mildly, liberal interpretation of Article 7 of LOSC.

It is suggested that negotiation still represents the best, as well as the most utilized, way to delimit maritime boundaries between States. The parties will retain full control over every

sea throughout the natural prolongation of landmass to the outer edge of its continental margin. In case the continental margin does not reach the distance of 200 nm from baselines, such coastal State is entitled to a 200nm continental shelf, provided that there is no overlapping entitlement with its neighbouring States. LOSC defines the procedure to delineate the outer limits of the continental shelf by employing two formulae and two constraints. Provided that criteria and constraint are met, the continental shelf may extend beyond 200 nm from baselines. In order to define the outer limits of its continental shelf, a coastal State has to provide geological and geomorphological evidence and make a submission to the United Nations Commission on the Limits of the Continental Shelf (CLCS).

²⁸³ R.R. Churchill and A.V Lowe, *supra note* 12 p 181

stage of the negotiation, including outcomes. When it comes to a negotiation involving archipelagic States, to reach an equitable solution, maximizing the role of archipelagic baselines in constructing the boundary line is always an option. It is certainly an option that is likely to be favoured by archipelagic States themselves.

5.2 Evaluation / Recommendations

It should be underlined that this paper does not represent the views of the Indonesian Government, especially Bakosurtanal, nor those of the Division for Ocean Affairs and Law of the Sea (DOALOS) or those of the Australian National Centre of Ocean Resources and Security (ANCORS) of the University of Wollongong. Therefore, this is not an official view of how Indonesia and those institutions mentioned above dealing with the complexities and problems regarding archipelagic baseline, especially in maritime boundary delimitation. However, this paper has been built through critical analysis with an emphasis on legal and technical aspects of the subject, by which it should be able to closely represent the existing complexities faced by some archipelagic States concerning their maritime boundary delimitations.

Considering the fact that there are still many segments of maritime boundaries which involving archipelagic baselines which have not been settled, the establishment of technical guidelines which supported by valid legal arguments on how the archipelagic straight baseline should be treated in maritime boundary delimitation may needed. Indeed, some GIS software have been applying median line algorithms to construct equidistance lines involving straight baselines, which also can be applied in the context of archipelagic straight baseline, however one may argue that the legal basis to support the method should be clearer.

One might hope that the Court or Tribunal can deliver a legal precedent on this matter. However, there should be a case brought before the Court involving an archipelagic State. It is not easy to predict which archipelagic State is going to bring a maritime delimitation case before the Court or Tribunal. Bringing a case before the Court is more to political issue rather than legal or technical issue since this relates to a major national interest of the parties.

Nonetheless, arguably this issue specifically has not been discussed in many forums of legal and technical experts. This may be caused by the fact that there are not many cases which can attract people's attention to discuss this issue. Based on this scenario, it is not an exaggeration to say that it is important to have deeper analysis and more focussed discussion on this issue among not only the technical experts but also the legal experts, especially from archipelagic States.

5.3 Future Work

This current research focuses on the legal and technical issues of archipelagic baseline, especially in correlation of its role in maritime boundary delimitation. The historical perspective of the archipelagic status also has been discussed briefly in this research. However, it should be noted that maritime boundary delimitation issue is always developing over time. This is caused not only by the development of legal jurisprudence but also the fact that every maritime boundary has its own characteristics. The specific characteristics sometimes force the States or the Court to find a suitable method for a particular segment, just in order to reach the equitable solution. The fact that there are still many unsettled maritime boundaries will raise a hope that the principles and methods of delimitation will become clearer and clearer over time. Therefore future research on this type of delimitation issue will retain its relevance, especially on the role of archipelagic baselines which at the time of writing remains unclear.

