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**Entitlement to the continental shelf beyond 200 nautical miles:
The concept of the natural prolongation in the establishment of the outer limits**

ΔΙΔΑΚΤΟΡΙΚΗ ΔΙΑΤΡΙΒΗ
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200 nautical miles**

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establishment of the outer limits*

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Abstract

Throughout centuries coastal States have expended their domination over sea areas, from the belt of territorial waters, securing access to their land, to the open oceans and the seabed below, controlling exploitation of resources. To legitimately access the seabed, coastal States had to justify the legal basis on which they were able to exercise rights therein. While, in general international law, on land, title to territory is based on the effective occupation of that territory, it appears that, at sea, actual occupation cannot apply.

Sovereign rights over the seabed are justified on the ground of extension of the title over the land territory. In the law of the sea, the right emanates from the land territory. The regime of the continental shelf is based on the principle that the seabed is the natural prolongation of the land territory. The seabed, to some extent, represents the continuation of the land territory that together form a geographical unit. The continental shelf is considered a part, or more exactly a prolongation, of the land territory, which justifies that certain of the powers applicable on land could also be applicable at sea. Therefore, the State, sovereign over its land territory, can extend its sovereign rights over the adjacent seabed, as the land dominates the sea.

As control of the continental shelf is exercised from land, and that such control becomes less effective farther at sea, the sovereign rights are gradually restricted. The concept of the natural prolongation of the land territory entails a two-fold idea. It entitles to the seabed, which represents its prolongation, and constrains the breadth of the continental shelf, to form a natural extension. Based on that concept, the submarine areas can be included in the continental shelf only and in as much as they represent a geomorphologic unit with the land mass. The submerged prolongation of the land mass is part of the continental shelf as long as it represents the natural prolongation of the land territory.

Abbreviations

ABLOS	Advisory Board on the Law of the Sea
AJIL	American Journal of International Law
ARIEL	Austrian Review of International and European Law
BYIL	British Yearbook of International Law
CJICL	Cambridge Journal of International and Comparative Law
CLCS	Commission on the Limits of the Continental Shelf
Commission, the	Commission on the Limits of the Continental Shelf
Convention, the	United Nations Convention on the Law of the Sea (1982)
Court, the	International Court of Justice
DOALOS	Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations Secretariat
Ed., eds.	Editor, editors
EEZ	Exclusive Economic Zone
Geneva Convention	Convention on the Continental Shelf (1958)
GIS	Geographic Information Systems
Guidelines	Scientific and Technical Guidelines of the CLCS
IAG	International Association of Geodesy
ICJ	International Court of Justice
ICLQ	International Comparative Law Quarterly
IHO	International Hydrographic Office
IJMCL	International Journal of Marine and Coastal Law
ILA	International Law Association

ILA Committee	International Law Association Committee on the Legal Issues of the Outer Continental Shelf
ILC	International Law Commission
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
ISA	International Sea Bed Authority
ISNT	Informal Single Negotiating Text
ITLOS	International Tribunal for the Law of the Sea
IWP	Informal Working Paper
JMLC	Journal of Maritime Law and Commerce
LJIL	Leiden Journal of International Law
LNTS	League of Nations Treaty Series
M	nautical miles
MLR	Modern Law Review
MPEPIL	Max Planck Encyclopedia of Public International Law
NILR	Netherlands International Law Review
NJIL	Nordic Journal of International Law
ODIL	Ocean Development and International Law
p.	page
PCIJ	Permanent Court of International Justice
RGDIP	Revue Générale de Droit International Public
RIRI	Revue Iranienne de Relations Internationales
RSNT	Revised Single Negotiating Text

SPLOS	States Parties to the United Nations Convention on the Law of the Sea
Tribunal, the	International Tribunal for the Law of the Sea
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea (1982)
UNCLOS I	First United Nations Conference on the Law of the Sea
UNCLOS II	Second United Nations Conference on the Law of the Sea
UNCLOS III	Third United Nations Conference on the Law of the Sea
UNGA	United Nations General Assembly
UNTS	United Nations Treaty Series
VCLT	Vienna Convention on the Law of Treaties (1969)
Vienna Convention	Vienna Convention on the Law of Treaties (1969)
Vol.	volume

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Declaration

I declare that this thesis has been composed by myself. It is my own work and it has not been submitted for any other degree or professional qualification.

Sophie Cuenot

16 October 2019

CHAPTER 1- INTRODUCTION

1.1. General introduction to the law of the sea and its general legal regime

1.1.1. History and negotiations of UNCLOS

The United Nations Convention on the Law of the Sea is the result of negotiations at the Third United Nations Conference on the Law of the Sea (referred here as UNCLOS III) that was called upon on 17 December 1970 by the General Assembly and Resolution 2750 C (XXV).¹

In the aftermath of the Second United Nations Conference on the Law of the Sea, in 1960, and its failure to settle once and for all the outer limits of maritime zones, the raise of tensions in the cold war between the Soviet and American blocks and the potentiality of the use of the seabed for military purposes, the speech of Arvid Pardo, ambassador of Malta to the United Nations, at the General Assembly, in 1967,² incited the establishment of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, upon whose conclusions UNCLOS III was gathered.³

¹ UNGA Resolution 2750 (1st Committee, 25th session), and other resolutions available at <http://legal.un.org/docs/?path=../diplomaticconferences/1973_los/docs/english/res/a_res_2750_xxv.pdf&lang=E>, p.25 et s., last accessed 16 October 2019.

² United Nations, General Assembly, 22nd session, *Official records* (First Committee, 1515th meeting, 1 November 1967, New York) Agenda item 92: “Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interest of mankind (A/6695; A/C.1/952)”.

³ Consisting of thirty-six Member States, the Ad Hoc Committee held three sessions during 1968, and presented its study (A/7230) to the General Assembly at its twenty-third session, in 1968. Having considered the report of the Ad Hoc Committee, the General Assembly adopted on 21 December 1968 resolution 2467 A (XXIII).

The Third United Nations Law of the Sea Conference was held from 1973 to 1982 over ten sessions and 160 states participated.⁴

The United Nations Convention on the Law of the Sea (referred here as the Convention or UNCLOS) was signed on 10 December 1982, in Montego Bay, Jamaica, and was signed by 119 states.⁵ UNCLOS is composed of 17 parts, 320 articles and 9 annexes.

Strong chairmanship and the use of the ‘package deal method’ during UNCLOS III helped steer the conference towards the successful adoption of the final legal instrument.⁶ The ‘package deal’ negotiations approach, based on the idea of a rule of silence under which delegations agreed to refrain from speaking on any one article if they were essentially in agreement with the overall text, helped to reach compromise between the different interest groups and groups of states and could lead to the adoption of the final text of the Convention.⁷

The Convention has been complemented by the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, consisting of 10 articles and 9 annexes, in 1994,⁸ and the United Nations

⁴ See UNCLOS III records, available at <https://www.un.org/depts/los/general_assembly/general_assembly_records.htm>, last accessed 16 October 2019.

⁵ *United Nations Convention on the Law of the Sea*, adopted 10 December 1982, entry into force 16 November 1994 (United Nations, Treaty Series, vol.1833, p.396). UNCLOS was signed by 119 countries the first day it was opened for signature. See current status of signature and ratification here:

<https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en>, last accessed 16 October 2019.

The Convention entered into force on 16 November 1994, a year after Guyana became the 60th State to deposit its instrument of ratification to the Convention.

⁶ Pulvenis J.F., *The Continental Shelf Definition and Rules Applicable to Resources* (Chapter 6) pp.315-381, in Dupuy, R.J. and Vignes D. (eds.): *A Handbook on the New Law of the Sea* (Hague Academy of International Law, Dordrecht/Boston/Lancaster: Martinus Nijhoff Publishers, 1991), at p.334.

⁷ Ibid., p.332. See the Informal Single Negotiating Text (A/CONF.62/WP.8) and the informal composite negotiating text (A/CONF.62/WP.10), and their following amendments in UNCLOS III: *Official records* available at <http://legal.un.org/diplomaticconferences/1973_los/>, last accessed 16 October 2019.

⁸ UNGA Resolution A/RES/48/263 of 28 July 1994, available at

Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982, relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, in 1995.⁹

UNCLOS is commonly called the “Constitution for the Oceans” as it provides the overall framework for the uses of the seas and oceans in terms of transport at sea, management of ocean resources and the protection and preservation of the marine environment.¹⁰

The Convention is perceived as a successful legal instrument. It managed to settle outer limits of national jurisdiction, structured the customary international law of the sea and gave an overall framework to marine activities.

It is through the deposit of the instrument of ratification of a majority of developing states that UNCLOS came into force on 16 November 1996. However, its almost universal acceptance, through ratification or accession, in the 1990s, seems to have rather been encouraged by the adoption, in the wake of the entry into force of the Convention, of the 1994 Implementing Agreement on Part XI.¹¹

With the turn in international politics and economies of the early 1990s, Part XI and the regime of minerals in the Area, core component of the Convention, could no longer be envisaged to be implemented as such. The Implementing Agreement and its modified regime of mineral extraction from the Area have helped developed States consider ratifying the Convention, pushing for the Convention overall provisions to become broadly accepted and implemented.

<http://www.un.org/depts/los/convention_agreements/texts/unclos/closindxAgree.htm>, last accessed 16 October 2019.

⁹ UNGA Resolution A/RES/50/24 of 5 December 1995, available at < <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement> >, last accessed 16 October 2019.

¹⁰ See Koh, T.T.B.: “A Constitution for the Oceans” in *Remarks by Tommy T.B. Koh, of Singapore, President of the Third United Nations Conference on the Law of the Sea* (1982), available on UN DOALOS webpage: <http://www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf>, last accessed 16 October 2019.

¹¹ See state of ratification, in footnote 5.

In legal doctrine, the concept of the continental shelf admittedly emerged with the Truman proclamation, in 1945.¹² The continental shelf was quickly recognized as customary international law. In 1958, based on the conclusions of the International Law Commission and the work of its *rapporteur*, Mr. J.F.A. François,¹³ the Geneva Convention on the Continental Shelf established its legal regime.¹⁴ Despite the successful definition of the continental shelf, the recognition of sovereign rights over the latter and the description of the ambit of rights of the coastal State thereof, the Convention failed to settle clear outer limits.

In 1960, at the Second Conference on the Law of the Sea¹⁵ states could not agree on outer limits and talks were pushed to the next conference. In light of the International Court of Justice judgment of 1969 in the *North Sea Continental Shelf* cases,¹⁶ the continental shelf concept was consolidated and it is on this basis that the legal regime of the continental shelf was envisaged in the start of the Third United Nations Conference on the Law of the Sea, in 1971.

The negotiations during UNCLOS III were protracted and difficult. In the first stage of the negotiations positions were, in plenary meetings or under the Second Committee, staked out and attempts were made to gradually reconcile them by narrowing differences and drawing up a negotiating text.¹⁷

¹² Truman Proclamation, Proclamation 2667 Policy of the United States With Respect to the Natural Resources of the Subsoil and Sea Bed of the Continental Shelf (Friday, September 28, 1945), available at <<https://www.trumanlibrary.gov/library/proclamations>>, last accessed 16 October 2019.

¹³ See work of the ILC and the reports on the law of the sea at: <http://legal.un.org/ilc/guide/8_2.shtml>, last accessed 16 October 2019.

¹⁴ *Convention on the Continental Shelf*, adopted 29 April 1958, entry into force 10 June 1964 (United Nations, Treaty Series, vol.499, p.311).

¹⁵ See Law of the Sea Conferences and records at: <<http://legal.un.org/diplomaticconferences/>>, last accessed 16 October 2019.

¹⁶ *North Sea Continental Shelf Cases* (Federal Republic of Germany v. Netherlands & Denmark) (Judgment) [1969] ICJ Rep 3.

¹⁷ See Pulvenis, p.332.

In the last phase of the negotiations, an agreement was sought on issues over which the most significant differences persisted. What is interesting to note is that the continental shelf issues, which were firstly addressed in plenary meetings at the Conference, became, by 1975, the subject of discussions of a private group, the so-called “Evensen Group”.¹⁸

This group was successful in addressing in depth fundamental questions relating to the definition of and regime governing the continental shelf. That year, the Chairman of the Second Committee could present a Single Negotiating Text demonstrating that substantial agreement existed on most points relating to the continental shelf regime.¹⁹

The outer limits, however, were left to be discussed by a group of experts. Agreement could not be reached on the extent of the continental shelf, and the question of the outer limits of the continental shelf became the centre of attention and vivid discussions in the last sessions of the Conference.

The negotiations, in 1978, at the seventh session, under Negotiating Group 6 in charge of dealing with hard core issues, were as fruitless as in previous talks.²⁰ A deadlock was only averted by authoritative chairmanship.

Chairman Aguilar, in 1978, at the eighth session, tabled compromise proposals on the definition of the continental shelf.²¹ He suggested, for instance, the introduction of an Annex to the Convention on the Commission on the Limits of the Continental Shelf.

In theory, the negotiations were to continue, but in fact, the negotiating group never met again, “which prevented the compromise achieved from being called into question and to

¹⁸ See in Pulvenis, p.332, referring to Daniel Vignes, ‘Deux prolégomènes du nouveau droit de la mer : le texte unique de négociation du 7 mai 1975 et le groupe nommé Evensen’, *Revue iranienne des relations internationales* (No 5-6, Winter 1975-1976) pp.9 et seq.

¹⁹ In Pulvenis, p.332, referring to the Informal Single Negotiating Text (7 May 1975), *loc. cit.*, vol IV, pp.162-163.

²⁰ In Pulvenis, p.333.

²¹ *Ibid* referring to the compromise proposals presented by the Chairman of Negotiating Group 6 (26 April 1979), *loc. cit.*, vol XI, p.100.

which in fact only a very small number of delegations were opposed.”²² As a result, no substantial change was made in the last revised Informal Composite Negotiating Text, which became the so-called Draft of the Convention.

1.1.2. History of article 76 of UNCLOS

The length and complexity of the delineation method could not actually be overcome during the UNCLOS III negotiations. In fact, one of the stumbling blocks of the negotiations during UNCLOS III was the drafting of the provisions for the legal regime of the continental shelf and the achievement of a compromise between *Margineers*, States with a wide continental shelf, and proponents of the inclusion of the continental shelf regime into the exclusive economic zone and proponents of the common heritage of humankind regime.²³

Article 76 which defines the continental shelf and its outer limits could not be agreed upon until the last phase of UNCLOS III. Final agreement was only reached in August 1980. Jean-François Pulvenis, negotiator on account of Venezuela at the conference recalls that:

“delegations paid little attention to the régime governing the shelf and its resources, despite the presentation and subsequent adoption of a number of amendments to the 1958 rules. The main feature of the debate was the opposing positions of those in favour and those against subsuming the continental shelf concept into the exclusive economic zone concept. It nevertheless soon became clear that the only opening for a possible compromise was to adopt a formula combining the retention of the shelf as an autonomous institution and fixing its outer limit at an exact point on the continental rise, and as a quid pro quo, establishing a mechanism for sharing out the profits derived from the exploitation of the mineral resources of the continental margin beyond 200 miles. The painstaking search for a balance between the conflicting interests, which had to be reconciled without any absolute sacrifices in order not to jeopardize the possibility of a consensus, explains why it took so long to hammer out a

²² In Pulvenis, p.335. referring to ICNT (informal text) of 27 August 1980.

²³ See Evensen group, and summary of discussion in Pulvenis, at p.331.

generally acceptable formula and why the provisions finally adopted were complex and diverse.”²⁴

What comes out of the negotiations process is that article 76 was hardly ever discussed during UNCLOS III. At the time of the conference negotiations, it is the regime of the international seabed area beyond national jurisdiction that attracted attention, and in a lesser extent the exclusive economic zone concept.²⁵

The continental shelf, although it had been widely and quickly recognized in international law in the aftermath of the Truman declaration in 1945, could not be defined in nature nor extent.

On account of compromise, the article encompasses all claims and interests, relating to the physical continental margin of the theoretical continental shelf. Due to a lack of time and discussion on the core issues such as the legal basis and method of delineation, article 76 lacks coherence.

It encompasses legal, scientific, technical concepts, all sorts of limits and formulae, based on distance and geo-sciences. It relies on the continental margin but also invokes arbitrary points and lines as well as legal concepts.

So, what does article 76 of UNCLOS mean? How are the outer limits of the continental shelf established beyond 200 M? It seems that the concept of the “natural prolongation of the land territory” plays a role in the establishment of the outer limits.

²⁴ Ibid.

²⁵ Ibid., p.331 et s.

1.2. Presentation of the study

1.2.1. Scope of the research

There is in the literature articles and books that analyse the overall regime of the continental shelf such as the work of Suarez or that study the rights and duties of coastal States in the continental shelf (Mossop),²⁶ or that focus on the delimitation and case law relating to the continental shelf beyond 200 nautical miles (Elferink, Kunoy, Magnusson),²⁷ as well as other bodies of work that analyse the technical function of the CLCS (Busch, Jensen).²⁸

However, in relation to the current uncertainties of judicial bodies in finding whether to refer to the use of article 76 and the notion of the natural prolongation of the land territory in the delimitation of the continental shelf beyond 200 M is, to the knowledge of this author, not studied so far. It is the word that is studied here.²⁹

²⁶ Suarez, S.V.: *The Outer Limits of the Continental Shelf: Legal Aspects of their Establishment* (Heidelberg: Springer, 2008); Mossop, J., *The Continental Shelf beyond 200 Nautical Miles, Rights and Responsibilities* (Oxford University Press, 2016).

²⁷ Oude Elferink, A.G., Henriksen T., Busch Signe V. (eds.): *Maritime Boundary Delimitation: The Case Law Is it Consistent and Predictable?* (Cambridge University Press, 2018); Kunoy, B.: “The Admissibility of a Plea to an International Adjudicative Forum to Delimit the Outer Continental Shelf Prior to the Adoption of Final Recommendations by the Commission on the Limits of the Continental Shelf” in *The International Journal of Marine and Coastal Law*, Vol.25 (2010), pp.237-270; Magnusson, B.M.: *The Continental Shelf Beyond 200 Nautical Miles, Delineation, Delimitation and Dispute Settlement* (Leiden: Brill Nijhoff, 2015).

²⁸ Busch, S.V.: *Establishing Continental Shelf Limits Beyond 200 Nautical Miles by the Coastal State: A Right of Involvement for Other States?* (Publications on Ocean Development, vol. 81, Martinus Nijhoff Publishers, 2016); Jensen, Ø.: *The Commission on the Limits of the Continental Shelf – Law and Legitimacy* (Leiden: Brill Nijhoff, 2014).

²⁹ Delimitation of the maritime boundary in the Bay of Bengal (Bangladesh/Myanmar), Judgment, ITLOS Reports 2012, p. 4; *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p.659; *Territorial and Maritime Dispute (Nicaragua v. Columbia)*, Judgment, I.C.J. Reports 2012, p. 624; *Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 Nautical Miles from the Nicaraguan Coast (Nicaragua v. Colombia)*, Order of 8 December 2017, I.C.J. Reports 2017, p. 361.

That is why, will be analyzed in this dissertation the nature and function of article 76 of UNCLOS and the concept of the natural prolongation, core notion in the establishment of the outer limits of the continental shelf.

Article 76 of UNCLOS establishes the outer limits of the continental shelf. In relation to the study of article 76, the question is to know how the outer limits are established. It entails the questions to know what the continental shelf is, and how the outer limits are established and by whom. The concept of the natural prolongation of the land territory is the underlying concept to the understanding of the establishment of the outer limits of the continental shelf. The following questions may be raised:

- What is the nature of article 76 of UNCLOS?
 - What do ‘continental shelf’ and continental margin mean?
 - What is the nature of the title to the seabed?
 - What is the basis of title to the seabed?
- What is the scope of application of article 76 of UNCLOS?
 - What does ‘natural prolongation of the land territory’ mean?
 - What does ‘submerged prolongation of the land mass’ mean?
 - What does the establishment of the outer limits entail?
 - What is the role of the Commission on the Limits of the Continental Shelf?

1.2.2. Presentation of the methodology

To know whether the natural prolongation concept would be used in the establishment of the outer limits, it is necessary to study the concept of title to territory in general international law.³⁰ To this aim, it will be referred to the classical legal doctrine and case law on the matter and the historical documents that initiated the concept of the continental shelf.

³⁰ See Jennings, R. Y., Watts, A. D. (eds.), *Oppenheim's International Law* (Manchester University Press, 9th edition, 1963); Shaw, M.N.: *International Law* (Cambridge University Press, 2008, 6th edition); Lauterpacht, H., ‘Sovereignty over Submarine Areas’ (1950) 27 *BYIL* 376.

To answer the question as to whether the natural prolongation, in article 76 of UNCLOS, is a criterion in the establishment of the outer limits of the continental shelf, a positivist approach will be used. To define the concept of the natural prolongation will be needed legal instruments and documents of the United Nations and relevant case law. The study of this concept will bring us to use the *travaux préparatoires* and UNCLOS III records, as well as relevant articles in legal doctrine.³¹

The question of the relationship between delineation and delimitation is a contemporary question faced by international judiciary bodies such as the ICJ or ITLOS. The study of the delineation process will be done through the analysis of UNCLOS, its Annexes and Final Act, as well as the relevant document of the United Nations Secretariat, its Division for Ocean Affairs, and of the Commission on the Limits of the Continental Shelf that has drafted the technical documents coastal States use to establish the outer limits of their continental shelf.

1.2.3. Outline of the dissertation

UNCLOS establishes the nature and extent of national jurisdiction through a multi-layer framework of maritime zones stretching from the coast to farther, deeper sea areas, with maritime zones dividing the sea vertically from the seabed up to the water column and the airspace above it. Within these maritime zones, the sovereign powers of the coastal State apply, fading away as reaching areas beyond national jurisdiction.

The point will be to know what the continental shelf is. The nature of the concept will be studied then the scope of application the provisions of article 76 of UNCLOS.

The continental shelf will be defined (Chapter 2). The continental shelf is a legal notion. Its definition is based on the scientific notion of the continental margin. Although the continental shelf is based on the notion of the continental shelf, the latter does not always

³¹ Kunoy, B., 'The Admissibility of a Plea to an International Adjudicative Forum to Delimit the Outer Continental Shelf Prior to the Adoption of Final Recommendations by the Commission on the Limits of the Continental Shelf' (2010) 25 *IJMCL* 237; or MacDorman, T.L., 'The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World' (1995) 10 2 *IJMCL* 301.

coincide with the actual morphology of the submarine areas. The notion of the continental margin is based on the submerged prolongation of the land mass. The continental shelf is based on the natural prolongation of the land territory.

The natural prolongation of the land territory is the legal basis of title to the continental shelf (Chapter 3). The continental shelf is the seabed adjacent to the coasts of a State. The Truman Proclamation, in 1945, has proclaimed for the first time, a right over the seabed. The foundation of that right was enshrined in the notion of contiguity and appurtenance. The resources of the seabed are considered to belong to the adjacent coastal State. This principle was consecrated in the Geneva Convention in 1958. However the breadth of the maritime zone was still not established. The *North Sea Continental Shelf cases*, in 1969, have developed the legal basis that founds the right of the coastal State in the seabed: the continental shelf represents the natural prolongation of the land territory. It means that the seabed is the continuation of the land territory under the sea and that the seabed forms a geographical unit with the land mass. The legal notion of the natural prolongation of the land territory refers to the scientific definition of the submerged prolongation of the land mass.

UNCLOS has finally established the outer limits to the continental shelf. These outer limits are, however, difficult to establish. They are based on scientific and technical provisions (Chapter 4). To find the outer limits the coastal State must establish the extent of the continental margin, and thus find what submarine areas fall within the submerged prolongation of the land mass. The coastal State is in charge of the delineation of the outer limits. Because such process is very technical, the coastal State should submit the outer limits to the Commission on the Limits of the Continental Shelf that makes recommendations on whether the outer limits submitted are in accordance with the provisions of article 76 of UNCLOS. The coastal State can establish the final and binding limits of its continental shelf on the basis of the recommendations of the CLCS.

However, there may be cases when the CLCS cannot make recommendations because States object to the qualification of the submission in a case of a land or maritime dispute. In this case the coastal State cannot establish the outer limits to its continental shelf, or at least not in accordance with the provisions of article 76 (Chapter 5). Judicial bodies, when faced with a dispute that concerns the delimitation of the continental shelf beyond 200 nautical

miles, may hesitate to delimit the outer portion of the continental shelf because the lack of recommendations questions the presence of a possible overlap of claims.

Chapter 2 - DEFINITIONS OF THE CONTINENTAL MARGIN AND THE CONTINENTAL SHELF

2.1. Introduction

“Part VI CONTINENTAL SHELF” of UNCLOS defines the continental shelf and the continental margin in Article 76 paragraphs 1, 2 and 3 as follow:³²

“1. The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges and the subsoil thereof [...].”

When we look at article 76 of UNCLOS our first impression is that there is a repetition of terms and concepts that are somewhat similar. As much as we try to understand clearly and accurately the notion of the continental shelf enshrined in the United Nations Convention on the Law of the Sea, we always seem to be confused and confound all the concepts the provisions of article 76 encompass. To try to grasp its sense we can firstly try to define the notion of the continental shelf, its nature and limits.

The continental shelf is a concept that is based on scientific terms and borrows from its vocabulary. The continental shelf is based on the concept of the continental margin but is not the continental margin. It is not clear whether the legal notion of the continental shelf

³² See footnote 2.

corresponds to the scientific continental margin? What are their definitions and role in the establishment of the outer limits? The continental shelf is a legal concept, the continental margin a scientific one (2.2.).

The continental margin represents the submerged prolongation of the land mass. The continental margin is used to define the continental shelf. The location of its outer edge defines the location of the outer limits of the continental shelf (2.3.).

In theory, the outer limits of the continental shelf should correspond to the location of the outer edge of the continental margin. In practice, the outer limits may not be situated on the outer edge (2.4.).

The justification lies in the fact that the continental margin is the submerged prolongation of the land mass and form one block with it. The outer limits of the continental shelf are delimited in accordance with the geomorphology of the submarine areas. The submerged prolongation of the land mass is the natural prolongation of the land territory (2.5).

2.2- Legal definition and morphological description enshrined in paragraphs 1 to 3 of article 76 of UNCLOS

Article 76 paragraph 1 states that:

“1. The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.”³³

The continental shelf is, according to article 76 of UNCLOS, a maritime zone whose jurisdiction applies to a portion of the seabed and subsoil, situated beyond the territorial sea and the 12-M line, and whose jurisdiction does not apply to the water column. The outer

³³ Article 76 of UNCLOS.

limits are set in accordance with the outer edge of the continental margin. They can either follow the outer edge or the 200-M line.

The continental shelf differs from delimitation methods of other maritime zones. Where a pure geographical approach applies in the cases of other maritime zones, where outer limits are delimited from fixed distance from the baselines, the continental shelf is delimited in accordance to the outer edge of the continental margin. To delimit the continental shelf a morphological criterion is taken into consideration.³⁴

The continental shelf starts where the territorial sea stops. Article 76 defines, in its paragraph 1, the continental shelf as the seabed and subsoil of the submarine areas that are situated beyond the territorial sea (“[t]he continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea”). The extent of the continental shelf is not fixed such as in the cases of the territorial sea or the exclusive economic zone which both have determined outer limits. Paragraph 1 lays down the criteria to appreciate its width.

According to the provisions of article 76 paragraph 1, the outer limits of the continental shelf are set up to the width of the continental margin (“to the outer edge of the continental margin”) or to a distance of 200 M from the baselines (“or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance”).

The outer limits of the continental shelf correspond to the width of the continental margin, or are set on a fixed distance of 200 M from the baselines. The width of the continental shelf is relative³⁵ as it can be calculated based on the length of the continental margin or by following a predetermined distance, the 200-M line.³⁶

³⁴ *Scientific and Technical Guidelines* (CLCS/11) CLCS (13 May 1999, 5th session, New York, 3-14 May 1999).

³⁵ Article 76 states that the continental shelf extends “to the outer edge of the continental margin, **or** to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance (emphasis added)”.

³⁶ Article 76 of UNCLOS. See the “chapeau” of article 76 paragraph 4; See *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal* (Bangladesh v. Myanmar)

It is according to the location of the outer edge that the outer limits of the continental shelf are calculated. The way article 76 paragraph 1 is articulated suggests that the fixed distance plays the role of a default distance for when the continental margin does not extend beyond 200 M from the baselines (“or... when...”).

The outer limits of the continental shelf should follow the outer edge of the continental margin but when the latter does not extend up to 200 M, the outer limits of the continental shelf then follows the 200-M line. The parameter for the delineation of the outer limits is the location of the outer edge of the continental margin (“where the continental margin does not extend up to that distance”).

Paragraph 2, which states that:

“2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.”³⁷

It refers to paragraphs 4 to 6 where it is said that there are two constraint lines. The provision of paragraph 2 indicates that these constraint lines may reduce the width of the continental shelf. One limit the extent of the continental shelf to 350 M from the baselines, it is the distance constraint line.³⁸ The other one limits the extent of the continental shelf to 100 M from the 2,500-metre isobath. It can be referred to as the depth constraint line.³⁹

(Judgment) [2012] ITLOS Reports 2012, p. 4 in §429 that “[u]nder article 76, paragraph 1, of the Convention, the continental shelf of a coastal State can extend either to the outer edge of the continental margin or to a distance of 200 nm, depending on where the outer edge is situated. While the term “natural prolongation” is mentioned in this paragraph, it is clear from its language that the notion of “the outer edge of the continental margin” is an essential element in determining the extent of the continental shelf.”

³⁷ Article 76 of UNCLOS §2.

³⁸ See footnote 34.

³⁹ Ibid.

It is to be noted that these constraint lines are maximum or absolute limits.⁴⁰ These distances cannot be exceeded, regardless of the fact that the outer edge of the continental margin may lie further seaward.

Paragraph 3 says that:⁴¹

“3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges and the subsoil thereof.”

Paragraph 3 defines the contour of the continental margin (“[t]he continental margin comprises the submerged prolongation of the land mass of the coastal State”) and describes the continental margin according to its morphology⁴² (“and consists of the seabed and subsoil of the shelf, the slope and the rise”).

According to article 76 paragraph 3, the continental margin “is the submerged prolongation of the land mass”. In other words, the continental margin, in scientific terms, is the extension of the land under the sea. The provisions of paragraph 3 set the boundary of the continental margin at the location where it meets the deep ocean floor.⁴³ The margin consists of the shelf, the slope and the rise and does not include the deep ocean floor.

In scientific terms, the shelf is thus the first portion of the continental margin. In the context of UNCLOS, however, the term continental shelf is employed to refer to the continental margin. More exactly, the term continental shelf refers to the maritime zone that in law governs the continental margin area.

⁴⁰ See Pulvenis, in footnote 6, p.352. Article 76 states that “the continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6”.

⁴¹ Article 76 of UNCLOS §3.

⁴² United Nations, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs: *Definition of the Continental Shelf An Examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (New York: United Nations Publications, 1993), p.10 §31: “In the 1982 Convention the term ‘continental margin’ is used in its geomorphological sense.”

⁴³ Article 76 of UNCLOS §3.

To conclude, it appears that the first paragraph is the legal definition of the continental shelf, defining the width of the maritime zone and the general criterion for the establishment of the outer limits; the second sets up absolute constraint lines the maritime zone cannot exceed; and the third paragraph acts as a morphological description of the continental margin.

Part 2.3- The geomorphological continental margin is the submerged prolongation of the land mass

The continental margin is defined in geology according to various characteristics, its composition and morphology. The continental margin is the submarine edge of the continental crust, distinguished by relatively light and isostatically high-floating material in comparison with the adjacent oceanic crust.⁴⁴ There are two types of continental margins: the passive and the active margins.⁴⁵ The details of the margins, including the nature of the continent-oceanic boundary, are determined by the tectonic and magmatic processes acting under the formation of the individual margin.⁴⁶ The natural variations in continental margins are also reflected in variations in their continental slopes. The continental margin is one of the three main features of the ocean, with the abyssal plains and the mid-oceanic ridges.

According to article 76 paragraph 3 “[t]he continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges and the subsoil thereof.”⁴⁷ The crucial element of the continental margin definition is the “submerged prolongation of the land mass” element.

⁴⁴ Britannica, Geology, *Continental margin* (definition), available at <<https://www.britannica.com/science/continental-margin>>, last accessed 16 October 2019.

⁴⁵ United Nations, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs: *Training Manual for Delineation of the Outer Limits of the Continental Shelf beyond 200 Nautical Miles and for preparation of submissions to the Commission on the Limits of the Continental Shelf* (The Law of the Sea series, New York: United Nations Publications, 2006), at V-1, *Summary*.

⁴⁶ *Ibid.*

⁴⁷ Article 76 of UNCLOS.

The characteristic of the continental margin is that it represents the prolongation of the land under the sea. In accordance with article 76 of UNCLOS, it would appear that there should be no significant rupture⁴⁸ in between the emerged land mass and its submerged counterpart for the latter to be considered the submerged prolongation. According to article 76, the continental margin should be a direct and uninterrupted continuation of the land mass under the sea.

In UNCLOS, the definition of the continental margin is a geomorphological one and does not rely on geology and crust type composition.⁴⁹ According to article 76 paragraph 3, the continental margin is scrutinised in relation to its profile. The shelf, the slope and the rise must be the submerged prolongation of the land mass, that is to say must be on the profile of the margin, to be included in the continental shelf of the coastal state.

In the Convention, the notion of the continental margin has been defined independently of its actual nature, whether continental or oceanic. The use of the term land

⁴⁸ See footnote 36, in §416, where Bangladesh supports that there must be continuity between the submerged prolongation and the land mass, which states that “[i]n respect of its own entitlement to the continental shelf beyond 200 nm, Bangladesh asserts that “the outer continental shelf claimed by Bangladesh is the natural prolongation of Bangladesh’s land territory by virtue of the uninterrupted seabed geology and geomorphology, including specifically the extensive sedimentary rock deposited by the Ganges-Brahmaputra river system”.

To prove this, Bangladesh provided the Tribunal with scientific evidence to show that there is a geological and geomorphological continuity between the Bangladesh land mass and the seabed and subsoil of the Bay of Bengal. In addition, Bangladesh submits that the extent of its entitlement to the continental shelf beyond 200 nm, established by the so-called Gardiner formula based on sediment thickness, extends well beyond 200 nm.”.

In §426 Bangladesh argues that “natural prolongation of its land territory” in article 76, paragraph 1, refers to the need for geological as well as geomorphological continuity between the land mass of the coastal State and the seabed beyond 200 nm. Where, as in the case of Myanmar, such continuity is absent, there cannot be entitlement beyond 200 nm. In Bangladesh’s view, “[n]atural prolongation beyond 200 [nm] is, at root, a physical concept [and] must be established by both geological and geomorphological evidence”. It cannot be based on the geomorphology of the ocean floor alone but must have an appropriate geological foundation. Bangladesh argues that the ordinary meaning of the words “natural prolongation” in their context clearly supports such interpretation. It maintains that this interpretation is also supported by the jurisprudence, as well as the Scientific and Technical Guidelines and the practice of the Commission.”

⁴⁹ See footnote 42, p.10 §31: “In the 1982 Convention the term “continental margin” is used in its geomorphological sense.”

mass in the provision ensures neutrality and avoids linking the *continental margin* with *continental crust*. In this provision, it could have been referred to continental mass or oceanic mass, but doing so would include an element of geology in the definition that would prevent States sitting on volcano chains or oceanic ridges to be able to extend their continental shelf.

Article 121 of UNCLOS states that:

- “1. An island is a naturally formed area of land, surrounded by water, which is above water at high tide.
2. Except as provided for in paragraph 3, the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of this Convention applicable to other land territory.
3. Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.”⁵⁰

Island-States can generate maritime zones around their land territories, independently of the characteristics of the land mass of the island itself, as it is applicable to other land territory. Since it is not allowed under article 76 paragraph 3 to include the deep ocean floor with its oceanic ridges in the realm of the continental shelf, if article 76 retained a geological characteristic within the definition of the continental margin, these island-States would not be able to generate a continental shelf.

Article 76 adopts a crustal neutrality approach which allows island-States to generate a continental shelf despite their oceanic crust component.⁵¹ Thanks to this approach island-States are treated equally with continental States and can generate all types of maritime zones, such as the continental shelf.

In the Convention, the definition of the continental margin is based on the morphology of the submerged prolongation and not on its geology. In this context, the notion of the

⁵⁰ Article 121 of UNCLOS.

⁵¹ Island-States may have a continental shelf extending beyond 200 M in application of article 76 paragraph 5. However, in the case of island-States situated on oceanic ridges, there is a constraint line of 350 M from the baselines to limit the extent of the continental shelf. See article 76 paragraph 6.

continental margin in UNCLOS may depart from the meaning of the term in geo-sciences. In geology, the continental margin is qualified according to its nature and composition. In article 76, the nature of the submerged prolongation of the land mass is primarily defined by a geomorphological approach. Submarine areas that constitute the submerged prolongation of the land mass will be considered the continental margin of the coastal State.

According to this approach, the composition of the margin is not important. The horizontal profile of the seabed is. Where there is a break or significant rupture in the profile, the margin may end. This works independently of the actual composition of the seabed. The composition of the shelf, the slope and the rise may be of different nature, as long as the seabed is the submerged prolongation of the land mass it will be considered the continental margin. It can be noted that may have an impact on the extent of the continental shelf. Features of the seafloor may be deemed part of the continental margin if they are smoothly integrated in its profile.⁵²

To conclude, UNCLOS does not use a geological definition of the continental margin. The composition of the seabed does not matter in the definition of the continental margin of article 76. The definition of the continental margin describes only the morphology of the margin and does not seem to take into account the geology and the nature of the rocks that compose it. In UNCLOS, the continental margin is defined in relation to the notion of the “submerged prolongation of the land mass”.

As a result, in article 76 of UNCLOS, the continental margin is defined as the seabed and subsoil adjacent to the continent, which is its submerged prolongation and whose morphology is commonly characterized by a shelf, a slope and a rise.⁵³ As a result, as far as the seabed can qualify as the submerged prolongation of the land mass, it may be included in the continental margin.

⁵² See footnote 34, at IV.

⁵³ See footnote 42 pp.10-11.

2.4. The outer limits of the continental shelf do not always correspond to the outer edge of the continental margin

Article 76 paragraph 1 states that:⁵⁴

“[t]he continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.”

According to the first portion of article 76 paragraph 1, the continental shelf “comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea” to the outer edge of the continental margin. So far, the continental shelf corresponds to the continental margin in paragraph 3 of article 76.

Yet the second part of paragraph 1 indicates that the continental shelf comprises the seabed and subsoil of the submarine areas to a distance of 200 M from the baselines where the outer edge of the continental margin does not extend up to that distance. The outer limits may thus correspond to the outer edge of the continental margin or to a fixed distance, set at 200 M, same as the exclusive economic zone.

To know whether the outer edge or the 200-M line applies, the coastal State should calculate the position of the outer edge of the margin. According to paragraph 1, when the outer edge lies within the 200-M line, the latter applies. In the contrary, when the outer edge lies seaward of the 200-M line, the outer limits of the continental shelf follow the outer edge of the continental margin.

To be included into the continental margin, according to article 76 paragraph 1, submarine areas needs to represent the submerged prolongation of the land mass. Paragraph 3 defines the continental margin as the shelf, the slope and the rise. The outer edge is located at the end of the rise. The coastal State needs to find the rise and its tip in order to locate the outer edge of the margin.

⁵⁴ Article 76 of UNCLOS §1.

The continental margin in UNCLOS is defined in its geomorphological sense. The outer edge of the margin is found by looking at the profile of the margin. A significant break in the profile marks the end of the submerged prolongation of the land mass.⁵⁵ Paragraph 4 of article 76 of UNCLOS establishes the method to locate the edge of the margin, by finding the foot of the slope, from which is calculated the tip of the rise, thus the outer edge of the continental margin.

Paragraph 4 states in detail that:⁵⁶

“4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.”

So far, in application of article 76, the outer limits corresponds the outer edge of the continental margin when the latter extends beyond 200 M. It is without taking into account the provision of paragraph 2. The continental shelf is actually limited in extent by constraint lines, provided for in paragraphs 5 and 6.⁵⁷

⁵⁵ See footnote 45, at IV.

⁵⁶ Article 76 of UNCLOS §4. See in *Annex*, Annex III, full text of Article 76 of UNCLOS.

⁵⁷ See footnote 45, at I, for the term “constraint lines”. See footnote 34, §5, the most favourable constraint line applies. Different constraint lines can apply to different portions of the margin.

When these constraint lines apply, the outer limits of the continental shelf may not correspond to the outer edge of the continental margin. Their role is to constrain the extent of the continental margin. The constraint lines cut off the outer edge of the continental margin.

When the outer edge of the margin goes beyond the most beneficial constraint line, the outermost portion of it is cut off of the continental margin. In this case, it can be noticed that the whole of the submerged prolongation of the land mass is not wholly included into the continental margin. Following this reasoning, it can be noted that, in this case, the outer limits does not correspond to the outer edge of the continental margin.

According to article 76, paragraph 1, when the outer edge of the margin lies within the 200-M line, the outer limits of the continental shelf follow the 200-M and thus include a portion of the submarine areas that would otherwise fall within the deep ocean floor, in the sense of paragraph 3. In this case, the outer limits of the continental shelf go beyond the outer edge of the continental margin.

In the case of the application of constraint lines, the actual outer edge of the margin lies beyond the limit of the constraint lines. The last portion of the submerged prolongation of the land mass is relinquished to the deep ocean floor.

In this case, the outer limits of the continental shelf do not follow the actual outer edge of the continental margin. The continental shelf relinquishes a part of the submerged prolongation of the land mass. It is interesting to note that, in contrast to the provision of paragraph 1 of article 76 of UNCLOS, the continental shelf, in this case, does not comprise the seabed and subsoil of the submarine areas that extend beyond its territorial sea to the outer edge of the continental margin, but to the outer limits of the constraint lines.

To conclude, both in the case of the 200-M line and in the case of the use of constraint lines, the outer edge of the continental margin and the outer limits of the continental shelf do not correspond. On the one hand, the continental shelf can comprise portions of submarine areas that are not part of the continental margin, in the case of the use of the 200-M line. On the other hand, the continental shelf may have to relinquish the outer portion of the margin, when constraint lines apply. Either a portion of the deep ocean floor is included in the continental shelf, without it being a part of the submerged prolongation of the

land mass, or a portion of the submerged prolongation is cut off from the continental shelf. In both cases the continental shelf does not represent the submerged prolongation of the land mass.