BIBLIOGRAPHY

Books and Articles

- Adede A.O., *Towards the Formulation of the rule of delimitation of Sea Boundaries Between States with Adjacent or opposite Coasts*, Virginia Journal of International Law, Vol.19 No.2, 1979
- Antunes Nuno, S.M., *Towards the Conceptualisation of Maritime Delimitation; Legal and Technical Aspects of a Political Process*, Leiden, Martinus Nijhoff Publisher, 2003
- Beazley, *Technical Aspect of Maritime Boundary Delimitation IBRU*, Maritime Briefing Vol 1 No.2, 1994
- Butcher John G., *Becoming an Archipelagic State: The Juanda declaration of 1957 and the 'Struggle' to Gain International Recognition of the Archipelagic Principle*, in Cribb Robert and Ford Michele, *Indonesia beyond the Water's Edge*, Singapore, Institute of Southeast Asian Studies, 2009
- Charney J.I and Alexander L.M. (eds), *International Maritime Boundaries*, Volume 1, Netherland, Martinus Nijhof, 1993
- Charney J.I and Alexander L.M. (eds), *International Maritime Boundaries*, Volume II, Netherland, Martinus Nijhoff, 1993
- Charney J.I and Alexander L.M. (eds), *International Maritime Boundaries*, Volume III, Netherlands, Martinus Nijhof, 2004
- Charney J.I. and Smith R.W. (eds), *International Maritime Boundaries*, volume IV, Netherlands, Martinus Nijhof, 2002
- Colson D. A. and Smith R.W. (eds), *International Maritime Boundaries*, Volume V, Netherlands, Martinus Nijhoff, 2005
- Chiu Hungdah, *Some Problems Concerning the delimitation of Maritime Boundary Between the Republic of China and the Philippines*, Chinese Yearbook of International Law and Affairs, The Chinese Society of International Law, 1983
- Chiu Hungdah, *Some Problems concerning the Application of the Maritime Boundary Delimitation Provisions of the 1982 United Nations Convention on the Law of the Sea Between Adjacent or opposite States*, Maryland Journal of International Law and Trade, Vol 9, 1985
- Churchill R.R. and Lowe A.V, *The law of the Sea*, 3rd edition, Manchester, Manchester University Press, 1999
- Collin Edward Jr and Rogoff Martin, *The International Law of maritime Boundary delimitation*, Maine Law Review Vol. 34:1
- Dana Peter H., *Geodetic Datum Overview*, Department of Geography, University of Texas at Austin, 1995, available at: <http://www.colorado.edu/geography/gcraft/notes/datum/datum.html>

- Djalal, Dino Pati, *Geopolitical Concepts and Maritime Territorial Behaviour in Indonesian Foreign Policy*, Simon Fraser University, 1990
- Evensen Jen, *Certain Legal Aspects concerning the delimitation of the territorial Waters of Archipelagos*, UNCLOS I official Records, New York, UN, 2009
- Francalanci. G. and Scovazzi. T, *Lines in the Sea*, Springer; 1 edition, 1994
- International Hydrographic Bureau, *A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea - 1982*, Special Publication No.51, 4th Edition, March 2006 available at: http://www.gmat.unsw.edu.au/ablos/TALOS_ed4.pdf
- Jagota S.P. , *Maritime Boundary*, Dordrecht, Martinus Nijhoff, 1985
- Jayewardene H.W., *the Regime of Island*, Dordrecht, Martinus Nijhoff, 1990
- Knight Gary and Chiu Hungdah, *The International law of the sea: cases, documents and readings*, London, Elsevier Applied Science, 1991
- Kopela Sophia, *2007 Archipelagic Legislation of the Dominican Republic: an Assessment*, the International Journal of Marine and Coastal Law 24, 2009
- Prescott, J.R.V. and Schofield C.H, *The Maritime Political Boundaries of the World*, Leiden: Martinus Nijhoff Publisher, 2005
- Prescott V. and Boyes G., *Undelimited Maritime Boundaries in the Pacific Ocean Excluding the Asian Rim*, IBRU Maritime Briefing: Volume 2 Number 8, Durham, IBRU, 2000
- Rhee Sang-Myon, *Sea Boundary delimitation Between States Before World War II*, American Society of International Law, The American Journal of International Law, Vol. 76, No.3 1982.
- Roach, J.A. and Smith, R.W., *United States Responses to Excessive Maritime Claims* The Hague: Martinus Nijhoff Publishers, 1996
- Roach, J.A. and Smith, R.W., *Excessive Maritime Claims*, US Naval War College, International law Studies, vol 66, 1994
- Schofield C. and Arsana I.M.A., *Clossing the loop, Indonesia's Revised Archipelagic Baseline System*, Australian Journal of Maritime and Ocean Affairs, Vol 1 No.2, 2009
- Schofield and Arsana, *Beyond the Limits?: Outer Continental Shelf Opportunities and Challenges in East and Southeast Asia*, Contemporary Southeast Asia: A Journal of International and Strategic Affairs, Vol.31, No 1, 2009, pp. 28-63
- Sohn L.B., *Baseline Considerations*, in J.I Charney and L.M. Alexander (eds), *International maritime Boundaries*, Volume 1, Netherland, Martinus Nijhof, 1993.
- Supriyanto Sugeng, *et.al.*, *Geodetic and Chart Datum Problem Arising from the Map Annexure of the Maritime Boundary Treaties in Non-WGS 84 Datum; Lesson Learned from Indonesia-*