2.5. The legal continental shelf is the natural prolongation of the land territory on the seabed

Article 76 of UNCLOS defines the continental shelf and its outer limits. According to article 76 above, the outer limits of the continental shelf are established by finding the outer edge of the continental margin. The outer limits either follow the outer edge or fixed distances. In the first case, the outer limits of the continental shelf follow the submerged prolongation of the land mass. In the second case, the outer limits do not correspond to the morphology of the submarine areas.

In the provisions of article 76, the outer limits of the continental shelf are established in relation to the location of the outer edge of the margin. However, the continental margin is not defined in paragraph 1, but in paragraph 3. In paragraph 1 of article 76, it is stated that the continental shelf of a coastal State “comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the margin does not extend up to that distance.”⁵⁸

The term “natural prolongation of the land territory” is used in the definition of the continental shelf. In paragraph 1, the continental shelf is defined in relation to its link to the land territory, whereas the term “submerged prolongation of the land mass” is used in paragraph 3 to define the continental margin.

The fact that the outer limits do not always follow the submerged prolongation of the land mass may be explained by the presence of the “natural prolongation of its land territory” in this provision. The continental shelf comprises the seabed and subsoil of the submarine areas that extend beyond the territorial sea throughout the natural prolongation of the land

⁵⁸ Article 76 of UNCLOS §1..

territory. The outer limits of the continental shelf which follow the outer edge of the margin or the 200-M line should comprise the seabed and subsoil of the submarine areas throughout the natural prolongation of the land territory.

In UNCLOS the continental shelf is defined in relation to the notion of the continental margin. It is interesting to note that in the Geneva Convention⁵⁹ the outer limits of the continental shelf are not established and the continental shelf is not defined in relation to the morphology of the submarine areas. Article 1 of the Geneva Convention states that:⁶⁰

“[...] the term "continental shelf" is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.”

In the Geneva Convention the outer limits are established in relation to depth (“depth of 200 metres”) or exploitability (“admits the exploitation of the natural resources”). In UNCLOS the continental shelf is defined in relation to the scientific notion of the continental margin. The coastal State needs to locate the outer edge of the margin to define whether the outer limits of its continental shelf follow the 200-M line or the outer edge of the margin. In UNCLOS, the legal regime of the continental shelf never actually applies to the geological shelf. The term continental shelf has however been retained.

In UNCLOS, the continental shelf is not the reflection of the actual geological shelf, but refers to a maritime zone where the coastal State enjoys certain rights in relation to the seabed.

⁵⁹ See in *Annex*, Annex II, excerpt from the *Geneva Convention on the Continental Shelf*, footnote 14, articles 1 and 2.

⁶⁰ See article 1 of the Geneva Convention on the Continental Shelf, Done at Geneva on 29 April 1958. Entered into force on 10 June 1964. United Nations, Treaty Series, vol. 499, p. 311.

Article 77 of UNCLOS mirrors article 2 of the Geneva Convention in defining the sovereign rights of the coastal State in the continental shelf:⁶¹

- “1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.
2. The rights referred to in paragraph 1 are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State.
3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.
4. The natural resources referred to in this Part consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.”

The difference between the terms continental shelf and continental margin are shown in paragraphs 1 to 3 of article 76. The notions of continental shelf and continental margin would not be synonyms nor the first an approximate superfluous definition of the latter, but different and complementary concepts.

Continental shelf may be seen as a neutral term used in the context of the Convention to refer to a maritime zone⁶² comprising the seabed in which the coastal State would enjoy sovereign rights⁶³ and continental margin the parameter upon which the width of the continental shelf is assessed. The continental shelf is a legal conception, a name given to a maritime zone that concerns the seabed and whose outer limits are delineated with scientific methodologies.

⁶¹ Article 77 of UNCLOS..

⁶² See UNCLOS Part II, V, VII, XI.

⁶³ Article 77 of UNCLOS.

In UNCLOS, the outer limits of the continental shelf are established in relation with the scientific notion of the continental margin and the continental shelf is defined in relation to the sovereign rights that apply therein.

As P.R.R. Gardiner⁶⁴ puts it, the definition of the term “continental shelf”:

“[has] a legal connotation quite different from its scientific meaning. Its historical evolution in international law has rendered this inescapable, although its unsuitability has been commented upon by the scientific community. Pragmatically however, its legal entrenchment since the 1958 convention makes any change unlikely, although the term ‘continental margin’ would objectively seem more suitable. And with the various facets now clearly understood, to attempt a terminological change at this stage may only confuse rather than assist the workings of the Conference; retention seems better than cure.”

For Gardiner, the term continental shelf has probably been retained for the sake of legal consistency of legal instruments and jurisprudence of courts and tribunals. The use of a new term could have been interpreted as the creation of an additional maritime zone, juxtaposing to the existing continental shelf regime of the Geneva Convention. To use, in UNCLOS, the same term as in the Geneva Convention, is to ensure stability in the legal regime of the continental shelf; leaving only to jurists and maritime delimitation experts the means to comprehend this semantic incongruity.

National legislations do not invariably refer to the continental shelf *eo nomine*, and that those who refers to it do not necessarily use it in the same meaning.⁶⁵

⁶⁴ Piers Gardiner, a geologist, was a member of the Irish delegation at UNCLOS III. He suggested the method to calculate the outer edge of the margin that was then called after him as the “Gardiner formula” and which is based on a ratio of sediment thickness to distance to the foot of the slope and has been enshrined in article 76 paragraph 4 subsection (a)(i).

See its article in which the method was first introduced: P.R.R., Gardiner ‘Reasons and Methods for Fixing the Outer Limits of the Legal Continental Shelf beyond 200 Nautical Miles’ (1978) 11-12 *RIRI* 144.

⁶⁵ See national legislations on the continental shelf on DOALOS website, accessible at : <<https://www.un.org/Depts/los/index.htm>>, last accessed 16 October 2019.

As Lauterpacht puts it the expression 'continental shelf' has become no more than a convenient formula:⁶⁶

“The considerations here set forth are not intended to suggest that the notion of the continental shelf was devoid of usefulness from its very inception or that it can no longer fulfil any useful purpose whatever. It served as rallying-point for a new complex of ideas by giving it the authority of a natural geographical phenomenon.”

The notion of the continental shelf is deprived of a possible relation to the actual physical meaning that could be attached to it. Actually, in the International Law Commission Report, to the United Nations General Assembly, in 1950, the relative usefulness of the expression continental shelf was highlighted.⁶⁷ The International Law Commission found it sufficient to refer to the seabed and subsoil of submarine areas.⁶⁸ It added that “the area for such control and jurisdiction will need definition, but it need not depend on the existence of a continental shelf.”⁶⁹

The expression was however kept and in the Geneva Convention, like in the case of UNCLOS, the term continental shelf is used. It is nonetheless interesting to notice that in UNCLOS the continental shelf is defined as “the seabed and subsoil of the submarine areas” that extend beyond the territorial sea.⁷⁰

To conclude, article 76 paragraph 1 defines the continental shelf as “a special juridical -and not a geomorphological- term which applies to the area of the seabed, beyond the territorial sea, falling under the sovereign rights of the coastal State for the purpose of exploring it and exploiting its natural resources.”⁷¹ The continental shelf is a term used in

⁶⁶ Lauterpacht, H., ‘Sovereignty over Submarine Areas’ (1950) 27 *BYIL* 376, p.382 et s.

⁶⁷ ILC, ‘Report of the International Law Commission’ on its Second Session, 5 June to 29 July 1950, *Official Records of the General Assembly, Fifth session, Supplement No.12 (A/1316)*, *YILC* (1950), vol. II, UN Doc A/CN.4/34.

⁶⁸ *Ibid*, referring to UN Doc. A/CN.4/SR.67, pp.16-24.

⁶⁹ *Ibid*.

⁷⁰ See Article 76 of UNCLOS §§1 to 3, in Annex III.

⁷¹ See *Definition of the Continental shelf*, in footnote 42, p.10, §27.

UNCLOS to refer generally speaking to the portion of the seabed over which the coastal state enjoys certain rights, in accordance with the provisions of article 77 of UNCLOS. Therefore, the outer limits of the continental shelf may not correspond exactly to the outer edge of the continental margin. The notion of the continental shelf bears a legal connotation.

2.6. Conclusion

As a conclusion, the continental shelf is a maritime zone that designates the seabed and subsoil beyond the territorial sea as falling under the legal regime of Part VI of UNCLOS and whose breadth is based on the scientific definition of the continental margin. The continental shelf is a legal term. It refers to the notion of the natural prolongation of the land territory of the coastal State. The continental shelf is not meant to reflect the geomorphological continental margin but a jurisdiction in which the coastal State can enjoy certain sovereign rights in relation to the exploration and exploitation of the resources thereof.

The width of the continental shelf is based on the extent of the submerged prolongation of the land mass. The continental shelf's progression is physically limited on the seabed by the extent of the continental margin whose outer edge is confined by the deep ocean floor. However, the width of the continental shelf is also limited in legal sense. The continental shelf is also constrained seaward by subjective limits based on distance and bathymetry, the constraint lines of article 76 paragraph 2. The continental shelf is not only confined by the physical nature of the submerged prolongation of the land mass, the natural prolongation of the land territory also constrains, by discretionary limits, the natural extent of the prolongation of the land territory in the submarine areas.

In that sense, the continental shelf does not correspond to the continental margin. The outer limits of the continental shelf may reflect the actual location of the outer edge of the margin or may reflect an abstract line on the seabed. The point is that the width of the maritime zone is justified by the presence of the continental margin but is established in relation to legal factors. The continental margin is the submerged prolongation of the land mass but the continental shelf is the natural prolongation of the land territory of the coastal state. What article 76 of UNCLOS says is that the natural prolongation of the land territory is not always the submerged prolongation of the land mass.

Chapter 3- ENTITLEMENT TO THE SEABED BASED ON APPURTENANCE AND GEOGRAPHICAL UNITY

3.1. Introduction

Rights over the continental shelf were proclaimed by the USA in 1945, in order to access the natural resources of the continental shelf off the shore of the American continent. In international law, to access a territory, a State must have title proving right over it. To establish a title over the seabed, there must be an established link between the latter and the State who claims it. In the past, never a State had declared right over an area of seabed. The seabed is not accessible to men, is uninhabitable.

On what grounds does title to the continental shelf stand? It will be examined the origins and basis of rights that justify the ability and validity of access and control of the seabed adjacent to the coastal State.

The legal justification of the continental shelf lies in the need to access the natural resources situated in the seabed. The Truman proclamation states that an adjacent coastal State is entitled to exercise rights in relation to the natural resources of the seabed adjacent to its coast, as these resources emanate from the adjacent land and thus belong to the coastal State (3.2.).

While the concepts of appurtenance was supported in the Truman proclamation, for it highlights the necessary connection between the land and the origin of the resources of the seabed, it is on the ground of the “natural prolongation of the land territory” that title to the seabed was finally established in the *North Sea Continental Shelf cases*, in 1969 (3.3.).

The seabed forms one geographical unit with the land and the title that exists on the land applies to its extension in the sea (3.4.).

3.2. *The 1945 Truman proclamation and the 1958 Geneva Convention on the Continental Shelf: claim to the seabed based on appurtenance*

In 1945⁷², the President of the United States of America, Mister Harry S. Truman,⁷³ made two presidential declarations⁷⁴ regarding marine policies. While one was referring to the policy of the United States with respect to coastal fisheries in certain areas of the high seas⁷⁵, it is the proclamation 2667 on the policy of the United States with respect to the natural resources of the subsoil and sea bed of the continental shelf⁷⁶ that attracted attention.

The will to regulate access to resources of the seabed adjacent to the coast of States was contemplated by the Hague Conference in 1930.⁷⁷ A treaty between the United Kingdom,

⁷² Year of the end of the Second World War, during which was signed the the Charter of the United Nations, on 26 June 1945, in San Francisco, at the conclusion of the United Nations Conference on International Organization, and came into force on 24 October 1945. See UN Charter at <<http://www.un.org/en/charter-united-nations/index.html>>, last accessed 16 October 2019.

The name "United Nations", coined by United States President Franklin D. Roosevelt was first used in the Declaration by United Nations of 1 January 1942, during the Second World War, when representatives of 26 nations pledged their Governments to continue fighting together against the Axis Powers. The Charter was signed on 26 June 1945 by the representatives of the 50 countries. Poland, which was not represented at the Conference, signed it later and became one of the original 51 Member States.

⁷³ Mister Harry S. Truman was the President of the United States of America upon death of former President, Mister Franklin D. Roosevelt and took office in 12 April 1945, and stayed in office until 20 January 1953.

⁷⁴ On the 28 September 1945.

⁷⁵ See US presidential proclamation, number 2668, on the policy of the United States with respect to coastal fisheries in certain areas of the high seas, available at:

<[, last accessed 16 October 2019](https://www.trumanlibrary.org/proclamations/index.php?pid=253&st=&st1=)

⁷⁶ Harry S.Truman: "Proclamation 2667 — Policy of the United States With Respect to the Natural Resources of the Subsoil and Sea Bed of the Continental Shelf," September 28, 1945. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. Available at

<<http://www.presidency.ucsb.edu/ws/?pid=12332>>, last accessed 16 October 2019.

⁷⁷ See Churchill, R.R. and Lowe, V.: *The Law of the Sea* (Manchester: Manchester University Press, 1999, 3rd edition), p.142 in the Legal status of the continental shelf.

acting on behalf of Trinidad, and Venezuela, signed in 1942, regulated rights to access the seabed of the Gulf of Paria.⁷⁸

However, it is with the Truman proclamation in 1945 that right over the seabed were recognised internationally.⁷⁹ In fact, the Truman proclamation was followed by a series of similar proclamations that recognised the right to access the seabed adjacent to the coasts of States.⁸⁰

3.2.1. The Truman proclamation: jurisdiction and control over the natural resources of the continental shelf by the contiguous nation

It is the need to access new sources of petroleum and other minerals⁸¹ that pushed the US government to claim access to the continental shelf where important deposit of resources

⁷⁸ Ibid, p.143: “In 1942 the United Kingdom, on behalf of Trinidad, and Venezuela concluded a Treaty relating to the Submarine Areas of the Gulf of Paria. Under this Treaty the sea bed in the Gulf beyond the territorial waters of the two States was divided into two sectors. In one sector the United Kingdom agreed not to assert claim to sovereignty or control and to recognise any rights of sovereignty or control lawfully acquired by Venezuela, while Venezuela gave a corresponding undertaking in respect of the other sector [...] Thus the treaty clearly defined the sectors within which each party was to make no claim to sovereignty, but did not itself assert the sovereignty of the other party over such sectors: sovereignty still had to arise from occupation. So the 1942 treaty succeeded, in effect in delimiting the continental shelf before the legal concept of the continental shelf itself was established.”

⁷⁹ See *North Sea Continental Shelf Cases* (Federal Republic of Germany v. Netherlands & Denmark) (Judgment) [1969] ICJ Rep 3, §47, p.33.

⁸⁰ See Churchill, in footnote 77, p.144: “Throughout the following years [after the Truman proclamation] more and more States laid claim to some kind of rights over the shelf. By the time of the 1958 Geneva conference about twenty States, some acting both in their own right and on behalf of dependent territories, had made such claims.”

⁸¹ See second paragraph of the Truman proclamation, footnote 76: “Whereas its competent experts are of the opinion that such resources underlie many parts of the continental shelf off the coasts of the United States of America, and that with modern technological progress their utilization is already practicable or will become so at an early date”.

were likely to be found.⁸² The United States of America were motivated to claim right over the seabed adjacent to their coasts to gain access to the natural resources thereof.⁸³

New technologies developed in the aftermath of the war that could be used to find and drill in the continental shelf off the coasts of states. The rationale behind the Truman proclamation was the protection of economic interests. In the rise of the Cold War and the battle for hegemonic power, the need for resources and security of the submarine areas around its land⁸⁴ territory pushed the US government to claim jurisdiction over these areas on the ground of conservation and prudent utilization.⁸⁵

According to the Truman proclamation, the coastal State contiguous to the continental shelf can claim jurisdiction over the natural resources present in the seabed and subsoil of the said continental shelf adjacent to its coast. It is:⁸⁶

“the view of the Government of the United States that the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying with the territory, and since self-protection compels the coastal nation to keep close

⁸² See reproduction of the Truman proclamation in *Annex*, Annex I.

⁸³ See Truman proclamation, footnote 76, §1: “*Whereas* the Government of the United States of America, aware of the long range world-wide need for new sources of petroleum and other minerals, holds the view that efforts to discover and make available new supplies of these resources should be encouraged”.

⁸⁴ See Arvid Pardo speech on the peaceful uses of the seabed (UN doc, 1967): *Agenda item 92: Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interest of mankind* (A/6695; A/C.1/952) United Nations, General Assembly, 22nd session, Official records (First Committee, 1515th meeting, 1 November 1967, New York).

⁸⁵ See Truman proclamation, footnote 76 §3: “*Whereas* recognized jurisdiction over these resources is required in the interest of their conservation and prudent utilization when and as development is undertaken.”

⁸⁶ *Ibid*, §4.

watch over activities off its shores which are of the nature necessary for utilization of these resources”.

The US government perceives the natural resources off its shore as subject to its jurisdiction and control. The coastal nation is entitled to the resources of the seabed because they emanate from its land (“these resources frequently form a seaward extension of a pool or deposit lying with the territory”). The US does not claim rights over the seabed itself but over the natural resources therein. The coastal State has no right over the continental shelf *per se*.⁸⁷

The Truman proclamation motivates the right to gain access to the resources of the seabed on the ground of appurtenance (“since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it”). The natural resources lying in the continental shelf, although situated in the seabed, belong to the coastal State, because they emanate from its land territory.

Jurisdiction is justified on the ground that access and control of the resources of the seabed in the continental shelf can only be with crafts whose operations start from the land of the coastal State (“self-protection compels the coastal nation to keep close watch over activities off its shores”). Such jurisdiction is deemed “reasonable and just” since the sediments that lie in the seabed contiguous to its coasts emanate from its land.

Based on these arguments, the US President proclaims that:⁸⁸

“[h]aving concern for the urgency of conserving and prudently utilizing its natural resources, the Government of the United States regards the natural resources of the subsoil and sea bed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control. In cases where the continental shelf extends to the shores of

⁸⁷ See US Code, Pub. L. 90–583, §3, Oct. 17, 1968, 82 Stat. 1146., in TITLE 43 PUBLIC LANDS, p.294, in CHAPTER 29 SUBMERGED LANDS, SUBCHAPTER III OUTER CONTINENTAL SHELF LANDS, which states in §1334(a) that “The Secretary shall administer the provisions of this subchapter relating to the leasing of the outer Continental Shelf, and shall prescribe such rules and regulations as may be necessary to carry out such provisions.”, available at: <<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title43/pdf/USCODE-2011-title43-chap29.pdf>> last accessed 16 October 2019.

⁸⁸ See Truman proclamation, footnote 76 §4.

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. The character as high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected.”

It is not clear what “jurisdiction and control” means. These terms are not defined in the Proclamation. However, the first paragraph above refers to the “urgency of conserving and prudently utilizing its natural resources”. The second paragraph refers to “the exercise of jurisdiction over the natural resources” since “the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore”.

According to the Proclamation, the coastal State does not have title over the seabed but the natural resources therein and the coastal State’s jurisdiction and control are to be used to conserve and utilize the natural resources. This could mean that the powers of the coastal State in the seabed are limited to the rights of exploitation and management of the resources and thus concern only the right to access and use the natural resources.

In relation to the definition of the notion of ‘jurisdiction and control’, Lauterpacht concludes that they can be assimilated to sovereignty as the rights are exclusively exercised by the coastal State:⁸⁹

“The language of the proclamations and other instruments and enactments relating to appropriation of or assertion of claims over submarine areas does not supply a clear answer to the question whether these rights are rights of sovereignty, or merely rights of jurisdiction and control, or-whether it be 'sovereignty' or merely 'jurisdiction and control'-whether they are rights over the submarine areas or over their resources. It would seem not only that the assumption of 'control and jurisdiction' was preferred to assumption of 'sovereignty', but also that the 'control and jurisdiction' thus claimed had reference not to the sea-bed and subsoil of the continental shelf as such but merely to the resources of the continental shelf. [...] There remains the question whether there is any difference between declaring that the sea-bed and

⁸⁹ See Lauterpacht, footnote 66, p.387-390.

the subsoil appertain-belong-to the state and declaring that they are under its sovereignty. The difference, it is believed, is merely one of words. An area which is under the state's exclusive control and jurisdiction, not delegated by or accountable to a foreign government or authority, is under the sovereignty of that state. It is part of that state. An area declared to be henceforth within the exclusive jurisdiction and control of a state becomes part of its territory.”

Such claim as the Truman proclamation was followed by similar ones.⁹⁰ In 1949, the International Law Commission raised the necessity to codify the regime of the territorial waters and the high seas.

To that aim, it appointed Mr. J.P.A. François⁹¹ as special *rapporteur* for the topic of the high seas in 1949, and subsequently extended his mandate to include also the topic of the territorial sea. Sign that the continental shelf legal regime had acquired some interest in the international community and academic sphere, in 1953⁹² was submitted, by the special *rapporteur*, to the General Assembly of the United Nations, final drafts that included reports on the legal regime of the continental shelf. The ILC reports highlighted the need for the codification of the law of the sea.

3.2.2. The Geneva Convention on the Continental Shelf: the recognition of an inherent right to the continental shelf

Following the ILC reports, the United Nations Conference on the Law of the Sea was convened in Geneva, Switzerland, from 24 February to 27 April of 1958 and four treaties were signed,⁹³ regulating the seas and the activities therein, among them the Geneva Convention on the Continental Shelf.⁹⁴

⁹⁰ See list of similar claims in Lauterpacht, footnote 66, p.381.

⁹¹ See UN document A/CN.4/97, Reports on the Law of the Sea, Yearbook of the ILC, 1956, vol.II, available at <http://legal.un.org/ilc/documentation/french/a_cn4_97.pdf>, last accessed 16 October 2019.

⁹² See UN Diplomatic Conferences Reports, available at <http://legal.un.org/diplomaticconferences/1958_los/>, last accessed 16 October 2019.

⁹³ See at UN Diplomatic Conference website, where it is said that: “Four separate conventions were adopted by the Conference on 29 April 1958 and were opened for signature until 31 October 1958, and thereafter opened for

Whereas the Truman proclamation is the claim through which rights to the natural resources of the continental shelf have been created, it is in fact in the Geneva Convention that a right over the continental shelf was recognised in law.⁹⁵

In the Convention, it is the continental shelf that is regulated and not just the rights of uses of its natural resources.⁹⁶ Whereas the proclamation claimed rights over the natural resources of the seabed and subsoil of the continental shelf, the Convention recognises a right to the continental shelf itself and regulates the legal regime applicable in it.

In article 1⁹⁷ the Convention defines the continental shelf as the part of the submarine areas that represent the seabed and subsoil situated beyond the territorial sea. In the Truman proclamation the outer limits of the jurisdiction are not established. In the Convention the continental shelf starts beyond the territorial sea and stops either at a depth of 200 metres or to a depth that admits exploitation.

Article 1 states that:⁹⁸

accession by all Member States of the United Nations, as well as other States and specialized agencies invited by the General Assembly to become party to: the Convention on the Territorial Sea and the Contiguous Zone (entered into force on 10 September 1964); the Convention on the High Seas (entered into force on 30 September 1962); the Convention on Fishing and Conservation of the Living Resources of the High Seas (entered into force on 20 March 1966), and the Convention on the Continental Shelf (entered into force on 10 June 1964). In addition, an Optional Protocol of Signature Concerning the Compulsory Settlement of Disputes was adopted, which entered into force on 30 September 1962.”

⁹⁴ See Geneva Convention, footnote 14.

⁹⁵ Ibid., article 2.

⁹⁶ Ibid., article 1: “For the purpose of these articles, the term " continental shelf " is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 204metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.”

⁹⁷ Ibid.

⁹⁸ Ibid.

“For the purpose of these articles, the term "continental shelf" is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.”

Although the Convention establishes limits to the maritime zone, the outer limits are rather vague. It can be said that the 200-metre depth limit acts as a default outer limit up to which the continental shelf automatically extends. The second limit, set according to an exploitability criterion, can be applied if it can be admitted that the coastal State can exploit beyond 200 metres of depth. Admission of exploitability is not defined but it can be suggested that it entails the technical and financial capacities of the coastal State to access and drill in depths superior to 200 metres.⁹⁹

There is an interesting provision in article 1 of the Convention, the crust-neutrality criterion. This was not mentioned in the Truman proclamation. . The continental shelf is not related to a continental characteristic. In fact, according to the Convention, any state with a maritime *façade* has a continental shelf. In other words, the possibility to have a continental shelf is not related to a state being situated on a continental mass. States, such as island-States or States with no shelf in the prolongation of their coast can be recognised the right to the seabed adjacent to the coast.

Article 2 of the Geneva Convention recognises, in law, the sovereign rights of the coastal State on the seabed adjacent to its coast:¹⁰⁰

“1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 of this article are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State.

⁹⁹ See Truman proclamation, footnote 76.

¹⁰⁰ See Geneva Convention, footnote 14, article 2.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in these articles consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.”

In the wording of the Convention, the coastal State exercises sovereign rights over the continental shelf. These sovereign rights, according to article 2 paragraph 1, are to be exercised in relation to the exploration of the continental shelf and the exploitation of its natural resources.

Whereas the Truman proclamation recognised jurisdiction and control over the natural resources of the seabed of the continental shelf, the Convention gives sovereign rights to the coastal States which not only apply in regard to the natural resources of the seabed but to the continental shelf as a whole. The sovereign rights are nevertheless limited to the economic uses of the continental shelf as they only concern the exploration of the seabed and the exploitation of its natural resources.

The natural resources are defined in paragraph 4 as being of two kinds. They include living as well as non-living resources. Within the non-living resources, the Convention includes the mineral and other non-living resources present in the seabed and subsoil. This description indicates that hydrocarbons as well as inorganic substances may be included in the definition. The living organisms, in order to be included in the list of resources capable of exploitation, should belong to sedentary species.

According to paragraphs 2 and 3 of article 2, the coastal State adjacent to the continental shelf is the only one granted the right to access the area. The sovereign rights are exclusive. Access to the area to other entities can be granted by the adjacent coastal State only. More interesting is the fact that these sovereign rights are considered to apply automatically, or as the provision puts it, the rights of the coastal State over the continental shelf do not depend upon occupation or proclamation.

To conclude, in the Truman proclamation, title to access the continental shelf and capture the natural resources therein is based on the fact that the deposits of natural resources, coming from the land, appertains to the coastal State. As a result, the natural resources are considered to belong to the coastal State and jurisdiction and control can be exercised to use and conserve the resources.¹⁰¹ In the Geneva Convention, the basis upon which the coastal State is entitled to the continental shelf is not justified. Legal title to exercise sovereign rights over the continental shelf is inherent.

Upon the entry into force, in 1964, of the Geneva Convention on the Continental Shelf, the question of basis of title to the continental shelf was brought to international attention. In 1967, the disputes between Germany and the Netherlands and Germany and Denmark concerning the delimitation of the maritime boundaries of the continental shelf in the North Sea were submitted to the International Court of Justice.

3.3. The 1969 North Sea Continental Shelf cases: the concept of the natural prolongation as basis of title to the seabed

In the *North Sea Continental Shelf cases*, the ICJ has to answer a problem of maritime delimitation in the seabed. To delimit the boundaries, the Court needs first to establish whether the parties to the dispute have a title to the seabed.

At the time of the judgment, the Geneva Convention defines the legal regime of the continental shelf but basis of title to the seabed is not really established in the Convention. Based on the Truman proclamation, the Convention recognises that coastal States have an inherent right in the seabed contiguous to their land territory but does not explain how this right is founded in international law.

The ICJ, in the *North Sea Continental Shelf cases*, establishes the basis of title to the seabed. It recognises that title, in the continental shelf, is acquired through the concept of the natural prolongation of the land territory. The seabed is not only adjacent to the land territory of the coastal State, it is its continuation under the sea. As title exists on the land territory it thus exists over the submerged prolongation of that territory.

¹⁰¹ See Truman proclamation, footnote 76.

3.3.1. The 'land dominates the sea' principle: basis of title in the law of the sea

International law is based on the concept of the State. Shaw explains that the notion of State is based in international law in the idea of sovereignty:¹⁰²

“The State in its turn lies upon the foundation of sovereignty, which expresses internally the supremacy of the governmental institutions and externally the supremacy of the State as a legal person. But sovereignty itself, with its retinue of legal rights and duties, is founded upon the fact of territory.”

Sovereignty, in turn, is rooted in the notion of territory:¹⁰³

“Without territory a legal person cannot be a State. It is undoubtedly the basic characteristic of a State and the one most widely accepted and understood. [...] Since such fundamental legal concepts as sovereignty and jurisdiction can only be comprehend in relation to territory, it follow that the legal nature of territory becomes a vital part of any study of international law.”

The notion of territory defines the scope of application of the sovereignty of a State. Therefore, it is necessary for a State to define the extent of its territory, delimit its border. Jennings explains that:¹⁰⁴

“The mission and purpose of traditional international law has been the delimitation of the exercise of sovereign power on a territorial basis. No rule is clearer than the precept that no State may lawfully attempt to exercise its sovereignty within the territory of another. The definition of Statehood itself has the possession of a more or less defined territory as a necessary element.”

Judge Huber has defined territorial sovereignty in the *Island of Palmas case* as:¹⁰⁵

¹⁰² Shaw, M.N.: *International Law* (Cambridge University Press, 2008, 6th edition), p.487.

¹⁰³ Ibid.

¹⁰⁴ Jennings, R. Y., ‘Acquisition of Territory in Law’, in R. Y. Jennings, A. D. Watts (eds.), *Oppenheim’s International Law* (Manchester: Manchester University Press; 9th edition, 1963), p.1.

¹⁰⁵ In Shaw, footnote 102, p.489, referring to 2 *RIAA*, pp. 829-838 (1928).

“sovereignty in relation to a portion of the surface of the globe is the legal condition necessary for the inclusion of such portion in the territory of any particular state.”

Before a State can exercise its sovereignty over its territory, it needs to prove title to this territory. Sovereignty over the territory relies on the notion of title. Shaw says that title relates to both the factual and legal conditions under which territory is deemed to belong to one particular authority or another.¹⁰⁶

In other words, it refers to the existence of those facts required under international law to entail the legal consequences of a change in the juridical status of a particular territory.¹⁰⁷ Jennings defines title as “the *de facto* antecedent, of which the right is the *de jure* consequent.”¹⁰⁸ Title to the continental shelf creates a right over it. Title to the continental shelf may be found in the modes of acquisition of territory as displayed in international law.

In international law, there are five modes of acquisition of territory: occupation of *terra nullius*, prescription, cession, accretion and subjugation (or conquest).¹⁰⁹ Title to a territory is either acquired, it is the acquisition of an additional territory, or is created, in the case of a new State.

Where occupation, prescription or accretion relate to the acquisition of a new territory, cession and subjugation relate to title to already existing territory that belonged to another sovereign entity. In the case of interest to us, the continental shelf, the question of whether the latter is considered a newly acquired territory or the addition of a subsequent piece of land is raised.

The continental shelf did not attract attention until the 20th century, but it does not mean that it did not exist. The continental shelf is not a new territory as such, it is however a

¹⁰⁶ In Shaw, footnote 102, p.490.

¹⁰⁷ In Jennings, footnote 104, p.4 which refers to the *Burkina Faso/Mali case*, ICJ Reports, 1986, pp. 554-564; ILR, pp. 440-459.

¹⁰⁸ Ibid, p.4.

¹⁰⁹ In Shaw, footnote 102, p.495.

new subject of attention over which title has never been exercised so far. The continental shelf is a *terra nullius*,¹¹⁰ a territory that belongs to no one and whose jurisdiction can be claimed. The problem of how a State acquires a territory is a difficult one and one that may be ultimately only be explained in legal-political terms.¹¹¹

When we come to look at the various modes international law recognises as creating title to territory we shall find that they all support the importance, both in the creation of title and of its maintenance, of actual effective control.¹¹²

Title is also based on its recognition *erga omnes*, by the international community of sovereign States, and the recognition of the activity of the State *à titre de souverain*.¹¹³ Relevant factors to prove such title may be based on historical demands, economic elements or even geographical contiguity.¹¹⁴

In the case of the continental shelf, the actual effective control may be difficult to prove. As for recognition of claims to the seabed, the plethora of claims following the Truman proclamation seems to indicate that a right to the seabed has been recognised by the international community.

¹¹⁰ In Shaw, footnote 102, p.492 “Apart from territory actually under the sovereignty of a State, international law also recognises territory over which there is no sovereign. Such territory known as *terra nullius*. In addition, there is a category of territory called *res communis* which is (in contrast to *terra nullius*) generally not capable of being reduced to sovereign control. The prime instance of this is the high seas, which belong to no-one and may be used by all. Another example would be the outer space. The concept of the common heritage of mankind has also been raised.”

¹¹¹ Ibid. See also Koskenniemi, M. *From Apology to Utopia, The Structure of International Legal Argument* (Cambridge University Press, 2008, reissue with new epilogue), especially chapters 1 and 4 .

¹¹² In Jennings, footnote 104, p.1. See the notions of *corpus* and *animus* in Roman law, in p.4.

¹¹³ Ibid, p.6.

¹¹⁴ In Shaw, footnote 102, pp.487-489.

The continental shelf is a *terra nullius* over which no title was previously claimed. Title may be based on occupation or prescription. To know whether title is based on occupation or prescription Jennings indicates that:¹¹⁵

“Occupation can only apply to territory that is *res nullius*; it is in all cases lawful in origin, and the mere passage of time has no place in it, provided only that the apprehension of the territorial sovereignty be effective. Prescription, on the other hand, is a *portmanteau* concept that comprehends both a possession of which the origin is unclear or disputed, and an adverse possession which is in origin demonstrably unlawful. For prescription, therefore, the possession must be long-continued, undisturbed, and it must be unambiguously attributable to a claim to act as sovereign. It depends as much on the quiescence of the former sovereignty as on the consolidation through time of the new. It follows also that the acquisition of a title to parts of the high seas must always be a prescription and not an occupation, for the high seas are not *res nullius*.”

Occupation is based on effective occupation of the territory. Prescription is based on possession, act *à titre de souverain* but mostly implies that title is contested or was formerly possessed by another sovereign.

Jennings defines occupation as “the appropriation by a State of a territory which is not at the time subject to the sovereignty of any State.”¹¹⁶ Jennings adds that the main legal problem with regard to occupation has been to define the degree and kind of possession effective to create a title and to define the area of territory to which such a possession might be said to apply.¹¹⁷ For this to happen there must be present both a *corpus* and an *animus*: the intention and the will to act as sovereign, and some actual exercise or display of such authority.¹¹⁸

¹¹⁵ In Jennings, footnote 104, p.23.

¹¹⁶ Ibid, p.20.

¹¹⁷ Ibid.

¹¹⁸ Ibid., referring to *Legal States of Eastern Greenland case*, in Series A/B, No. 53, pp. 45-6.

The acquisition of title is recognised in international law by effective occupation. Concerning the seabed, there have been only proclamations, but they were not followed by actual occupation of the submarine areas. In the case of the continental shelf it seems that title to the territory cannot be founded in occupation. No such effective occupation is possible in the seabed. This absence of effective occupation is:¹¹⁹

“in no way fatal to acquisition of territorial title over submarine areas. For modern international practice does not invariably consider effective occupation to be a condition of acquisition of title. As it is occasionally put in a more circuitous fashion, the requirement of effectiveness of occupation is a matter of degree.”

In modern international law, discovery of a territory and purely symbolic occupation have been discarded. Occupation of a *terra nullius* is recognised as a mode of acquisition of a territory if there is effective occupation of the territory.¹²⁰

However, for the continental shelf, occupation, effective or notional is not required. In the Truman proclamation, the US government claims its will to act as sovereign in relation to the utilization and conservation of the natural resources of the seabed.¹²¹ It claims jurisdiction and control.

¹¹⁹ In Lauterpacht, footnote 66, p.415 et s.

¹²⁰Ibid, Lauterpacht refers to the judgment given in 1933 in the case between Denmark and Norway concerning the *Legal Status of Eastern Greenland* the Permanent Court of International Justice: the PCIJ after laying down the general principle that a claim to territorial title based upon continued display of authority must show 'the intention and will to act as sovereign, and some actual exercise or display of such sovereignty', proceeded to qualify very substantially the requirement of 'some actual exercise or display' of authority. Moreover, the Court held, with regard to the much later period between 1721 and 1814, that as there had been no claim to sovereignty by any other Power, and in view of the arctic and inaccessible character of the uncolonized part of the country, mere acts of legislation were sufficient evidence of effectiveness. It considered as sufficient such manifestations of display of sovereignty as acts of legislation concerning navigation in the seas round Greenland and the conclusion of commercial agreements referring to Greenland. In P.C.I.J., Series A/13, No. 53, pp. 45- 46.

¹²¹ In Truman proclamation, footnote 76.

A proclamation is a means by which a title, claimed or acquired, is announced. It is not a source of a title or a means of acquiring it.¹²² That does not mean that it is meaningless or unnecessary. But such symbolic act cannot, without doing violence to language, be regarded as occupation.¹²³

However, according to the award of the *Clipperton Island case*, between France and Mexico in 1931, a symbolic act such as a proclamation is enough to consider the taking of possession as accomplished and the occupation established. The arbitrator, the King of Italy, proceeded to base his decision on the rule that:¹²⁴

“if a territory, by virtue of the fact that it was completely uninhabited, is, from the first moment when the occupying state makes its appearance there, at the absolute and undisputed disposition of that state, from that moment the taking of possession must be considered as accomplished, and the occupation is thereby established.”

As any acts of occupation are possible in relation to the submarine areas, it is found necessary to fall back upon the notion of notional occupation, proclamation. However, it is doubtful whether the Proclamation can characterize an actual exercise of an act *à titre de souverain*. To base title to the continental shelf on proclamation is a tautology:¹²⁵

“The State is entitled to issue the proclamation annexing the continental shelf and to grant concessions over it if it occupies it to the extent of issuing the proclamation and granting concessions.”

Actually, the Geneva Convention has discarded the need for any express proclamation. The Geneva Convention indicates that a coastal State does not need to proclaim rights over the continental shelf for the right is inherent.

The International Law Commission, aware of this incongruity, had no difficulty in thus disposing of the idea of 'notional occupation' which in effect amounts to a denial of the

¹²² In Lauterpacht, footnote 66, p.417.

¹²³ Ibid.

¹²⁴ Ibid., p.417.

¹²⁵ Ibid., p.420.

necessity of occupation.¹²⁶ In its Report to the UN General Assembly, in 1950, the ILC adopted a text stating that “the submarine area (sea-bed and subsoil) of the Continental Shelf off the coast of a littoral State and outside the area of its territorial waters is subject *ipso jure* [sc. without a proclamation] to the control and jurisdiction of the littoral State”.¹²⁷

Following this reasoning, in UNCLOS, title to the seabed is not based on proclamation. In article 77 of UNCLOS, like in article 2 of the Geneva Convention, the need for effectiveness of occupation has been discarded to the benefit of an inherent title.

To conclude, in the case of the continental shelf, occupation of the seabed cannot be the basis upon which title is established as there can be no effective occupation of the seabed. According to international law, however, the coastal State must prove that there are factual and legal conditions that prove that it has a right over this *terra nullius*.¹²⁸ The coastal State should prove that it undertakes activity *à titre de souverain* over the seabed.

Case law has recognised that a proclamation of right over an uninhabited territory can serve to recognise occupation. The Truman proclamation, which has been widely recognised and imitated, should thus create title to the seabed. But a proclamation is a consequence of a title. It is because a State has a right that it can claim it. Recognition of proclamation as a mode of acquisition is a tautology.

In fact, it would appear that the basis of title to the continental shelf is neither founded in prescription, nor occupation, but on the notion of inherent title. Article 2 paragraph 3 of the Geneva Convention states that the rights of the coastal State do not depend upon occupation or proclamation; the right of the coastal State to the seabed is inherent.¹²⁹ The answer is that neither the Proclamation, nor the Convention, found the basis of entitlement to the continental shelf in the notion of occupation. Title to the seabed does not need to be established, as it is intrinsically linked to the title to the land.

¹²⁶ Ibid., p.419.

¹²⁷ Ibid.

¹²⁸ In Shaw, footnote 102, p.490.

¹²⁹ See full text in *Annex*, Annexes I and II.

3.3.2. An inherent right to the seabed: the continental shelf is the natural prolongation of the land territory

The International Court of Justice (ICJ or the Court) read its judgment, on the *North Sea Continental Shelf* cases,¹³⁰ on 20 February 1969. The disputes, between Germany and the Netherlands, and Germany and Denmark, were brought to the attention of the Court in 1967.¹³¹

The situation reveals that the coasts of Germany, in the North Sea, are in a concave position, between the Netherlands, South, and Denmark, North, making the establishment of the maritime boundaries on the continental shelf, through negotiations, in accordance with equitable principle, and the Geneva Convention on the Continental Shelf, to which Germany was not a party, objectionable by the latter.

The disputes were brought to the ICJ by a letter submitted to the Court which requested, in a Special Agreement between the parties to the disputes, the ICJ to decide on the following question:¹³²

“[w]hat principles and rules of international law are applicable to the delimitation as between the Parties of the areas of the continental shelf in the North Sea which appertain to each of them beyond the partial boundary?”

The Court considers that the apportionment of a “just and equitable share” of the continental shelf area,¹³³ as supported by Germany, appears to be wholly at variance with the

¹³⁰ In *North Sea Continental Shelf cases*, footnote 79, p. 3.

¹³¹ Ibid., in p.6 of the Judgment: the Minister of Foreign Affairs of the Netherlands sent a letter on 16 February 1967 to the ICJ, whose Registry received on 20 February 1967.

¹³² Ibid., p.6: “Articles 1 to 3 of the Special Agreement between the Governments of Denmark and the Federal Republic of Germany [and the Governments of the Netherlands and the Federal Republic of Germany] are as follows: “Article 1 (1) The International Court of Justice is requested to decide the following question: What principles and rules of international law are applicable to the delimitation as between the Parties of the areas of the continental shelf in the North Sea which appertain to each of them beyond the partial boundary determined by the above-mentioned Convention of 9 June 1965 [and Convention of 1 December 1964]?”

¹³³ Ibid., §18, p.22.

most fundamental of all the rules of law relating to the continental shelf, as enshrined in article 2 of the Geneva Convention:¹³⁴

“namely that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources. In short, there is here an inherent right. In order to exercise it, no special legal process has to be gone through, nor have any special legal acts to be performed. Its existence can be declared (and many States have done this) but does not need to be constituted. Furthermore, the right does not depend on its being exercised. To echo the language of the Geneva Convention, it is ‘exclusive’ in the sense that if the coastal State does not choose to explore or exploit the areas of shelf appertaining to it, that is its own affair, but no one else may do so without its express consent.”

On the basis of article 2 of the Geneva Convention, the Court explains that the right in the seabed is inherent. Following the reasoning of the Court, an inherent title is a right that does not need to be constituted (“[i]ts existence can be declared [...] but does not need to be constituted”). This right does not need to be constituted because this right is an extension of the sovereignty of the State (“by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights”) over the land onto the seabed. The sovereignty over the land territory extends as sovereign rights in the seabed. The question is to know why the right over the land can extend in the seabed.

The Court explains that the continental shelf constitutes the natural prolongation of the land territory of the coastal State under the sea. Thus, the right that exists over the land territory extends onto the seabed.

In international law, title to a territory is based on occupation or one of the other modes of acquisition, as explained above. In the law of the sea, title to the seabed is not based on one of these classical modes of territorial acquisition but on the notion of natural

¹³⁴ Ibid., §19, p.22.

prolongation. The fact that the continental shelf is in the continuation¹³⁵ of the land gives to the adjacent coastal State a right to exercise certain activities in it.

Title to the continental shelf, based on the idea that the continental shelf represents the natural prolongation of the land territory, is enough to extend the basis of title of the land territory to the seabed. Right exists *ipso facto* and *ab initio* as the seabed is the extension of the land territory. Title extends from land to sea.

In fact, title to the continental shelf exists for as long as the state itself exists.¹³⁶ By the simple fact that the state is here its rights over the adjacent continental shelf are present as the latter is an extension of its land territory under the sea and explains why the rights over the continental shelf are inherent and exclusive.¹³⁷

The notion of natural prolongation of the land territory is further explained in the judgment of the ICJ. Sovereignty of the coastal State extends onto the continental shelf because of the notion of appurtenance:¹³⁸

“[t]he *a priori* argument starts from the position described in paragraph 19, according to which the right of the coastal State to its continental shelf areas is based on its sovereignty over the land domain, of which the shelf area is the natural prolongation into and under the sea. From this notion of appurtenance is derived the view which, as has already been indicated, the Court accepts, that the coastal State's rights exist *ipso facto* and *ab initio* without there being any question of having to make good a claim to the areas concerned, or of any apportionment of the continental shelf between different States.”

¹³⁵ See discussions at the ILC during the preparation of the reports to the UN General Assembly on issues concerning the law of the sea and the continental shelf in particular, in ILA Report, in footnote 67.

François reports in §58, p.11, that: “la Commission a considéré que le phénomène géographique de voisinage, de contiguïté, de continuité, de dépendance ou d'identité des régions sous marines avec le territoire contigu fournissait un fondement suffisant au principe des droits souverains de l'État riverain”.

¹³⁶ In Jennings, footnote 104, p.14 .

¹³⁷ Ibid., p.8 et s.

¹³⁸ §39, p.30.

Basis of title is founded in the notion of appurtenance. The seabed belongs to the coastal State because the seabed and the land form one block and since the coastal State has title to its land territory and since the seabed is the natural prolongation of its land territory, the coastal State has title also over the seabed.

In the law governing the continental shelf title is not founded in the continental shelf *per se*, the basis of title emanates from the land territory. In the law of the sea the land dominates the sea.

In accordance with the notion of the natural prolongation, the coastal State has, in the eyes of the Court, sovereignty over the land and its extension under the sea. Title exists over the continental shelf on the ground that the submarine areas represent a part of the territory of the coastal State on which the latter exercises sovereignty.

For the Court, sovereignty stretches where territory extends:¹³⁹

“More fundamental than the notion of proximity appears to be the principle- constantly relied upon by all the Parties- of the natural prolongation or continuation of the land territory or domain, or land sovereignty of the coastal State, into and under the high seas, via the bed of its territorial sea which is under the full sovereignty of that State. There are various ways of formulating this principle, but the underlying idea, namely of an extension of something already possessed, is the same, and it is this idea of extension which is, in the Court's opinion, determinant. Submarine areas do not really appertain to the coastal State because- or not only because- they are near it. They are near it of course; but this would not suffice to confer title, any more than, according to a well-established principle of law recognized by both sides in the present case, mere proximity confers *per se* title to land territory. What confers the *ipso jure* title which international law attributes to the coastal State in respect of its continental shelf, is the fact that the submarine areas concerned may be deemed to be actually part of the territory over which the coastal State already has dominion,- in the sense that, although covered with water, they are a prolongation or continuation of that territory, an extension of it under the sea.

¹³⁹ §43, p.31.

From this it would follow that whenever a given submarine area does not constitute a natural-or the most natural-extension of the land territory of a coastal State, even though that area may be closer to it than it is to the territory of any other State, it cannot be regarded as appertaining to that State;- or at least it cannot be so regarded in the face of a competing claim by a State of whose land territory the submarine area concerned is to be regarded as a natural extension, even if it is less close to it.”

The basis of title in the seabed emanates from legal title to land. As stated by the ICJ “[t]he land is the legal source of the power which a State may exercise over territorial extensions to seaward.”¹⁴⁰

Actually, ‘the land dominates the sea’ principle entails the existence of a maritime *façade* under which the land can extend as the seabed. As recalled by Prosper Weil, “maritime rights ‘have been based on two principles which have acquired an almost idiomatic force . . . : the land dominates the sea and it dominates it by the intermediary of the coastal front.”¹⁴¹

As confirmed by the ICJ, in the *Continental Shelf case*, 1985:¹⁴²

“What distinguishes a coastal State with [maritime] rights from a landlocked State which has none, is certainly not the landmass, which both possess, but the existence of a maritime front in one State and its absence in the other. The juridical link between the State’s territorial sovereignty and its rights to certain adjacent maritime expanses is established by means of its coast.”

In the law of the sea, title to the sea is justified by possession of title to the land and presence of a maritime front from which the seabed is a prolongation. The concept of natural prolongation, in article 76 paragraph 1 of UNCLOS, seems to reflect this notion.

¹⁴⁰ In *North Sea Continental Shelf cases*, footnote 79, §51, p.3.

¹⁴¹ Weil, P., *The Law of Maritime Delimitation*, Reflections (1989). Weil borrows the phrase “the land dominates the sea” from the North Sea judgment. North Sea, at p.51.

¹⁴² *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya v. Malta)* (Judgment) [1985] ICJ Rep. 13.

To conclude, in the course of the study of title to the continental shelf, we saw that the Truman proclamation asserts rights of jurisdiction and control for the economic uses of the natural resources of the seabed and subsoil of the continental shelf. The Proclamation proclaims claims a new right. However, a proclamation does not constitute a valid basis of title. The Geneva Convention recognises in law such rights but does not give in its provisions the basis of the sovereign rights of the coastal State in the continental shelf. It only states that the rights in the continental shelf are sovereign rights and that they are inherent.

In the *North Sea Continental Shelf* cases, the ICJ explains the basis of title thanks to the notion of appurtenance. The continental shelf forms one block with the land territory. The seabed is the continuity of the land under the sea and forms the geomorphological prolongation of the land. Since the coastal State has a legal title to exercise sovereignty over its land territory, it has, in application of the 'land dominates the sea' principle, an inherent title over the seabed.

3.4. Article 76 of UNCLOS: the natural prolongation of the land territory and the notion of geomorphological unity

Since title to the continental shelf is rooted in the concept of natural prolongation, the breadth of the continental shelf should reflect that notion and the outer limits set accordingly.

In the Geneva Convention, the outer limits were not settled. It was one of the reasons of the gathering of the Third United Nations Convention on the Law of the Sea (UNCLOS III) to establish outer limits to the continental shelf.

The natural prolongation means that the seabed is the continuation of the land under the sea and that the land territory and the seabed form one geomorphological block. Therefore, the seabed, to be included in the continental shelf, has to be the submerged prolongation of the land mass. The outer limits of the continental shelf should represent a natural extension of the land territory.

3.4.1. Arvid Pardo, UNCLOS III: the need to establish outer limits

At the time of the submission of the *North Sea Continental Shelf* cases to the ICJ, was brought to the attention of the United Nations General Assembly,¹⁴³ First Committee,¹⁴⁴ an exceptional agenda item on the “Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind”, by Ambassador of Malta to the United Nations.¹⁴⁵

In the context of the Cold War,¹⁴⁶ it was feared that the escalation of conflicts could bring the two blocks to use the continental shelf, adjacent to their coasts for military purposes.¹⁴⁷ As the 1958 Geneva Convention on the Continental Shelf did not set fixed outer

¹⁴³ The General Assembly is one of the six main organs of the United Nations, the only one in which all Member States have equal representation: one nation, one vote. All 193 Member States of the United Nations are represented in this unique forum to discuss and work together on a wide array of international issues covered by the UN Charter, such as development, peace and security, international law, etc. In September, all the Members meet in the General Assembly Hall in New York for the annual General Assembly session. See UNGA website available at <<http://www.un.org/en/ga/>>, last accessed 16 October 2019.

¹⁴⁴ The First Committee deals with disarmament, global challenges and threats to peace that affect the international community and seeks out solutions to the challenges in the international security regime. See First Committee functions at <<http://www.un.org/en/ga/first/index.shtml>>, last accessed 16 October 2019.

¹⁴⁵ UNGA, *22nd session*, First Committee, 1515th meeting, *1 November 1967, Official Records*, New York, *Agenda item 92*, in A/C.1/PV.1515, available at <<http://undocs.org/A/C.1/PV.1515>>, last accessed 16 October 2019.

¹⁴⁶ With the launch of the first nuclear-powered submarine, the USS Nautilus, by the USA, in January 1954, followed in 1962 by the Cuban Missile Crisis and the US naval blockade of the Cuban island that followed, the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, was welcomed by nations of the two blocks to alleviate the nuclear escalation and possible naval warfare. In this context, the call to reserve exclusively for peaceful purposes the seabed and ocean floor beyond the territorial waters was promoted and argued by Ambassador A. Pardo in its speech.

¹⁴⁷ A. Pardo speech, footnote 84, §5, p.1: “We [the Maltese government] have been following closely for some time developments in the field of oceanography and deep-sea capability and have been impressed by the potential benefits both to our country and to mankind if technological progress takes place in a peaceful atmosphere and within a just legal framework and, on the other hand, by the truly incalculable dangers for mankind as a whole were the sea-bed and ocean floor beyond present national jurisdiction to be progressively

limits, and discussions at UNCLOS II¹⁴⁸ failed to reach agreement on the breadth of maritime zone within national jurisdiction, the call of Ambassador of Malta to the United Nations, Arvid Pardo, raised some interest.

The question at stake in the debate at the General Assembly concerned the intensification and rapid extension of national appropriation and exploitation far beyond the shelf.¹⁴⁹ On the pretext of military and security reasons, in the context of the escalation of tensions in the Cold War, in the 1960s, coastal States tend to justify extension of the limits of their jurisdiction and control over the continental shelf, rapidly gaining areas beyond the shelf, towards the abyssal plain, with the risk of seeing all marine resources captured by a handful of nations with the technological abilities to reach such depth.

To the opinion of Arvid Pardo, and contrary to what was argued by the US,¹⁵⁰ leaving the legal regime of the continental shelf in the framework of the Geneva Convention would induce that the sea and ocean floor would quickly be monopolised, preventing access to all nations, impairing investment, exploration of depths and advancement in technology. As clearly put by A. Pardo, “the present juridical framework clearly encourages, subject to certain limitations, the appropriation for national purposes of the sea-bed beyond the geophysical continental shelf.”¹⁵¹

and competitively appropriated, exploited and used for military purposes by those who possess the required technology.”

¹⁴⁸ The Second United Nations Conference on the Law of the Sea (or UNCLOS II) was held in 1960.

Subsequent to the adoption of the 1958 Conventions on the Law of the Sea, at the first United Nations Conference on the Law of the Sea, the General Assembly requested the Secretary-General to convene a Second United Nations Conference on the Law of the Sea to consider the topics of the breadth of the territorial sea and fishery limits, which had not been agreed upon in the said Conventions (resolution 1307 (XIII) of 10 December 1958). The Conference was held from 17 March to 26 April 1960 and adopted two resolutions in its Final Act (A/CONF.19/L.15). Substantive decisions on the topics of the breadth of the territorial sea and fishery limits were deferred to a later stage. Information available at <http://legal.un.org/diplomaticconferences/1960_los/>, last accessed 16 October 2019.

¹⁴⁹ In *North Sea Continental Shelf cases*, footnote 79, §39, p.5

¹⁵⁰ See A. Pardo speech, in Introduction.

¹⁵¹ In *North Sea Continental Shelf cases*, footnote 79, §56, p.7.

The need for a definition of the continental shelf, of the extent of the possible limits of jurisdiction on the seabed and the ambit of the rights is at the core of the speech of Arvid Pardo. It is with these arguments in mind that was suggested the gathering of a new conference, to regulate the access to the seabed and ocean floor and the exploitation of their resources.¹⁵²

Following the general debate at the UN General Assembly, the later decided on 18 December 1967, by resolution 2340 (XXII), to establish an Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, consisting of thirty-six Member States.¹⁵³

The Ad Hoc Committee held three sessions during 1968, and presented its study (A/7230) to the General Assembly at its twenty-third session, in 1968. Having considered the report of the Ad Hoc Committee, the General Assembly adopted on 21 December 1968 resolution 2467 A (XXIII), by which it decided to establish a Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, consisting of forty-two Member States.¹⁵⁴

Subsequently, on 17 December 1970, the General Assembly decided by resolution 2750 C (XXV), to convene a third conference on the law of the sea in 1973, and instructed the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction to act as preparatory body for the conference.¹⁵⁵

¹⁵² Ibid., §§96-98, p.13 and §102, pp.13-14.

¹⁵³ See

<http://legal.un.org/docs/?path=../diplomaticconferences/1973_los/docs/english/res/a_res_2750_xxv.pdf&lang=E>, last accessed 16 October 2019.

¹⁵⁴ See UN Resolutions available at <<https://www.un.org/en/sections/documents/general-assembly-resolutions/index.html>>, last accessed 16 October 2019.

¹⁵⁵ See UNCLOS III, documents available at <http://legal.un.org/diplomaticconferences/1973_los/>, last accessed 16 October 2019.

The Committee held six sessions and a number of additional meetings in New York and Geneva between 1971 and 1973. On 18 December 1972, having considered the report on the Committee's work during its 1972 sessions (A/8721 and Corr.1), the General Assembly requested the Secretary-General to convene the first session of the Third United Nations Conference on the Law of the Sea in 1973 to deal with organizational matters, and a

The Conference, in which 160 states participated, held eleven sessions between 1973 and 1982.

The Conference allocated to the First Committee the topic of the international regime of the sea-bed and ocean floor beyond national jurisdiction, and to the Second Committee the topics of the territorial sea, the contiguous zone, the continental shelf, the exclusive economic zone, the high seas, land-locked countries, shelf-locked States and States with narrow shelves or short coastlines and the transmission from the high seas. The topic of the preservation of the marine environment was allocated to the Third Committee. The continental shelf was the study of the Second Committee under an informal single negotiating text.

The definition of the continental shelf and article 76 as we know it today were only discussed towards the end of UNCLOS III, in 1980.¹⁵⁶

second session in 1974, as well as subsequent sessions if necessary, to deal with substantive work (resolution 3029 (XXVII)). The Committee submitted its final report to the General Assembly at its twenty-eighth session, in 1973 (A/9021 and Corr.1 and 3). Having considered the report, the General Assembly requested the Secretary-General to invite States to the Conference, and decided that the mandate of the Conference was the adoption of a Convention dealing with all matters relating to the Law of the Sea (resolution 3067 (XXVIII) of 16 November 1973).

¹⁵⁶ At its third session, at the request of the Conference, the Chairmen of the three Main Committees each prepared an informal single negotiating text covering the subjects entrusted to their respective Committees, which together constituted the informal single negotiating text (A/CONF.62/WP.8, Parts I to III). At the following session, revised texts on the settlement of disputes (A/CONF.62/WP.9/Rev.1 and Rev.2) as well as a revised single negotiating text (A/CONF.62/WP.8 and Rev.1) were prepared. Thereafter, at its sixth session, the Conference requested the President and the Chairmen of the Main Committees, working under the President's leadership as a team with which the Chairman of the Drafting Committee and the Rapporteur-General were associated, which was subsequently referred to as "the Collegium", to prepare an informal composite negotiating text (A/CONF.62/WP.10), covering the entire range of subjects and issues contained in Parts I to IV of the revised single negotiating text. At its seventh session, the Conference identified certain outstanding core issues and established seven negotiating groups (A/CONF.62/62) for the purpose of resolving these issues (A/CONF.62/RCNG.1 and 2).

Subsequently, during the eighth session, a revision of the informal composite negotiating text was prepared (A/CONF.62/WP.10/Rev.1). The Conference took the decision to complete work on the Convention by 1980. During its ninth session, on the basis of the deliberations of the Conference (125th to 128th plenary meetings), the Collegium undertook a second revision of the informal composite negotiating text, presented as the informal composite negotiating text (A/CONF.62/WP.10/Rev.2). Following the deliberations of the Conference at its

The United Nations Convention on the Law of the Sea together with resolution I to IV, forming an integral whole, was provisionally adopted, subject to drafting changes, at the 182nd plenary meeting on 30 April 1982, by a recorded vote taken at the request of delegation of the United States of America.

On 10 December 1982, the Conference adopted the United Nations Convention on the Law of the Sea¹⁵⁷ (also called UNCLOS or the Convention) containing 320 articles and nine annexes.

The Convention was opened for signature, until 9 December, first at the Ministry of Foreign Affairs of Jamaica (from 10 December 1982), and then at the United Nations Headquarters in New York (from 1 July 1983).

Later in the 1990s, the General Assembly considered the agenda item entitled “The Law of the Sea” on 9 December 1993, and on 27 and 28 July 1994. By resolution 48/263 of 28 July 1994 the General Assembly adopted the Agreement relating to the implementation of

tenth and resumed tenth sessions (142nd to 155th plenary meetings), the Collegium prepared a revision of the draft convention on the law of the sea (A/CONF.62/L.78), which became the official draft convention of the Conference, subject only to the specific conditions recorded in document (A/CONF.62/114). At the subsequent session, on the basis of the deliberations of the Conference (157th to 166th plenary meetings) concerning the report of the President (A/CONF.62/L.86) and the reports of the Chairmen of the Main Committees (A/CONF.62/L.87, L.91 and L.92) on the negotiations conducted by them and the report of the Chairman of the Drafting Committee on its work (A/CONF.62/L.85 and L.89), the Collegium issued a memorandum (A/CONF.62/L.93) containing changes to be incorporated in the draft convention on the law of the sea (A/CONF.62/L.78), and document A/CONF.62/L.94 setting out three draft resolutions and a draft decision of the Conference which were to be adopted at the same time as the draft convention.

¹⁵⁷ *United Nations Convention on the Law of the Sea*, adopted 10 December 1982, entry into force 16 November 1994 (United Nations, *Treaty Series*, vol.1833, p.396): UN Treaty Series, No. 31363, MULTILATERAL, United Nations Convention on the Law of the Sea (with annexes, final act and procès-verbaux of rectification of the final act dated 3 March 1986 and 26 July 1993). Concluded at Montego Bay on 10 December 1982 Authentic texts: Arabic, Chinese, English, French, Russian and Spanish. Registered *ex officio* on 16 November 1994.

Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982,¹⁵⁸ consisting of ten articles and nine annexes.

The United Nations Convention on the Law of the Sea entered into force twelve months after the deposit of the sixtieth instrument of ratification, on 16 November 1994. The Agreement relating to the implementation of Part XI of the Convention entered into force on 28 July 1996, thirty days after the deposit of the fortieth instrument of ratification.

3.4.2. Article 76 of UNCLOS: continuity of the land territory and geomorphological unity of the land mass and the submarine areas

Article 76 of UNCLOS states in its first three paragraphs that:¹⁵⁹

- “1. The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.
2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.
3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.”

Article 76 of UNCLOS refers to the concept of continuity between the land and the seabed and geographical unity to found the right to the continental shelf. In accordance with

¹⁵⁸ UNTS, No. 31364, MULTILATERAL, Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (with annex). Adopted by the General Assembly of the United Nations on 28 July 1994 Authentic texts: Arabic, Chinese, English, French, Russian and Spanish. Registered ex officio on 16 November 1994.

¹⁵⁹ See full text in *Annex*, Annex III.

the *North Sea Continental Shelf cases*, in article 76 of UNCLOS title to the seabed may be founded in the notion of continuity and geographical unity:¹⁶⁰

“The inadequacy of the notion of occupation as the basis of the legal right to the submarine areas brings into prominence the alternative solution, namely, that of the principle of contiguity or, which is probably the same, of continuity. In so far as the various proclamations and enactments have attempted to specify the legal grounds on which they are based, most of them have invoked, in addition to other reasons, the principle-or the fact -of contiguity and geographical unity.”

In the *North Sea Continental Shelf cases*, title “appears to be not continuity in the accepted sense, i.e. as connoting horizontal prolongation of the already occupied territory, but a different, and apparently more intense, degree of unity-a unity provided by the fact that the shelf is supposed to constitute the base, the platform, on which the continent rests.”¹⁶¹ The notion of continuity offers more than a simple basis of title. It strengthens the appurtenance of the coastal State over the seabed. In the notion of continuity does not only lie the notion of adjacency, but also the notion of physical identity.¹⁶² The continental shelf is not only in the vicinity, or proximity, of the coast, it also is the geographical continuation of the land mass.

This would explain why the coastal State does not have to express any proclamation or make any occupation of the continental shelf. It explains that the right in the continental shelf exists *ipso facto* and *ab initio*:¹⁶³

“That view underlies the conception, referred to above, of the submarine area in general and the continental shelf in particular, as being the platform, the base-as it were-on which the continent rests. This conception of unity, as distinguished from mere contiguity, underlies also the principal geographical explanations of the phenomenon of the continental shelf. One of these explanations is that the continental shelf originally formed part of the territorial domain of the littoral state from which it has been detached by maritime

¹⁶⁰ In Lauterpacht, footnote 66, p.423.

¹⁶¹ Ibid , p.423 et s.

¹⁶² Ibid.

¹⁶³ Ibid., p.430.

attrition. Under that view the formal appropriation of the continental shelf is no more than a case of restitution *in integrum* in favour of the state asserting its pre-existing right over its own territory.”

As control of the continental shelf is exercised from land, and that such control becomes less effective farther at sea, the sovereign rights are gradually restricted. Since the continental shelf is a part of the territory of the coastal State its sovereign rights apply therein and the outer limits of the continental shelf mark the end of the powers of jurisdiction and control of the coastal State. The breadth of the continental shelf should thus reflect the sovereign powers of the coastal State.

The outer limits of the continental shelf are based, in accordance with the legal basis of title in the seabed, which is the concept of the natural prolongation of the land territory, on the location of the outer edge of the continental margin. However, the provisions of article 76 of UNCLOS also indicate that the outer limits may not always follow the configuration of the margin, such as in the case of a narrow margin, where the 200-M line applies, or such as in the case of a wide margin, where constraint lines cut off the last portion of the margin.

In cases where there is no margin in the submarine areas off the coast of a State, the literal implication of establishing the outer limits on the outer edge of the margin would mean that these coastal States would be deprived of access to the submarine areas beyond their territorial sea. As a matter of fact, the continental shelf is defined by reference to technical notions in the field of geo-sciences but also in reference to the abstract notion of distance.

As Lauterpacht puts it:¹⁶⁴

“Essentially, the problem which has arisen in connection with the continental shelf raises not only the question of application of existing international law but also of its adaptation to a situation which at the beginning of the twentieth century was not considered-if it was considered at all-to be within the realm of practical possibility. Accordingly, while account must be taken of such law as there is on the subject, the latter is only one factor in the situation. The other, equally essential, test is that of legitimate interests of states, viewed in the light

¹⁶⁴ Ibid.

of reasonableness and fairness, and of the requirements of the international community at large.”

However, the rights of States to exercise sovereign rights in the continental shelf shall not be dependent on the existence of a continental margin. Any other solution would be unjust for coastal States who have no margin extending off their coast.

The concept of the natural prolongation of the land territory entails a two-fold idea. It entitles to the seabed, which represents its prolongation, and constrains the breadth of the continental shelf, to form a natural extension.

In describing the process of delineation, we have noticed that the outer edge of the continental margin does not always constitute the outer limits of the continental shelf. In some cases the outer edge is too narrow and lies within 200 M, in others it is too wide and lies beyond the constraint lines.

On the one hand, when the continental margin extends beyond 200 M, the outer limits of the continental shelf may be constrained up until 350 M or 100 M from the 2,500 metre-isobath,¹⁶⁵ excluding from the seabed a part of the submerged prolongation of the land mass that is relinquished and becomes a part of the deep ocean floor, although it is a prolongation of the land mass. In that case the continental shelf will not include the whole of the margin. Constraint lines cut off the outermost part.

On the other hand, it is intriguing to notice that, under article 76 paragraph 1, when the outer edge of the continental margin does not reach 200 M, there may be a portion of the seafloor that is included within the jurisdiction of the continental shelf although it is not a part of the submerged prolongation of the land mass.

In fact, when the continental margin does not extend beyond 200 M, the continental shelf will yet extend up until 200 M, although the submerged prolongation of the land mass stops before that line,-including between the edge of the margin and the 200-M line a part of the seafloor that would otherwise be part of the deep ocean floor.

¹⁶⁵ Article 76 of UNCLOS §6.

In both cases, the continental shelf does not correspond to the continental margin. To what is it due? Why constraint lines apply in one case and the 200-M line in the other? We could think that, contrary to the application of constraint lines to a wide margin that serves the purpose of cutting off the last portion lying far at sea, the 200-M line serves the purpose of adding a portion of submarine areas to the continental shelf to fit a certain breadth, to correspond to a certain distance.

The continental shelf comprises the seabed and subsoil of the submarine areas that extend beyond the territorial sea throughout the natural prolongation of the land territory, normally, to the outer edge of the continental margin.¹⁶⁶ If the continental shelf thus does not extend up to the outer edge of the margin, would it be because the outermost portion does not represent the natural prolongation of the land territory of the coastal State? If the 200-M line applies in cases where the outer edge does not reach that distance, isn't it to represent the natural prolongation of the land territory of the coastal State?

It seems that, in the end, the notion of the natural prolongation of the land territory is not only the basis of title to the seabed but also a factor playing a role in the location of the outer limits.¹⁶⁷

The sovereign powers over the seabed can only stretch as much as the coastal State can exercise, control and legitimate its jurisdiction over it.¹⁶⁸ On the seabed, the outer edge

¹⁶⁶ Article 76 of UNCLOS.

¹⁶⁷ In *Bay of Bengal case*, footnote 36, §432, p.113: "By contrast, no elaboration of the notion of natural prolongation referred to in article 76, paragraph 1, is to be found in the subsequent paragraphs. In this respect, the Tribunal recalls that, while the reference to natural prolongation was first introduced as a fundamental notion underpinning the regime of the continental shelf in the North Sea cases, it has never been defined."

¹⁶⁸ *Ibid.*, §455, p.117 : "Accordingly, the equidistance/relevant circumstances method continues to apply for the delimitation of the continental shelf beyond 200 nm. This method is rooted in the recognition that sovereignty over the land territory is the basis for the sovereign rights and jurisdiction of the coastal State with respect to both the exclusive economic zone and the continental shelf. This should be distinguished from the question of the object and extent of those rights, be it the nature of the areas to which those rights apply or the maximum seaward limits specified in articles 57 and 76 of the Convention."

shows the extent of the continental margin. The margin serves as a yardstick with which the breadth of the continental shelf will be established:²¹⁶

“[t]he legal concepts of territory and continental shelf, however, are defined with reference to the scientific concepts of land mass and continental margin. In other words, the two definitions combined declare that (i) the territory of a coastal State extends under water; (ii) the continental shelf constitutes the submerged prolongation of its land territory; and (iii) the outer limit of such prolongation is measured **with reference** to the submerged prolongation of the land mass, ie the “continental margin”. The continental margin is just a yardstick, **a reference**, for the determination of the “legal” continental shelf. Depending on the various geomorphological circumstances the “legal” continental shelf can be wider or narrower than the continental margin.”

However, the continental shelf does not always supersede to it. The continental margin is the geological submerged prolongation of the land mass. Its extent varies from location to location as its features may have a great impact on the location of the outer edge. The continental shelf is a maritime zone whose outer limits depict the limit of the jurisdiction of a coastal State on the seabed, as well as the boundary with the Area.¹⁶⁹ Its outer limits cannot be solely based on such a variable factor as the outer edge.

Whereas the continental margin is a geological concept based on the idea that the margin is the geological mass that prolongs the continents under water, the continental shelf is a legal concept that revolves around the idea that the continental shelf is a maritime zone whose limits are established in relation to what can be perceived a natural extension of the territory of the coastal State on the seabed.

The natural prolongation concept would reflect the principle that the land dominates the sea:¹⁷⁰

²¹⁶ See Training Manual, footnote 42, I-18, where bold characters are used.

¹⁶⁹ Article 134 of UNCLOS..

¹⁷⁰ In *Bay of Bengal case*, footnote 36, §433, p.113: “The Tribunal further observes that during the Third United Nations Conference on the Law of the Sea the notion of natural prolongation was employed as a concept to lend support to the trend towards expanding national jurisdiction over the continental margin.”

“[o]ne of the fundamental components of a State, together with its population and government, is its territory. The land territory is the emerged part whereas the continental shelf is the submerged part or, as the definition puts it, the natural prolongation of the land territory”.²¹⁵

The continental margin is seen as the submerged prolongation of the land mass, upon which inherent title exists due to continuity with the land, while the continental shelf is the maritime zone attributed to all coastal States independently of the nature of the seabed. The continental shelf is thus the natural prolongation of the land territory and its extent represents the stretch of sovereignty over the seabed. It can only be justified until a certain extent.

In the case of land, *effectivité* of control is used to determine jurisdiction. On the seabed, control is more difficult to assess and the jurisdiction will exist by reflection of the jurisdiction on land. In the case of the seabed, since the latter is the extension of the land territory in law and the land mass in geology, element of geology will be limited by legal principle.

Therefore, it would appear that submerged prolongation and natural prolongation would not be always synonym as nature needs to be repaired by law. The prolongation of the land mass may not correspond to the stretch of sovereignty of the coastal State over the seabed, by resonance of the land dominates the sea principle.¹⁷¹ The submerged prolongation is limited by the notion of the natural prolongation of the land territory.

Geological facts are used to evaluate the extent of the jurisdiction but the state of nature is limited by legal perception of fairness and legitimate shares of seabed areas between coastal States.¹⁷² What part of the submerged prolongation may not be perceived a natural prolongation of the land territory of a coastal State on the seabed is cut off from the limits of the maritime zone. The constraint lines play this role of limitation.

²¹⁵ See Training Manual, footnote 42, I-18.

¹⁷¹ See Chapter 2.

¹⁷² In Lauterpacht, footnote 66, p.376.

To conclude, within the notion of the natural prolongation of the land territory does not only lie the notion of title and access to the seabed but also of the extent of the jurisdiction over the seabed attributed to every coastal State. The submerged prolongation of the land mass should become the continental shelf, but when the submerged prolongation is too narrow or too wide its extent may not always be considered a legitimate prolongation. That is why the outer limits of the jurisdiction cannot be solely based on geology. Legal notions come to balance the unfair state of nature.

Nature is not fair; nature is a matter of factual situations. When nature attributes to each coastal State a different factual situation, here a narrow shelf, there a wide one, law should give equal rights to access to the seabed.¹⁷³ While the definition of the continental margin is interesting to ground the concept of title over the seabed, it may not bring a fair solution in law.

The margin is the prolongation of the land under the sea and. When the submarine areas are recognised to be the geomorphological continuity of the land mass, they are then considered to be the submerged prolongation of the land mass. However, the submerged prolongation may not always give a fair prolongation in the eyes of the law.

The submarine areas that are included in the continental shelf must represent the submerged prolongation of the land mass and a natural prolongation of the land territory. The submarine areas can be included in the continental shelf only and in as much as they represent a geomorphologic unit with the land mass. In turns, the submerged prolongation of the land mass is included in the continental shelf as long as it represents the natural prolongation of the land territory.

3.6 Conclusion

As a conclusion, it can be said that the concept of the natural prolongation of the land territory entails a two-fold idea. It entitles to the seabed (the inherent right over the continental shelf are explained by the fact that the seabed is the natural prolongation of the land territory) and constrains the breadth of the continental shelf.

¹⁷³ See Article 77 of UNCLOS.

Based on that concept, the submarine areas can be included in the continental shelf only and in as much as they represent a geomorphologic unit with the land mass. The submerged prolongation of the land mass is part of the continental shelf as long as it represents the natural prolongation of the land territory.

The submerged prolongation of the land mass is based on the notion of geomorphological prolongation of the land mass under the sea. Thus, the features that are included in the continental shelf should form the continuation of the land territory, not more, not less.

Hence, the need to scrupulously scrutinize the methodology used by coastal States in the establishment of the outer limits, to make sure that the submarine areas included are indeed the submerged prolongation of the land mass.

Chapter 4- DELINEATION: IN SEARCH OF THE LIMIT TO THE SUBMERGED PROLONGATION OF THE LAND MASS

4.1. Introduction

The methodology to establish the outer limits of the continental shelf is set in article 76. Article 76 of UNCLOS is one of a kind. Contrary to other articles of the Convention that deal with the breadth of maritime zones, article 76 does not set the outer limits of the continental shelf by the measurement of a single fixed distance from the baselines, but by a set of technical provisions where law and science intertwine.¹⁷⁴ How are the outer limits established?

The delineation of the outer limits of the continental shelf beyond 200 M has to be done by the coastal State in accordance with article 76 of UNCLOS.¹⁷⁵ The outer limits should be submitted to the Commission on the Limits of the Continental Shelf (the Commission or CLCS), according to article 76 paragraph 8.

In accordance with article 3 of Annex II to UNCLOS, the functions of the CLCS are to consider data and information submitted by coastal States and make recommendations in accordance with article 76 of UNCLOS and the Statement of Understanding adopted on 29 August 1980 by UNCLOS III and annexed to the Final Act to the Convention; and to provide scientific and technical advice to coastal States during the preparation of the data.¹⁷⁶

The CLCS, in accordance with article 76 paragraph 8, shall make recommendations to coastal States on matters related to the establishment of the outer limits of the continental shelf. The limits of the shelf established by a coastal State on the basis of the recommendations shall be final and binding.¹⁷⁷

¹⁷⁴ See diagrams to illustrate the delineation of the outer limits of the continental shelf, in *Annex*, Annex VI.

¹⁷⁵ See the full text of the article in *Annex*, Annex III.

¹⁷⁶ See Article 3 of Annex II to UNCLOS, and the Statement of Understanding, in *Annex*, Annex III.

¹⁷⁷ Article 76 of UNCLOS §8.

To delineate the outer limits coastal States follow technical steps as enacted by article 76 and refer to the geo-sciences methodologies¹⁷⁸ of the Commission in its Scientific and Technical Guidelines (the Guidelines).¹⁷⁹ In accordance with the functions of the CLCS, the Commission has elaborated guidelines relating to the collection of data and the use of scientific methodologies.

These Guidelines are a document prepared for the purpose of providing direction to coastal States which intend to submit data and other material concerning the outer limits of the continental shelf and clarify the scope and depth of admissible scientific and technical evidence to be examined by the Commission during its consideration of each submission for the purpose of making recommendations.²⁸⁹

The Guidelines are accompanied by a Training Manual for delineation of the outer limits of the continental shelf beyond 200 nautical miles and for preparation of submissions to the Commission on the Limits of the Continental Shelf (Training Manual) which provides details on the provisions of the Guidelines.¹⁸⁰ The CLCS has produced a flow chart¹⁸¹ showing the entire procedure a coastal State has to follow to delineate the outer limits of the continental shelf in accordance with article 76 of the Convention.

The first step of the delineation process consists in locating the outer edge of the continental margin (4.2. and 4.3.). If the outer edge of the margin lies within 200 M from the baselines, the outer limits follow the 200-M line. If the outer edge of the margin extends beyond 200 M from the baselines the geomorphological characteristics of the submarine areas will be examined.

Only the submarine areas that represent the submerged prolongation of the land mass are included in the continental margin (4.4. and 4.5.). The outer limits that are delineated by

¹⁷⁸ See Scientific and Technical Guidelines (CLCS/11), footnote 34, reproduced in *Annex*, Annex IV.

¹⁷⁹ *Ibid.*

²⁸⁹ *Ibid.*, §1.2.

¹⁸⁰ See Training Manual, footnote 42.

¹⁸¹ See CLCS/11/Add.1, in *Annex*, Annex IV, Master Flowchart.

the coastal State in accordance with the recommendations of the CLCS are final and binding (4.6.).

4.2. Identification of the foot of the slope: paragraph 4 subsection (b)

Article 76 of UNCLOS sets the method to establish the outer limits of the continental shelf. From the perspective of article 76 paragraph 1, the natural prolongation of the land territory goes, beyond the territorial sea, to the outer edge of the continental margin or to the 200-M line.

To know whether the outer edge extends beyond 200 M, paragraph 4 of article 76 establishes formulae to locate the foot of the continental slope and from that point calculate the outer edge of the margin. Wherever the outer edge is located, in application of the test of appurtenance,¹⁸² beyond 200 M, the outer limits will have to be delineated in accordance with the following provisions of article 76 of UNCLOS.

The continental margin is defined by assessing the profile of the submerged prolongation of the land mass according to paragraph 3 of article 76:¹⁸³

“3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.”

It can be noted that, according to paragraph 3 of article 76, the continental margin is defined according to its three geomorphological components: the shelf, the slope and the rise. Article 76 paragraph 3 does not indicate where the continental margin ends.

It is actually thanks to paragraph 4 that the coastal State can locate the outer edge of the continental margin.

¹⁸² See CLCS/11, footnote 34, §2.2.

¹⁸³ Article 76 of UNCLOS.

4.2.1. Article 76 paragraph 4 and the 'test of appurtenance'

The delineation of the outer limits relies on the location of the outer edge, as mentioned in article 76 paragraph 1. The method to locate the outer edge of the continental margin is to be found in article 76 paragraph 4. The test of appurtenance¹⁸⁴ is enshrined in the *chapeau* of article 76, paragraph 4, subsection (a) and consists in finding the outer edge of the continental margin by locating the foot of the continental slope.

Article 76, paragraph 4 states that:¹⁸⁵

4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.”

The Commission on the Limits of the Continental Shelf is the competent body to assess data submitted by coastal States and make recommendations on the outer limits of the continental shelf.¹⁸⁶ Before assessing the delineation of the outer limits, the CLCS should firstly examine whether the outer edge extends beyond 200 M, according to the *chapeau* of paragraph 4.

¹⁸⁴ CLCS/11, footnote 34, article 76 of UNCLOS §4 (*chapeau*) refers to the “test of appurtenance”.

¹⁸⁵ See UNCLOS article 76§4.

¹⁸⁶ Article 76 of UNCLOS. §8 and Annex II to UNCLOS, article 3.

This process is technical and requires the application of certain scientific methodologies. In its Scientific and Technical Guidelines, the CLCS clarifies the scope and depth of admissible scientific and technical evidence that can be brought to support the location of the outer edge and the outer limits.¹⁸⁷ These Scientific and Technical Guidelines form the basis for the assessment of data and information by the Commission and the making of recommendations to coastal States.

Looking at how the Commission interprets articles 76 in its Recommendations to coastal States is relevant to our study in so far as it shows how the CLCS applies the provisions of article 76. In its Guidelines, the CLCS lays down the definition and purpose of the “test of appurtenance”.¹⁸⁸ The Commission first attempts to define article 76 paragraph 1 and the criterion of delineation before defining the test of appurtenance.

In the view of the Commission:¹⁸⁹

“[a]rticle 76, paragraph 1 establishes the rights of coastal States to determine the outer limits of the continental shelf by means of two criteria based *on either natural prolongation or distance* (emphasis added).”

It then adds that:¹⁹⁰

“[p]aragraph 4 (a) suggests the formulation of a test of appurtenance *in order to entitle* a coastal State to extend the outer limits of the continental shelf beyond the limits set by the 200-nautical-mile distance criterion. (emphasis added).”

¹⁸⁷ See CLCS/11, footnote 34, §1.2: “The Commission prepared these Guidelines for the purpose of providing direction to coastal States which intend to submit data and other material concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured. The Guidelines aim to clarify the scope and depth of admissible scientific and technical evidence to be examined by the Commission during its consideration of each submission for the purpose of making recommendations.”

¹⁸⁸ *Ibid.*, see in *Annex*, Annex IV. Full text available at

<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N99/171/08/IMG/N9917108.pdf?OpenElement>, last accessed 16 October 2019.

¹⁸⁹ See CLCS/11, footnote 34, §2.1.1.

¹⁹⁰ *Ibid.*, § 2.1.2.

Before defining what the test of appurtenance is, the CLCS establishes the rights of coastal States to determine the outer limits of the continental shelf by means of two criteria.