Singapore Case, Presented at the International Seminar on the Technical Aspects of the Law of the Sea, Bali, Indonesia, 3-5 August 2009

Tsamenyi. M, *et.al.*, *Navigation Through Archipelagos: Current State Practice*, in Nordquist. Myron H, *et.al.* (ed), *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention*. Leiden, Martinus Nijhoff Publishers, 2009

United Nations, *Status of the United Nations Convention on the Law of the Sea, of the Agreement relating to the implementation of Part XI of the Convention and of the Agreement for the implementation of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks*, New York, updated to 10 July 2009, available at www.un.org/Depts/los/reference_files/status2008.pdf.

UN DOALOS, Office of Legal Affairs, United Nations, *Table of Claims to Maritime Jurisdiction* (2008) available at http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/table_summary_of_claims.pdf

UN DOALOS, *Practice of Archipelagic State*, New York, United Nations, 1992

UN DOALOS, *Archipelagic States: Legislative History of Part IV of the United Nations Convention on the Law of the Sea*. New York, United Nations, 1990

US Department of State, *Maldives Maritime claims and Boundaries*, Limits in the Seas No. 126, available at: <http://www.State.gov/documents/organization/57678.pdf>

Cases

The International Court of Justice, *Fisheries case* (United Kingdom v. Norway), Judgment of December 18th, 1951:I.C.J.Reports 1951

The International Court of Justice, *Sovereignty over Pulau Ligitan and Pulau Sipadan* (Indonesia v. Malaysia), Judgment, I. C. J. Reports 2002, p. 625

The International Court of Justice, *North Sea Continental Shelf* (Federal Republic of Germany v. Denmark and Netherlands), Judgment, I.C.J. Reports 1969

The International Court of Justice, *Case Concerning Maritime Delimitation in the Black Sea (Romania v. Ukraine)* Judgment 3 February 2009

The International Court of Justice, *Continental Shelf Delimitation* (Libyan Arab Jamahiriya/Malta, Judgement, I.C.J. Reports 1985

The International Court of Justice, *Maritime Delimitation and Territorial Questions* (Qatar v. Bahrain), Merits, Judgment, I.C. J. Reports 2001, p. 40

The Arbitration between the United Kingdom and France on the Delimitation of the Continental Shelf, 1977, available at International Law Reports, Vol 54.

The Arbitration between Barbados and the Republic of Trinidad and Tobago on maritime boundary delimitation, 11 April 2006, *available at* http://www.pca-cpa.org/showfile.asp?fil_id=178

The Permanent Court of Arbitration, The Grisbadarna Case Norway v. Sweden Award of the Tribunal, *available at* <http://www.pca-cpa.org/upload/files/Grisbadarna%20award%20English%20edited.pdf>

Conventions

The United Nations Conventions on the Law of the Sea. Done at Montego Bay, 10 December 1982, Entered into force 16 November 1994.

The United Nations Convention on the Territorial Sea and the Contiguous Zone. Done at Geneva 29 April 1958. Entered into force on 10 September 1964.

The United Nations Convention on the Continental shelf. Done at Geneva 29 April 1958. Entered into force on 10 June 1964.

The United Nations Convention on the High Seas. Done at Geneva on 29 April 1958. Entered into force on 30 September 1962

The United Nations Convention on Fishing and Conservation of the Living Resources of the High Seas. Done at Geneva on 29 April 1958. Entered into force on 20 March 1966

Treaties and Agreements

Agreement between the Government of the Jamaica and the Government of the Republic of Cuba on the delimitation of the maritime boundary between the two States, signed on 18 February 1994, *available at* <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/JAM-CUB1994MB.PDF>

Agreement between the Republic of Ireland and the United Kingdom of Great Britain and Northern Ireland concerning the delimitation of the Continental Shelf between the Two Countries, entered into force 11 January 1990, *available at* <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GBR-IRL1988CS.PDF>

Agreement Stipulating the Territorial Sea Boundary Lines between Indonesia and the Republic of Singapore in the Strait of Singapore at <http://www.State.gov/documents/organization/61500.pdf>

Agreement between the Government of the Republic of Indonesia and the Government of Malaysia Relating to the delimitation of the continental shelves between the Two Countries. Entered into force on 7 November 1969. *available at* <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/MYS-IDN1969CS.PDF>