It seems, by following the reasoning of the CLCS, that they are enshrined, in article 76 paragraph 1, two criteria whose mark of separation is the comma, situated before “or”, implicating that “throughout the natural prolongation of its land territory to the outer edge of the continental margin” would be the natural prolongation criterion, and the rest of the sentence, “or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance”, the distance criterion.¹⁹¹

The CLCS defines the test of appurtenance as:¹⁹²

“[t]he process¹⁹³ by means of which the above provision [of article 76 paragraph 4] is examined. The test of appurtenance is *designed to determine the legal entitlement of a coastal State to delineate the outer limits of the continental shelf throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breath of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. (emphasis added)*”

The Commission then goes on to describe the process by which a coastal State passes the test:¹⁹⁴

“[i]f a State is able to *demonstrate* to the Commission that *the natural prolongation of its submerged land territory to the outer edge of its continental margin extends beyond the 200-nautical-mile distance criterion*, the outer limit of its continental shelf can be delineated by means of the application of the complex set of rules described in paragraphs 4 to 10. (emphasis added)”

¹⁹¹ In *Bay of Bengal case*, footnote 36, §428, p.112.

¹⁹² See CLCS/11 footnote 34, § 2.2.2.

¹⁹³ Ibid.

¹⁹⁴ Ibid., §2.2.3.

It then adds that:¹⁹⁵

“[i]f, on the other hand, a State *does not demonstrate* to the Commission that *the natural prolongation of its submerged land territory to the outer edge of its continental margin extends beyond the 200-nautical-mile distance criterion*, the outer limit of its continental shelf *is automatically delineated up to that distance* as prescribed in paragraph 1. In this case, coastal States do not have an obligation to submit information on the limits of the continental shelf to the Commission, not is the Commission entitled by the Convention to make recommendations on those limits. (emphasis added)”

For the Commission, the outer limits of the continental shelf of coastal States are determined either by natural prolongation or distance. The term natural prolongation means that the submarine areas should represent the submerged prolongation of the land mass to be included in the continental shelf and the outer limits should follow the contour of the margin.

The Commission says that to delineate the outer portion of the continental shelf in accordance with the provisions of article 76, coastal States need to prove that the margin extends beyond 200 M from the baselines by passing the test of appurtenance. It would appear that the Commission deducts from the reading of the *chapeau* that the “test of appurtenance” of article 76 serves the purpose of *entitlement* to the continental shelf beyond 200 M. Passing the test would be the *sine qua non* to get entitled to the specific method of delineation for the outer continental shelf.

According to the Scientific and Technical Guidelines of the CLCS, the ‘test of appurtenance’ is defined as the process by means of which the provision of article 76 paragraph 4 is examined.¹⁹⁶ In the terms of the Commission, the test of appurtenance is “designed to determine the legal entitlement of a coastal State to delineate the outer limits of the continental shelf throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which

¹⁹⁵ Ibid. §2.2.4.

¹⁹⁶ Ibid. §2.2.2.

the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.”¹⁹⁷

The Commission adds that “[i]f a State is able to demonstrate to the Commission that the natural prolongation of its submerged land territory to the outer edge of its continental margin extends beyond the 200-nautical-mile distance criterion, the outer limit of its continental shelf can be delineated by means of the application of the complex set of rules described in paragraphs 4 to 10.”¹⁹⁸

However, the process of passing the test of appurtenance does not confer title to the outer continental shelf. As the Commission itself explains it above, the purpose of the test of appurtenance is to *demonstrate* that the margin extends beyond 200 M and therefore that the delineation process of article 76 is applicable. The test of appurtenance’s purpose is to find out the location of the outer limits.

What the test will show is where the outer edge of the margin stops and where the outer limits of the continental shelf should stop accordingly, that is to say on the 200-M-outer-limit line or on the outer edge of the continental margin.¹⁹⁹ By application of article 76 paragraph 4, the test assesses the submerged prolongation of the land mass to find out where it ends. The test and article 76 paragraph 4 are the technical implementation of paragraph 1 to 3, in order to define the extent of the continental margin and the subsequent breadth of the continental shelf.²⁰⁰ Paragraph 4 does not deal with legal concepts but with the implementation of geomorphological and geological methodologies to find out the extent of the physical continental margin.

In the context of examining whether the test of appurtenance is passed, the CLCS verifies that the submarine areas that are included in the outer portion of the continental shelf are the physical submerged prolongation of the land mass. It is important to highlight that this

¹⁹⁷ Ibid. §2.2.2.

¹⁹⁸ Ibid. § 2.2.3.

¹⁹⁹ In *Bay of Bengal case*, footnote 36, §437, p.114.

²⁰⁰ Article 76 of UNCLOS §§ 1- 4.

assessment does not confer title to the outer portion, as the continental shelf is one single unit and has always constituted the extension of the land under the sea.

The aim of the test of appurtenance is to trigger the specific method of delineation applicable to the continental shelf beyond 200 M. If the test is positive and the outer edge of the margin extends beyond 200 M, the submarine areas that are deemed to constitute the submerged prolongation of the land mass will be delineated according to the specific method of delineation.

To conclude, entitlement, as formulated by the CLCS, does not mean the process of attributing legal title to the outer portion of the shelf, it rather means that passing the test of appurtenance is the parameter through which the breadth of the continental margin is examined. To pass the test means that the continental shelf has to be delineated according to the following provisions of article 76. The test proves that the continental shelf can be delineated in accordance with article 76.

In fact, when the CLCS examines the application of the foot of the slope and formulae lines, according to paragraph 4, it assesses the natural prolongation of the land territory: it verifies, in its role of technical expert, that the location of the foot of the slope and the calculation of the outer edge of the continental margin are the submerged prolongation of the land mass. The CLCS checks that the submarine areas included into the continental margin represent really the geomorphological or geologic continuation of the land mass under the sea, and are not a part of the deep ocean floor.²⁰¹

4.2.2. The maximum change in the gradient at the base of the slope

Article 76 paragraph 4 does not establish the outer edge of the continental shelf directly. In application of subsections (a) (i) and (ii), the foot of the slope is found then the outer edge is calculated accordingly.

The first step in the delineation process is to locate the foot of the slope, according to article 76 paragraph 4 subsection (b), “[i]n the absence of evidence to the contrary, the foot of

²⁰¹ Article 76 of UNCLOS §3.

the continental slope shall be determined as the point of maximum change in the gradient at its base.”²⁰² These provisions indicate that the foot of the slope is defined by the maximum change in the gradient at the base of the continental slope. It is the default method to locate the foot of the slope.²⁰³ According to these provisions, the coastal State should first identify the base of the slope, then the foot of the slope within that region.

According to the Guidelines, the base of the slope is the “region where the lower part of the slope merges into the top of the continental rise, or into the top of the deep ocean floor where a continental rise does not exist.”²⁰⁴

To identify the base of the slope, the CLCS recommends that the search should be carried out by means of a two-step approach:²⁰⁵

“First, the search for its seaward edge should start from the rise, or from the deep ocean floor, in a direction towards the continental slope; secondly, the search for its landward edge should start from the lower part of the slope in the direction of the continental rise, or the deep ocean floor where a rise is not developed.”

Bathymetric and geological data provide the evidence to be used in the geomorphological analysis conducted to identify the region defined as the base of the continental slope.²⁰⁶

The submission to the CLCS of the data and information concerning Ascension Island, in the Atlantic Ocean, highlights very well the process of finding the base of slope.²⁰⁷

²⁰² Article 76 of UNCLOS §4.

²⁰³ In CLCS/40, footnote 34, §§5.

²⁰⁴ *Ibid.*, §5.4.5.

²⁰⁵ *Ibid.*

²⁰⁶ *Ibid.*, §5.2.1.

²⁰⁷ See *Summary of Recommendations of the Commission on the Limits of the Continental Shelf* in Regard to the Submission made by the United Kingdom of Great Britain and Northern Ireland in Respect of Ascension Island on 9 May 2008 (15 April 2010), p.36 et s., at §49.

The United Kingdom places the base of the slope in the ocean basin floor, west of the Mid-Atlantic Ridge. According to the UK, the Ascension Island “is an integral part of the Mid-Atlantic Ridge and its natural prolongation fundamentally extends to, and along that ridge.”²⁰⁸ Therefore, the UK identifies the base of the slope at the points where “the westward-dipping seafloor meets the deep abyssal plain of the western South Atlantic Ocean”.²⁰⁹

For the CLCS the base of the slope zone lies at the bottom of the Ascension Island edifice:²¹⁰

“the application of paragraph 5.4.5 of the Guidelines places the base of the slope of Ascension Island at the bottom of the volcanic edifice, and not within the central valley or the fracture zones of the MAR [Mid-Atlantic Ridge]. (bracket added)”

As a consequence, in the present case, Ascension Island’s edifice sits directly on deep ocean floor, with the base of the slope being situated right down the island.²¹¹ In this case, the fact that the base of the foot of the slope is situated at the bottom of the edifice has a consequence on the location of the foot of the slope, as it relocates the foot within 200 M from the baselines and thus does not allow the UK to establish outer limits of its continental shelf beyond 200 M.

The only accurate method of defining the continental shelf is to consider it as lying between the shore and the first substantial fall-off-on the seaward side-whatever its depths.²¹²

²⁰⁸ Ibid. §31.

²⁰⁹ Ibid. §35.

²¹⁰ Ibid. at 48.

²¹¹ See reproduction of diagram in *Annex*, Annex VI, in Recommendation of the CLCS concerning the UK (Ascension Island).

²¹² In Lauterpacht, footnote 66, p.382-84, citing Bourcart, *Géographie du fond des mers. Etude du relief des océans*, p. 130.

The maximum change in the gradient represents the substantial fall-off.²¹³ The determination of the location of the point of maximum change in the gradient at the base of the slope is to be conducted by means of mathematical analyzes.²¹⁴ The continental slope can be determined on the basis of morphological and bathymetric evidence.²¹⁵ Where more than a single change in the gradient is located at the base of the slope, the CLCS recognises as a general rule the selection of the point of maximum change in the gradient as the method to identify the location of the foot of the slope.²¹⁶

To conclude, to locate the foot of the slope is an arduous task but of the most importance. From the foot of the slope is calculated the outer edge and the possibility of the application of the specific method of delineation that concerns the establishment of the outer limits beyond 200 M, enshrined in article 76 of UNCLOS.

In the foot of the slope lies the notion of the submerged prolongation of the land mass. To locate the maximum change in the gradient at the base of the slope means to locate the region, on the profile of the seabed, that marks the end of the geomorphological unity with the land mass. Geomorphology, but also geology and geophysics, can be used to verify that the submarine areas that are situated landward from the foot of the slope actually form the submerged prolongation of the land mass. Through this operation, the CLCS verifies that the test of appurtenance is passed.

As nature is unique and each situation is particular, the foot of the slope cannot be found through the application of a single unique method, but will depend on each case, data and methodologies provided by coastal States.²¹⁷ The difficult point is to locate the base of the slope, that is to say the region “where the lower part of the slope merges into the top of the

²¹³ Ibid., referring to the Memorandum of the Secretary-General, A/CN. 4/32, p. 50: the French expression “La première rupture de pente” was defined by Bourcart, and further used in the ILC Report, 1950 upon which the Geneva Convention was drawn.

²¹⁴ In CLCS/11, footnote 34, §5.4.7.

²¹⁵ Ibid., §5.4.6.

²¹⁶ Ibid., 5.4.12.

²¹⁷ Ibid., §5.4.3.

continental rise, or into the top of the deep ocean floor where a continental rise does not exist.”²¹⁸

This actually consists, in a two-step approach, to search for the seaward edge of the slope and its landward edge²¹⁹, evidenced, if possible, on the basis of morphology and bathymetry.²²⁰ In case where there may be more than a single change in the gradient at the base of the slope, the maximum change qualifies.²²¹ Other changes in the gradient will be considered exception, which could be used only if justified through a different methodology.

4.2.3. The evidence to the contrary

The Scientific and Technical Guidelines of the CLCS notes that the Commission “is bound by this provision to examine all additional evidence provided by a coastal State for the identification of alternative points to locate the foot of the continental slope.”²²² The selection of any other local change in the gradient at the base of the slope will be regarded as an exception. The justification for the application of this exception will require the presentation of evidence to the contrary to the general rule.²²³

²¹⁸ Ibid., §5.4.5.

²¹⁹ Ibid., §5.4.5 : «The Commission defines the base of the continental slope as a region where the lower part of the slope merges into the top of the continental rise, or into the top of the deep ocean floor where a continental rise does not exist. The Commission recommends that the search for the base of the continental slope be carried out by means of a two-step approach. First, the search for its seaward edge should start from the rise, or from the deep ocean floor where a rise is not developed, in a direction towards the continental slope. Secondly, the search for its landward edge should start from the lower part of the slope in the direction of the continental rise, or the deep ocean floor where a rise is not developed.»

²²⁰ Ibid., §5.4.6. : these two methodologies should be used if the base can be determined through their application ; however, geology and geophysics can also be used to supplement proof that the base of the slope is found at that location.

²²¹ Ibid., §5.4.12.

²²² Ibid., §2.1.13.

²²³ Ibid., §5.4.12.

Evidence to the contrary may be presented in the case where there are additional geological and geophysical evidence that show that the continental margin departs from the geomorphologic inception of article 76 of UNCLOS.²²⁴

To the Commission, the exception can be seen as “an opportunity for coastal States to use the best geological and geophysical evidence available to them.”²²⁵ We can briefly mention here that being able financially, technically and humanly speaking, to collect, process and interpret data to allow use of this exception rule may not be affordable to any coastal State, and that to some extent, the provisions of article 76 are discriminatory to the least developed states.²²⁶

The use of bathymetry and measurements of distances from baselines, such as in the application of the distance formula or the distance constraint line may be preferred by the least developed States, although being perhaps to the detriment of the most favourable extension of their jurisdiction on the seabed.²²⁷

To locate the base of the slope and the foot of the slope in that region, coastal States have to prove that the region in question is part of the submerged prolongation of the land mass of their State.

As explained in the Recommendations of the CLCS, concerning Iceland and the Reykjanes Ridge, the water depth alone is not sufficient to define the complex boundary region between the continental slope and the deep ocean floor,²²⁸ and it is only thanks to the use of geological and geophysical information that supported the determination of the base of

²²⁴ Ibid., §§6.1.3 and 6.

²²⁵ Ibid., §6.1.10.

²²⁶ See Part XIV of UNCLOS about development and transfer of marine technology, Annex II to UNCLOS, article 3 on advisory function of the CLCS and GRID-Arendal on helping developing States delineate the outer limits of the continental shelf beyond 200 M: <<https://www.grida.no/>>, last accessed 16 October 2019.

²²⁷ See formulae and constraint lines below.

²²⁸ See *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in regard to Iceland, in the Aegir Basin area and in the western and southern parts of Reykjanes Ridge, made on 29 April 2009 (10 March 2016), §52 and 54.

the continental slope that the CLCS could consider the Ridge as the submerged prolongation of the land mass:²²⁹

“After careful consideration of all the scientific and technical data and information contained in the Submission, the Subcommission considered that the region defined by the Iceland hotspot interaction with the seafloor spreading of the western and southern parts of the Reykjanes Ridge, which extends from the land territory of Iceland to a distance beyond 200 M from baselines from which the breadth of the territorial sea is measured, is part of the continental margin of Iceland for the purposes of article 76. Equally important, the western and southern parts of the Reykjanes Ridge which do not have a clearly defined interaction with the Iceland hotspot are considered as part of the deep ocean floor with its oceanic ridges for the purposes of article 76.”

On a complex profile, there may be different regions in which the foot of the slope may lay. Some States, when submitting to the CLCS for recommendations on the outer limits of the continental shelf, find several feet of slopes as they deem several regions to qualify as the base of slope.

However, in cases where it is shown that the region does not represent the slope of the margin, such as in cases where on the profile this region is situated above the level of the abyssal plain, or when in geology is brought the evidence that the region in question is made of components of the margin, the foot of the slope may be further seaward.²³⁰

This is exemplified in the Recommendations of the CLCS concerning Japan. It is the view of the CLCS that “in areas such as the Minami-Io To Island region having complex, unconventional margins with large changes in water depths, and a wide variety of features on the adjacent deep ocean floor, such low relative relief is insufficient to justify the submerged

²²⁹ See reproduction of diagram of Reykjanes Ridge in *Annex*, Annex VI, Recommendations concerning Iceland.

²³⁰ See *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in regard to the Partial Submission made by Japan on 12 November 2008 (19 April 2012).

prolongation of the relevant land masses of Japan 350 km beyond Taisho Seamount through to the Ridge Hill based on morphology alone.”²³¹

In other words, the base of the slope and its foot, as chosen by Japan, do not represent the region marking the end of the submerged prolongation of the land mass.²³² There is a most seaward region that would better qualify, in the view of the CLCS:²³³

“the most plausible location for the base of the slope zone is within the saddle area at the seaward end of the Taisho Seamount. This area is characterised by a regional change in the morphological gradient of the inner-arc slope, a break in the morphological continuity of the spur, the transition to the typical back-arc spreading fabric, and a general thinning of the arc crust.”

Whereas the use of geomorphological methodologies can be seen as the general rule, the use of other methodologies based on the geology of the seabed and subsoil may be used as an exception but may bring difficulties in assessing whether inclusion of this portion of submarine areas may actually corresponds the submerged prolongation of the land mass.²³⁴ The continental terrace, composed of the continental shelf and slope, are usually close to the characteristics of the continental crust type.²³⁵

However, the rise, if present, may rather develop predominantly in a rifted margin realm with sufficient supply of sediments from the continent after breakup and

²³¹ Ibid., §31.

²³² See in *Annex*, Annex VI, the diagram showing the saddle area marking the end of the submerged prolongation, in Recommendations of the CLCS to Japan, footnote 230, in relation to Minami-Io To Spur.

²³³ Ibid. §35.

²³⁴ In CLCS/11, footnote 34, §6.2.4: “The Commission is aware of the difficulties arising from the determination of the foot of the continental slope and the edge of the continental margin from a geological perspective. Continental crust is compositionally distinct from oceanic crust, but the boundary between these two crustal types may not be clearly defined. Simple subdivision of margins into shelf, slope and rise may not always exist owing to the variety of geological and geomorphological continental margin types resulting from different tectonic and geological settings.”

²³⁵ Ibid., §6.2.2 and §6.2.3.

commencement of sea-floor spreading.²³⁶ Contrary to the general definition of article 76 paragraph 3, the rise may not always be present, and if it is, it may actually be closer in composition to the deep ocean floor.

Consequently, using geologic methodologies to find the foot of the slope may be allowed but contested.²³⁷ Crust composition may mix and vary according to where on the margin such assessment is made.

Looking for the tip of the continental crust may not be accurate as crusts mix due to tectonic movements. The Commission recalls that “the foot of the slope and the continental slope are inseparable, and commonly lie close to the outer edge of the continent, that is, near the place where the crust changes from continental to oceanic.”²³⁸

Therefore, it is in the vicinity of the foot of the slope that the edge will be searched. To locate the base of the continental slope and the foot therein, geology may be used in addition to geomorphology but not alone.²³⁹

To conclude, looking for the foot of the slope consists in looking for the region in which the continental margin ends. The foot of the slope marks the envelope landward of which the submerged prolongation of the land mass should be situated. The evidence that the submarine areas included in the envelope are the submerged prolongation of the land mass is proved by bringing geomorphological evidence, and geological evidence when the morphology of the margin alone does not allow to locate with precision the base of the slope.

4.3. Establishment of the outer edge of the margin: paragraph 4 (a) (i) and (ii)

The outer edge of the continental margin is calculated from the foot of the slope, according to article 76 paragraph 4, subsection (a) points (i) and (ii):

²³⁶ Ibid. §6.2.1.

²³⁷ Ibid., §6.2.5.

²³⁸ Ibid., §6.2.3.

²³⁹ Ibid., §6.3.10. : “the CLCS might consider the use of the continental-oceanic transitional zone as the place to determine the outer edge of the continental margin, for rifted non volcanic and sheared continental margins.”

“(a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.”

These two formulae²⁴⁰ have been drafted on the ground of the proposals of Piers R.R. Gardiner,²⁴¹ member of the Irish delegation to UNCLOS III, and of Hollis D. Hedberg,²⁴² American geologist, professor at Princeton University, USA.

It has to be understood that these formulae do not attempt to locate the physical edge of the continental margin, since in most cases the edge cannot be found.²⁴³ The location of an outer edge is necessary in law first to find a boundary to the continental shelf maritime zone and to the Area, second to incorporate into their jurisdiction the potential resources that may be trapped in sediment layers.²⁴⁴

4.3.1. The Gardiner formula

The Gardiner formula is based on a ratio of thickness of sedimentary rocks to distance to the foot of the slope, in subsection (a) point (i) and allows inclusion of sediments that potentially contain hydrocarbons pockets. The Hedberg formula is different and maybe

²⁴⁰ See CCLS/11, footnote 34, where the term « formulae » is used, in §2.1.4.

²⁴¹ Gardiner, P.R.R., ‘Reasons and Methods for Fixing the Outer Limits of the Legal Continental Shelf beyond 200 Nautical Miles’ (1978) 11-12 *RIRI* 144.

²⁴² Hedberg, H., ‘Ocean Floor Boundaries’ (1979) 204 *Science* 135.

²⁴³ See CLCS/11, footnote 34, Parts 5 and 6.

²⁴⁴ In Gardiner, footnote 241, p.148.

simpler as it is not based on the geology of the seafloor but rather based on distance to the foot of the slope, in point (ii) thereof.

In 1978, during the UNCLOS III negotiation, P.R.R. Gardiner highlights, in regards to the concurrent proposal of Professor Hedberg, that there are three schools of thought in relation to the location of the limits of the continental shelf: one that argues that the continental shelf's limits should be based on the 200 M-limit of the EEZ, the second supporting the limits to be based on the natural geological features of the seabed, and the third highlighting the difference between the continental shelf as a maritime zone and the continental margin as the physical prolongation of the land mass in geology and thus in favour of an artificial limit not automatically superseding to the margin but rather based on the idea of what extent of seabed may constitute the natural prolongation of the land territory.²⁴⁵ It can be noted that this battle between artificial and natural limits was actually not resolved as article 76 contains provisions satisfying all sides,²⁴⁶ maybe to the detriment of simplicity and expeditious delineation.

Gardiner is of the view that the best formula would be based on sediment thickness which would allow inclusion of the continental rise and calculation of the outer edge and would be best deemed as the natural tip of the submerged prolongation.²⁴⁷ It should be noted however that this formula was specially thought to fit the physical nature of the Atlantic-type of margin.²⁴⁸ According to this formula, the distance cut-off point would be directly proportional to the thickness of rise sediments.²⁴⁹ The ratio of thickness of sediments to distance to the foot of the slope is reversely proportional as a too thick rise would cut off the outermost portion of the rise from its inclusion into the submerged prolongation, and as too thin rises would allow inclusion of portion of the deep ocean floor into the submerged

²⁴⁵ In Gardiner, footnote 241, p.153 et s.

²⁴⁶ Article 76 of UNCLOS §§1, 4 and 5.

²⁴⁷ In Gardiner, footnote 241, p.158 et s.

²⁴⁸ Ibid..

²⁴⁹ Ibid., p.158 : “it has therefore been suggested that the outer limit of the rise could be represented by a specific sediment thickness, such as 1km.” furthermore completed by “thus a coastal State could only place the outer limit 100 nm beyond the foot of the slope if at that point the sediment were at least 1km thick.”

prolongation of the land mass.²⁵⁰ To Gardiner this ratio seems to balance the interests of wide and narrow margins.²⁵¹

The choice of this formula, however, seems to be based on the will of “Margineer states”²⁵² to capture the most of the rise and its sediments, providing being thick enough.²⁵³

“As the rise thins away from the foot of the slope until it disappears altogether, coastal state claims would be restricted naturally, unlike proposals utilising a fixed distance, depth, or fixed thickness of sediments. Also, importantly, the further the cut-off point is from the foot of the slope, the thicker the rise sediments which will come within the international area. It is known that conditions suitable for hydrocarbon accumulations can occur where sediments are thicker than 1km; these would fall within the international domain where ever limits based on this proposal were more than 54nm (100km) beyond the foot of the slope.”²⁵⁴

This formula limits the extent of the rise on the seafloor but allows capture of potential resources. Since thick layers are necessary to find hydrocarbons, ratio of thickness to distance would remain quite close to the foot of the slope. Thus, enacting a ratio of sediments at least 1km thick to distance to the foot of the slope ensures capture of the thick layers within national jurisdictions, depriving their potential presence within the jurisdiction of the Area and potential share with the international community.

The Gardiner formula promotes an aggressive approach to the establishment of the outer edge of the margin, under article 76 paragraph 4, in application of paragraph 3. Whatever may be deemed to be included into the submerged prolongation of the land mass should be within the limits of the jurisdiction and the continental shelf maritime zone.

²⁵⁰ Ibid., p.159.

²⁵¹ Ibid., p.158: « Although attractive from the prospective of wide margin States, difficulties arose in trying to determine a thickness figure that would give an equitable national/international boundary.

²⁵² Ibid., p.167.

²⁵³ Ibid., p.159: “the 1% figure was chosen so that coastal States would retain under their jurisdiction a significant part of the continental rise.”

²⁵⁴ Ibid., pp.158-159.

Where the Gardiner formula is very much oriented on promoting the Margineers' interests, the Hedberg formula appears as a mild claim to the rise and its resources.²⁵⁵ In fact, the continental shelf does not reflect the exact nature of the physical seabed, as knowledge of the continental-oceanic boundary is impossible and location of the last grain of sands undoable. The continental shelf is rather based on a legal perception of what may be deemed the natural prolongation of the land territory.

The submerged prolongation of the land mass can represent in geology the continental margin, but its extent may be varying so much depending on each particular case that settling the outer edge on the basis of nature is unfair or disproportionate. Rather, the continental shelf is differentiated from the continental margin, and the first is understood to support a legal idea of the extent of the state over the seabed. The second should only be the indication of what is a yardstick to evaluate the first.

4.3.2. The Hedberg formula

Hedberg argued for the creation of a "base-of-slope-boundary zone", as "it appeared that the base of the slope was not only the most prominent geomorphic marker worldwide on the ocean floor, but also that, as constituting the outer edge of the continent, it was the most natural and appropriate line of division between the jurisdictional authority of the nations occupying the continents and islands and an international regime for the deep central ocean regions."²⁵⁶

The idea was rejected and Professor Hedberg came up with a revised version. Hedberg's formula is a compromise between Margineers' interests and a single limit on the

²⁵⁵ See Hedberg, footnote 242.

²⁵⁶ Ibid., p.442, in Introduction.

seabed.²⁵⁷ The revised formula couples the “base-of-slope-boundary zone” formula with the assessment of these limits by an independent body:²⁵⁸

“Its principal feature is reliance on the base of the continental (or insular) slope as a general guide to the drawing of a precise boundary by the coastal State itself within a boundary zone of internationally prescribed width adjacent to the approximate base of slope line on its oceanward side. The proposal calls for an international technical marine boundary commission to draw an approximate base-of-slope line and to make sure that the precise boundary line is drawn within the prescribed limits of the boundary zone. Boundaries of oceanic islands would be drawn in the same manner as for continents but related to the insular slope rather than the continental slope.”²⁵⁹

Keeping the slope as a guide to locate the boundary was clever as the latter marks, geologically speaking, the end of the submerged prolongation of the land mass and is the most prominent feature, geomorphologically speaking, that can show rather quickly the region where the foot of the slope would lie.²⁶⁰

As the base of the slope is not a sharp enough feature to serve as a political boundary, the idea of a measured distance from the base of the slope allows creation of a boundary zone, which as such models the continental rise, and allows inclusion of sediments into national jurisdiction, satisfying reluctant states partisans of more aggressive claims on the seabed.²⁶¹

The reason behind the choice of 60 M is due to the fact that such distance is *grosso modo* equivalent to 100km.²⁶² The choice of a boundary line not lying directly on the slope but farther seaward is, of the view of Hedberg, helping drawing a few simple straight lines,

²⁵⁷ Ibid., in Abstract, p.441 : « more than ten years ago, i first proposed a single, simple and natural boundary formula for the ocean floor which could be uniformly and appropriately applied to Islands and continents and narrow-margin and broad-margin countries alike. »

²⁵⁸ Ibid., in abstract.

²⁵⁹ Ibid., in abstract.

²⁶⁰ Ibid., p.443.

²⁶¹ Ibid., see Boundary Zone at p.445.

²⁶² Ibid.

which can constitute a precise boundary and allow other states and the international community (and the International Seabed Authority, also called the ISA) to locate easily the boundary between national and international jurisdictions.

Besides, it can be mentioned that such straight lines favour the control of jurisdiction and exercise of sovereign rights.²⁶³ The most interesting argument, in Hedberg's formula, is that the boundary would not be drawn directly by states but by a technical international marine boundary commission, composed largely of qualified oceanographers, geologists, geographers and engineers, who would produce maps on approximate base-of-slope line worldwide, and would delineate on maps the 100-M line boundary from the slope, accordingly.²⁶⁴

Following this approach, states' job would consist simply in delineating straight lines along the boundary line, connecting fixed points of latitude and longitude.²⁶⁵

In Hedberg's view, the Commission should make recommendations on the straight-line boundaries which would be subject to approval both by States and the ISA. Its work would be neutral and done outside of national interests in hydrocarbons.

States, for they are sovereign, would have to delineate but the actual technical work would be done completely and solely by the Commission:

“The technical international marine boundary commission would be expected to check the precise boundary proposed by a coastal State to make sure that it fell within the prescribed limits, and to make recommendations to the international authority regarding its acceptance.”²⁶⁶

²⁶³ Ibid.

²⁶⁴ Ibid.

²⁶⁵ Ibid., see Precise Boundary, p.445.

²⁶⁶ Ibid., p.445 in Check by Boundary Commission.

Following the negotiations, the Hedberg formula was added in article 76 paragraph 4 subsection (a) point (ii) and the Commission on the Limits of the Continental Shelf was created although, in the context of UNCLOS, it was in charge of a rather different mission.²⁶⁷

In conclusion, as prescribed by Hedberg, once the foot of the slope is located and the points (“(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which” and “(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than”) forming the edges calculated either by the Gardiner or Hedberg formulae, these outer edges can be said to form the tip of the submerged prolongation of the land mass.

Therefore, what is within the outer edge is deemed a component of the submerged prolongation, either because it is following the profile or morphology of the margin, or because it is deemed to be composed of the same elements as the land mass.²⁶⁸ Once the continental margin is revealed, its width will be evaluated against provision of paragraph 4 subsection (a) and its *chapeau*. Where the outer edge of the margin extends beyond 200 M, the coastal State is obliged (“shall”) to delineate the outer limits of the maritime zone beyond 200 M, -and here we should highlight the word *beyond*, as if the edge falls *on* the 200-M line the specific delineation method does not apply,- by application of the provisions of the following paragraphs 5 to 7.

To conclude we can note that the rise is actually hardly locatable as, in some cases, it does not exist or, is so intricate with the deep ocean floor that there is no outer edge but a transitional zone between continent and oceanic crusts. Thus, the rise is actually not located like in the case of the foot of the slope, it is created.

To conclude, the rise is fictional. The outer edge of the margin is not found in the submarine areas. It is calculated from the foot of the slope. The application of one of the formulae will calculate the hypothetical location of the outer edge of the margin, in regard to the definition of article 76 paragraph 3 of UNCLOS.

²⁶⁷ See in Chapter 5.

²⁶⁸ See CLCS/11, footnote 34, §3.1.

In other words, the continental margin is, according to the definition composed of a shelf, a slope and a rise, thus the submerged prolongation of the land mass, to correspond to that definition, must include a portion of the submarine areas that lie seaward of the foot of the slope, to incorporate a fictional continental rise. Although it is possible to locate the base of the slope and thus the foot of the slope, -that forms the region in which the submarine prolongation of the land mass meets the deep ocean floor,- it is difficult to locate, in that region, the tip of the margin, and in some cases impossible as there is no rise at all.

The aim of these formulae is to create a boundary zone, a region that will form the rise and the extension of the submerged prolongation of the land mass. The problem is that these formulae have helped coastal States to incorporate in the submerged prolongation of their land mass, a huge amount of submarine areas. It would have been safer to establish the outer edge at the foot of the slope, which is a more visible and clear boundary with the deep ocean floor.

4.4. The special formula to locate the outer edge in the Bay of Bengal: the Memorandum of Understanding

Before proceeding to the delineation of the outer limits of the continental shelf on the basis of the outer edge of the continental margin, we need to point out the existence of a “Statement of Understanding concerning a specific method to be used in establishing the outer edge of the continental margin” (*Memorandum of Understanding* annexed as Annex II to the *Final Act to the Third UNCLOS*)²⁶⁹ concerning the establishment of the outer edge of the continental margin in the Bay of Bengal. The Statement has never been the subject of any study.

This is a derogative formula that applies as a variation of the sediment-thickness formula on the fan of the Bay of Bengal.²⁷⁰ The seabed of the Bay of Bengal is covered with an alluvial cone, a fan, which is constituted of sediments deposited by the river Ganges and its

²⁶⁹ See reproduction in *Annex*, Annex III, and available at

https://www.un.org/Depts/los/clcs_new/documents/final_act_annex_two.htm, last accessed 16 October 2019

²⁷⁰ In Training manual, footnote 42, I-34 35 : this is a « modified sediment thickness formula ».

alluvium coming straight from the Himalayan range.²⁷¹ Application of the Hedberg formula is not the most favourable in this case. Application of the Gardiner formula would be a better fit, however, the application of the ratio would result in inequity for the States concerned.²⁷²

4.4.1. *The specific characteristics*

The statement is divided into five paragraphs. The first two paragraphs detail the characteristics of the continental margin of a coastal State where the greater proportion of sedimentary rock lies beneath the rise and where due to the application of the methods of article 76 paragraph 4 more than half of the margin would be excluded from the natural prolongation of the land territory of the coastal State resulting in inequity in delineation and access to resources.

The third paragraph recognizes this particularity and allows the said State to delineate the outer edge of its continental margin according to a specific method to include a greater proportion of the submerged prolongation of the land mass into the natural prolongation of the coastal State.

The fourth paragraph allows the neighbouring State to use this specific method in the delineation of its margin on the common geological feature that it shares with the other State.

The fifth and final paragraph requests the CLCS to be governed by this statement when it will make recommendations on the outer limits of the continental shelves of the States in the southern part of the Bay of Bengal.

²⁷¹ In Suri Balakrishna, Philomene A. Verlaan, Joseph R. Morgan, “Bay of Bengal” (Bay, Indian Ocean), *Encyclopaedia Britannica, Inc. (2019)*. Available at: <<https://www.britannica.com/place/Bay-of-Bengal>>, last accessed 16 October 2019.

²⁷² See Statement of Understanding in *Annex*, Annex III.

See chart of the Bay of Bengal in Annex VI and of the Fan in the Submission of Sri Lanka to the CLCS, Submission by the Democratic Socialist Republic of Sri Lanka, made on 8 May 2009, p.5, available at <https://www.un.org/depts/los/clcs_new/submissions_files/lka43_09/lka2009executivesummary.pdf>, last accessed 16 October 2019.

It seems that this special method was placed in Annex II of the Final Act to UNCLOS III and not in the text of the Convention, in Article 76, to keep an exceptional status.²⁷³ If the method had been included in the body of the text it would have been tempting to understand that this rule had the status of a general method applicable to all continental margins, as are the two methods of Article 76, paragraph 4 (a) points (i) and (ii).

The specific method applies only to the southern part of the Bay of Bengal for the State whose margin fits into the description of paragraph 1 of the statement and to its neighbouring State whose margin lies on the same common geological feature, as expressed by the description of the particular case in paragraph 4 of the statement. As it has been pointed out, “although the Statement does not mention States by name, the reference to ‘the southern part of the Bay of Bengal’ has been interpreted to include Sri Lanka and India”.²⁷⁴

In light of the wording of the Statement,²⁷⁵ in order for a State to qualify and use this specific method, its continental margin will have to correspond with the special characteristics of paragraphs 1 of the statement.²⁷⁶ This provision supports the idea that this Statement is only applicable to Sri Lanka and India.

²⁷³ In Training Manual, footnote 42, I-35: “this exception is often referred to as the ‘Bengal Rule’ because it was drafted to address the special characteristics of the Bay of Bengal, which is explicitly referred to in the Statement of Understanding.”

²⁷⁴ It is not sure whether the CLCS will allow all States claiming use of the Statement to actually use the specific method. See CLCS Document: CLCS/103 Item 14.

²⁷⁵ *Vienna Convention on the Law of Treaties*, adopted 23 May 1969, entry into force 27 January 1980 (United Nations, *Treaty Series*, vol.1155, p.331), article 31, especially its following provisions: “1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose. 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes: (a) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty; (b) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.”

²⁷⁶ In Training manual, footnote 42, I-34; See Executive Summary of Sri Lanka (concerning the particular situation of the continental margin of the Bay of Bengal out of Sri Lanka’s coasts and the particularities of its continental margin):

These special characteristics are complementary and all the elements will have to be present: in the statement the word “and” is used, thus meaning that the characteristics should be cumulated.

The CLCS when confronted to a submission that contains reference to the Statement and its specific method of delineation, it has to check that the margin fits into these two cumulative characteristics.²⁷⁷

Therefore, to be able to use the specific method, the coastal State’s continental margin will have to fit in the characteristics described in paragraphs 1, where, firstly, the continental shelf breaks occurs at not more than 20 M. Secondly, for the continental margin to qualify for application of the specific method, “the greater proportion of the sedimentary rock of the continental margin lies beneath the rise”.²⁷⁸

In Sri Lanka’s Submission to the CLCS, it is recalled that the continental margin of Sri Lanka, in the Bay of Bengal, “displays the special geological and morphological characteristics described in the Statement of Understanding, that is characterized by a very narrow shelf, a very steep slope and an extensive rise.”²⁷⁹

In case the margin qualifies, the next step for the CLCS is to verify that application of article 76 paragraph 4 subsection (a) points (i) and (ii) excludes more than half of the margin from the envelope of the outer edge.²⁸⁰ By application of these formulae in the Bay of Bengal,

<http://www.un.org/depts/los/clcs_new/submissions_files/lka43_09/lka2009executivesummary.pdf>, last accessed 16 October 2019, p.6.

²⁷⁷ See the Submission by the Democratic Socialist Republic of Sri Lanka, made on 8 May 2009, where the Statement of Understanding is used in the delineation of the outer limits of the continental shelf, available at <https://www.un.org/Depts/los/clcs_new/submissions_files/lka43_09/lka2009executivesummary.pdf>, last accessed 16 October 2019.

²⁷⁸ Statement of Understanding, Annex II to the Final Act to UNCLOS III, reproduction in Annex, Annex III..

²⁷⁹ In Submission by the Democratic Socialist Republic of Sri Lanka, made on 8 May 2009 (Executive Summary) p.6.

²⁸⁰ Article 76 of UNCLOS §4 and the Statement of Understanding, §2..

the thickness of sediments would never be less than 3.5km,²⁸¹ although the Gardiner formula allows up to 1km of thickness below the fixed point. If by application of article 76 both characteristics are met, then the formulae are excluded from application and the specific method can be applied.²⁸²

In the particular case of the Bay of Bengal, due to the presence of a fan and very thick layers of sediments in the rise, the application of a sediment thickness formula would help encapsulate a big portion of the margin. However, the provision of the Gardiner formula locates the outer edge by a ratio of sediment thickness from distance to the foot of the slope. For this reason this formula cannot suit the particular situation of the seafloor of the Bay of Bengal.

By application of the specific method of the Statement, sediment thickness is calculated in absolute terms. Sediment thickness is not calculated in relation to distance to the foot of the slope, but by calculation of sediment thickness only.²⁸³ The outer edge is situated along fixed points under which sediment thickness is not less than 1km, without reference to distance to the foot of the slope.²⁸⁴

While the provisions of article 76 paragraph 4 subsection (a) do not apply, the provision of paragraph 7 does apply, and the fixed points will have to be delineated by segments not exceeding 60 M in length.²⁸⁵

The rise is so long and thick that it represents by itself more than half of the continental margin. Where it can be understood that constraint lines are necessary to avoid monopolisation of the seabed by coastal States, it can be understood that in such situation

²⁸¹ Ibid., §2.

²⁸² Ibid., § 3.

²⁸³ In Training manual, footnote 45, I-34; See Sri Lanka's Submission (Executive Summary), footnote 279, p.11 and the sediment thickness points.

²⁸⁴ Ibid., p.6.

²⁸⁵ Ibid.

where more than half of the margin would lie outside the envelope of the margin, the constraint lines of article 76 paragraphs 5 and 6 do not apply.²⁸⁶

The specific method of the Statement is applicable to actually allow that particular feature in the Bay of Bengal to benefit from the rise and its exceptional thickness. It would be in other words unfair not to allow the coastal State in question to get access to the rise and include the most efficient part of the submerged prolongation of its land mass into its continental shelf.

4.4.2. The application of the method to the neighbouring State

This method can also be utilized “by a neighbouring State for delineating the outer edge of its continental margin on a common geological feature”,²⁸⁷ as stated in paragraph 4 of the Statement.²⁸⁸

When the first part of the provision is read (“when a State establishes the outer edge of its continental margin by applying the method set forth in the preceding paragraph of this Statement, this method may also be utilized by a neighbouring State”), it can be understood that the neighbouring State can use the specific method only if and when the coastal State, to which this specific method is intended, applies that method. Therefore, the neighbouring State may decide to use this specific method if the other State has opted for it.

But it is to be noted that the condition is not only that the other State has to use the method, the condition is also that the outer edge of the margin of the neighbouring State, once established in accordance with article 76 paragraph 4, should lie on the same “common

²⁸⁶ Ibid., p.12. See reproduction of diagram in *Annex*, Annex VI, in Submission of Sri Lanka, Figure 3.

²⁸⁷ See *note verbales* of India, Maldives, Bangladesh to Sri Lanka’s Submission and their rights to use the Statement, available at

<http://www.un.org/depts/los/clcs_new/submissions_files/submission_lka_43_2009.htm>,

Last accessed 16 October 2019.

²⁸⁸ It can be noted that India did not make use of the Statement in its Submission, made on 11 May 2009, available at

<https://www.un.org/depts/los/clcs_new/submissions_files/ind48_09/ind2009executive_summary.pdf>, last accessed 16 October 2019.

geological feature”.²⁸⁹ It means that the neighbouring State should first establish its outer edge according to the provisions of article 76, because the common geological feature needs to be qualified as fitting within the characteristics described above, and is actually qualified as such once the main State has applied the method.

We have to recall that one of the characteristic for the specific method to apply is that the lines representing the outer edge of the margins of the States should lie on a thickness of sedimentary rocks not less than 3.5 kilometres in mathematical average, -excluding thereby half of the margin from the envelope of the outer edge.

To conclude, the Statement of Understanding applies in the Bay of Bengal to Sri Lanka and possibly to India. It replaces paragraphs 4 to 6 of article 76 of UNCLOS. The application of the provisions of article 76 of UNCLOS would deprive Sri Lanka of the possibility to delineate the outer limits of its continental shelf beyond 200 M. It allows the coastal State to delineate the outer limits of its continental shelf by including most of the rise in the submerged prolongation of its land mass. In fact, in the case of the Bay of Bengal, the slope is situated very near the coast and the fan, which constitutes a very thick layer of sediment, and represents the rise of the margin, extends very far at sea.

4.5. The delineation of the outer limits of the continental shelf: paragraphs 5 to 7

The outer limits beyond 200 M should follow the outer edge of the margin, as mentioned in article 76 paragraph 1, but in application of paragraph 2, these limits may be constrained.

The relevant provisions are enshrined in paragraphs 5 to 7 and state that:²⁹⁰

“5. The fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4 (a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.

²⁸⁹ See Definition of the Continental Shelf, footnote 42, Chapter 1.

²⁹⁰ Article 76 of UNCLOS §§5-7. Excerpt of UNCLOS in *Annex*, Annex III.

6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

7. The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by coordinates of latitude and longitude.”

The outer limits of the continental shelf follow the 200-M line wherever the margin does not extend beyond 200 M. The outer limits follow the outer edge of the margin where the latter extends beyond 200 M, and in cases where the latter extends beyond the constraint lines of paragraphs 5 and 6, the outer limits follow the constraint lines, on the portions that exceed the limits of the constraint lines.

4.5.1. The constraint lines

The measurement of the 350-M constraint line does not seem to be problematic, only in relation to the establishment of baselines.²⁹¹ However, the location of the 2,500metre isobath is subject to discussion.²⁹²

For the CLCS, in accordance with its Scientific and Technical Guidelines:²⁹³

“The line determined at a distance of 100 M from the 2,500metre isobath becomes effective as a constraint over the outer limits of the continental shelf wherever this isobath is located at a distance of 250 M or greater from the baselines from which the territorial sea is measured.”²⁹⁴

²⁹¹ See ILA, Baselines Committee, Sofia and Sydney Reports, available at < <http://www.ila-hq.org/index.php/committees>>, last accessed 16 October 2019.

²⁹² In CLCS/11, footnote 34, §4.

²⁹³ Ibid., §4.4, pp33-36.

²⁹⁴ Ibid. §4.4.1.

It seems to be clear that the first isobath is the only valid constraint line. However, the CLCS is aware of the difficulty and the complexity of a margin. The 2,500-metre isobath may be repetitive in multiples at several locations on the continental margin. Each particular case will need to be analyzed to decide whether evidence to the contrary may be granted:

“Unless there is evidence to the contrary, the Commission may recommend the use of the first 2,500m isobath from the baselines from which the breadth of the territorial sea is measured that conforms to the general configuration of the continental margin.”²⁹⁵

As a result, the first isobath, the closest landward, will be considered the applicable constraint line. However, what conforms to the “general configuration of the margin” can be interpreted. It is usually the first isobath²⁹⁶ encountered within the foot of the slope that qualifies, as the foot of the slope is the marker of the maximum change in the gradient and an indication of the tip of the continental margin.

Where the outer edge lies too far seaward, constraint lines apply. There are of two kinds: either based on distance from the baselines or on distance from an isobath.²⁹⁷ Paragraph 6 of article 76 however indicates that the constraint lines are not applied by choice, that is to say to favor the extension of the continental shelf maritime zone on seabed areas. In fact, contrary to the two formulae which can be applied to favour at will the coastal State, the constraint lines are dependent on seabed features and their characteristics.

²⁹⁵ Ibid., §4.4.2.

²⁹⁶ See *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in regard to Iceland, in the Aegir Basin area and in the western and southern parts of Reykjanes Ridge, made on 29 April 2009 (10 March 2016); *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in regard to the Partial Submission made by Japan on 12 November 2008 (19 April 2012); *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in Regard to the Submission made by Australia on 15 November 2004 (9 April 2008).

²⁹⁷ Article 76 of UNCLOS §5.

4.5.2. *The classification of seafloor highs*

Oceanic ridges part of the deep ocean floor and thus outside of the submerged prolongation of the land mass cannot be included into the continental margin and thus cannot be used as features for delineation of the outer limits of the continental shelf.²⁹⁸

Submarine ridges can be used for the delineation of the outer limits but the specific 350-M constraint line applies to them. On submarine elevations, the 100-M line situated from the 2,500-metre isobath can be used;²⁹⁹

However, the Convention does not define what falls into the notion of submarine elevations, such as a cap, a bank, a spur etc. The only characteristic available in the provision of article 76 paragraph 6 of UNCLOS is that a submarine elevation is the natural component of the continental margin.

Whereas the Scientific and Technical Guidelines of the CLCS do not offer much in regard to differentiation and qualification of seafloor highs,³⁰⁰ their Training manual³⁰¹ emphasises on the origin and classification of these features.³⁰² Seafloor highs may be classified according to their morphology, genesis and crustal composition, may consist of oceanic or continental crust, whose composition may vary according to whether they are due to spreading or rifting, colliding or diverging plates tectonic.³⁰³

Concerning differentiation between oceanic ridges and submarine ridges:³⁰⁴

²⁹⁸ Article 76 of UNCLOS §3.

²⁹⁹ Article 76 of UNCLOS §6.

³⁰⁰ CLCS/11, footnote 34.

³⁰¹ See Training Manual, footnote 45, The manual is used as tool during the training programme offered by the CLCS to developing States. See training opportunities and programme on DOALOS website: available at <http://www.un.org/depts/los/clcs_new/training_issues_opportunities.htm>, last accessed 16 October 2019.

³⁰² See Training Manual, footnote 45, Part VII on Seafloor highs, especially pages VII-18 and 19.

³⁰³ Ibid.

³⁰⁴ Ibid. §7.1.3.and §7.1.6.

“none of these terms is precisely defined. It seems that the term ‘ridge’ is used on purpose, but the link between the ‘oceanic ridges’ of paragraph 3 and the ‘submarine ridges’ of paragraph 6 is unclear. Both terms are distinct from the term ‘submarine elevations’ of paragraph 6” and “this seems to imply that ‘submarine ridges’ and ‘submarine elevations’ are also distinct legal categories, as they are subject to separate provisions regarding the maximum outer limit.”

The important differentiation is between submarine ridges and elevations. The elevations are defined as natural components of the continental margin. Rather than their name or classification as plateau or rise, the important feature is the fact that they seem to be closely linked to the margin. This would induce by analogy that the submarine ridges would not.

The qualification as submarine ridge or elevation may be found thanks to the application of the provisions of the 1969 Vienna Convention on the Law of Treaties on treaty interpretation and the use of preparatory work.³⁰⁵

In the preparatory work of UNCLOS III and the records of negotiations sessions,³⁰⁶ can be found a Soviet proposal concerning paragraph 3 of article 76: “it does not include the deep ocean floor, the subsoil thereof, nor underwater ocean ridges and the subsoil thereof.”³⁰⁷

A Japanese proposal added a geological crust criterion and suggested that “it does not include the deep ocean floor or ridges formed of oceanic crust or the subsoil thereof”.³⁰⁸

³⁰⁵ Vienna Convention on the Law of Treaties, footnote 275: “Article 32 *Supplementary means of interpretation* Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31: (a) leaves the meaning ambiguous or obscure; or (b) leads to a result which is manifestly absurd or unreasonable.”

³⁰⁶ Records of UNCLOS III available at <http://legal.un.org/diplomaticconferences/1958_ios/>, last accessed 16 October 2019.

³⁰⁷ USSR, 1979. See in Training manual, footnote 45, VII-21.

³⁰⁸ Ibid. Japan 1979.

Further on, other proposals suggested linking certain oceanic ridges to a distance constraint line of 350 M from the baselines. In this case, oceanic ridges have seemed to be accepted as being able of inclusion but under a restriction.

The *Margineers*, in line with this idea, suggested the following provision for paragraph 5:³⁰⁹

“The fixed points comprising the line of the outer limits of the continental shelf on the sea bed, drawn in accordance with paragraph 4(a) (i) and (ii), either shall not exceed 350 miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 M from the 2,500 metre isobath, which is a contour connecting water depths of 2,500 metres. However, this paragraph shall apply to submarine oceanic ridges, which are, for the purposes of this paragraph, long narrow submarine elevations formed of oceanic crust, in such a manner that the outer limits of the continental shelf in the areas of such ridges does not exceed the above 350-mile distance.”

Although all the above provisions have been rejected in the course of negotiations, we see a pattern concerning oceanic ridges. They are composed of oceanic crust and apparently situated in the ocean basin, obviously not linked to the margin. Besides, it seems that a second category appears, under the name of submarine oceanic ridge which is capable of inclusion. This category seems to resemble our submarine ridges.

Later on, the *Margineers* proposed to include a new category of features, submarine elevations, in the continental margin definition of paragraph 3, to which the USSR responded by the creation of paragraph 6 submitted as follow:

“It does not include the deep ocean floor, with oceanic ridges, seamounts or guyots and any other submarine elevations not situated on the continental margin or the subsoil of the ocean floor. (§3) Notwithstanding the provisions of paragraph 5, in areas of any other submarine ridges and elevations except those referred to in paragraph 3 of the present article, the outer limit of the

³⁰⁹ See in Training manual, footnote 45, VII-22.

continental shelf should not exceed 350 M from the baselines from which the breadth of the territorial sea is measured. (§6).”

Submarine elevations seem to be connected to the margin as defined within paragraph 3 on definition of the continental margin. Submarine ridges, in the Soviet proposition, are differentiated and are incorporated into a new paragraph, paragraph 6. Differentiation between ridges and elevations is for the first time highlighted while different kinds are created to apply to each category of features. According to the Soviet proposal, a feature that is considered a part of the margin is not concerned with the 350-M constraint line. In other words, a feature that is not closely linked to the margin will be constrained.

The final text of the article was drafted by the chairman of the Negotiating Group 6,³¹⁰ as compromise could not be found by the parties. It is the article 76 as we know it today. The reference to natural components appeared in this final draft.

To conclude, by looking at the *travaux préparatoires* of UNCLOS III, we hold to the idea that an submarine elevation should be closely linked, in the sense of being in the continuity, to the margin. A ridge, on the contrary, is only attached to the margin but does not constitute its prolongation, thus justifying the application, in the latter case, of a distance constraint to avoid inclusion in the margin of a feature which does not *per se* represents the submerged prolongation of the land mass.

As pointed out by the Commission, article 76 does not make reference to a crust-type criterion,³¹¹ thus the differentiation cannot be based on geology, or at least not solely.³¹² Qualification of seafloor highs as submarine ridges should be done, on a case-by-case basis,³¹³

³¹⁰ Ibid., VII-23.

³¹¹ In CLCS/11, footnote 34, §7.2.9.

³¹² Ibid., §7.2.1.

³¹³ Ibid., §7.2.9.

based on their morphology, their relation to the land mass and notion of submerged prolongation of land masses.³¹⁴

The seafloor highs must be in the profile of the margin. As noted in its Training Manual:

“to be consistent with paragraph 3 (i.e. the continental margin as the submarine prolongation of the land mass) it seems a requirement to invoke the principle of geological continuity so that these morphological features must be made up of the same type of landmass as the coastal State from which the continental margin extends in order to classify them as *natural* components of that continental margin.”³¹⁵

Submarine elevations should be considered through the processes that form continental margins and how continents grow and should thus also take into account geological processes along the margins.³¹⁶ The CLCS, in its Guidelines, indicate that two types of processes will be examined for consideration as submarine elevations that form natural components of the margin: sedimentary wedge or crustal fragment that have accreted to the margin, or seafloor highs that are formed by a breakup process where they constitute an integral part of the prolongation of the land mass.³¹⁷

This implies that:

³¹⁴ Ibid: “Therefore the Commission feels that in cases of ridges its view shall be based on such scientific and legal considerations as natural prolongation of land territory and land mass, morphology of ridges and their relation to the continental margin as defined in paragraph 4, and continuity of ridges.”

³¹⁵ In Training Manual, footnote 45, VII-28.

³¹⁶ In CLCS/11, footnote 34, §7.3.1.

³¹⁷ Ibid., §7.3.1.(a) and (b): “(a) In the active margins, a natural process by which a continent grows is the accretion of sediments and crustal material of oceanic, island arc or continental origin onto the continental margin. Therefore, any crustal fragment or sedimentary wedge that is accreted to the continental margin should be regarded as a natural component of that continental margin; (b) In the passive margins, the natural process by which a continent breaks up prior to the separation by seafloor spreading involves thinning, extension and rifting of the continental crust and extensive intrusion of magma into and extensive extrusion of magma through that crust. This process adds to the growth of the continents. Therefore, seafloor highs that are formed by this breakup process should be regarded as natural components of the continental margin where such highs constitute an integral part of the prolongation of the land mass.”

“the continental margin and the landmass of a coastal State may consist of a variety of lithologies (rock types) and still represent geological continuity as long as the landmass and continental margin are formed by the natural process by which continents grow, including their marginal submarine elevations features.”³¹⁸

In application of this principle of continuity, the classification of seafloor highs will be established by checking the morphology criterion and the configuration of the seafloor high in relation to the position of the foot of the slope.³¹⁹ The foot of the slope is thus the parameter around which classification (as submarine elevation or ridge) will be done. In fact:

“the location of the foot of the slope by application of paragraph 4 gives an envelope that incorporates all features that may generate the final outer edge of the margin. Any morphologically continuous ridge-like feature that lies within this foot of the slope envelope will have to be regarded as such an integral part of the continental margin.”³²⁰

The seafloor highs are not classified to apply the constraint lines.³²¹ In other words, the CLCS does not, first, qualify the seafloor high, then, apply the corresponding constraint line. In fact, the key to the classification of seafloor high lies in the definition of the foot of the slope envelope.

The foot of the slope is an important feature as it shows the zone in which the submerged prolongation of the land mass stops. Therefore, whenever the foot of the slope is located on a point within which starts the feature, the latter is considered to be a part of the submerged prolongation of the land mass, and thus either a submarine ridge or a submarine elevation.³²²

³¹⁸ In Training manual, footnote 45, VII-28.

³¹⁹ Ibid., VII-30.

³²⁰ Ibid.

³²¹ Ibid.

³²² See for instance *Recommendations of the CLCS to Australia*, footnote 296.

A submarine elevation is defined by the CLCS as seafloor high “that along its entire length lies inside the outer edge of the continental margin by sharing its common foot of the continental slope, and shares the geological characteristics and origin of the landmass of the coastal State.”³²³ If the feature is located landward from the foot of the slope, it is a part of the submerged prolongation of the land mass that forms a natural component of the margin.³²⁴

The case of Japan and the classification of the Ogasawara Plateau is interesting to study.³²⁵ As defined by Japan in the Submission:³²⁶

“the Ogasawara Plateau is a complex, composite seafloor high composed of several seamounts, and divided into western, eastern and southeastern parts (see Figure 11). The western part is a plateau-like Page 14 of 62 feature with general depths of 3000 to less than 2000 meters that hosts the two large Minami and Higashi Seamounts, and the minor Nishi Seamount. This is the part of the composite high named Ogasawara Plateau by Okamura et al. 1992, and which is currently colliding with the Izu-Ogasawara Arc and clogging up the subduction trench in the area where the Mariana Trench joins the Izu-Ogasawara Trench.”

Japan considers that “the submerged prolongation of its land mass extends from the islands on the Izu-Ogasawara Arc to the west.”³²⁷

The CLCS notes that “The Plateau Part has merged with the Izu-Ogasawara Arc in the west, forms a massive bridge across the subduction trench, and extends onto the deep ocean floor of the Pacific Ocean to the east.”³²⁸

However, the Commission disagrees that.³²⁹

³²³ In Training manual, footnote 45, VII-32.

³²⁴ See for instance Recommendations of the CLCS to Japan, footnote 230.

³²⁵ See reproduction of the Plateau, in *Annex*, Annex VI.

³²⁶ In Recommendations of the CLCS to Japan, footnote 230, p.14.

³²⁷ Ibid.

³²⁸ Ibid.

³²⁹ Ibid.

“this continuous FOS envelope circumscribes the Hotokenoza Seamount Group. This is because in the view of the Subcommission, such seamounts, not surmounted by islands, their underlying basal swells and base-of-slope aprons are normal parts of the general deep ocean floor, particularly in the Pacific Ocean.”

In its recommendations to Japan, the CLCS is of the view that the Ogasawara Plateau forms a bridge with the Izu Arc and thus that the Plateau forms a natural component of the margin. The Plateau can thus be considered a submarine elevation to which the depth constraint applies.

On the contrary, it can be noted that when a seafloor high is not considered to be in the foot of the slope envelope, as in the case of the Hotokenoza Seamount Group, the seafloor high is thus considered a submarine ridge, to which the distance constraint applies. Indeed the depth constraint line cannot apply because the seafloor high is not geomorphologically and geologically a natural component of the margin.

In the case of submarine ridges, the CLCS define them as seafloor highs that “morphologically are an integral part of the continental margin, but along parts of the entire length of the ridge are different from the landmass of the coastal State from which the margin extends, in terms of characteristics and/or origin.”³³⁰ Hence, the feature is considered a natural component of the margin and it will be qualified a submarine ridge to which the 350-M constraint line applies.

4.5.3. The 60-M segments

The outer limits are delineated along the most seaward combination of lines, being the outer edge of the margin, the constraint lines and the 200-M line. According to article 76 paragraph 7, the delineation must be constituted of segments of 60-M in length. This means that the points established in application of paragraph 4 subsection (a) points (i) and (ii) shall be used to link these segments. The outer limits form the boundary with the international

³³⁰ In Training manual, footnote 45, VII-31.

seabed area. If no segments would be used, the outer limit, thus the boundary, would be too sinuous.

In some submissions to the CLCS, the segments do not link the points representing the outer limits in accordance with the method explained above, such as in the case of Australia.

In the case of Australia and the South Tasman Rise Region, for instance, the CLCS does not agree with the way the 60-M segments have been delineated.³³¹ These segments join points corresponding to the outer edge of the margin, but, they do not follow the contour of the margin as they cut through the submarine areas, beyond the outer edge limit, that are situated seaward of the submerged prolongation of the land mass:³³²

“In accordance with paragraph 8 above, the Commission does not agree with the method submitted by Australia for the connection of outer limit continental shelf points beyond 200 M to the 200 M limit line at points STR-ECS-1 and STR-ECS-647, since this method creates area of continental shelf that falls outside of the continental margin as defined in article 76, paragraphs 4 and 7.”

Such States do not hesitate to cut off the outer limits.³³³ It would not be a problem if they would cut off parts of the seabed that falls within the envelope of the continental shelf. However, this cutting technique is used to integrate within the segments parts of the submarine areas that would not otherwise be considered the submerged prolongation of the land mass. Thanks to this technique they capture within their national jurisdiction even bigger portion of the submarine areas.

4.6. Conclusion

In short, a coastal State that wants to determine the outer limits of its continental shelf will have to respect the following steps:³³⁴ it has to determine 1) the baselines from which the breadth of the territorial sea is measured, in accordance with Part II of the Convention; 2) the

³³¹ See in Annex, Annex VI, in the Recommendations of the CLCS to Australia, a reproduction of the segments.

³³² See Recommendations of the CLCS to Australia, made on 9 April 2008, p.30.

³³³ See Australia, Iceland or Faroese, in Recommendation of the CLCS.

³³⁴ In Definition of the Continental Shelf, footnote 42, p.12 §39.

200-M line from the baselines; 3) the foot of the slope; 4) the points where the ratio $x = \text{thickness of sedimentary rocks/distance to the foot of the slope} = \text{or} > 0,01$; 5) the 60-M line from the foot of the slope; or use the Statement of Understanding; 6) the 350-M line from the baselines; 7) the 2,500-metre isobath and the line that is situated 100 M seaward from that isobath.

When, from the foot of the slope the outer edge calculated lies beyond 200 M, the outer limits must be delineated in accordance with the following provisions, in other cases, the 200-M line applies. The outer limits will either follow the outer edge, when the latter does not extend beyond the most landward constraint line applicable, or will follow the constraint lines, on the portions where the outer edge extends beyond the applicable constraint line.

When a constraint line applies, to know which constraint line of the two applies, the CLCS, in its Recommendations, and in accordance with its Scientific and Technical Guidelines, shows that the foot of the slope envelope is the parameter with which the constraint lines apply. The seafloor highs that fall landward of the foot of the slope envelope are considered the natural component of the margin, thus they are classified as submarine elevations, to which the depth constraint applies. The seafloor highs that fall seaward of the foot of the slope envelope are not a natural component of the margin in most cases. The evidence to the contrary will have to be given by geomorphological and geological information. If the seafloor high is the submerged prolongation of the land mass, then the depth constraint applies. If not, the seafloor high is considered a submarine ridge, not a natural component of the margin, to which the distance constraint applies.

In delineating the continental shelf beyond 200 M, the coastal State can choose the most efficient combination of outer limits, still the 60-M segments that form the outer-limit line should follow the contour of the outer edge of the margin, as constructed through the provisions of paragraphs 4 to 6, thus respecting the location of the outer edge and the constraint lines, without relating points through the submarine areas that do not constitute a part of the submerged prolongation of the land mass.³³⁵

³³⁵ In CLCS/11, footnote 34, §2.1.8.

In the Truman Proclamation, the outer limits were not settled, and based solely on the access to the natural resources of the shelf. In the Geneva Convention, the provisions reformulate the Proclamation and base the establishment of the outer limits on exploitability or a fixed depth. These provisions support the access to resources and do not limit the right of coastal States to capture the natural resources at sea, on the contrary.

Article 76 of UNCLOS, continues to encourage exploitation. The provisions of that article allow coastal States to include within the natural prolongation of their land territory submarine areas that can however hardly be considered to actually form part of the submerged prolongation of the land mass of a coastal State. The possibility of such exaggerated claims on the seabed comes from the lack of clear scientific definitions in article 76 of UNCLOS.

It is thus vital that the Commission on the Limits of the Continental Shelf, in examining submissions, define clearly the methodology for the establishment of the outer limits of the continental shelf and applies article 76 strictly. It is also important that States do not impede on its technical role of expertise.

Chapter 5- DELIMITATION: DIFFICULTIES IN THE PROCESS OF ESTABLISHMENT OF THE OUTER LIMITS OF THE CONTINENTAL SHELF

5.1 Introduction

Through the process of submission of the outer limits to the Commission on the Limits of the Continental Shelf and the making of recommendations by the CLCS, Article 76 paragraphs 8 establishes the outer limits as final and binding:³³⁶

“8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.”

Once the limits are established, the coastal State shall deposit such limits to the Secretary-General of the United Nations, who should give due publicity to them, as provided by article 76 paragraph 9:³³⁷

“9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.”

The establishment of the outer limits as the final and binding limits of national jurisdiction of coastal States on the seabed is connected to the submission of these outer limits to the Commission on the Limits of the Continental Shelf. The outer limits, to be considered final and binding, must be established on the basis of these recommendations. The submission

³³⁶ Article 76 of UNCLOS §8. See excerpt of Part VI of UNCLOS in *Annex*, Annex III.

³³⁷ *Ibid.*

to the CLCS plays a role in the establishment of the outer limits and the question is to know whether the coastal State must base its outer limits on the recommendations of the Commission, or whether the coastal State has a margin of maneuver on the location of the final line? The process of establishment of the outer limits is a ping-pong match between the coastal State and the CLCS, as the coastal State can submit new or revised information to the Commission (5.2.).

The establishment of the final and binding limits is a difficult process. Few coastal States have deposited the outer limits to the Secretary-General of the United Nations.³³⁸ It may be due to the fact that collection of data may be difficult in certain regions of the seabed and for certain less developed States. It is however mainly due to the fact that the process of establishment of the outer limits is currently blocked (5.3.).

In accordance with article 76 paragraph 10 of UNCLOS:³³⁹

“10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.”

The establishment of the outer limits of the continental shelf are without prejudice to the question of delimitation of the continental shelf in a maritime boundary dispute between opposite or adjacent States. It is not clear what this provision actually means. Does ‘without prejudice’ mean that the establishment of the outer limits and the delimitation of the boundary between two States are different processes? Or, does it mean that the establishment of the outer limits should not prevent a judicial body from looking at a maritime boundary dispute?

The meaning of ‘without prejudice’ is even less clear when the provision of article 76 paragraph 10 of UNCLOS is read in conjunction with the provisions of the Rule of Procedure of the CLCS. On the basis of its functions, as set in Annex II to UNCLOS, the Commission

³³⁸ See countries list available at:

<<https://www.un.org/Depts/los/LEGISLATIONANDTREATIES/depositpublicity.htm>>, last accessed 16 October 2019.

³³⁹ Article 76 of UNCLOS §10.

has drafted its own Rules of Procedure. Within this instrument there are rules concerning the work of sessions and subcommissions that evaluate the submissions of coastal States.³⁴⁰

In Rule 46, and Annex I to its Rules, the CLCS has included a provision, based on its understanding of article 76 paragraph 10 of UNCLOS, that concerns “submissions in case of a dispute between States with opposite or adjacent coasts or in other cases of unresolved land or maritime disputes”.³⁴¹ The CLCS opts out of consideration of submissions when there is a case of dispute between opposite or adjacent States on the outer limits submitted, but also in other cases of maritime dispute or land dispute.

Because of these provisions, the CLCS cannot consider the submissions of many States. Many submissions are thus pending before the CLCS and the outer limits cannot be established on the basis of recommendations to become final and binding.

5.2. The establishment of final and binding limits, according to article 76 paragraphs 8 and 9 of UNCLOS

The outer limits of the continental shelf should be submitted to the CLCS and the outer limits established on the basis of these recommendations to become final and binding. These limits become permanent *erga omnes* when the coastal State deposits these limits to the Secretary-General of the United Nations.

The provisions of article 76, paragraph 8 and 9 read together say that:³⁴²

“8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of

³⁴⁰ See *Rules of Procedure of the Commission on the Limits of the Continental Shelf* (CLCS/40/Rev.1) CLCS (17 April 2008, 21st session, New York, 17 March - 18 April 2008).

³⁴¹ Ibid, see Rule 46 and Annex I to the Rules of Procedure on “Submissions in case of a dispute between States with opposite or adjacent coasts or in other cases of unresolved land or maritime disputes”. See in *Annex*, Annex V, excerpt of Rules of Procedure of the CLCS.

³⁴² Article 76 of UNCLOS §§8-9.

equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.”

5.2.1. The meaning of ‘final and binding’ limits

The meaning of the provisions of article 76 of UNCLOS has been studied by the Committee on the Outer Continental Shelf, of the International Law Association, from 2000 to 2010.³⁴³ These reports are written by recognised public international law scholars.³⁴⁴

In the Statute of the ICJ, article 38 states that “judicial decisions and the teachings of the most highly qualified publicists of the various nations” can be used to decide on a dispute submitted to the ICJ “as subsidiary means for the determination of the rules of law.”³⁴⁵ They form an instrument of soft law and may be considered to interpret the meanings of the terms ‘final and binding’ and ‘on the basis of these recommendations’ enshrined in article 76 of UNCLOS.

³⁴³ See reports of the ILA, Outer Continental Shelf Committee, at <<http://www.ila-hq.org/index.php/committees>>, last accessed 16 October 2019.

³⁴⁴ Professor A.G. Oude Elferink was the *Rapporteur* of the Outer Continental Shelf Committee.

³⁴⁵ Statute of the ICJ, article 38, in *Statute of the International Court of Justice*, adopted 24 October 1945 (United Nations, *Treaty Series*, annex to the Charter of the United Nations).

5.2.1. *The meaning of 'final and binding' limits*

The first ILA Report, the New Delhi Preliminary Report of 2002, questions the meaning of substantive terms of article 76 of UNCLOS.³⁴⁶ In 2004, the Report of the Berlin Conference, on the “Legal Issues of the Outer Continental Shelf”, elaborates the meaning of the terms of article 76 of UNCLOS.³⁴⁷

5.2.1.1. *The term 'on the basis of'*

During UNCLOS III, the provision of paragraph 8, included the term ‘taking into account’ and not the term ‘on the basis of’.³⁴⁸ As explained in the ILA Report of 2004, one comment on the provision still including the term ‘taking into account’ suggests an explanation for replacing it by the term ‘on the basis’ of:³⁴⁹

“That sentence cannot conceivably mean what it seems to say, namely, that the coastal state can establish final limits binding on the rest of the world simply by “taking into account”, but possibly in significant respects rejecting the Commission’s recommendations.”

As Canada as summarised it during UNCLOS III:³⁵⁰

“The . . . Commission is primarily an instrument which will provide the international community with reassurances that coastal States will establish their continental shelf limits in strict accordance with the provisions of article 76. It has never been intended, nor should it be intended, as a means to impose on coastal States limits that differ from those already recognized in article 76. Thus to suggest that the coastal States limits shall be established ‘on the basis’ of the Commission's recommendations rather than on the basis of article

³⁴⁶ ILA Preliminary Report, New Delhi Conference (2002). See reports on ILA website, available at <<http://www.ila-hq.org/index.php/committees>>, last accessed 16 October 2019.

³⁴⁷ ILA Report, Berlin Conference (2004), Legal Issues of the Outer Continental Shelf, §6.

³⁴⁸ ILA Berlin Report, footnote 347, §6.6, p.21.

³⁴⁹ Ibid.

³⁵⁰ Statement by the Delegation of Canada, dated 2 April 1980, UN Doc. A/Conf. 62/WS/4 reprinted in UNCLOS III, Official Records (New York, 1981), vol XIII, p. 102.

76, could be interpreted as giving the Commission the function and power to determine the outer limits of the continental shelf of a coastal State. We are assured on all sides that this is not the intention . . .”

The provision “on the basis of these recommendations”, to most States,³⁵¹ should not be understood as giving powers to the CLCS to influence the outer limits. While “taking into account” had been suggested during UNCLOS III,³⁵² the change to “on the basis of” was considered a more careful choice to limit the freedom of action of the coastal State³⁵³ as it seems to “provide certainty and consistency for the international community, while preserving sufficient, although unspecified, flexibility for the coastal State.”³⁵⁴

The “on the basis of” clause actually implies an “if/then mechanism”,³⁵⁵ meaning that if the outer limits are based on the recommendations of the CLCS, then the outer limits will be considered final and binding. This mechanism seems to imply a degree of flexibility of the coastal State vis-à-vis the recommendations of the Commission.³⁵⁶

When the Commission considers the submission of a coastal State, it can either come to the conclusion that the data and information submitted show that the test of appurtenance is passed, thus that the outer limits of the continental shelf should be delineated according to the provisions of article 76 of UNCLOS, and that the outer limits are actually established in accordance with article 76, or it can reject the data and information submitted by the coastal

³⁵¹ Brown, E., *Sea-bed Energy and Minerals: The International Legal Regime* (Martinus Nijhoff 1992), p. I.4.14.

³⁵² ILA Report, Berlin Conference, footnote 347, p.21-22 : during the ninth session of UNCLOS III, the words ‘on the basis of’ replaced the words “taking into account”. This change, proposed by the Chairman of the Second Committee, was supported by geographically disadvantaged States, whereas a number of broad margin States opposed it or expressed their reservations.”

³⁵³ ILA Report, Berlin Conference, footnote 347, p.21.

³⁵⁴ In MacDorman, T.L., ‘The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World’ (1995) 10 2 *IJMCL* 301, p314.

³⁵⁵ *Ibid.*, p314.

³⁵⁶ See ILA Report, Berlin Conference, footnote 347, p.22.

State, if the information are not sufficient or result in the creation of outer limits that vary from what the CLCS has calculated.³⁵⁷

Following the recommendations of the CLCS, the coastal State, within a reasonable period, can either make a revised or a new submission.³⁵⁸ That submission will include additional or new information. The outer limits if recognised by the CLCS as valid in regard to the provisions of article 76 will be used by the coastal State to establish the final and binding limits.

However, the coastal State could choose not to make a revised or new submission. According to paragraph 8 of article 76, the process of submission to the CLCS by the coastal State is compulsory (“shall be submitted to” the CLCS) . The making of recommendations is also compulsory for the CLCS (“shall make recommendations”).

In the provision of article 8 of Annex II to UNCLOS, it is stated that the coastal State shall make a new or revised submission in case of disagreement with the recommendations:³⁵⁹

“In case of disagreement by the coastal State with the recommendations of the Commission, the coastal State shall, within a reasonable time, make a revised or new submission to the Commission.”

However, it does not mean that when disagreement persists the coastal State cannot establish its outer limits. This provision does not prevent the coastal State, if it still does not agree with the recommendations, even in the case of a new or revised submission, to proceed to the establishment of the outer limits. Thus, there may be cases where the outer limits of the continental shelf of a coastal State may not be based on the recommendations of the Commission.

As it is said in the ILA Berlin Report, “[t]he Convention does not entrust the CLCS with a role in respect of the process of establishing the outer limits of the continental shelf once it has issued its recommendations and the coastal State does not make a new or revised

³⁵⁷ In ILA Report, Berlin Conference, footnote 347, p.21.

³⁵⁸ Article 9 of Annex II to UNCLOS.

³⁵⁹ Ibid.

submission.”³⁶⁰ The choice of the term ‘on the basis of’ instead of ‘taking into account’ could suggest that the coastal State, to establish its outer limits, should refer to a great extent to the recommendations of the CLCS.

However, if the coastal State decides otherwise, the Commission cannot prevent the coastal State to establish its outer limits not on the basis of its recommendations. The result is that these outer limits may be considered not to be final and binding.

To conclude on the meaning of the term “on the basis of”, it seems that the CLCS’s role is just to provide the coastal State with recommendations. It is not in its function to decide on the validity of the outer limits in law. The coastal State who decides to base its outer limits on the recommendations of the Commission may qualify the outer limits as final and binding.

5.2.1.2. The term ‘final and binding’

Article 76 paragraph 8 states that the limits of the shelf established by a coastal State on the basis of the recommendations of the Commission shall be final and binding.³⁶¹ The outer limits are final and binding to the coastal State, the CLCS, but also the International Seabed Authority:³⁶²

“Apart from the coastal State concerned, this provision might in principle be addressed to other States parties to the Convention, the ISBA and States that are not parties to the Convention.”

The ILA Report of the Berlin Conference defines the term ‘final and binding’:³⁶³

“The term ‘final and binding’ actually consists of two separate terms, each of which has a separate meaning. The reference to ‘final’ entails that the outer limit line shall no longer be subject to change but becomes permanently fixed.

³⁶⁰ ILA Report, Berlin Conference, footnote 347, p.22.

³⁶¹ Article 76 of UNCLOS §8.

³⁶² ILA Report, Berlin Conference, footnote 347, p.23.

³⁶³ Ibid.

The reference to ‘binding’ implies an obligation to accept the outer limit line concerned.”

On the one hand, the term ‘final’ implies that the limits cannot be changed by the coastal State.³⁶⁴

“The coastal State is under an obligation not to change an outer limit line which has become final and binding. Any other interpretation would contradict the provision that the outer limit is final, that is, not subject to change. This conclusion is reinforced by article 76(9) of the Convention, which provides that the coastal State shall deposit charts and relevant information with the Secretary-General of the United Nations permanently describing the outer limits of its continental shelf.”

On the other hand, the term ‘binding’ implies that the limits are final and binding *erga omnes*.³⁶⁵

“One consequence of the reference to ‘final and binding’ for other States parties to the Convention is that they can no longer challenge an outer limit line that has become final and binding, even if the parameters on which it is based, such as the baseline, changes. This conclusion follows from the fact that the outer limit line becomes final and binding on the coastal State. Only the coastal State is competent to establish the outer limit of its continental shelf and it would thus be impossible that an outer limit line that is final and binding on the coastal State can still be changed and not be binding on other States.”

As to know when the outer limits become final and binding, the ILA Report says that.³⁶⁶

“Only the coastal State is competent to establish the outer limits of its continental shelf and the outer limit lines can only become final and binding on the coastal State once that State has established these outer limit lines. The coastal State is under an obligation to deposit charts and information describing

³⁶⁴ Ibid.

³⁶⁵ Ibid.

³⁶⁶ Ibid.

the outer limits of its continental shelf with the Secretary-General of the United Nations. This deposit signifies the completion of the process of establishment of the outer limits of the outer continental shelf by the coastal State, and these limits are at least from that moment final and binding on the coastal State, unless they are successfully challenged by other States parties to the Convention.”

To conclude, the term “final and binding” means that the outer limits, once established according to article 76, may not be contested,³⁶⁷ or rather, that “the limit thus established will become obligation *erga omnes* -which means final and binding on all States,”³⁶⁸ submitting State and all other States, as well as the ISA, but not to non-State Parties as a consequence of the *pacta tertiis* rule.³⁶⁹

5.2.1.3. The term ‘permanently describing the outer limits’

The limits become permanent when they are deposited with the Secretary-General of the United Nations.³⁷⁰ Once the limits become permanent, the Secretary-General gives “due publicity to them”.³⁷¹ The limits should through this process be considered the final and binding limits of the continental shelf of the coastal State *erga omnes*.

³⁶⁷ In McDorman, footnote 354, p.314 citing the 1994 US Commentary, US Senate Treaty Doc. 103±39, note 20 above, p. 57: “If the coastal State agrees, the limits of the continental shelf established by the coastal State on the basis of these recommendations are final and binding (article 76(8)), thus providing stability to these claims which may not be contested”.

³⁶⁸ In McDorman, footnote 354, p.314 citing J.C. Lupinacci, “El regimen de la plataforma continental en la Convencion sobre el Derecho del Mar” in P.M. Arana (ed.), Trabajos presentados a la Conferencia Internacional sobre Recursos Marinos del Pacifico, Vina del Mar, Chile, 1983 as cited in United Nations, Definition of the Continental Shelf, note 13 above, p. 29.

³⁶⁹ ILA Report, Berlin Conference, footnote 347, p.23.

³⁷⁰ Article 76 of UNCLOS. §8 of UNCLOS.

³⁷¹ Ibid.

Article 76 paragraph 9 provides that the coastal State shall deposit charts and relevant information with the Secretary-General of the United Nations, permanently describing the outer limits of its continental shelf:³⁷²

“9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.”

The ILA Report raises the question about the consequences attached to the deposit of information on the outer limits: “do these limits become permanently fixed by the mere fact that the coastal State has deposited the required information?”³⁷³

In regard to the establishment of the outer limits:³⁷⁴

“In providing an answer to this question a number of issues has to be taken into consideration. Article 76(9) does not require that the outer limits on which information is submitted are the outer limit lines established on the basis of the recommendations of the CLCS under article 76(8). It would thus seem possible for a coastal State to deposit information on outer limit lines that have not been considered by the Commission or outer limit lines that have not been established on the basis of the Commission’s recommendations. Under article 76(9), the Secretary General is not authorized to review the material submitted by the coastal State. It has been suggested that article 76(9) must be treated as placing on Secretary- General a responsibility similar to that of a treaty depositary, with no legal consequences attaching to such acceptance”

Since the charts and relevant information deposited should describe the permanent outer limits of the continental shelf of the coastal State, the outer limits become final and binding when they are deposited with the Secretary-General.

³⁷² Article 76 of UNCLOS §9.

³⁷³ ILA Report, Berlin Conference, footnote 347, p.24.

³⁷⁴ Ibid., p.24.

As a consequence, it would mean for the coastal State that “the inclusion of the reference to ‘permanently’ implies that once it has deposited information under article 76 paragraph 9 it can no longer change these outer limit coordinates.

The Secretary-General of the United Nations acts as a treaty depository. Thus, it cannot question the validity of the outer limits deposited, even if the outer limits deposited are not based on the recommendations of the CLCS.

Once the limits are given due publicity, States who do not agree with the outer limits can challenge the outer limits established by the coastal State. If an opposite or adjacent State is of the view that the continental shelf, as publicized, encroach on its continental shelf, it can use the dispute settlement mechanism of Part XV of UNCLOS to resolve the dispute of the overlapping claims.³⁷⁵ Does it mean that the process of establishment of the outer limits between the coastal State and the CLCS is a private matter? The outer limits officially publicized can be tackled but it appears that States also interfere in the process of submission.

To conclude, although it appears that the process of submission to the CLCS and recommendations of the CLCS is necessary to the establishment of the outer limits, the CLCS does not play a role in the process of establishment of the final and binding limits. Coastal States are competent to fix the outer limits of their continental shelf. The CLCS is only mandated to react to submissions and re-submissions,³⁷⁶ and it is actually other submitting States or any other State who can react to the validity of the final and binding limits.³⁷⁷

5.2.2. *The Role of the Recommendations of the CLCS in their establishment*

The creation of the Commission on the Limits of the Continental Shelf is the result of negotiations at UNCLOS III.³⁷⁸ Its role is limited, under the framework of UNCLOS, to make recommendations on the outer limits as delineated by the coastal State. The CLCS is not

³⁷⁵ See Part XV of UNCLOS.

³⁷⁶ In McDorman, footnote 354, p.315.

³⁷⁷ See *notes verbales* of states, in Submissions of coastal States, available at <https://www.un.org/depts/los/clcs_new/commission_submissions.htm>, last accessed 16 October 2019.

³⁷⁸ In McDorman, footnote 354, in abstract.

composed of jurists,³⁷⁹ its 21 members are experts in the field of geology, geophysics or hydrography, they are elected by States Parties to UNCLOS from among their nationals and they are paid by their nominating State.³⁸⁰

The CLCS does not issue judgments but recommendations. The CLCS is not a judicial body. The Commission is not an international court, or arbitrator of claims in the seabed, and does not represent the interest of the international community.³⁸¹ It is an independent technical body, a *treaty organ* of the United Nations,³⁸² whose members are experts in mission for the Organisation.

Its role is technical as its functions are to:³⁸³

- “(a) to consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with article 76 and the Statement of Understanding adopted on 29 August 1980 by the Third United Nations Conference on the Law of the Sea;
- (b) to provide scientific and technical advice, if requested by the coastal State concerned during the preparation of the data referred to in subparagraph (a).”

Its role is important to the delineation process and the final line that will mark the boundary with the Area. It seems that the Commission’s role is linked to the politics of boundary-making:³⁸⁴

“It will be argued that the best view of the Commission, based on the political context of boundary-making and a careful analysis of the wording of Article 76

³⁷⁹ See Article 3 of Annex II to UNCLOS.