- Agreement between the Government of the Socialist Republic of Vietnam and the Government of the Republic of Indonesia concerning the delimitation of the continental shelf boundary, entry into force on 29 May 2007.
- Agreement between the Government of Solomon Islands and the Government of Australia establishing certain sea and sea-bed boundaries, entered into force on 14 April 1989, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/SLB-AUS1988SB.PDF>
- Agreement on the Delimitation of the Maritime Border between the Gabonese Republic and the Democratic Republic of Sao Tome and Principe, signed on 26 April 2001, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GAB-STP2001MB.PDF>
- Agreement between the Government of the United Republic of Tanzania and the Government of the Republic of Seychelles on the Delimitation of the Maritime Boundary of the Exclusive Economic Zone and Continental Shelf, entry into force 23 January 2002, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/TZA-SYC2002MB.PDF>
- Agreement between the Government of the Republic of France and the Government of Fiji relating to the Delimitation of their Economic Zone, entry into force on 21 August 1984, *available at* <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-FJI1983EZ.PDF>>
- Agreement on maritime delimitation between the Government of the French Republic and the Government of the Solomon Islands, entered into force on 12 November 1990, *available at* <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-SLB1990MD.PDF>
- Agreement between the Government of the French Republic and the Government of the Republic of Seychelles concerning Delimitation of the Maritime Boundary of the Exclusive Economic Zone and the Continental Shelf of France and of Seychelles, entry into force 19 February 2001, *available at* <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-SYC2001MB.PDF>
- Codicil modifying the Agreement of 19 January 1983 between the Government of the French Republic and the Government of Fiji relating to the delimitation of their economic zone, entry into force on 8 November 1990, *available at* <<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-FJI1990EZ.PDF>>
- Treaty on Maritime delimitation between Jamaica and the Republic of Colombia, entered into force on 14 March 1994, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/JAM-COL1993MD.PDF>
- Treaty on the Delimitation of the Maritime Frontier between the Islamic Republic of Mauritania and the Republic of Cape Verde, signed on 19 September 2003, *available at*:

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/CPV_MRT2003MB.pdf

Treaty on the delimitation of the maritime frontier between the Republic of Cape Verde and the Republic of Senegal, entered into force 25 March 1994, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/CPV-SEN1993MF.PDF>

Treaty between Australia and the Independent State of Papua New Guinea concerning sovereignty and maritime boundaries in the area between the two countries, including the area known as Torres Strait, and related matters, entered into force on 15 February 1985, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/AUS-PNG1978TS.PDF>

Treaty between the Republic of Trinidad and Tobago and the Republic of Venezuela on the delimitation of marine and submarine areas, entered into force on 23 July 1991, *available at*: <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/TTO-VEN1990SA.PDF>

Treaty concerning the Delimitation of the Maritime Boundary between the Republic of Equatorial Guinea and the Democratic Republic of Sao Tome and Principe, Signed on 26 June 1999, *available at*:
<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/GNQ-STP1999MB.PDF>>

National Legislations

Antigua and Barbuda Maritime Areas Act 1982, Act No. 18 of 17 August 1982, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/ATG_1982_18.pdf

Bahamas Act No. 37 of 1993 respecting the territorial sea, archipelagic waters, internal waters and the exclusive economic zone, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/BHS_1993_37.pdf

Cape Verde's Law No 60/IV/1992 of 21 December 1992, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/CPV_1992_Law.pdf

Comoros Law No. 82-005 on the delimitation of the maritime zones of the Islamic Federal Republic of the Comoros of 6 May 1982, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/COM_1982_Law.pdf

Dominican Republic Act No.186 of 13 September 1967, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DOM_1967_Act.pdf

Dominican Republic Law 66-07 of 22 May 2007, *available at*: http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DOM_2007_Act_frbulletin65.pdf