³⁸⁰ See Article 2 paragraphs 1 and 5 of Annex II to UNCLOS.

³⁸¹³⁸¹ In McDorman, footnote 354, p.313.

³⁸² See *Letter* dated 11 March 1998 from the Legal Counsel, Under-Secretary- General of the United Nations for Legal Affairs, addressed to the Commission on the Limits of the Continental Shelf, Doc. CLCS/5 (11 March 1998).

³⁸³ Article 3 paragraph 1 of Annex II to UNCLOS.

³⁸⁴ In McDorman, footnote 354, p.307.

and Annex II, is that it is a unique body constrained to speak a technical and scientific language yet involved in a process where the language that matters is that of politics.”

The Commission was in fact imagined firstly as a boundary commission.³⁸⁵ The boundary commission, as it was envisaged by Professor Hedberg,³⁸⁶ would be a delineation commission dealing with technical aspects concerning the location of the continental margin. It was thought as a “technical international marine boundary commission”, to be composed largely of qualified oceanographers, geologists, geographers and engineers, not lawyers.³⁸⁷

Its mission would not consist in delineating the final outer limits of all continental shelves, but rather to:³⁸⁸

“produce on maps an approximate base-of-slope line worldwide, and then delineate on maps the boundary zone, using the approximate base-of-slope line as its inner limits, and a line possibly 100 km oceanward from it as the outer limit of the zone. All recommendations of the boundary commission would be subject to approval both by the international authority and the coastal State concerned.”

The precise boundary would be delimited by each coastal State that would draw and mark its own precise linear boundary, “consisting of straight lines connecting fixed points of latitude and longitude, subject only to the requirements that this precise boundary lies entirely within the internationally prescribed limits of the boundary zone.”³⁸⁹

³⁸⁵ See Hedberg, footnote 242, p.445: Boundary Commission.

³⁸⁶ Ibid..

³⁸⁷ Ibid, p.445.

³⁸⁸ Ibid.

³⁸⁹ Ibid. p.445. In its footnote, Hedberg expresses that “some objections have been that a coastal State would always draw its boundary along the outermost edge of the zone. This would be its privilege, as long as the boundary fell entirely within the internationally prescribed limits. The wish to keep the boundary simple and for it to pass international inspection would doubtless keep a coastal State from trying to follow too closely the outer edge of the zone.”

The functions of the technical ‘international marine boundary commission’ would consist in checking “the precise boundary proposed by a coastal State to make sure that it fell within the prescribed limits, and to make recommendations to the international authority regarding its acceptance.”³⁹⁰ The commission would not delineate the outer limits but would indicate the region in which the coastal State may do so.

By reading Professor Hedberg’s provisions on the making of a boundary commission, we do not see any encroachment on sovereignty of States. The boundary commission would not actually deal with boundaries but outer limits. The role of the commissioners, experts in ocean and geo-sciences, would be related to technicalities and finding the outer edge region in which the outer limits could be drawn. The commission as envisaged by Hedberg would not deal with delimitation but the technical process of delineation of the outer limits.

However, the ambit of the powers of that “boundary commission” frightened many coastal States:³⁹¹

“Nation states jealously control the determination of both their land and sea boundaries. A state’s assertion of an international boundary, its outer limit of national sovereignty, is a political act which, however, is usually accompanied both by legal justification and technical expertise in the delineation of the precise location of the boundary.”

The role of the CLCS, as provided for in UNCLOS, is only envisaged as a technical one. The Commission checks, when faced with submissions, whether the continental shelf extends beyond 200 M and whether the outer limits are delineated according to the provisions of article 76.³⁹²

The Commission assesses that scientific methodologies for collecting and computing data concerning the outer edge and the outer limits have been correctly calculated and positioned. The CLCS makes recommendations on the outer limits, stating whether it

³⁹⁰ In Hedberg, footnote 242, p.445.

³⁹¹ In McDorman, footnote 354, p.308. See in Report of the Eleventh Meeting of State Parties, note 5 above, para. 75.

³⁹² Article 76 of UNCLOS §4.

approves the delineation method and lines or whether additional or new information relative to the outer edge or outer limits should be given by the submitting state.³⁹³

As to know whether the Commission can assess a submission by a non-State Party to UNCLOS, it is a question that is subject to debate in the doctrine.³⁹⁴ It seems that most provisions concerning the legal regime of the continental shelf have been by now considered a part of customary international law,³⁹⁵ but it is less sure that provisions such as submissions to the CLCS have reached this status,³⁹⁶ as article 76 makes reference to a “coastal State” and not to “States Parties” as defined in article 1 paragraph 2 (1) of UNCLOS. Therefore, it is not sure whether a submission of a coastal State, non-Party to UNCLOS, will be examined by the Commission.

In discharging its functions, the CLCS does not encroach on legal provisions.³⁹⁷ Checking the correct application of scientific methodologies and technical tools is in no way related to legal procedure or the political making of boundaries.³⁹⁸ When the CLCS looks at the submissions, it should only deal with the application of the technical aspects of article 76 and their verification of their correct use by the submitting State. In doing so, the CLCS should not interpret legal provisions.³⁹⁹

³⁹³ In McDorman, footnote 354, p.304.

³⁹⁴ Ibid., p.303-304 ; Oude Elferink, A.G.: “Submissions of Coastal States to the CLCS in Cases of Unresolved Land and Maritime Disputes”, in M. H. Nordquist, J. M. Moore and T. H. Heidar (eds.), *Legal and Scientific Aspects of Continental Shelf Limits*, Centre for Oceans Law and Policy, (Leiden: Martinus Nijhoff Publishers, 2004) pp. 263-287.

³⁹⁵ In McDorman, footnote 354, in Introduction.

³⁹⁶ The Commission had requested a legal opinion be prepared on whether it could deal with submitted information from a non-party to the LOS Convention. At the Eighth Meeting of the States Parties in 1998, it was concluded that the question need not be answered until the situation arose. Report of the Eighth Meeting of the States Parties, Doc. SPLOS/31 of 4 June 1998, available at <www.un.org/Depts/los/meeting_states_parties/documents/SPLOS_31.htm>, last accessed 16 October 2019.

³⁹⁷ ILA Report, Berlin Conference, footnote 347, p.6 on the competence of the CLCS.

³⁹⁸ In McDorman, footnote 354, p.304.

³⁹⁹ Ibid., p.307. As McDorman says it, “it is the intent of Article 76 that limits be ascertained”, p.308.

In line with the will of state to sustain their sovereign powers, the Commission, under the UNCLOS framework, has a “relatively modest role in what is essentially a boundary-making process that is political.”⁴⁰⁰ In fact, when a submitting State is in disagreement with the recommendations of the CLCS, that State can “make a revised or new submission to the Commission.”⁴⁰¹ The role of the Commission in relation to the process of delineation of the outer limits is restricted to the technical study of the outer limits of the continental shelf, in application of the provisions of article 76 of UNCLOS.⁴⁰²

The act of determination of the boundary is jealously kept and exercised by States, in application of their sovereign powers.⁴⁰³

“A state's assertion of an international boundary, its outer limit of national sovereignty, is a political act which, however, is usually accompanied both by legal justification and technical expertise in the delineation of the precise location of the boundary. [...] It is only in the rarest of situations where a state yields the ultimate decision-making respecting the location of a national boundary to an independent authority.”

The delineation process is of a unilateral nature. States establish all the outer limits of their maritime zones “without consultation with other states or international institutions even in situations where those claims may overlap with those made by other states.”⁴⁰⁴ The outer limits of the continental shelf are established by the coastal State, in accordance with its sovereign rights.

In line with this principle, in UNCLOS, the role of the CLCS is very limited, as “ambiguity in the wording of Article 76(8) should be interpreted in a manner which results in

⁴⁰⁰ In McDorman, footnote 354, in Abstract.

⁴⁰¹ Article 8 of Annex II to UNCLOS.

⁴⁰² In McDorman, footnote 354.

⁴⁰³ Ibid. pp.308-309.

⁴⁰⁴ Ibid.

as little interference as possible with the political prerogatives of coastal State boundary-making.”⁴⁰⁵

The procedure of recommendations of the Commission is just linked to the verification of the outer limits in relation with the scientific components of the establishment of outer limits.

According to McDorman:⁴⁰⁶

“The LOS Convention provides to the Commission a role in the establishment by a coastal state of its outer limits of the continental shelf utilising Article 76 of the LOS Convention. The Commission's role is restricted to the question of the outer limits of the continental shelf and does not interfere with the right recognised in both customary international law¹⁶ and the LOS Convention of a coastal state to a continental shelf area beyond 200 nautical miles where the physical features are present .”

The role of the CLCS in relation to the submissions is just to make recommendations on the outer limits submitted. It does have a bigger role than that:⁴⁰⁷

“The relationship or process between the Commission and the submitting coastal state ``was envisaged by its proponents . . . as being a narrowing down `ping-pong' procedure" (emphasis added) -state submission, Commission recommendations, state resubmission, Commission recommendations, etc.- with the submitting state, acting in good faith, and the Commission eventually achieving accord.”

The CLCS is just the *watchdog* of claims of coastal States, in charge of verifying that the outer limits delineated by coastal States are in accordance with the provisions of article 76 of UNCLOS.⁴⁰⁸

⁴⁰⁵ In McDorman, footnote 354, p.309: “The political reality of boundary-making reinforces the one certainty respecting the role of the Commission that a coastal State retains the legal and political responsibility for establishing its continental margin outer limit.”

⁴⁰⁶ In McDorman, footnote 354, p.305.

⁴⁰⁷ Ibid. p.306.

“What can be drawn from this respecting the role and workings of the Commission is that what should concern the Commission is not so much whether a submitting state justifies its choice of outer limit, rather whether, in the view of the Commission, there is an exaggerated claim. In discussing the Commission, the government of the United States made use of the word “safeguards”. This is a useful way of looking at the role of the Commission- it has a safeguard or watchdog role respecting exaggerated continental margin claims.”

The role of the submitting State however has a bigger importance. As long as it wants and can play this ‘ping-pong match’ it can submit and resubmit.⁴⁰⁹ In the end, it is the submitting State that decides whether it is satisfied with the recommendations and whether it wants to establish the outer limits. The CLCS is, in this match, just the *watchdog* of exaggerated claims. The establishment of final and binding limits is not the business of the Commission but of States. The outer limits ought to be contested by other States but not the Commission.

To conclude, the making of boundary is a match played between States. The interaction of the CLCS in the establishment of the outer limits is justified in the sense that its action will allow the coastal State to make a legitimate claim *vis-à-vis* other States. The recommendations play the role of a technical and scientific legitimization of the outer limits, but the political act of delimitation of the boundary rests with States.

5.3. The establishment of the boundaries of the continental shelf, according to article 76 paragraph 10 and the Rules of Procedure of the CLCS

In accordance with article 76 paragraph 8 of UNCLOS, the outer limits of the continental shelf of the coastal State that are established on the basis of the recommendations of the CLCS are deemed final and binding *erga omnes*. In accordance with paragraph 9 of article 76, due publicity is given to the permanent outer limits that have been deposited with the Secretary-General of the United Nations.

⁴⁰⁸ Ibid., p.308.

⁴⁰⁹ Ibid.

Through the process of submission of the outer limits of the continental shelf to the CLCS, the coastal State can legitimize the location of its boundary on the seabed. It is not that the Commission gives a judgment on its location, rather that its technical expertise can be used by the coastal State towards other States to prove that its continental shelf extends beyond 200 M, that its outer limits can consequently be delineated in accordance with article 76 and that the outer limits thereby delineated are in accordance with the provisions of article 76 of UNCLOS. The claim of the coastal State over the seabed is, with this process, valid and the coastal State may use the recommendations as a proof of its right in the seabed region and as good faith in respect with the location of its maritime boundaries.

An opposite or adjacent State can, at this point, contest the boundary or compete in regard of the claim to the designated seabed region. Because the outer limits have been given due publicity, other States can see and judge whether they deem the outer limits to be located in a region where they either deem that the coastal State does not have a right, or that they deem that there is an overlap of claims with their own entitlement.

As, under article 83 of UNCLOS, “[t]he delimitation of the continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution”, article 76 paragraph 10 clarifies that: “the provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.”⁴¹⁰

When there is an overlap of claims over a same seabed region, opposite or adjacent States whose competitive claims overlap may resort to the use of Part XV of UNCLOS on dispute settlement mechanisms and choose to delimit the boundary between the overlapping claims before a judicial body.⁴¹¹ In application of the last paragraph of article 76, the provisions of this article are without prejudice to the question of delimitation of the continental shelf.

⁴¹⁰ See reproduction of Article 76 §10 and article 83 of UNCLOS, in *Annex*, Annex III.

⁴¹¹ See Part XV of UNCLOS. The ICJ, ITLOS or an arbitral tribunal may be competent.

According to these provisions, the processes of delineation of the outer limits and of delimitation of the boundary with an opposite of adjacent States are separated. The question of establishment of the outer limits of the continental shelf is a technical process, dealt with by the coastal State. The latter submit its outer limits to the CLCS to verify that the outer limits are delineated in accordance with article 76. The question of delimitation of the maritime boundary between States with opposite or adjacent coasts, if not resolved between States, is brought to a judicial body who will establish the boundary on the overlapping claim.

Consequently, article 9 of Annex II to UNLCOS states that “the actions of the Commission shall not prejudice matters relating to the delimitation of boundaries between States with opposite or adjacent coasts.”⁴¹²

However, in its Rules of Procedure,⁴¹³ the CLCS has interpreted this provision as meaning that:⁴¹⁴

“1. In case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States or in other cases of unresolved land or maritime disputes, submissions may be made and shall be considered in accordance with Annex I to these Rules. 2. The actions of the Commission shall not prejudice matters relating to the delimitation of boundaries between States.”

These provisions depart from the meaning of article 76 paragraph 10 and article 9 in Annex II to UNCLOS. The question is thus to know whether Rule 46 of the Rules of Procedure has interpreted the Convention? In relation to the study of Rule 46, the ability of the CLCS to interpret a legal instrument will be questioned (5.3.1.).

In application of this Rule, States may, by a *note verbale* addressed to the Secretary-General of the United Nations,⁴¹⁵ oppose the claim of the submitting State to the CLCS, which as a consequence, prevents the Commission from qualifying the submission and make

⁴¹² Article 9 of Annex II to UNCLOS. See reproduction in *Annex*, Annex III.

⁴¹³ See CLCS/40, footnote 340.

⁴¹⁴ *Ibid.*, Rule 46 in Rules of Procedure.

⁴¹⁵ *Ibid.*, Annex I to the Rules of Procedure §5.

recommendations.⁴¹⁶ As a result, the outer limits of the continental shelf cannot be established by the coastal State, or at least not on the basis of the recommendations of the Commission.

The lack of recommendations block the submitting State as it cannot prove that the test of appurtenance is passed and that the outer limits of its continental shelf are located beyond 200 M. In the case of a maritime dispute, the submitting State can see its claim to the seabed beyond 200 M questioned by the opposite or adjacent State, such as in the *Bay of Bengal case*,⁴¹⁷ before the International Tribunal for the Law of the Sea (Tribunal or ITLOS), in 2012.

Behind the dispute before the Tribunal, the question that was raised was whether there is a temporal relationship between delineation and delimitation? Does a coastal State need to establish its outer limits according to article 76 of UNCLOS before it can delimit the maritime boundary on the seabed? This would imply that the application of article 76 creates a legal entitlement to the outer portion of the continental shelf and the following implies that there are, in UNCLOS, two continental shelves, an inner shelf to which right is inherent, and an outer continental shelf for which the coastal State has to apply (5.3.2.).

5.3.1. Rule 46 of the Rules of Procedure: the role of the CLCS vis-à-vis maritime boundary disputes

The CLCS should, according to article 76 paragraph 8 and Annex II to the Convention, “consider data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with article 76 and the Statement of Understanding adopted on 29 August 1980 by the Third United Nations Conference on the Law of the Sea.”⁴¹⁸

⁴¹⁶ Ibid, §5(a).

⁴¹⁷ In *Bay of Bengal case*, footnote 36.

⁴¹⁸ Article 3 of Annex II to UNCLOS.

In relation to the fulfillment of its functions, Annex II to UNCLOS provides the structure of the workings of the Commission and its subcommissions.⁴¹⁹ In line with the Annex, the Commission has drafted its own Rules of Procedure.⁴²⁰ They set the rules to govern the workings of sessions and meetings, the term of office of members of the CLCS, the conduct of business and the duties of the Secretariat of the United Nations in relation to the performing of its duties vis-à-vis the CLCS. They also set the rules of the workings of the review of submissions and the making of recommendations.

5.3.1.1. *The Rules of Procedure of the CLCS: the right to establish its own rules in regard to the performing of its functions*

In the *Nottebohm case*, the ICJ recognises that “[s]ince the *Alabama case*, it has been generally recognised, following the earlier precedents, that, in the absence of any agreement to the contrary, an international tribunal has the rights to decide as to its own jurisdiction and has the power to interpret for this purpose the instruments which govern that jurisdiction.”⁴²¹ An international tribunal has *kompetenz-kompetenz*.⁴²² The Meeting of States Parties to UNCLOS has developed its own rules of procedure to guide the running of its meetings.⁴²³ The Meeting of States Parties is not a judicial body, however it may draft the rules that govern its workings. Can the CLCS have its own?

When it comes to procedural rules and question of legality, the CLCS has been directed to address the matters to the Legal Counsel of the United Nations.⁴²⁴ The CLCS is a “treaty organ” to the United Nations. They are affiliated to the UN as “experts in mission”

⁴¹⁹ Article 5 of Annex II to UNCLOS.

⁴²⁰ See CLCS/40, footnote 340.

⁴²¹ *Nottebohm case*, Preliminary Objection, Judgment, [1953] ICJ Rep., p.119

⁴²² In Kunoy, B., ‘The Admissibility of a Plea to an International Adjudicative Forum to Delimit the Outer Continental Shelf Prior to the Adoption of Final Recommendations by the Commission on the Limits of the Continental Shelf’ (2010) 25 *IJMC* 237.

⁴²³ See SPLOS/2/Rev.4; see UN GA Official Records, A/49/PV.77, p.3 where it was stated that “the meeting of States Parties is the supreme body in relation to the Convention.” See Article 319 §2(e) of UNCLOS.

⁴²⁴ See UN website < <http://legal.un.org/ola/>>, last accessed 16 October 2019.

and, as such could use the UN internal mechanisms such as seeking a legal opinion from the UN Legal Counsel on matters related to its field of competence.

On an issue relating to the privileges and immunities, the Legal Counsel was competent and addressed a legal opinion on the matter to the CLCS.⁴²⁵ Concerning the interpretation of Annex II to UNCLOS concerning the making of a new or revised submission, the CLCS did not know whether Brazil could submit substantive changed data while still be considered part of the ongoing submission.⁴²⁶

This question was answered by the Legal Counsel.⁴²⁷ The Legal Counsel, in accordance with its core functions, can interpret and draft rules of international public law.⁴²⁸ In this case, he answered and thus we feel that the UN Legal Counsel is competent to give this sort of legal opinion concerning the application and interpretation of UNCLOS and relevant Annexes to the Convention.

However, in subsequent issues raising legal interpretation, the CLCS did not address the Legal Counsel but directly the Meeting of States Parties.⁴²⁹ In relation to the article 121

⁴²⁵ Letter dated 11 March 1998 from the Legal Counsel, Under-Secretary- General of the United Nations for Legal Affairs, addressed to the Commission on the Limits of the Continental Shelf, Doc. CLCS/5 (11 March 1998).

⁴²⁶ See, CLCS Document: CLCS/46 - Letter dated 25 August 2005 from the Legal Counsel, Under-Secretary- General of the United Nations for Legal Affairs, addressed to the Chairman of the Commission on the Limits of the Continental Shelf: Legal opinion on “whether it is permissible, under the United Nations Convention on the Law of the Sea and the rules of procedure of the Commission, for a coastal State, which has made a submission to the Commission in accordance with article 76 of the Convention, to provide to the Commission in the course of the examination by it of the submission, additional material and information relating to the limits of its continental shelf or substantial part thereof, which constitute a significant departure from the original limits and formulae lines that were given due publicity by the Secretary- General of the United Nations in accordance with rule 50 of the rules of procedure of the Commission”:

<<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N05/482/97/PDF/N0548297.pdf?OpenElement>>, last accessed 16 October 2019.

⁴²⁷ Ibid. see Annex to the Letter, p.3 et s.

⁴²⁸ See footnote 424.

⁴²⁹ See SPLOS Document, SPLOS/203 §72 p.12.

of UNCLOS, the qualification of an emerged land as a rock or an island, was not addressed by the CLCS to the Legal Counsel as some states parties felt that this issue should be dealt with by the Meeting which would be the competent organ to deal with legal interpretation.⁴³⁰

Concerning the legal status of the Rules of Procedure of the CLCS, some States were of the view that the CLCS did not have the competence to enact such a document.⁴³¹ Mr. Nicolas Michel, then Under-Secretary-General for Legal Affairs, Legal Counsel, answered that:⁴³²

“[i]n addition to the explicit authority conferred upon it by the Convention, it is recognized that as a treaty body the Commission has certain implied powers that are essential for the fulfilment of its responsibilities under the Convention. This is the case of the power to adopt rules of procedure and other relevant documents with a view to facilitating the discharge of the functions of the Commission in an orderly and effective manner. Due to the nature of the functions of the Commission, its rules of procedure and other relevant documents are not merely organizational, or internal, in nature. On the contrary, they also offer guidance to States which make a submission to the Commission. Unlike the case of the International Seabed Authority (see article 149, para. 4), the Convention does not contain any article providing the Commission with the power to adopt its own rules or procedure. The Commission, therefore, can do so only by exercising a power which is conferred upon it by necessary implication as being essential to the performance of its duties. The same applies to other relevant documents. This is consistent with the 1949 advisory opinion by the International Court of Justice on Reparations for injuries suffered in the service of the United Nations. The Court found in that opinion, *inter alia*, that “under international law, the Organization must be deemed to have those powers, which, though not expressly provided in the Charter, are conferred upon it by necessary implication as being essential to the performance of its duties” (I.C.J. Reports, 1949, p. 182). The same considerations can be applied to the Commission with regard to powers which are essential to the performance of its duties, even though not expressly provided in the Convention.”

⁴³⁰ Ibid., §11, p.3.

⁴³¹ See CLCS Document, CLCS/46.

⁴³² See Letter, footnote 425, p.7 Part II(a).

The Rules of Procedure are thus a valid document to use and to refer to when coastal States delineate or submit outer limits or, when the Commission itself makes its recommendations.

Concerning the conformity of the Rules and Annexes with UNCLOS, the Legal Counsel says that.⁴³³

“It should be underlined, however, that rules of procedure and other relevant documents adopted by the Commission should be in strict conformity with the pertinent provisions of the Convention, which is the main instrument guiding the work of the Commission. In the case of any conflict between the provisions of these documents, which are supplementary by their nature, and those of the Convention, the latter shall prevail.”

Therefore, it would seem that if the provisions of the Rules exceed the wording or purpose of UNCLOS, the latter should prevail.⁴³⁴

However, in accordance with the 1969 Vienna Convention on the Law of Treaties, may be taken into consideration together with the context “any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation”⁴³⁵

In the present context, the Meeting of States Parties to UNCLOS has accepted and referred to these Rules and its Annexes:

⁴³³ Ibid, p.8.

⁴³⁴ Vienna Convention on the Law of Treaty (VCLT), footnote 275, art 31: “1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose. 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes: (a) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty; (b) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty”.

⁴³⁵ Ibid., Article 31 §3 (b) of VCLT.

“It should be observed that the States parties to the Convention acknowledged in one of their decisions the right of the Commission to adopt documents necessary for the proper discharge of its responsibilities under the Convention. In the decision regarding the date of commencement of the 10-year period for making submissions to the Commission set out in article 4 of annex II to the Convention (SPLOS/72), adopted at their Eleventh Meeting, held from 14 to 18 May 2001, the States parties noted “that it was only after the adoption by the Commission of its Scientific and Technical Guidelines on 13 May 1999 that States had before them the basic documents concerning submissions in accordance with article 76, paragraph 8, of the Convention”. By that decision, the States parties thus recognized the role played by the Guidelines and highlighted the particular importance they attached to them in the context of implementation of article 76, paragraph 8, of the Convention.”

For the Legal Counsel, the Meeting of States Parties has recognised the Annexes of the Rules of Procedure of the CLCS as valid *vis-à-vis* article 76 paragraph 10 and article 9 of Annex II to UNCLOS. The provisions of the Rules of Procedure may be deemed a valid interpretation of UNCLOS and this would thus mean that any disputes related to the delineation of the outer limits of the continental shelf could prevent the CLCS from qualifying the submission and consequently making recommendations. Following this event, no further letter was ever addressed by the CLCS to the Legal Counsel.

In accordance with the Rules of Procedure of the Meeting of States Parties,⁴³⁶ Rule 47 on Decisions on Competence and Rule 53 on Decisions on questions of substance, and accessory, Rules 54 and 55, may help us know whether the Meeting of States Parties may be competent to address legal matters encountered by the Commission. On matters of competence, the issue should be put to the vote of the Meeting before can be taken.⁴³⁷

If the matter is deemed of substance, “decisions [...] shall be taken by a two-thirds majority of the States parties present and voting, provided that such majority includes a

⁴³⁶See *Rules of Procedure for Meeting of States Parties* (SPLOS/2/Rev..4) SPLOS (24 January 2005, 15th session, New York, 16-24 June 2005).

⁴³⁷ *Ibid.* Rule 47.

majority of the States parties participating in the Meeting.”⁴³⁸ In parallel, “[e]xcept as otherwise provided in these rules, decisions on all matters of procedure shall be taken by a majority of the States parties present and voting.”⁴³⁹ It thus seems that the competence of the Meeting relies on its will to vote on the matter suggested to the assembly.

Dealing with the question of the validity of Rule 56, the definition of ‘dispute’ and the inclusion of delimitation issues into the technical process of delineation and assessment by an independent body of experts, is may be considered too much of a big deal to be put to vote. The proponents of a strict lecture of article 76 paragraph 10 battle the defendants of soft imbrications of delimitation procedures into technical delineation processes.⁴⁴⁰ As no compromise between both sides would be found leading to the matter being put to vote, it seems that the Meeting of States Parties will constantly refrain from dealing with issues of legal nature relating to the application of article 76.

To conclude, as experts in mission for the UN, linked to the organisation, the CLCS felt it had the ability to seek legal opinion of the UN Legal Counsel. The latter, taking competence, said that since these rules and annexes have been used and referred to by States parties and that they are consequently a valid interpretation of UNCLOS: this would mean that Rule 56 and its Annex I would be a valid interpretation of article 76 paragraph 10 as well as article 9 of annex II to UNCLOS.

⁴³⁸ Ibid. Rule 53.

⁴³⁹ Ibid., Rule 55.

⁴⁴⁰ See for instance SPLOS/203 §70; SPLOS/277 §81: “Concern was raised by some delegations with regard to the fact that some submissions were being deferred, seemingly indefinitely, as a result of objections made by third States under rule 46 and annex I to the rules of procedure of the Commission (CLCS/40/Rev.1).⁸ It was observed that none of the disputes that had led to the deferral of submissions had been resolved, leading to further deferrals. In this regard, a view was expressed that the Commission should continue to work in accordance with its rules of procedure and the Convention.”; SPLOS/316 §57 “Some delegations raised concerns about the seemingly indefinite deferment of certain submissions as a result of objections made by third States. It was suggested that the rules of procedure of the Commission should be amended to enable it to consider all submissions. Another delegation noted, however, that the decision by the Commission to defer consideration of a submission owing to the existence of disputes was consistent with its rules of procedure.” See also §§55-58.

In the ILA Report of the Berlin Conference, it is said that the competence of the Commission should be assessed in relation to the functions in relation to which its competence will be performed:⁴⁴¹

“To assess the nature of a specific competence of the Commission, a distinction has to be made between the competence of the Commission in respect of functions which have been explicitly entrusted to it under the Convention and the competence, which the Commission is presumed to have in order to make it possible to carry out these former functions. This also concerns the question as to what extent the views of the Commission, as contained in documents it has issued, carry legal consequences for States parties to the Convention.”

While it seems that the CLCS can have its own Rules of Procedure in order to frame its activities, the competence of the CLCS in relation to the drafting of certain of these rules may be questioned.

If the rules concern the competence of the Commission in relation to its activities and the workings of its subcommissions and work of its members, the CLCS is deemed competent to draft and apply these rules. If the rules concern the application of the Convention and consequently impact on the application of article 76, the CLCS is not competent, as its rule may impede the rights of States:⁴⁴²

“the competence to interpret and apply article 76 of the Convention rests in the first place with its States parties.²⁸ The Commission is only competent to deal with the interpretation of the provisions of article 76 and other provisions of the Convention to the extent this is necessary to carry out the functions which have been assigned to it under the Convention.”

In fact, the provision of Rule 46 of the Rules of Procedure of the CLCS adds an obligation that is not present in the text of article 76 paragraph 10. As explained in the ILA

⁴⁴¹ ILA Report, Berlin Conference, footnote 347, p.5.

⁴⁴² Ibid, pp-5-6.

Report, “the CLCS should not interpret these provisions in such a way that they place additional obligations on coastal States.”⁴⁴³ The Commission is competent to establish:⁴⁴⁴

“the rules applicable to its own internal procedures. Such rules have to be complied with by States in their dealings with the Commission. Such rules can only be objected against on the ground that the CLCS has overstepped the limits of its competence or that these rules are invalid for other reasons.”

Article 76 of UNCLOS deals with the establishment of the outer limits of the continental shelf. The establishment of the outer limits is a process that rests with coastal States. The role of the CLCS is the one of a watchdog and a *legitimitor*.⁴⁴⁵ The technical verification of the CLCS over the outer limits is used to legitimize the claim of a coastal State. According to Annex II to UNCLOS, the CLCS exercises technical functions and has the role of a *watchdog* of article 76 against exaggerated claims. But, as it is entrapped into political game, the CLCS becomes “a *legitimitor* of the claims of a coastal State” over the seabed.⁴⁴⁶

In the case of Rule 46, and Annex I that complements it, they depart from the sense of article 76 paragraph 10 of UNCLOS. Rule 46 read together with Annex I paragraph 5 say that “in cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the States concerning in the dispute.”⁴⁴⁷ In case of a land or maritime dispute, the CLCS can however consider submissions when there is prior consent by all States parties to the dispute.⁴⁴⁸

The provision of Rule 46 paragraph 1 and Annex I to the Rules of Procedure may be seen as a substantive interpretation of the provision of article 76 paragraph 10: it is not

⁴⁴³ Ibid.

⁴⁴⁴ Ibid, p.7.

⁴⁴⁵ In McDorman, footnote 354, p.319.

⁴⁴⁶ Ibid. Emphasis from the text.

⁴⁴⁷ Rule 46 of the Rules of Procedure of the CLCS and Annex I, in CLCS/40, footnote 340, reproduced in *Annex*, Annex V.

⁴⁴⁸ Ibid.

mentioned in article 76, nor in article 9 in Annex II to UNCLOS, that the CLCS should not look at a submission which relates to an area of seabed under dispute.

When article 76 paragraph 10 and article 9 of Annex II to UNCLOS only state that the provisions concerning the establishment of the outer limits of the continental shelf are without prejudice to the question of delimitation, Rule 46 of the Rules of Procedure and its Annex I create an additional obligation for submitting States: the continental shelf concerned by the submission must not be the matter of a dispute, the CLCS cannot qualify the submission of a submitting State in case of a dispute; the CLCS may consider a submission if there is prior consent between all the States party to the dispute. The provisions of Annex I paragraph 5 create a right for States to contest the outer limits of the continental shelf submitted by the coastal State to the CLCS.

To conclude, the CLCS is competent to establish its Rules of Procedure, as long as these rules concern the workings of the Commission. The CLCS has overstepped its competence in its Rules of Procedure in relation to the drafting of Rule 46 and Annex I. The submission must not include a relation to a maritime dispute, nor a land dispute. If so, the Commission shall not consider and qualify the submission. They constitute a legal interpretation of article 76 paragraph 10 and article 9 of Annex II to UNCLOS. The provisions concerned create an additional obligation for the submitting State to the CLCS and create a right for other States to contest the submission. The CLCS is a technical organ and does not have the legal competence to create additional obligations on States.

5.3.1.2. The meaning of the term 'without prejudice' in article 76 paragraph 10

According to article 76 paragraph 10:⁴⁴⁹

“10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.”

⁴⁴⁹ Article 76 of UNCLOS.

Article 76 does not deal with delimitation of the outer limits of the continental shelf. In fact:⁴⁵⁰

“Article 76(10) of the Convention states that the provisions of article 76 are without prejudice to the question of the delimitation of the continental shelf between States with opposite or adjacent coasts. This provision confirms that article 76 is concerned with entitlement to and the establishment of the outer limits of the continental shelf and not the delimitation of overlapping entitlements between neighboring States.”

As a matter of fact, article 83 establishes the rules concerning delimitation of the continental shelf between States with opposite or adjacent coasts:⁴⁵¹

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

Article 76 paragraph 10 acts as a safeguarding clause, recalling that “the implementation of article 76 by one State does not affect the rights of another State, in a case where the delimitation of the continental shelf between the States concerned is at issue.”⁴⁵² This safeguarding clause suggests that “the existence of overlapping claims to a continental shelf area should not be invoked by a State to argue that the CLCS should not consider a submission in respect of the outer limits of such an area.”⁴⁵³

The fact is that, paragraph 8 read in conjunction with paragraph 10 limit the role of the Commission. The making of recommendations should “be interpreted in a manner which results in as little interference as possible with the political prerogatives of coastal state boundary-making.”⁴⁵⁴

⁴⁵⁰ ILA Report, Berlin Conference, footnote 347, p.26.

⁴⁵¹ Article 83 § 1 of UNCLOS.

⁴⁵² ILA Report, Berlin Conference, footnote 347, p.26.

⁴⁵³ Ibid, p.27.

⁴⁵⁴ In McDorman, footnote 354, p.309.

In other words, in application of article 76 and Annex II to UNCLOS, the CLCS can consider submissions which contain the outer limits of the continental shelf over an areas of the seabed in which another State, may it be in another submission, also establishes the outer limits of its continental shelf. As a result, the CLCS can consider submissions that concern the same seabed area.

However, article 9 of Annex II to the Convention provides that “the actions of the CLCS shall not prejudice matters relating to the delimitation of boundaries between States.”⁴⁵⁵ The consequences of the consideration of submissions by the Commission should not prejudice the delimitation of boundaries.

The ILA Report provides the following interpretation of the provision: “[t]his provision provides the basis for a special procedure in respect of submissions involving overlapping areas of continental shelf.”⁴⁵⁶ In fact, the “Convention does not provide an explicit basis to adopt a special procedure for other matters that might be raised by other States in respect of a submission by a coastal State, such as the interpretation or application of the Convention or disputes over territory.”⁴⁵⁷

According to this, the provision of article 9 prevents the recommendations of the Commission to qualify the status of a land territory. If the CLCS in its consideration of the submission, verifies the outer limits of the continental shelf of the submitting State and recommends that the establishment of the outer limits has been made in accord with article 76, this could be understood by States as qualifying the submerged prolongation of the land mass as the natural prolongation of the land territory of the coastal State; this could be interpreted to imply that the land territory belong to the submitting State.⁴⁵⁸

“It cannot make recommendations that would affect the rights of other States, in case they have not agreed to a consideration of questions involving their rights under the Convention. At the same time, the coastal State which has

⁴⁵⁵ Ibid.

⁴⁵⁶ Ibid.

⁴⁵⁷ Ibid.

⁴⁵⁸ Ibid.

made a submission may object to the involvement of another State in the consideration of its submission, and the Convention in any case does not accord other States a right to be involved in this process.”

Therefore, when article 9 of Annex II to UNCLOS indicates that the actions of the CLCS shall not prejudice matters relating to delimitation of boundaries, the interpretation can be that the consideration of the submission may qualify the entitlement of the coastal State over the land (and maritime) dispute.

That is why, Rule 46 indicates that “in case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States or in other cases of unresolved land or maritime disputes, submissions may be made and shall be considered in accordance with Annex I to these Rules”.⁴⁵⁹ In accordance with this Rule, Annex I to the Rules of Procedure indicates in its paragraph 5(a) that “in cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the States concerning in the dispute.”⁴⁶⁰

In the ILA Report, it is considered that if the CLCS would consider the submission, it may be deemed a qualification of the dispute and “recommendations of the CLCS in such a case, without agreement of all the parties concerned, would question the legality and threaten the effectiveness of the procedure involving the CLCS.”⁴⁶¹

It is said that the “practice in respect of article 76 reflects recognition of the significance of taking into account third States’ views”.⁴⁶²

“The above matters not only may arise between States parties to the Convention, but may also involve third States. A third State may hold that the consideration by the CLCS of a submission made by a State party to the Convention may impair its rights existing outside the Convention. In such a

⁴⁵⁹ Rule 46 of the Rules of Procedure of CLCS, CLCS/40, footnote 347, reproduced in *Annex*, Annex V.

⁴⁶⁰ *Ibid*, Annex I to the Rules of Procedure.

⁴⁶¹ ILA Report, Berlin Conference, footnote 347, p.27.

⁴⁶² *Ibid* : “Rule 50 of the Commission’s Rules of Procedure provides for notification of the Members of the United Nations, including the States parties to the Convention”

case, a third State can lodge a diplomatic protest with the State concerned or take any other steps at its disposal to address the issue. In addition, the arguments which have been advanced to allow other States parties to indicate their views on such a matters also apply in the case of third States.”

This obligation constitutes, for submitting States, a substantive and drastic instability in relation to the establishment of the outer limits of the continental shelf. Without the consideration of submissions by the CLCS, the outer limits cannot be established on the basis of its recommendations, thus these outer limits cannot be considered to be final and binding. As a result of this the breadth of the continental shelf cannot be settled or cannot be settled with the legitimacy of the recommendations of the CLCS.

To conclude, the outer limits of the continental shelf cannot be easily and quickly settled, although it was the purpose of the Convention. This may bring instability in ocean order and the extent of national jurisdiction on the seabed. Where and when the outer limits of the continental shelf are not established, the jurisdiction of coastal States on the seabed may be contested by neighbouring States. This may imply a resurgence of maritime boundary disputes.

Up to this date, 90 submissions were made by coastal States to the CLCS and the Commission has made 32 recommendations.⁴⁶³ Rule 46 of the Rules of Procedure and its Annex I have a huge impact on the review of outer limits of the continental shelf and the possibility of establishment of permanent limits on the seabed throughout the world.

5.3.2. The creation of a temporal relationship between delineation and delimitation?

The establishment of the outer limits of the continental shelf are without prejudice to the question of delimitation of the continental shelf in a maritime boundary dispute between opposite or adjacent States. The establishment of the outer limits and the delimitation of the boundary between two States are two different processes.

⁴⁶³ See CLCS website at <https://www.un.org/depts/los/clcs_new/clcs_home.htm>, last accessed 16 October 2019.

The actions of the CLCS, according to article 9 of Annex II to UNCLOS, should not prejudice matters relating to delimitation. Rule 46 and Annex I to the Rules of Procedure of the CLCS indicates that, in order to avoid having a prejudice on matters relating to delimitation, the Commission should not consider submissions concerning cases of land or maritime disputes.⁴⁶⁴ The consideration of such submissions could amount to a qualification of a submission and thus have an impact on the dispute as the actions of the CLCS could entitle the submitting State to the disputed land or maritime region.

As a result of these provisions, the CLCS sees, on the one hand, the amount of submissions growing, as all coastal States who may have the outer limits of their shelf extending beyond 200 M continue to submit data and information to the Commission. On the other hand, the workload of the CLCS continues to accumulate,⁴⁶⁵ as many submissions are, under Rule 46 of the Rules of Procedure of the CLCS, being added to the queue for consideration.⁴⁶⁶

The fact that outer limits are not considered and qualified by the CLCS, does not prevent disputes to be brought before international court or tribunals. In case 16 before ITLOS, the Tribunal, in the dispute between Bangladesh and Myanmar, was concerned by the delimitation of the maritime boundary in the Bay of Bengal, which included the delimitation of the territorial sea, EEZ and the continental shelf within and beyond 200 M.⁴⁶⁷

Behind the dispute before the Tribunal, the question that was raised was whether there is a temporal relationship between delineation and delimitation? In other words, does a coastal State need to establish its outer limits according to article 76 of UNCLOS before it can delimit the maritime boundary on the seabed? This would imply that the application of article 76 creates a legal entitlement to the outer portion of the continental shelf (5.3.2.1.).

⁴⁶⁴ See Rules of Procedure, CLCS/40, footnote 347; reproduction in *Annex*, Annex III and V.

⁴⁶⁵ See SPLOS documents : SPLOS/157, SPLOS/162.

⁴⁶⁶ See on CLCS website: <https://www.un.org/Depts/los/clcs_new/commission_submissions.htm>, last accessed 16 October 2019.

⁴⁶⁷ See proceedings and judgment on ITLOS website at : <<https://www.itlos.org/cases/list-of-cases/case-no-16/>>, last accessed 16 October 2019.

The following implies that there are, in UNCLOS, two continental shelves, an inner shelf to which right is inherent, and an outer continental shelf for which the coastal State has to apply. However, there is, according to principles of international law, an inherent right to the continental shelf that is defined as one single unit (5.3.2.2.). The continental shelf can be delimited even when there is no establishment of the outer limits under article 76 through the procedure with the CLCS. Delimitation is done, in application of international law and article 83 of UNCLOS, in application of equidistance.

5.3.2.1. The role of the test of appurtenance in the delineation process

Based on the findings of the ILA Reports, some scholars, such as Kunoy,⁴⁶⁸ think that there would be a temporal relationship⁴⁶⁹ between entitlement and delimitation of the limits of the outer portion of the continental shelf, beyond 200 M. He supports that article 76 would compel coastal States to demonstrate entitlement to the outer continental shelf, before they can delineate the outer limits of the continental shelf beyond 200 M.⁴⁷⁰

Coastal States would not be entitled to the outer portion of the continental shelf without passing the test of appurtenance enshrined in article 76 paragraph 4. Entitlement would be proven by passing the test of appurtenance. Kunoy says that:⁴⁷¹

“while all coastal States have an inherent entitlement to the continental shelf within 200 nm from the baselines from which the breadth of the territorial sea is measured, Article 76 of the Convention embraces a differential regime for the area beyond 200 nm by which a coastal State needs to demonstrate that it fulfils the test of appurtenance in Article 76 of the Convention before permanently delineating the outer limits of the continental shelf. The extent of the entitlement to the outer continental shelf is dictated by the location of the foot of the continental slope points.”

⁴⁶⁸ In Kunoy, footnote 422.

⁴⁶⁹ In *Bay of Bengal case*, footnote 36, §398, p.105.

⁴⁷⁰ In Kunoy, footnote 422.; Magnusson, B. M., ‘Is there a Temporal Relationship between the Delineation and the Delimitation of the Continental Shelf beyond 200 Nautical Miles?’ (2013) 28 *JMCL* 465.

⁴⁷¹ In Kunoy, B., ‘A Geometric Variable Scope of Delimitations: The Impact of a Geological and Geomorphological Title to the Outer Continental Shelf’ (2006) 11 *ARIEL* 49..

The coastal State would be automatically *entitled* to a default 200-M continental shelf. To *get entitled* to the extended continental shelf, the coastal State would have to prove that the outer edge of the continental margin is the natural prolongation of the land territory by passing the test of appurtenance. He says that “[i]n contrast to the area within 200 nm, geological and geomorphologic features are the source of the entitlement to the continental shelf beyond 200 nm.”⁴⁷² Determining the location of the foot of the slope serves as the basis of title to the outer continental shelf.⁴⁷³

“The foot of the continental slope points [has a] a generative role in determining the extent of the title to the outer continental shelf beyond 200 nm. For this reason, the Commission has characterized the foot of the continental slope not only as the "essential feature that serves as the basis for entitlement to the extended continental shelf" but also as the "reference baseline" from which the outer edge of the continental margin is to be established.”

Under this theory, it is by applying the provisions of article 76 that coastal States would become entitled, or qualify, to a 200-M continental shelf or to an “extended” continental shelf,⁴⁷⁴ depending on successfully passing the test of appurtenance, thus there would be two shelves.⁴⁷⁵

Following this reading of article 76, it seems that the test of appurtenance is the prerequisite for title to the outer portion of the continental shelf to exist and the delimitation of the outer continental shelf should be based on geomorphology:⁴⁷⁶

“In conclusion it is submitted that the entitlement to the outer continental shelf is based on geology and geomorphology and new equitable principles will consequently emerge.”

⁴⁷² Ibid., p.69.

⁴⁷³ Ibid., p.70.

⁴⁷⁴ In Magnusson, footnote 470, p.466.

⁴⁷⁵ Ibid., p.478, referring to CLCS/11, footnote 34, p.12, para. 2.2.6 & 13, para 2.2.8.

⁴⁷⁶ In Kunoy, footnote 422, p.269.

Where we do not contest that the coastal State needs to successfully demonstrate that the outer edge of the margin lies beyond 200 M, we contest that such demonstration would grant title to the outer continental shelf.⁴⁷⁷ The test does not give title to the outer continental shelf, it proves title to it. The presence of the natural prolongation concept in the definition of the maritime zone, in paragraph 1, is a yardstick for delineation and the two distances its subsequent detailed components. Natural prolongation refers to the notion of continuity of the land under the sea and geomorphological unity.⁴⁷⁸

On the one hand, for Kunoy, there is a differential regime in the outer continental shelf. The legal basis of title to the outer shelf is embedded in passing the test of appurtenance, not on the inherent right as in the inner portion of the shelf. The coastal State needs to prove first that its continental shelf passes the test of appurtenance. If it does the coastal State is entitled to the outer portion of the shelf. This could mean that without delineation the outer portion of the shelf is not considered part of the natural prolongation of the land territory:⁴⁷⁹

“a dispute regarding overlapping claims to such an outer continental shelf is, in the technical sense, only hypothetical until the Commission has endorsed the outer limits of the continental shelf proposed by relevant coastal States.”

⁴⁷⁷ In Magnusson, footnote 470., p.467-468, making reference to A.G. Oude Elferink in footnote 13: “Others have, however, expressed a similar view, as is presented in the article. See Alex Oude Elferink, “The Continental Shelf Beyond 200 Nautical Miles: The Relationship between the CLCS and Third Party Dispute Settlement” in Alex Oude Elferink & Donald Rothwell (eds.), *Ocean Management in the 21st Century: Institutional Frameworks and Responses* (Martinus Nijhoff, Leiden, 2004) 107, 118. These statements were made prior to the judgments in the *Bay of Bengal case* (Delimitation of the maritime boundary in the Bay of Bengal (Bangladesh/Myanmar), Judgment, ITLOS Reports 2012, p. 4) and the *Territorial and Maritime Dispute* (Nicaragua v Colombia) (Judgment) 2012; <http://www.icj-cij.org/docket/files/124/17164.pdf>, accessed 23 January 2013 (Nicaragua/Colombia case).”

⁴⁷⁸ See In *North Sea Continental Shelf cases*, footnote 79.

⁴⁷⁹ In Kunoy, footnote 422, p.248 ;

Although he recognizes that article 77 gives inherent right to the continental shelf,⁴⁸⁰ he supports that there are two continental shelves; one that is inherent, the inner shelf, and one that needs to be submitted to the test of appurtenance, the outer continental shelf, to gain entitlement to the outer continental shelf.

The rationale would be based on the presence in paragraph 1 of article 76⁴⁸¹ of the coordinating conjunction “or” that would divide the sentence in two, separating the provisions of article 76 paragraph 1 accordingly:⁴⁸²

“1. The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, *or* to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. (emphasis added)”

Does this theory mean that before passing the test of appurtenance the submarine areas in the prolongation of the inner shelf would not yet be part of the submerged prolongation of the land mass? Does this mean that the test of appurtenance would be a trigger to the extension of the sovereign rights to the extended continental shelf?

However, it must be noted that the submarine areas do represent the submerged prolongation of the land mass, even before the test of appurtenance has been applied. In application of Kunoy’s thesis it means that the right to the outer portion of the continental shelf is only acquired when the test of appurtenance is passed. In that case, the right to the outer portion is not inherent; there are thus two continental shelves.

In application of this idea, delineation should precede delimitation:⁴⁸³

⁴⁸⁰ Ibid. p.241.

⁴⁸¹ ¹⁸⁸ See UNCLOS article 76.

⁴⁸² In Kunoy, footnote 422, p.248.

⁴⁸³ Ibid., p.270.

“the establishment of the outer limits of the continental shelf, to which there are overlapping claims, is subject to a two-step tango in which the recommendations of the Commission and a delimitation undertaken by an international adjudicative body are not only two separate steps, but also temporally differentiated, in that the second step should only be taken subsequent to the first step.”

On the other hand, for Kunoy, the fact that the delineation of the outer limits is based on geomorphology means that the delimitation process in the outer portion of the continental shelf should differ from the one applicable in the inner shelf, that is the application of equidistance, and that delimitation should be done on the basis of geomorphology.⁴⁸⁴

“It can therefore be argued that to rely on the geographical equitable criteria and methods in delimitations of the outer continental shelf would be to overlook the fact that geomorphology and geology are, together, the constitutive elements of title to the area beyond 200 nm”

According to Kunoy, the “chief operation is to determine the extent of title of each State”⁴⁸⁵ on the seabed since title is based on the nature of the submerged prolongation of the land mass in the outer portion of the continental shelf, the delimitation methodology must be the same as the one applied to the legal basis of title to the outer shelf.⁴⁸⁶

“*A fortiori*, if the distance criterion is in certain circumstances the basis of the entitlement, this implies that the basis of the entitlement will in certain circumstances be based on something else than the distance from the coast.”

Following his reasoning, it seems coastal States do not have inherent right to the continental shelf as a whole but rather are entitled to a default shelf, up to 200 M, while title to the extended continental shelf would have to be claimed through the application of the test of appurtenance. Furthermore, this would suggest that article 77 does not entitle coastal States to the “continental shelf” as a whole but would rather entitle them automatically to the *inner*

⁴⁸⁴ Ibid., p.266.

⁴⁸⁵ Ibid., p.255.

⁴⁸⁶ Ibid., p. 267.

continental shelf, up to 200 M. However, there is no such thing as an *extended* continental shelf – as there is no *inner* continental shelf, as it has been established in the *Bay of Bengal case*.⁴⁸⁷

What is wrong in this appreciation of the concept of the continental shelf is that it links the process of delineation of article 76 to possession of title to the continental shelf. It entangles the legal concept of granting title to the seabed with the technical process of locating the outer edge of the margin.⁴⁸⁸

We should first highlight that there is actually no such thing as an “extended” continental shelf. There is in geology only one unit of continental margin.⁴⁸⁹ The continental margin does not “extend” as if it were a string that could stretch. The seabed is not a gum and rocks do not have such extendible properties. The term “outer” continental shelf may however be used to refer to the part of the maritime zone that is situated beyond 200 M, for instance in the process of delineating the outer limits of the continental shelf beyond 200 M thanks to the provisions of article 76 paragraphs 5 to 7.

In this context, the continental shelf is actually one single unit,⁴⁹⁰ as the continental shelf has always been the submerged prolongation of the land mass, and title exists over the whole of the continental shelf, within and beyond 200 M, since the latter is the extension of the land under the sea where sovereignty stretches.

Article 76 delivers the method through which the outer limits of the maritime zone are found. Article 76, therefore, does not give title to the outer continental shelf; it sets down a method of delineation for the latter. Title is given in the continental shelf legal regime *ipso facto* and *ab initio*,⁴⁹¹ according to the doctrine of continuity. The application of the

⁴⁸⁷ In *Bay of Bengal case*, footnote 36.

⁴⁸⁸ Article 76 of UNCLOS.

⁴⁸⁹ In *Bay of Bengal case*, footnote 36.

⁴⁹⁰ In the *Matter of an Arbitration between Barbados and the Republic of Trinidad and Tobago* (Barbados v. Republic of Trinidad & Tobago) (Arbitration Tribunal) (2006) 45 ILM 800, 835, para. 213 (Barbados/Trinidad & Tobago case); ITLOS *Bay of Bengal case*, footnote 36, p.108, para. 362.

⁴⁹¹ See In *North Sea Continental Shelf cases*, footnote 79 and Article 77 of UNCLOS.

provisions of article 76 paragraph 4 of UNCLOS proves whether the submarine areas that are situated beyond the territorial sea form the submerged prolongation of the land mass. The CLCS checks, through the test of appurtenance, whether what is included into the continental margin by the coastal State represents in fact the submerged prolongation of the land mass.

5.3.2.2. *The inherence of title to the whole of the natural prolongation of the land territory*

The concept of the natural prolongation, as it was defined under the 1969 ICJ *North Sea Continental Shelf* cases,⁴⁹² explains the relation of the coastal State towards the seabed adjacent to its coasts. The natural prolongation is the basis of title to the seabed, on the ground of extension of land and the application of the “land dominates the sea” principle. The seabed being the extension of the land under the sea, the sovereignty of the coastal State inherently stretches to the continental shelf where sovereign rights are exercised.

In recent case law, the notion of natural prolongation has re-emerged and its meaning tackled. In the *Bay of Bengal* case,⁴⁹³ before the International Tribunal for the Law of the Sea,⁴⁹⁴ the question whether “the Tribunal has jurisdiction to delimit the continental shelf beyond 200 nm and whether the Tribunal, if it determines that it has jurisdiction to do so, should exercise such jurisdiction”⁴⁹⁵ was raised. The point is to know whether the Tribunal can be deemed competent to delimit the overlapping claims beyond 200 M.

⁴⁹² See In *North Sea Continental Shelf* cases, footnote 79.

⁴⁹³ In *Bay of Bengal* case, footnote 36.

⁴⁹⁴ See ITLOS website < <https://www.itlos.org/>>, last accessed 16 October 2019 : The Tribunal has jurisdiction over any dispute concerning the interpretation or application of the Convention, and over all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal (Statute, article 21). The Tribunal is open to States Parties to the Convention (i.e. States and international organisations which are parties to the Convention). It is also open to entities other than States Parties, i.e., States or intergovernmental organisations which are not parties to the Convention, and to State enterprises and private entities "in any case expressly provided for in Part XI or in any case submitted pursuant to any other agreement conferring jurisdiction on the Tribunal which is accepted by all the parties to that case" (Statute, article 20).

⁴⁹⁵ In *Bay of Bengal* case, footnote 36, §341, p.92.

The underlying question is to know whether there are two continental shelves, thus whether there is a different basis of entitlement to the outer portion of the continental shelf, beyond 200 M? The continental shelf whose outer limits are set at 200 M from the baselines, is founded in the notion of appurtenance and the concept of the natural prolongation of the land territory. The outer continental shelf, whose outer limits are set in accordance with article 76 paragraph 1 of UNCLOS, up to the outer edge of the margin, may find its basis in another principle.

For Myanmar, the Commission should confirm that the continental shelves have passed the test of appurtenance and that the continental shelves of both states really extend beyond 200 M so that the Tribunal can be competent to delimit.⁴⁹⁶ Delineation would take precedence over delimitation, as for delimitation to occur there needs to be a valid claim to the outer continental shelf.⁴⁹⁷

For Bangladesh, the question of delineation and delimitation are two different processes and the first is not needed for the second to occur,⁴⁹⁸ as “the Tribunal has jurisdiction to delimit boundaries within the outer continental shelf and that the Commission makes recommendations as to the delineation of the outer limits of the continental shelf with the Area, as defined in article 1, provided there are no disputed claims between States with opposite or adjacent coasts.”⁴⁹⁹

While earlier jurisprudence⁵⁰⁰ indicated that competent international judicial bodies should not delimit the continental shelf unless the CLCS had decided on the entitlement of the

⁴⁹⁶ Ibid., §345, 92.

⁴⁹⁷ Ibid., §349, p.92.

⁴⁹⁸ Ibid., §350 p.93.

⁴⁹⁹ Ibid., §356 and §95. Bangladesh refers to Rule 46 of the Rules of Procedure of the CLCS preventing making recommendations on submission where there are disputed claims over an area of outer continental shelf. To Bangladesh, this rule applies. We will contest its validity in regards of article 76§10 and 83 of UNCLOS in Chapter 5.

⁵⁰⁰ In *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea* (Nicaragua v. Honduras), Judgment, I.C.J. Reports 2007, p. 659, at §319.

parties to such shelf, recent jurisprudence⁵⁰¹ demonstrates that the court or tribunal may undertake an assessment of entitlement to the outer shelf, without encroaching on the functions of the CLCS, as delimitation and delineation are two different processes, the one without prejudice for the other.

The question of delimitation is to be dealt with by competent international judicial bodies, in accordance with Part XV of UNCLOS.⁵⁰² While dealing with disputes over overlapping claims on the continental shelf, judicial bodies may refer to the CLCS as technical experts.⁵⁰³ However, the ICJ considers that the complexity of scientific and technical data to be taken into account in addressing legal issues is not an impediment to the exercise of jurisdiction.⁵⁰⁴ Besides, the Court considers that in case the parties would bring scientific arguments, the ICJ would not hesitate to look at these data in the context of article 76.⁵⁰⁵

ITLOS has indeed examined scientific data in the Bay of Bengal case, and the ICJ in the Nicaragua/Honduras case.⁵⁰⁶ In brief, while judicial bodies have the competence to examine the validity of legal claims over the seabed, they also take competence to assess scientific evidence. Judicial bodies, ITLOS and ICJ, in their latest judgments, did not hesitate to consider the competence of the CLCS in relation to the establishment of the outer limits beyond 200 M.⁵⁰⁷

⁵⁰¹ In *Bay of Bengal case*, footnote 36.

⁵⁰² Part XV of UNCLOS.

⁵⁰³ See in Article 289 of UNCLOS.

⁵⁰⁴ See ILA Report, Berlin Conference, footnote 347, p.11 and *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya v. Malta)* (Judgment) [1985] ICJ Rep. 13, p.36 §41.

⁵⁰⁵ *Court of Arbitration for the Delimitation of Maritime Areas between Canada and France: Decision in Case Concerning Delimitation of Maritime Areas (Canada v. France)* (Arbitration Tribunal) (1992) 31 ILM 1148, p.1172 §81.

⁵⁰⁶ *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, I.C.J. Reports 2007, p.659.

⁵⁰⁷ In *Bay of Bengal case*, footnote 36; or *Dispute concerning delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana/Côte d'Ivoire)* Judgment (27 September 2017), ITLOS.

In the *Bay of Bengal* case, when it comes to the relationship between delineation and delimitation and as to whether the Tribunal is competent to delimit the outer continental shelf when the Commission did not make recommendations, ITLOS says that the purpose of article 76 is to establish final and binding limits to the continental shelf⁵⁰⁸ and adds that the CLCS plays an important role under the Convention and has a special expertise which is reflected in its composition.⁵⁰⁹ It separates the technical process of outer limits delineation from the legal procedure of boundary disputes, and article 76 from article 83 of UNCLOS.⁵¹⁰

However, the Tribunal does not rule on the validity of Rule 46 of the Rules of Procedure of the CLCS and its Annex II paragraph 5(a) that states that “[i]n cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the States concerned in the dispute.”⁵¹¹ ITLOS recognises the technical competence of the Commission in relation to the delineation process which it separates from its own legal competence in relation to delimitation of disputed maritime areas.

However, the Tribunal is elusive when it comes to the supposed link between delineation and delimitation.⁵¹² It does not directly answer whether the recommendations are necessary for validity of overlapping claims beyond 200 M and about consideration of submissions by the CLCS in case of disputes.

It rather “concludes that, in order to fulfil its responsibilities under Part XV, Section 2, of the Convention in the present case, it has an obligation to adjudicate the dispute and to delimit the continental shelf between the Parties beyond 200 nm,”⁵¹³ on the ground that:

“The consequence of these decisions of the Commission is that, if the Tribunal declines to delimit the continental shelf beyond 200 nm under article 83 of the

⁵⁰⁸ In *Bay of Bengal case*, footnote 36, §374, p.99.

⁵⁰⁹ Ibid, §374, p.99.

⁵¹⁰ Ibid., §376, p.99 and §379, p.100.

⁵¹¹ Ibid., §385-387, p.101.

⁵¹² Ibid., §393, p.102.

⁵¹³ Ibid., §394, p.103.

Convention, the issue concerning the establishment of the outer limits of the continental shelf of each of the Parties under article 76 of the Convention may remain unresolved [...] A decision by the Tribunal not to exercise its jurisdiction over the dispute relating to the continental shelf beyond 200 nm would not only fail to resolve a long-standing dispute, but also would not be conducive to the efficient operation of the Convention.”⁵¹⁴

While the link between delineation and delimitation does not seem, in our eyes, to be resolved by the Tribunal,⁵¹⁵ the link between entitlement and delimitation and its justification appears to be more evident to the Tribunal. As ITLOS puts it:

“Delimitation presupposes an area of overlapping entitlements. Therefore, the first step in any delimitation is to determine whether there are entitlements and whether they overlap.”⁵¹⁶

Although this dissertation does not deal with delimitation and the rich maritime boundary disputes case law relating to continental shelf and its outer portion, we can however highlight that the Tribunal, as well as the parties, recognise the interrelationship between the two concepts.⁵¹⁷ There can be a dispute to a maritime area only if there are at least two claims to the same area and that both are valid claims.⁵¹⁸

To answer the question, “the Tribunal first points out the need to make a distinction between the notion of entitlement to the continental shelf beyond 200 nm and that of the outer limits of the continental shelf.”⁵¹⁹

The Tribunal recognises that a:

“coastal State’s entitlement to the continental shelf exists by the sole fact that the basis of entitlement, namely, sovereignty over the land territory, is present.

⁵¹⁴ Ibid. §§390-391, p.102.

⁵¹⁵ Ibid., §400, p.105.

⁵¹⁶ Ibid., §397, p.105.

⁵¹⁷ Ibid., §398, p.105.

⁵¹⁸ Ibid., §399, p.105: “If not, it would be dealing with a hypothetical question.”

⁵¹⁹ Ibid., §406, p.106.

It does not require the establishment of outer limits. Article 77, paragraph 3, of the Convention confirms that the existence of entitlement does not depend on the establishment of the outer limits of the continental shelf by the coastal State.”⁵²⁰

However, the fact that the coastal State has the obligation to submit information on the outer limits of the continental shelf beyond 200 M to the CLCS upon which the latter should make recommendations, for the outer limits to be opposable,⁵²¹ seems to justify that the Tribunal must not refrain from “determining the existence of entitlement to the continental shelf and delimiting the continental shelf between the parties concerned.”⁵²²

In other words, the fact that the procedure before the CLCS is necessary for the establishment of the final and binding limits of the continental shelf seems to justify the determination of the existence of entitlement beyond 200 M. Such thing as a determination of entitlement can be done by ITLOS, “as the question of the Parties’ entitlement to a continental shelf beyond 200 nm raises issues that are predominantly legal in nature,”⁵²³ and can deal with scientific concepts when there are uncontested scientific materials.⁵²⁴

In this very case before ITLOS, there are scientific materials that seem sufficient enough to prove that the sediments of the seabed are emanating from the land territory of the coastal States,⁵²⁵ which should represent the natural prolongation of the land territory.⁵²⁶ The parties to the dispute seem to support entitlement to the outer continental shelf based on the concept of natural prolongation.⁵²⁷ To prove entitlement, the continental shelf (its outer portion) would need to be the natural prolongation of the land territory, as this concept would

⁵²⁰ Ibid., §408-409, p107.

⁵²¹ Ibid., §407, p.107.

⁵²² Ibid., §410, p.107.

⁵²³ Ibid., §413, p.108.

⁵²⁴ Ibid., §411, p.107.

⁵²⁵ Ibid., §416, p.108.

⁵²⁶ Ibid., §429, p.112.

⁵²⁷ Ibid., §424-427 pp.110-111.

be the criterion of entitlement in article 76. The CLCS checking whether the margin passes the test of appurtenance, enshrined in the *chapeau* of article 76 paragraph 4 subsection (a), would be the process to qualify to this criterion.⁵²⁸

In the *Bay of Bengal* case, the proof of entitlement would be evident since there exists a special method of delineation for the Bay of Bengal, enshrined in Annex II to the Final Act of the Third United Nations Conference on the Law of the Sea, which applies for the outer continental margin.⁵²⁹ We will defend however that the notion of natural prolongation supposedly being a criterion to prove entitlement to the outer continental shelf is nothing more than a legal concept relating to the definition of the continental shelf and is not related to delineation.

It can be noted that there should not be any dispute brought to a competent judicial body in relation to the outer limits of the continental shelf marking the boundary with the Area. The coastal States delineate the outer limits and submit them to the CLCS which will assess whether they are in accordance with the relevant provisions of UNCLOS. The outer-limit line once established by the coastal State in accordance with the recommendations of the Commission, and which have been given due publicity, according to article 76 paragraphs 8 and 9, are final and binding.⁵³⁰ They mark the boundary with the Area.⁵³¹

In parallel, we can wonder whether the wording of article 76§10 and article 83 read together would not rather mean that the purpose of the delineation process and submission to the CLCS would not only refer to finding out the limit of the continental shelf, parallel to the

⁵²⁸ Ibid., §437, p.114: in fact, test of appurtenance proves that what is included in the continental margin is the submerged prolongation of the land mass, not the natural prolongation of the land territory. The natural prolongation concept is linked to the definition of the continental shelf, see in §437, p.114.

⁵²⁹ See Article 76 of UNCLOS and the “Statement of Understanding concerning a specific method to be used in establishing the outer edge of the continental margin”..

⁵³⁰ In *Bay of Bengal case*, footnote 36, §368 p.97.

⁵³¹ See article 134 §4 of UNCLOS: “Nothing in this article affects the establishment of the outer limits of the continental shelf in accordance with Part VI or the validity of agreements relating to delimitation between States with opposite or adjacent coasts.”

coasts, in order to establish the outer-limit line that will be the boundary with the Area,⁵³² while delimitation of the continental shelf would refer to drawing the boundary on the sides, with the opposite or adjacent states, which would be a judiciary process, to be resolved by application of the “equidistance plus relevant circumstances” principle, whenever negotiations between the parties would have failed.⁵³³

In September 2017, a Special Chamber of ITLOS handed down its judgment in the *Dispute Concerning Delimitation of the Maritime Boundary Between Ghana and Côte d’Ivoire in the Atlantic Ocean (Ghana v. Côte d’Ivoire)*.⁵³⁴ While the Special Chamber confirmed the argumentation of the *Bay of Bengal* case, supporting inherent entitlement but need to determine entitlement of the outer shelf,⁵³⁵ it recalled that, in this case, both parties had submitted to the CLCS, and that since the CLCS had already made recommendations with respect to Ghana’s outer shelf, it meant that “there is no risk that the Judgment of the Special Chamber might interfere with the functions of the CLCS.”⁵³⁶

To ITLOS, recommendations of the Commission proves that exists an outer continental shelf, thus that exists entitlement to an outer continental shelf thus that there exists an overlapping claim to the outer continental shelf area, conferring competent to the Tribunal to delimit that area.⁵³⁷ This judgment stands on the grounds of the *Bay of Bengal case* re-using the same arguments, which still show, in our eyes, the ambiguity of the Tribunal towards the hypothetical link between delineation and delimitation.⁵³⁸ It still states that both mechanisms

⁵³² Article 76 §8-10 and article 134 of UNCLOS.

⁵³³ See article 76§10 and article 83 of UNCLOS, and Part XV on Dispute settlement mechanisms .

⁵³⁴ See Ghana/Côte d’Ivoire, footnote 507, available at <https://www.itlos.org/fileadmin/itlos/documents/cases/case_no.23_merits/C23_Judgment_23.09.2017_corr.pdf> last accessed 16 October 2019.

⁵³⁵ In *Bay of Bengal case*, footnote 36, §491, p.138.

⁵³⁶ *Ibid.*, § 494.

⁵³⁷ *Ibid.*,§495, p.139.

⁵³⁸ *Ibid.*,§498, p.139.

are separate, yet, in practice, in both cases of 2012 and 2017, it proves that such claims over the outer continental shelf existed by bringing to the fore the submissions to the CLCS.⁵³⁹

More interesting is the judgment of the ICJ, in March 2016, in the *Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 Nautical Miles from the Nicaraguan Coast* (Nicaragua v. Colombia) case,⁵⁴⁰ which had to answer whether the recommendations of the CLCS are a prerequisite for delimitation by the Court.⁵⁴¹ The interesting point is that, whereas ITLOS avoided answering, by simply stating that in both cases an outer continental shelf existed, in the *Nicaragua v. Colombia* case, the ICJ did answer on whether there is a temporal relationship between delineation and delimitation.

The Court explains in relation to delineation that the role of the CLCS is to make sure that through the technical process of delineation creating the boundary with the Area the latter is not encroached and then explains that such process does not impact delimitation.⁵⁴² As with ITLOS, the Court says that both mechanisms are distinct,⁵⁴³ The procedure before the CLCS relates to the delineation of the outer limits of the continental shelf, and hence to the determination of the extent of the seabed under national jurisdiction. The delimitation of the continental shelf is governed by article 83 of UNCLOS and effected by agreement between the states concerned, or by recourse to dispute resolution procedures.

Contrary to ITLOS, which only justified its competence on the ground of the particularity of the Bay of Bengal and of the need for stability and ocean order, the Court says that since the delimitation of the continental shelf beyond 200 M can be undertaken independently of a recommendation from the CLCS, the latter is not a prerequisite that needs to be satisfied by a State Party to UNCLOS before it can ask the Court to settle a dispute with

⁵³⁹ Ibid., §517, p.143.

⁵⁴⁰ In *Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 Nautical Miles from the Nicaraguan Coast* (Nicaragua v. Colombia), *Preliminary Objections, Judgment*, I.C.J. Reports 2016, p. 100 available at < <http://www.icj-cij.org/files/case-related/154/154-20160317-JUD-01-00-EN.pdf>>, last accessed 16 October 2019.

⁵⁴¹ In *Bay of Bengal case*, footnote 36, §97, p.38.

⁵⁴² Ibid. §§109-110, p.40.

⁵⁴³ Ibid. §112, p.41.

another state over such a delimitation.⁵⁴⁴ The Court, contrary to the Tribunal, does not make a link between its competence and submission to the CLCS, clearly differentiating both mechanisms, yet in this judgment the Court says that “it is possible that the two operations may impact upon one another.”⁵⁴⁵

Interestingly enough, the rejection of a temporal relationship between delineation and delimitation implies that the coastal State can, in theory, exercise inherent and exclusive rights in the continental shelf to explore and exploit its natural resources, while in practice the coastal State does not know up to where its jurisdiction stops.

While article 82 compels for sharing of benefit from extraction of minerals from the outer continental shelf to the International Seabed Authority⁵⁴⁶ and that the common heritage of humankind principle applies in the Area beyond the limits of the continental shelf,⁵⁴⁷ knowledge of the precise location of the boundary between national jurisdiction and the Area is of vital importance for the state and its financial investments and to the ISA which is in charge to collect the revenue shared from the outer continental shelf and manage minerals of the Area.

Therefore, the gap between theory and practice raises the question, in the case between *Nicaragua v. Colombia*, of “[t]he principles and rules of international law that determine the rights and duties of the two States in relation to the area of overlapping continental shelf claims and the use of its resources, pending the delimitation of the maritime boundary between them beyond 200 nautical miles from Nicaragua’s coast”.⁵⁴⁸

The Court answers that it cannot determine the applicable law with regard to a hypothetical situation.⁵⁴⁹ It recalls that its function is “to state the law, but it may pronounce

⁵⁴⁴ Ibid. §114, p.41.

⁵⁴⁵ Ibid. §113, p.41.

⁵⁴⁶ Article 82 of UNCLOS; see in *Annex*, Annex III.

⁵⁴⁷ See part XI UNCLOS, article 136 of UNCLOS.

⁵⁴⁸ In *Bay of Bengal case*, footnote 36, §116, p.41.

⁵⁴⁹ Ibid. §123, p.42.

judgment only in connection with concrete cases where there exists at the time of the adjudication an actual controversy involving a conflict of legal interests between the parties.”⁵⁵⁰ Since this request does not relate to an actual dispute between the Parties, that is, “a disagreement on a point of law or fact, a conflict of legal views or of interests between two persons”,⁵⁵¹ nor does it specify what exactly the Court is being asked to decide, the Court does not determine the applicability of rights and duties in the outer shelf. In conclusion, the Court rejects to answer on the law applicable to the outer continental shelf when the delineation process is blocked.

Although it seems obvious to competent judicial bodies that the continental shelf is one single unit, that title to it is inherent by application of article 77, and that the delineation and delimitation mechanisms are two different mechanisms, the Court and the Tribunal stay evasive on the possible impact of delineation on entitlement and delimitation of the outer continental shelf. They do not contest the validity of Rule 46 of the Rules of Procedure of the CLCS and the impact of maritime disputes on the submission process.

It should however be obvious that the technical assessment of the location of the continental margin helps locate the boundary with the Area, upon which the Commission acts as a watchdog,⁵⁵² while the legal procedure of delimitation by judicial bodies deals with the division of an area of overlapping claims. What seems to confuse doctrine and case law is the notion of natural prolongation in article 76.

To conclude, since the inherent right to the continental shelf applies to the whole of the submerged prolongation of the land mass, in application of the concept of the natural prolongation of the land territory, it appears that there is only one single continental shelf. The test of appurtenance does not entitle to the outer portion of the continental shelf, rather, it entitles to the use of the specific method of delineation of article 76 of UNCLOS.

The continental shelf is the natural prolongation of the land territory. The submarine areas form one block with the land territory. There is continuity between the land and the

⁵⁵⁰ Ibid. §123, p.42.

⁵⁵¹ Ibid. §124, p.42.

⁵⁵² In McDorman, footnote 354.

seabed and a geomorphological unity between them. The continental shelf appertains to the coastal State and its title over the land stretches over the seabed. Title over the seabed is inherent and intrinsically linked to title to the land. These elements seem to indicate that title to the seabed, in accordance with the continuity and unity approaches, applies to the whole of the submarine areas that form the submerged prolongation of the land mass.

Since the continental shelf is one single unit and that its legal basis of entitlement is based on the concept of the natural prolongation of the land territory, the delimitation method should reflect it. Thus, the equidistance method that applies in the law of the sea should also apply to the continental shelf, within and beyond 200 M, as the concept of the natural prolongation of the land territory reflects the notion of appurtenance over the seabed based on a reflection of the land on the sea and the land dominates the sea principle. Consequently, the method that best reflects that notion of geographic extension of the land territory over the seabed area is the method of equidistance.

*5.3.2.3. Delimitation based on geography: the use of equidistance
within and beyond 200 M*

Article 83 of UNCLOS on “Delimitation of the continental shelf between States with opposite or adjacent coasts”, states that:⁵⁵³

- “1. The delimitation of the continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.
2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures provided for in Part XV.
3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

⁵⁵³ Article 83 of UNCLOS.

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

The question of delimitation implies the presence of a dispute between neighbouring States, with opposite or adjacent coasts. When negotiations between the parties to the dispute is not conclusive, a judicial body may be asked to resolve the dispute, as a last resort, according to the application of dispute settlement mechanisms. The mechanisms are set up under Part XV of UNCLOS.⁵⁵⁴

It should be noted however that dispute resolution mechanism through a judicial body, if conciliation did not work, is not always compulsory.⁵⁵⁵ In fact, according to article 297 there are limitations and exceptions to the application of compulsory settlement of disputes.⁵⁵⁶ According to article 298, there are optional exceptions when signing, ratifying, or acceding to the Convention or at any time thereafter, through which a State Party may not accept the compulsory procedure.⁵⁵⁷

This works in respect of:⁵⁵⁸

“disputes concerning the interpretation or application of *articles 15, 74 and 83 relating to sea boundary delimitations*, or those *involving historic bays or titles* provided that a State having made such a declaration shall, when such a dispute arises subsequent to the entry into force of this Convention and where no agreement within a reasonable period of time is reached in negotiations between the parties, at the request of any party to the dispute, accept submission of the matter to conciliation under Annex V, section 2; and provided further that any dispute that necessarily involves the concurrent consideration of any unsettled dispute concerning sovereignty or other rights

⁵⁵⁴ See Part XV of UNCLOS.

⁵⁵⁵ See Part XV Section 2, article 287 of UNCLOS.

⁵⁵⁶ See article 297 of UNCLOS.

⁵⁵⁷ ILA Report, Berlin Conference, footnote 347.

⁵⁵⁸ Article 298 §1.a (1) of UNCLOS.

over continental or insular land territory shall be excluded from such submission.” (emphasis added)

In brief, the compulsory settlement of disputes can be avoided in case of sea boundary delimitations disputes. The delimitation of the continental shelf may be considered to fall in the ambit of this provision.⁵⁵⁹

In the *North Sea Continental Shelf cases*, brought to the ICJ, in 1969, the implication of the inherent right over the seabed meant that the continental shelf already belongs to the coastal States, thus that the work of the Court, in the delimitation process, is to delimit, to divide the overlapping claims, not to apportion them, as the seabed is the natural prolongation of the land territory.

In fact, in the negotiations held by Germany and its neighbouring States failed to agree on boundary lines on the ground that, in the eye of the plaintiff, the will of the Netherlands and Denmark to apply the equidistance principle and equidistance lines,⁵⁶⁰ would curtail Germany’s share of continental shelf area,⁵⁶¹ having the effect of pulling the boundary lines inwards, in the direction of the concavity.⁵⁶²

⁵⁵⁹ In McDorman, T. L., ‘Continental Shelf’ in D. R. Rothwell, A. G. Oude Elferink, K. T. Scott, T. Stephens (eds.), *The Oxford Handbook of the Law of the Sea* (Oxford University Press, 2015) pp. 181-202.

⁵⁶⁰ In *North Sea Continental Shelf cases*, footnote 79, definition of the median lines in §4, p.14: ““median lines” which, for immediate present purposes, may be described as boundaries drawn between the continental shelf areas of “opposite” States, dividing the intervening spaces equally between them.”

See definition of equidistant lines in §6, p.17: ““equidistance line”, may be described as one which leaves to each of the parties concerned all those portions of the continental shelf that are nearer to a point on its own coast than they are to any point on the coast of the other Party. An equidistance line may consist either of a “median” line between “opposite” States, or of a “lateral” line between “adjacent” States. In certain geographical configurations of which the Parties furnished examples, a given equidistance line may partake in varying degree of the nature both of a median and of a lateral line. There exists nevertheless a distinction to be drawn between the two, which will be mentioned in its place.”

⁵⁶¹ *Ibid.*, §7, p.17.

⁵⁶² *Ibid.*, §8, p.18.

Consequently, cutting off the continental shelf area of Germany:⁵⁶³

“where two such lines are drawn at different points on a concave coast, they will, if the curvature is pronounced, inevitably meet at a relatively short distance from the coast, thus causing the continental shelf area they enclose, to take the form approximately of a triangle with its apex to seaward and, as it was put on behalf of the Federal Republic, ‘cutting off’ the coastal State from the further areas of the continental shelf outside of and beyond this triangle.”

In the opinion of the defendants, the Netherlands and Denmark, the equidistance principle should apply, in accordance with article 6 of the 1958 Geneva Convention on the Continental Shelf,⁵⁶⁴ unless, or except to the extent to which, "special circumstances" are recognized to exist.⁵⁶⁵

In the eyes of the Netherlands and Denmark, the presence of an island or a small protuberance can be viewed as a special circumstance but not the concave structure of the coast.⁵⁶⁶ To Germany, the continental shelf area should be divided on a “just and equitable

⁵⁶³ Ibid., §8, p.18.

⁵⁶⁴ Article 6 of the Geneva Convention, footnote 14, states that: “Article 6 1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite 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 nearest points of the baselines from which the breadth of the territorial sea of each State 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 nearest points of the baselines from which the breadth of the territorial sea of each State is measured. 3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed permanent identifiable points on the land.”

⁵⁶⁵ In *North Sea Continental Shelf cases*, footnote 79, §13, p.20.

⁵⁶⁶ Ibid., §13, p.20: “As regards what constitutes "special circumstances", all that need be said at this stage is that according to the view put forward on behalf of Denmark and the Netherlands, the configuration of the German North Sea coast, its recessive character, and the fact that it makes nearly a right-angled bend in mid-course, would not of itself constitute, for either of the two boundary lines concerned, a special circumstance

share”, in proportion to the length of its coastline or sea-frontage.⁵⁶⁷ Besides, in case of application of the equidistance principle, Germany notes that the configuration of the coast should be seen as a special circumstance, justifying departure from the equidistance method of delimitation in this particular case.⁵⁶⁸

Following this reasoning, the Court explains that delimitation should be done in accordance with this fundamental concept.⁵⁶⁹ For that reason, the delimitation method that should apply cannot be done by apportionment of “just and equitable share”.⁵⁷⁰ Such method would imply that the continental shelf area should be apportioned instead of delimited.⁵⁷¹

Following this method, the continental shelf would be allocated between the parties to the dispute and pieces of continental shelf *given* to States, as possession of continental shelf areas would be transferred following the judgment of the Court. This method simply cannot

calling for or warranting a departure from the equidistance method of delimitation : only the presence of some special feature, minor in itself-such as an islet or small protuberance-but so placed as to produce a disproportionately distorting effect on an otherwise acceptable boundary line would possess this character”.

⁵⁶⁷ Ibid, §15, p.21: “The Federal Republic, for its part, while recognizing the utility of equidistance as a method of delimitation, and that this method can in many cases be employed appropriately and with advantage, denies its obligatory character for States not parties to the Geneva Convention, and contends that the correct rule to be applied, at any rate in such circumstances as those of the North Sea, is one according to which each of the States concerned should have a "just and equitable share" of the available continental shelf, in proportion to the length of its coastline or sea-frontage.”

⁵⁶⁸ Ibid., §16, p.22.

⁵⁶⁹ In Jennings, footnote 104, p.4 et s.

⁵⁷⁰ In *North Sea Continental Shelf cases*, footnote 79, §20, p.23: “It follows that even in such a situation as that of the North Sea, the notion of apportioning an as yet undelimited area, considered as a whole (which underlies the doctrine of the just and equitable share), is quite foreign to, and inconsistent with, the basic concept of continental shelf entitlement, according to which the process of delimitation is essentially one of drawing a boundary line between areas which already appertain to one or other of the States affected.”

⁵⁷¹ In Jennings, footnote 104, p.12.

be considered in application of article 2 of the Geneva Convention.⁵⁷² The continental shelf is inherent to coastal States and cannot be given. Since title to the continental shelf exists *ipso facto* and *ab initio*, possession cannot be transferred as it exists for as long as the coastal State exists.⁵⁷³

Therefore, the ICJ should delimit and not apportion, meaning that the Court should divide the continental shelf area, that is rightfully claimed, under article 2 of the Convention,⁵⁷⁴ as being a natural prolongation of the land territory of the three coastal States. Delimitation underlines the idea that there is a disputed area, where rightful claims supersede, and there cannot be a disputed area without several claims to this area.

In application of this principle, the Court recalls that delimitation is not apportionment and that delimitation is not about dividing the disputed continental shelf area by letting the coastal State the closer, or the more contiguous or adjacent, have a superior claim to the area:⁵⁷⁵

“[t]his was one reason why the Court felt bound to reject the claim of the Federal Republic (in the particular form which it took) to be awarded a "just and equitable share" of the shelf areas involved in the present proceedings. Denmark and the Netherlands, for their part, claim that the test of appurtenance must be "proximity", or more accurately "closer proximity": all those parts of the shelf being considered as appurtenant to a particular coastal State which are (but only if they are) closer to it than they are to any point on the coast of another State. Hence delimitation must be effected by a method which will

⁵⁷² In *North Sea Continental Shelf cases*, footnote 79, §20, p.23: “The delimitation itself must indeed be equitably effected, but it cannot have as its object the awarding of an equitable share, or indeed of a share, as such, at all, for the fundamental concept involved does not admit of there being anything undivided to share out.”

⁵⁷³ *Ibid.*, §20, p.23: “But this does not mean that there has been an apportionment of something that previously consisted of an integral, still less an undivided whole.”

⁵⁷⁴ *Ibid.*, §20 p.23: “Evidently any dispute about boundaries must involve that there is a disputed marginal or fringe area, to which both parties are laying claim, so that any delimitation of it which does not leave it wholly to one of the parties will in practice divide it between them in certain shares, or operate as if such a division had been made.”