- Fiji depository of its geographical coordinates of points of Fiji's archipelagic baselines, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/fji_mzn60_2007.pdf
- Fiji Marine Spaces Act of 15th December 1977, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/FJI_1978_Act.pdf
- Jamaica Maritime Areas Act of 28 November 1996, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/JAM_1996_Act.pdf
- Indonesian Law No.18 of 2007 concerning Ratification of the Agreement between the Government of the Republic of Indonesia and the Government of the Socialist Republic of Vietnam Concerning the delimitation of the Continental shelf Boundary, 2003, available in Indonesian language
at
http://www.setneg.go.id/index.php?option=com_perundangan&id=1593&task=detail&catid=1&Itemid=42&tahun=2007
- Jamaica's depository of its archipelagic baselines to the Secretariat General of the United Nations, 8 October 1996, *Available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/jam_mzn11_1996.pdf
- Kiribati maritime Zones (Declaration) Act 1983 - No. 7 of 16 May 1983 on provisions in respect of the Internal Waters, the Archipelagic waters, the territorial Sea and the exclusive economic zone of Kiribati. *Available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/KIR_1983_Act.pdf
- Marshal Islands' Marine Zones (Declaration) Act 1984 on provisions in respect of the Internal Waters, the Archipelagic Waters, the Territorial Sea, the Exclusive Economic Zone and the Contiguous Zone of the Republic, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/MHL_1984_Act.pdf
- Papua New Guinea National Seas Act 1977, Act No. 7, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/PNG_1977_Act7.pdf
- Papua New Guinea's depository of its archipelagic baselines to the Secretariat General of the United Nations, M.Z.N. 41. 2002. LOS of 8 October 2002:, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/png_mzn41_2002.pdf
- Sao Tome and Principe Law No.1/98 on delimitation of the territorial sea and the exclusive economic zone, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/STP_1998_Law.pdf
- Sao Tome and Principe Act No 1/98 on delimitation of the territorial sea and exclusive economic zone, *available at:*
http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/stp_mzn17_1998.pdf

Saint Vincent and the Grenadines' Maritime Areas Act, 1983 (Act No. 15 of 19 May 1983) *available at:*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VCT_1983_Act.pdf

Seychelles depository of its geographical coordinates of points of Seychelles' archipelagic baselines, *available at*

<<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/SYC.htm>>

Seychelles maritime Zones Act and maritime zone notification, *available at:*

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/STATEFILES/SYC.htm>

Solomon Islands Declaration of Archipelagic Waters, *Available at:*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/SLB_1979_Notice.pdf

Trinidad and Tobago Archipelagic Waters and Exclusive Economic Zone Act 1986 No. 24 of 11 November 1986, *available at:*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TTO_1986_Act.pdf

Trinidad and Tobago Archipelagic Baseline Order, 1988, Notice No. 206 of 31 October 1988, *available at;*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TTO_1988_Order.pdf

Trinidad and Tobago depository of its geographical coordinates of points of Trinidad and Tobago's archipelagic baselines, *available at*

<http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/DEPOSIT/tto_mzn49_2004.pdf>

Tuvalu Marine zones (declaration) Act, 1983, *available at:*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TUV_1983_Act.pdf

Vanuatu maritime Zones Act No.23 of 1981, *available at:*

http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/VUT_1981_Act.pdf

Documents

United States of America, *President Truman's Proclamation on U.S. Policy concerning natural Resources of Sea Bed and Fisheries on High Seas (Truman Proclamation)*, 28 September 1945, *available at:* <http://www.ibiblio.org/pha/policy/1945/450928a.html> .

ILC, *Yearbook of the International Law Commission*, United Nations Publication sales, Volume I, 1952.

ILC, *Yearbook of the International Law Commission*, United Nations Publication sales, Volume II, 1953.

ILC, *Yearbook of the International Law Commission*, United Nations Publication sales, Volume II, 1956.

Institut de droit International, *Annuaire de L'intitut*, 1927, vol 33

United Nations, *Official Records of the General Assembly, Ninth Session*, Supplement No. 9 (A/3159)

United Nations, *United Nations conferences on the law of the sea, official records, first committee on territorial sea and contiguous zone, Geneva 1958 available at:*
http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1958/vol/english/1st_Cttee_vol_III_e.pdf

United Nations, *Study on the future functions of the Secretary-General under the draft convention and on the needs of countries, especially developing countries, for information, advice and assistance under the new legal regime*, (Document A/CONF.62/L.76), *available at*
http://untreaty.un.org/cod/diplomaticconferences/lawofthesea-1982/docs/vol_XV/a_conf-62_1-76.pdf

United Nations, *Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements as at 20 July 2009, available at:*
http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#The
United Nations Convention on the Law of the Sea

United Nations, *Official Documents of Conference for the Codification of International Law, First Report Submitted to the Council by the Preparatory Committee for the Codification Conference, The Hague, March 13, 1930, available at :*
<http://www.uniset.ca/naty/maternity/24AmJIntLSpSup1.pdf>

United Nations, *Third Report on the Regime of Territorial Sea by Mr. J.P.A. François, Special Rapporteur, ILC Report (A/CN.4/77) available at:*
http://untreaty.un.org/documentation//french/a_cn4_77.pdf