⁵⁷⁵ *Ibid.*, §39, p.30.

leave to each one of the States concerned all those areas that are nearest to its own coast. Only a line drawn on equidistance principles will do this. Therefore, it is contended, only such a line can be valid (unless the Parties, for reasons of their own, agree on another), because only such a line can be thus consistent with basic continental shelf doctrine.”

Delimitation, in accordance with the natural prolongation principle, should be done in a way to respect the natural prolongation of each coastal State that has a claim in the continental shelf area disputed.⁵⁷⁶ The application of the equidistance principle would allocate continental shelf areas according to proximity to the zone and not in accordance with the superior principle of the natural prolongation of the land territory.⁵⁷⁷ As the continental shelf is the extension of all three States, each of them should have access to its natural extension, regardless of the proximity of the area to the closer adjacent coastal States.⁵⁷⁸

⁵⁷⁶ Ibid., §42, p.31: “There seems in consequence to be no necessary, and certainly no complete, identity between the notions of adjacency and proximity; and therefore the question of which parts of the continental shelf "adjacent to" a coastline bordering more than one State fall within the appurtenance of which of them, remains to this extent an open one, not to be determined on a basis exclusively of proximity. Even if proximity may afford one of the tests to be applied and an important one in the right conditions, it may not necessarily be the only, nor in all circumstances, the most appropriate one. Hence it would seem that the notion of adjacency, so constantly employed in continental shelf doctrine from the start, only implies proximity in a general sense, and does not imply any fundamental or inherent rule the ultimate effect of which would be to prohibit any State (otherwise than by agreement) from exercising continental shelf rights in respect of areas closer to the coast of another State.”

⁵⁷⁷ Ibid., §40, p.30: “This view clearly has much force; for there can be no doubt that as a matter of normal topography, the greater part of a State's continental shelf areas will in fact, and without the necessity for any delimitation at all, be nearer to its coasts than to any other. It could not well be otherwise: but *post hoc* is not *propter hoc*, and this situation may only serve to obscure the real issue, which is whether it follows that every part of the area concerned must be placed in this way, and that it should be as it were prohibited that any part should not be so placed. The Court does not consider that it does follow, either from the notion of proximity itself, or from the more fundamental concept of the continental shelf as being the natural prolongation of the land domain—a concept repeatedly appealed to by both sides throughout the case, although quite differently interpreted by them.”

⁵⁷⁸ Ibid., §41, p.30: “As regards the notion of proximity, the idea of absolute proximity is certainly not implied by the rather vague and general terminology employed in the literature of the subject, and in most State proclamations and international conventions and other instruments—terms such as "near", "close to its shores", "off its coast", "opposite", "in front of the coast", "in the vicinity of", "neighbouring the coast", "adjacent to",

It follows from this that the delimitation method that is in line with and helps delimit in practice a boundary line that will reflect the natural prolongation concept is not bound to the equidistance principle and method. The way to delimit should be analyzed on a case-by-case basis so as to allocate to each claim an area of the disputed continental shelf that represents and safeguards the natural prolongation of the adjacent coastal State on the contiguous extension of its land territory.⁵⁷⁹

Proximity is not the criterion of delimitation method and equidistance just an *ex post facto* that aims at justifying the use of such method of delimitation⁵⁸⁰. As the Court says, *post hoc* is not *propter hoc* and seeing equidistance as the practical implementation of proximity leads astray from the notion of the natural prolongation.⁵⁸¹ Putting a link between this delimitation method and the core concept that justifies entitlement to the continental shelf will only obscure the understanding of the latter concept. What is sure is that the continental shelf is primarily a geological concept and that its physical characteristics have been taken into account in the process of creation of the legal regime of the continental shelf.

"contiguous", etc.,-all of them terms of a somewhat imprecise character which, although they convey a reasonably clear general idea, are capable of a considerable fluidity of meaning. To take what is perhaps the most frequently employed of these terms, namely "adjacent to", it is evident that by no stretch of imagination can a point on the continental shelf situated say a hundred miles, or even much less, from a given coast, be regarded as "adjacent" to it, or to any coast at all, in the normal sense of adjacency, even if the point concerned is nearer to someone coast than to any other. This would be even truer of localities where, physically, the continental shelf begins to merge with the ocean depths. Equally, a point inshore situated near the meeting place of the coasts of two States can often properly be said to be adjacent to both coasts, even though it may be fractionally closer to the one than the other. Indeed, local geographical configuration may sometimes cause it to have a closer physical connection with the coast to which it is not in fact closest"

⁵⁷⁹ Ibid., §55, p.36: "In the light of this history, and of the record generally, it is clear that at no time was the notion of equidistance as an inherent necessity of continental shelf doctrine entertained. Quite a different outlook was indeed manifested from the start in current legal thinking. It was, and it really remained to the end, governed by two beliefs;-namely, first, that no one single method of delimitation was likely to prove satisfactory in all circumstances, and that delimitation should, therefore, be carried out by agreement (or by reference to arbitration); and secondly, that it should be effected on equitable principles."

⁵⁸⁰ Ibid., §56, p.36.

⁵⁸¹ Ibid., §40, p.30.

In that regard, it seems that the concept of appurtenance⁵⁸² should play a role in delimitation of the continental shelf:⁵⁸³

“The doctrine of the continental shelf is a recent instance of encroachment on maritime expanses which, during the greater part of history, appertained to no-one. The contiguous zone and the continental shelf are in this respect concepts of the same kind. In both instances the principle is applied that the land dominates the sea; it is consequently necessary to examine closely the geographical configuration of the coastlines of the countries whose continental shelves are to be delimited. This is one of the reasons why the Court does not consider that markedly pronounced configurations can be ignored; for, since the land is the legal source of the power which a State may exercise over territorial extensions to seaward, it must first be clearly established what features do in fact constitute such extensions. Above all is this the case when what is involved is no longer areas of sea, such as the contiguous zone, but stretches of submerged land; for the legal régime of the continental shelf is that of a soil and a subsoil, two words evocative of the land and not of the sea.”

While the Court affirms that delimitation should take account of the geomorphology of the seabed as the topography of the land is used in the delimitation of land boundary, it can be noted that in future cases, such as the *Bay of Bengal case*, the Tribunal has concluded that the boundary line should be based on geography and the principle of equidistance.

The Tribunal notes that the provisions of article 83 applies equally to the whole shelf:

“article 83 of the Convention addresses the delimitation of the continental shelf between States with opposite or adjacent coasts without any limitation as to area. It contains no reference to the limits set forth in article 76, paragraph 1, of the Convention. Article 83 applies equally to the delimitation of the continental shelf both within and beyond 200 nm.”⁵⁸⁴

⁵⁸² Ibid., §95, p.51.

⁵⁸³ Ibid.? §96, p.52.

⁵⁸⁴ In *Bay of Bengal case*, footnote 36, §454, p.132.

In the view of the Tribunal, since article 83 applies, the method is the one of equidistance/relevant circumstances:⁵⁸⁵

“the delimitation method to be employed in the present case for the continental shelf beyond 200 nautical miles should not differ from that within 200 nm. Accordingly, the equidistance/relevant circumstances method continues to apply for the delimitation of the continental shelf beyond 200 nm. This method is rooted in the recognition that sovereignty over the land territory is the basis for the sovereign rights and jurisdiction of the coastal State with respect to both the exclusive economic zone and the continental shelf. This should be distinguished from the question of the object and extent of those rights, be it the nature of the areas to which those rights apply or the maximum seaward limits specified in articles 57 and 76 of the Convention. The Tribunal notes in this respect that this method can, and does in this case, permit resolution also beyond 200 nm of the problem of the cut-off effect that can be created by an equidistance line where the coast of one party is markedly concave.”

As the matter to be resolved in the dispute is the delimitation of a seabed area over which there are two overlapping claims, the claim of Bangladesh and the claim of Myanmar, the method to be used to delimit the area under dispute is to divide the area by the use of the equidistance method. This is in conformity with the application of the principle of the *North Sea Continental Shelf cases* concerning delimitation versus apportionment.⁵⁸⁶

To conclude, it can be said that there is no question of temporal relationship between delineation and delimitation; the two are different and separated processes. Delineation is the technical process of establishment of the outer limits of the continental shelf by application of article 76 of UNCLOS. Delimitation is a judicial procedure, under article 83 of UNCLOS, through which a competent juridical body divides overlapping claims over a maritime area, water column or seabed.

⁵⁸⁵ Ibid, §455.

⁵⁸⁶ In *North Sea Continental Shelf cases*, footnote 79.

5.4 Conclusion

According to article 76 paragraph 1, the outer edge of the margin should be the outer limits of the continental shelf. In other words, the width of the physical margin should reflect on the breadth of the maritime zone. However, article 76 paragraph 2 states that the outer limits cannot exceed certain constraints. Therefore, it appears that the continental shelf will not always supersede to the continental margin. Consequently, the outer limits will not always be modeled on the outer edge. This is explained by the fact that the continental shelf can only represent the natural prolongation of the land territory over the seabed. In other words, the land dominates the sea and the powers of the state on land stretches at sea.

However, the elasticity of the powers of the state over the sea-bed knows a yield point. The submerged prolongation of the land mass extends naturally at will. Maritime zones simply do not. They are bound by notion of legitimacy and fairness, towards other coastal States, other states who want to enjoy the freedom of the high seas and the international community, represented behind the legal regime of the common heritage of humankind in the international seabed area beyond the limits of national jurisdictions.

In other words, the submerged prolongation of the land mass may not always constitute the natural prolongation of the land territory. The role of the test of appurtenance is not to verify the legal notion of the natural prolongation but the scientific proof that shows that the outer continental shelf is actually the submerged prolongation of the land mass. It therefore elucidates the purpose of the test of appurtenance.

The purpose of the test of appurtenance is the assessment of the submerged prolongation to identify the location of the outer edge of the margin, and subsequently the location where the land mass meets the deep ocean floor. The application of the provisions of paragraph 4 will establish the outer edge of the margin. Passing the test will amount to the proof that the submerged prolongation of the land mass is in this case wider than 200 M from the baselines. Such assessment will amount, in turn, to proving that the portion of the continental margin that extends beyond 200 M is actually a part of the submerged prolongation of the land mass, and does not belong to the deep ocean floor.

While natural prolongation is the legal concept that explains the basis of right to access the seabed,⁵⁸⁷ delineation is the technical process to assess the extent of the seabed and locate the limit of the maritime zone with the Area and delimitation is the legal procedure through which a dispute concerning the location of a boundary between opposite or adjacent States is resolved. Entitlement and the notion of natural prolongation justify access to the area, the delineation process assesses the breadth of the submerged prolongation of the land mass of a coastal State and delimitation resolves legal disputes of overlapping claims over the natural prolongation of the land territory of neighbouring States with opposite or adjacent coasts.⁵⁸⁸

⁵⁸⁷ See chapter 2 on entitlement to the seabed since the Truman proclamation on the basis of continuity.

⁵⁸⁸ See next chapter 5 and chapter 6.

6. General Conclusion

Conclusion

The notion of the natural prolongation of the land territory bears the meaning of continuity in its semantic. The continental shelf is the natural prolongation of the land territory, in other words, the continental shelf is the extension of the land under the sea. The fact that the continental shelf is the natural prolongation of the land territory is an innate characteristic of the continental shelf, it is not acquired, it is intrinsic to the physical characteristics of the land. As a result, it would seem to mean that, according to the legal theory pertaining to Part VI of UNCLOS and the concept of the continental shelf, the coastal State, *in abstracto*, has always sovereign rights over the whole of the continental shelf up until the limits of the maritime zone, even though in practice the limits of the maritime zone may be not established yet. In practice, it will only be once the provisions of article 76 are applied that will be known the exact location of the limits and the extent of the maritime zone.

In theory, the fact that the continental shelf represents the natural prolongation of the land territory means that the limits of the maritime zone on the seabed are already there, they exist *ab initio* and *ipso facto*. What should be understood is that the natural prolongation is the *nature* of the continental shelf and not a *condition*. One does not need to prove natural prolongation for the continental shelf to be delineated, one needs to delineate to reveal the location of the outer limits.

Therefore, a state does not, by any process, need to prove title to a portion of what actually represents the extension of itself. As title to the continental shelf is inherent to title to the land territory, article 76 simply cannot confer such title nor extend sovereign rights beyond 200 M. Entitlement to the whole of the continental shelf does not need to be proved and the continental shelf represents in itself the natural prolongation of the land territory under the sea.

It is thus wrong to speak about determination of *entitlement* and say that passing the test entitles to the outer continental shelf. Speaking of determination of entitlement can only provoke confusion between the delineation and delimitation mechanisms. Speaking about

determination of entitlement pushes for creation of a link between the two mechanisms. Entitlement means the right to do or have something, *to give* oneself the right to do something. Entitlement bears the notion of qualification in its semantic: to provide with the ability to access the outer continental shelf. But here, the right to the continental shelf is not given, it is inherent. Therefore a coastal State cannot *qualify to* the outer continental shelf, by no means. There is thus no possible entitlement procedure.

The test of appurtenance by no means can qualify the coastal State to an outer continental shelf. The continental shelf has always been here and the seabed as always represented the submerged prolongation of the land mass. The word “entitlement” cannot be used to mean that the test of appurtenance gives a right to the outer portion of the continental shelf. A coastal State cannot decide on this matter of factual situation. The coastal State’s sovereignty *has* a natural prolongation that extends throughout its territorial sea into a maritime zone in which it has jurisdiction in relation to the economic uses of the seabed. Thus, it *has to* apply the test of appurtenance.

The application of the test is compulsory, not up to the state, to *reveal* the actual physical nature of the seabed, and its application compels the application of the specific method of delineation enshrined in article 76. It is an obligation. Its application is compelling, not discretionary. It is a duty, not a right. Therefore it cannot be spoken of an *entitlement* to the delineation method; there is an *obligation* to comply with the specific delineation method. Its application is not discretionary, the coastal State does not have, neither can it use the *ability to decide* at its own discretion of its application. The width of the continental margin is not established by the coastal State: the coastal State does not decide that it has the right to apply the specific delineation method. This fact is decided by the reality of the physical situation due to the intrinsic characteristic of the seabed. The coastal State *reveals* by the application of the test of appurtenance whether the submerged prolongation of its land mass extends beyond 200 M.

The Commission does not verify that the seabed is the natural prolongation *in law*, rather it verifies that the submarine areas beyond 200 M are part of the *physical* submerged prolongation of the land mass. It is a mistake for the members of the Commission or jurists to believe that this verification, through the test of appurtenance, is linked to the concept of entitlement. The function of the Commission is not legal but technical and its function in

relation to paragraph 4 of article 76 in the test of appurtenance is not to grant entitlement but to give the green light for the use of the delineation method beyond 200 M. The Commission is a technical body and not a legal one. It is not equipped with the mechanism to grant rights and furthermore should not grant itself such powers. Its functions are confined to the technical study of the continental margin, its outer edge and the correct application of geo-sciences methodologies for the delineation of the outer limits beyond 200 M by coastal States.

Clear comprehension of this fact and rigorous use of notion is key to understand the legal regime of the continental shelf and properly use its mechanisms. Speaking of a natural prolongation criterion can only induce entanglement of title to the seabed to the delineation/delimitation process. Entitlement is however a condition *a priori*, that justified access to the seabed and right therein. The establishment of the limits of the continental shelf maritime zone is an *a posteriori* situation, in which rights to the seabed already exist.

Therefore, when a competent judicial body need to delimit beyond 200 M, the job of the Court of Tribunal is only to determine whether the limits of the continental shelves of the parties to the dispute, on the opposite or adjacent sides, meet, and create a zone of dispute, an overlapping claim. The Court or Tribunal then divides the area by the use of equidistance/relevant circumstances to achieve an equitable solution. The judicial body deals with the boundary, that is to say, the line that is situated between opposite or adjacent coasts of States. The Commission deals with the outer limits, that is to say, the line, parallel to the land, that represents the end of the extension of the land mass under the sea, and that also represents the boundary with the Area. In doing so, the CLCS assesses the submerged prolongation of the land mass in regard to scientific methodologies, the judicial body the natural prolongation of the land territories in relation to equity and maritime boundary delimitation case law.

Continental shelf outer limits and sea-level rise

We currently face a major environmental crisis that causes sea-level rise. The question of stability of frontiers and ocean order is seriously impacted. Would the limits change if baselines would sensitively move or States would disappear?⁵⁸⁹ It seems that the outer limits

⁵⁸⁹ ILA, Committee on Baselines and sea-level rise : <<http://www.ila-hq.org/>>, last accessed 16 October 2019.

of the territorial sea and the EEZ would be affected as they are based on the location of the baselines. The outer limits in the case of a change in the baselines could be recalculated.

However, in the case of the continental shelf, the outer limits being permanently describing the contour of the continental shelf, does it mean that the outer limits cannot be changed in case sea-level rises and baselines are affected? Besides, would coastal States have to re-submit to the CLCS in case such limits may be changed?

Concerning the continental shelf, most of the outer limits depend on the location of the margin, which would not change. These limits may not be contested. However, some outer limits depend on calculation from the baselines. These lines may be deemed to be subject to change. In this case, a re-submission to the CLCS would help confirm calculation of the new distances. The outer limits are, in accordance with article 76 paragraph 9, permanent, but would the outer limits be considered permanent by other States if the baselines have changed dramatically?

The major issue concerns island-States, in cases where the whole State would disappear. It should be recalled that maritime zones reflect the sovereign powers of the coastal State on its maritime *façade* and the adjacent sea. In application of the land dominates the sea principle, maritime zones can exist only if a State exists.

Concerning the continental shelf, the continental shelf constitutes the natural prolongation of the land territory because it is the physical extension of the latter under the sea. If a state completely disappears, there would be no territory. In the case of the continental shelf, not having title to the land, the State, even if it would still be recognized as sovereign in international law, would not have title to the seabed. Would it be able to keep its jurisdiction and rights over the seabed?

Besides, although the continental margin would still exist, it would not represent the extension of the land territory under the sea any longer. The land territory would not be. There could not be any natural prolongation as the land itself would be submerged. Since there would be no State, could there be any maritime zone at all, in application of article 121 of UNCLOS?

Annex

Annex I

Proclamation 2667—Policy of the United States With Respect to the Natural Resources of the Subsoil and Sea Bed of the Continental Shelf *September 28, 1945*

By the President of the United States of America

A Proclamation

Whereas the Government of the United States of America, aware of the long range world-wide need for new sources of petroleum and other minerals, holds the view that efforts to discover and make available new supplies of these resources should be encouraged; and

Whereas its competent experts are of the opinion that such resources underlie many parts of the continental shelf off the coasts of the United States of America, and that with modern technological progress their utilization is already practicable or will become so at an early date; and

Whereas recognized jurisdiction over these resources is required in the interest of their conservation and prudent utilization when and as development is undertaken; and

Whereas it is the view of the Government of the United States that the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying with the territory, and since self-protection compels the coastal nation to keep close watch over activities off its shores which are of the nature necessary for utilization of these resources;

Now, Therefore, I, Harry S. Truman, President of the United States of America, do hereby proclaim the following policy of the United States of America with respect to the natural resources of the subsoil and sea bed of the continental shelf.

Having concern for the urgency of conserving and prudently utilizing its natural resources, the Government of the United States regards the natural resources of the subsoil and sea bed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control. 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. The character as high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected.

In Witness Whereof, I have hereunto set my hand and caused the seal of the United States of America to be affixed.

Done at the City of Washington this 28th day of September, in the year of our Lord nineteen hundred and forty-five, and of the Independence of the United States of America the one hundred and seventieth.

Note: The White House press release issued with this proclamation reads in part as follows:

"The policy proclaimed by the President in regard to the jurisdiction over the continental shelf does not touch upon the question of Federal versus State control. It is concerned solely with establishing the jurisdiction of the United States from an international standpoint. It will, however, make possible the orderly development of an underwater area 750,000 square miles in extent. Generally, submerged land which is contiguous to the continent and which is covered by no more than 100 fathoms (600 feet) of water is considered as the continental shelf.

"Petroleum geologists believe that portions of the continental shelf beyond the 3-mile limit contain valuable oil deposits. The study of subsurface structures associated with oil deposits which have been discovered along the gulf coast of Texas, for instance, indicates that corresponding deposits may underlie the offshore or submerged land. The trend of oil-productive salt domes extends directly into the Gulf of Mexico off the Texas coast. Oil is also

being taken at present from wells within the 3-mile limit off the coast of California. It is quite possible, geologists say, that the oil deposits extend beyond this traditional limit of national jurisdiction.

"Valuable deposits of minerals other than oil may also be expected to be found in these submerged areas. Ore mines now extend under the sea from the coasts of England, Chile, and other countries.

"While asserting jurisdiction and control of the United States over the mineral resources of the continental shelf, the proclamation in no wise abridges the right of free and unimpeded navigation of waters of the character of high seas above the shelf, nor does it extend the present limits of the Territorial waters of the United States.

"The advance of technology prior to the present war had already made possible the exploitation of a limited amount of minerals from submerged lands within the 3-mile limit. The rapid development of technical knowledge and equipment occasioned by the war now makes possible the determination of the resources of the submerged lands outside of the 3-mile limit. With the need for the discovery of additional resources of petroleum and other minerals, it became advisable for the United States to make possible orderly development of these resources. The proclamation of the President is designed to serve this purpose."

Executive Order 9633, reserving and setting aside the resources of the continental shelf and placing them for administrative purposes, pending legislative action, under the jurisdiction and control of the Secretary of the Interior, was released with the foregoing proclamation. For text see 3 CFR, 1943-1948 Comp., p. 437.

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Annex II

Excerpt from

CONVENTION ON THE CONTINENTAL SHELF

The States Parties to this Convention

Have agreed as follows:

Article 1

For the purpose of these articles, the term "continental shelf" is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

Article 2

1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 of this article are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in these articles consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.

Article 6

1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite 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 nearest points of the baselines from which the breadth of the territorial sea of each State 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 nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed permanent identifiable points on the land.

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Annex III

Excerpt from

United Nations Convention on the Law of the Sea

PART VI

CONTINENTAL SHELF

Article 76

Definition of the continental shelf

1. The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

2. The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.

4. (a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

- (i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or
- (ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.

5. The fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4 (a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.

6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

7. The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by coordinates of latitude and longitude.

8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.

10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.

Article 77

Rights of the coastal State over the continental shelf

1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in this Part consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.

Article 78

Legal status of the superjacent waters and air space and the rights and freedoms of other States

1. The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters or of the air space above those waters.

2. The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.

Article 79

Submarine cables and pipelines on the continental shelf

1. All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article.

2. Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines.

3. The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.

4. Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.

5. When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.

Article 80

Artificial islands, installations and structures on the continental shelf

Article 60 applies *mutatis mutandis* to artificial islands, installations and structures on the continental shelf.

Article 81

Drilling on the continental shelf

The coastal State shall have the exclusive right to authorize and regulate drilling on the continental shelf for all purposes.

Article 82

Payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles

1. The coastal State shall make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

2. The payments and contributions shall be made annually with respect to all production at a site after the first five years of production at that site. For the sixth year, the rate of payment or contribution shall be 1 per cent of the value or volume of production at the site. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 7 per cent thereafter. Production does not include resources used in connection with exploitation.

3. A developing State which is a net importer of a mineral resource produced from its continental shelf is exempt from making such payments or contributions in respect of that mineral resource.

4. The payments or contributions shall be made through the Authority, which shall distribute them to States Parties to this Convention, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States, particularly the least developed and the land-locked among them.

Article 83

Delimitation of the continental shelf between States with opposite or adjacent coasts

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

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

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

4. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the continental shelf shall be determined in accordance with the provisions of that agreement.

Article 84

Charts and lists of geographical coordinates

1. Subject to this Part, the outer limit lines of the continental shelf and the lines of delimitation drawn in accordance with article 83 shall be shown on charts of a scale or scales adequate for ascertaining their position. Where appropriate, lists of geographical coordinates of points, specifying the geodetic datum, may be substituted for such outer limit lines or lines of delimitation.

2. The coastal State shall give due publicity to such charts or lists of geographical coordinates and shall deposit a copy of each such chart or list with the Secretary-General of the United Nations and, in the case of those showing the outer limit lines of the continental shelf, with the Secretary-General of the Authority.

Article 85

Tunnelling

This Part does not prejudice the right of the coastal State to exploit the subsoil by means of tunnelling, irrespective of the depth of water above the subsoil.

ANNEX II. COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF

Article 1

In accordance with the provisions of article 76, a Commission on the Limits of the Continental Shelf beyond 200 nautical miles shall be established in conformity with the following articles.

Article 2

1. The Commission shall consist of 21 members who shall be experts in the field of geology, geophysics or hydrography, elected by States Parties to this Convention from among their nationals, having due regard to the need to ensure equitable geographical representation, who shall serve in their personal capacities.

2. The initial election shall be held as soon as possible but in any case within 18 months after the date of entry into force of this Convention. At least three months before the date of each election, the Secretary-General of the United Nations shall address a letter to the States Parties, inviting the submission of nominations, after appropriate regional consultations, within three months. The Secretary-General shall prepare a list in alphabetical order of all persons thus nominated and shall submit it to all the States Parties.

3. Elections of the members of the Commission shall be held at a meeting of States Parties convened by the Secretary-General at United Nations Headquarters. At that meeting, for which two thirds of the States Parties shall constitute a quorum, the persons elected to the Commission shall be those nominees who obtain a two-thirds majority of the votes of the representatives of States Parties present and voting. Not less than three members shall be elected from each geographical region.

4. The members of the Commission shall be elected for a term of five years. They shall be eligible for re-election.

5. The State Party which submitted the nomination of a member of the Commission shall defray the expenses of that member while in performance of Commission duties. The coastal State concerned shall defray the expenses incurred in respect of the advice referred to in article 3, paragraph 1(b), of this Annex. The secretariat of the Commission shall be provided by the Secretary-General of the United Nations.

Article 3

1. The functions of the Commission shall be:

(a) to consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with article 76 and the Statement of Understanding adopted on 29 August 1980 by the Third United Nations Conference on the Law of the Sea;

(b) to provide scientific and technical advice, if requested by the coastal State concerned during the preparation of the data referred to in subparagraph (a).

2. The Commission may cooperate, to the extent considered necessary and useful, with the Intergovernmental Oceanographic Commission of UNESCO, the International Hydrographic Organization and other competent international organizations with a view to exchanging scientific and technical information which might be of assistance in discharging the Commission's responsibilities.

Article 4

Where a coastal State intends to establish, in accordance with article 76, the outer limits of its continental shelf beyond 200 nautical miles, it shall submit particulars of such limits to the Commission along with supporting scientific and technical data as soon as possible but in any case within 10 years of the entry into force of this Convention for that State. The coastal State shall at the same time give the names of any Commission members who have provided it with scientific and technical advice.

Article 5

Unless the Commission decides otherwise, the Commission shall function by way of sub-commissions composed of seven members, appointed in a balanced manner taking into account the specific elements of each submission by a coastal State. Nationals of the coastal State making the submission who are members of the Commission and any Commission member who has assisted a coastal State by providing scientific and technical advice with respect to the delineation shall not be a member of the sub-commission dealing with that

submission but has the right to participate as a member in the proceedings of the Commission concerning the said submission. The coastal State which has made a submission to the Commission may send its representatives to participate in the relevant proceedings without the right to vote.

Article 6

1. The sub-commission shall submit its recommendations to the Commission.
 2. Approval by the Commission of the recommendations of the sub-commission shall be by a majority of two thirds of Commission members present and voting.
 3. The recommendations of the Commission shall be submitted in writing to the coastal State which made the submission and to the Secretary-General of the United Nations.
- Article 7 Coastal States shall establish the outer limits of the continental shelf in conformity with the provisions of article 76, paragraph 8, and in accordance with the appropriate national procedures.

Article 8

In the case of disagreement by the coastal State with the recommendations of the Commission, the coastal State shall, within a reasonable time, make a revised or new submission to the Commission.

Article 9

The actions of the Commission shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts.

The Final Act of the Third United Nations Conference on the Law of the Sea

**ANNEX II
STATEMENT OF UNDERSTANDING
CONCERNING A SPECIFIC METHOD
TO BE USED IN ESTABLISHING
THE OUTER EDGE OF THE CONTINENTAL MARGIN**

The Third United Nations Conference on the Law of the Sea,

Considering the special characteristics of a State's continental margin where: (1) the average distance at which the 200 metre isobath occurs is not more than 20 nautical miles; (2) the greater proportion of the sedimentary rock of the continental margin lies beneath the rise; and

Taking into account the inequity that would result to that State from the application to its continental margin of article 76 of the Convention, in that, the mathematical average of the thickness of sedimentary rock along a line established at the maximum distance permissible in accordance with the provisions of paragraph 4(a)(i) and (ii) of that article as representing the entire outer edge of the continental margin would not be less than 3.5 kilometres; and that more than half of the margin would be excluded thereby;

Recognizes that such State may, notwithstanding the provisions of article 76, establish the outer edge of its continental margin by straight lines not exceeding 60 nautical miles in length connecting fixed points, defined by latitude and longitude, at each of which the thickness of sedimentary rock is not less than 1 kilometre,

Where a State establishes the outer edge of its continental margin by applying the method set forth in the preceding paragraph of this statement, this method may also be utilized by a neighbouring State for delineating the outer edge of its continental margin on a common geological feature, where its outer edge would lie on such feature on a line established at the maximum distance permissible in accordance with article 76,

paragraph 4(a)(i) and (ii), along which the mathematical average of the thickness of sedimentary rock is not less than 3.5 kilometres,

The Conference requests the Commission on the Limits of the Continental Shelf set up pursuant to Annex II of the Convention, to be governed by the terms of this Statement when making its recommendations on matters related to the establishment of the outer edge of the continental margins of these States in the southern part of the Bay of Bengal.

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Annex IV

Excerpt from

Scientific and Technical Guidelines

CLCS/11

2. Entitlement to an extended continental shelf and the delineation of its outer limits

- 2.1. Formulation of the problem: article 76
- 2.2. Test of appurtenance
- 2.3. Delineation of the outer limits of the continental shelf

2.1. Formulation of the problem: article 76

2.1.1. Article 76, paragraph 1, establishes the right of coastal States to determine the outer limits of the continental shelf by means of two criteria based on either natural prolongation or distance:

"The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance."

2.1.2. Paragraph 4 (a) suggests the formulation of a test of appurtenance in order to entitle a coastal State to extend the outer limits of the continental shelf beyond the limit set by the 200-nautical-mile distance criterion. This test consists in the demonstration of the fact that the natural prolongation of its land territory to the outer edge of the continental margin extends beyond a line delineated at a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured:

"For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured ..."

2.1.3. The Convention offers two complementary provisions designed to provide the definition of the continental margin and the breadth of its outer limit. The first provision, contained in paragraph 3, provides its definition:

"The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof."

2.1.4. The second provision, contained in paragraph 4 (a) (i) and (ii), subject to paragraphs 5 and 6, determines the position of the outer limit of the continental margin by means of a complex formula based on four rules. Two of these rules are affirmative and the remaining two are negative. The two positive rules, herein referred to as formulae, are connected through an inclusive disjunction:

"(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

"(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the slope."

2.1.5. The use of an inclusive disjunction as a connective between the two formulae implies that the compound is true so long as at least one of the components is true. Thus, the limit of the continental shelf can be extended up to a 1 per cent sediment thickness line delineated by reference to fixed points, or to a line delineated by reference to fixed points at a distance of 60 nautical miles from the foot of the continental slope, or both.

2.1.6. When both formulae lines are used, their outer envelope determines the maximum potential extent of entitlement over the continental shelf by a coastal State. This envelope forms the basis of a claim but it is still subject to spatial constraints in order to produce the delineation of the outer limits of the continental shelf.

2.1.7. The extent of the outer envelope formed by the lines derived from the two formulae is restricted by a line derived from the two negative rules, herein referred to as constraints, which are connected by another inclusive disjunction. According to paragraph 5, the simultaneous application of these two constraints defines the outer limit beyond which an extended claim cannot be made:

"The fixed points comprising the line of the outer limits of the continental shelf on the sea-bed, drawn in accordance with paragraph 4 (a) (i) and (ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres."

2.1.8. The application of a negation over each of the two components connected by an inclusive disjunction implies that the compound is true so long as at least one of the

constraints is satisfied. Thus, the outer limits of the continental shelf can extend either beyond a line delineated by reference to fixed points at a distance of 350 nautical miles from baselines from which the breadth of the territorial sea is measured, or beyond a line delineated by reference to fixed points at a distance of 100 nautical miles from the 2,500 metre isobath, but not both.

2.1.9. In practice, the use of an inclusive disjunction means that the outer envelope of the constraint lines identifies the breadth beyond which the outer limits of the continental shelf of a coastal State cannot extend. This outer envelope of the constraints does not provide per se the basis for entitlement to an extended continental shelf. It is solely a constraint placed over the envelope line produced by the formulae in order to delineate the outer limits of the continental shelf.

2.1.10. Submarine ridges constitute a special case which is subject to the rules of entitlement given by paragraph 4 (a) (i) and (ii), but it is also subject to the more stringent constraint provided by paragraph 6:

"Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs."

2.1.11. Submarine elevations are exempted from the provisions applied to submarine ridges. They are subject instead to the constraints provided in paragraph 5.

2.1.12. Pursuant to the above provisions, paragraph 4 (b) provides a dual regime for the identification of the foot of the slope based on either geomorphological and bathymetric evidence or an additional source of evidence:

"In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base."

2.1.13. Whereas the point of maximum change in the gradient at its base identifies the position of the foot of the continental slope as a general rule, the Commission is bound by this provision to examine all additional evidence provided by a coastal State for the identification of alternative points to locate the foot of the continental slope.

2.1.14. As a summary, where the natural prolongation of a coastal State to the outer edge of the continental margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, the outer limits of the continental shelf can be extended up to a 1 per cent sediment thickness line, or to a line delineated at a distance of 60

nautical miles from the foot of the slope, and no further than a line delineated at a distance of 350 nautical miles from baselines from which the breadth of the territorial sea is measured, or no further than a line delineated at a distance of 100 nautical miles from the 2,500 metre isobath.

2.1.15. The use of a conjunction as a connective between the two components formed, in turn, by a formula compound and a constraint compound, implies that the full compound is true only so long as both components are true. Thus, at least one of the formulae and one of the constraints must be satisfied at all times.

2.1.16. In practice, the use of a conjunction means that the outer limit of the continental shelf is delineated by the inner envelope of two lines: the outer envelope of the formulae, and the outer envelope of the constraints. Section 2.3 illustrates the methodology used to combine these envelopes.

2.2. Test of appurtenance

2.2.1. Both the basis for entitlement to delineate the outer limits of an extended continental shelf and the methods to be applied in this delineation are embedded in article 76. However, it is clear that the positive proof of the former precedes the implementation of the latter, as stated in article 76, paragraph 4 (a):

"For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured ..."

2.2.2. The Commission defines the term "test of appurtenance" as the process by means of which the above provision is examined. The test of appurtenance is designed to determine the legal entitlement of a coastal State to delineate the outer limits of the continental shelf throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

2.2.3. If a State is able to demonstrate to the Commission that the natural prolongation of its submerged land territory to the outer edge of its continental margin extends beyond the 200-nautical-mile distance criterion, the outer limit of its continental shelf can be delineated by means of the application of the complex set of rules described in paragraphs 4 to 10.

2.2.4. If, on the other hand, a State does not demonstrate to the Commission that the natural prolongation of its submerged land territory to the outer edge of its continental margin

extends beyond the 200-nautical-mile distance criterion, the outer limit of its continental shelf is automatically delineated up to that distance as prescribed in paragraph 1. In this case, coastal States do not have an obligation to submit information on the limits of the continental shelf to the Commission, nor is the Commission entitled by the Convention to make recommendations on those limits.

2.2.5. The Commission finds that the proof of entitlement over the continental shelf and the method of delineation of the outer limits of the continental shelf are two distinct but complementary questions. The basis for delineation cannot be other than pertinent to that of entitlement itself.

2.2.6. The Commission shall use at all times: the provisions contained in paragraph 4 (a) (i) and (ii), defined as the formulae lines, and paragraph 4 (b), to determine whether a coastal State is entitled to delineate the outer limits of the continental shelf beyond 200 nautical miles. The Commission shall accept that a State is entitled to use all the other provisions contained in paragraphs 4 to 10 provided that the application of either of the two formulae produces a line beyond 200 nautical miles.

2.2.7. The Commission finds multiple justifications for the application of the formulae rules in the test of appurtenance:

- The geological and geomorphological provisions contained in paragraph 3 are satisfied;
- The application of any other criteria would be inconsistent with the provisions contained in the Convention for the delineation of the outer limits of the continental shelf;
- The application of other rules would have set a legal precedent not contained in the Convention, and perhaps also created unnecessary uncertainties and the burden of additional time and expense on States; and
- The Commission is not precluded by the Convention from applying these rules.

2.2.8. The formulation of the test of appurtenance can be described as follows:

If either the line delineated at a distance of 60 nautical miles from the foot of the continental slope, or the line delineated at a distance where the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the slope, or both, extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, then a coastal State is entitled to delineate the outer limits of the continental shelf as prescribed by the provisions contained in article 76, paragraphs 4 to 10.

2.2.9. If the test of appurtenance is positively satisfied, a coastal State has an obligation to submit to the Commission information on the limits of the continental shelf beyond 200 nautical miles, according to paragraph 8:

"Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding."

2.3. Delineation of the outer limits of the continental shelf

2.3.1. Article 76 contains a complex combination of four rules, two formulae and two constraints, based on concepts of geodesy, geology, geophysics and hydrography:

Formulae

- A line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or
- A line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

Constraints

- A line delineated by reference to fixed points at a distance of 350 nautical miles from the baselines from which the breadth of the territorial sea is measured; or
- A line delineated by reference to fixed points at a distance of 100 nautical miles from the 2,500 metre isobath.

2.3.2. Whereas the application of at least one of the two formulae to determine a line beyond 200 nautical miles suffices to provide the basis for entitlement to delineate the outer limits of an extended continental shelf, the application of all four rules may be necessary in order to actually delineate the outer limits of the continental shelf.

2.3.3. Once the outer limits defined by each of the four rules included in article 76 are determined, the delineation of the outer limit of the extended continental shelf can be summarized as a three-step process:

- (i) The two limits computed by the application of each of the affirmative rules are used to create their outer envelope or formulae line;
- (ii) The two limits computed by the application of each of the negative rules are used to create their outer envelope or constraint line; and
- (iii) The inner envelope of the formulae and constraint lines described above determines the outer limit of the extended continental shelf.

2.3.4. In the special case of submarine ridges, the constraint line created in step (ii) above is formed only by the 350-nautical-miles limit.

2.3.5. Article 76, paragraph 7, describes the geometric character of the outer limit of the continental shelf:

"The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by coordinates of latitude and longitude."

2.3.6. This provision does not specify explicitly the geometric definition of these straight lines. Several line definitions could be conceivably adopted. These could be, among others, loxodromes, normal sections from either end point of a segment, or great circles. The Commission acknowledges that this provision implements a new norm of international law and that there is no precedent or State practice which might suggest the existence of a uniform and extended application of a particular geodetic methodology for this particular purpose.

2.3.7. In view of the rigorous geometric definition of a straight line as the line of shortest distance between two points, the Commission will employ geodesics on the surface of the official geodetic reference ellipsoid used by a State in each submission to define the path and distances of these specific straight lines. This decision is adopted without prejudice to, and is independent from, the interpretation made by the Commission with respect to straight lines as prescribed under the provisions of article 7 and as discussed in section 3.3 of these Guidelines.

2.3.8. The length of straight lines used to connect fixed points, which define the outer limit of the continental shelf, shall not exceed 60 nautical miles. These straight lines can connect fixed points located on one of, or any combination formed by, the four outer limits produced by each of the two formulae and the two constraints contained in article 76.

2.3.9. In the case of straight lines connecting fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such points to the foot of the continental slope, only points located not more than 60 nautical miles apart along the same

continental margin will be connected. These straight lines should not be used to connect fixed points located on opposite and separate continental margins. This provision is implemented by the Commission with a view to ensuring that only the portion of the seabed that meets all the provisions of article 76 is enclosed by these straight lines. Any portion of the seabed allocated to a continental shelf by the construction of these lines must fully meet the requirements of the provisions of article 76. Figure 2.8 illustrates a practical example of this provision.

2.3.10. The outer limit of the continental shelf is also determined by means of straight lines, which may connect fixed points located along arcs. These arcs may be located at 100 nautical miles from the 2,500 metre isobath, not more than 60 nautical miles from the foot of the slope, or 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. In these cases, straight lines should be constructed with a view to ensuring that only the portion of the seabed that meets all the provisions of article 76 is enclosed.

2.3.11. The Commission acknowledges that the character of the limits established by a coastal State based on its recommendations, according to paragraph 8, is final and binding and that, according to paragraph 2, coastal States shall not extend the outer limits of their continental shelf beyond these limits:

"The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6."

6. Foot of the continental slope determined by means of evidence to the contrary to the general rule

6.1. Formulation of the problem: paragraph 4 (b)

6.2. Geological and geophysical evidence

6.3. Determination of the foot of the continental slope

6.4. Considerations to be given with respect to evidence to the contrary

6.1. Formulation of the problem: paragraph 4 (b)

6.1.1. The Commission recognizes that the determination of the foot of the continental slope is achieved as a general rule by means of the point of maximum change in the gradient at its base. However, article 76, paragraph 4 (b), also incorporates a possible exception when evidence to the contrary of this general rule might be submitted by a coastal State:

"In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base."

6.1.2. The Commission interprets the determination of the foot of the continental slope when evidence to the contrary to the general rule is invoked, as a provision with the character of an exception to the rule. This provision not only does not oppose, but in fact complements, the general rule established by the determination of the foot of the continental slope as the point of maximum change in the gradient at its base. Both approaches aim to find the foot of the continental slope at its base.

6.1.3. The complementary character of this provision is emphasized by the fact that in addition to bathymetric and geomorphological evidence, all other necessary and sufficient geological and geophysical evidence must also be included as part of a submission by a coastal State.

6.1.4. The Commission feels it important to outline the breadth and scope of the necessary and sufficient evidence which will be required from States that might deem it appropriate to invoke this provision. The clarification of relevant scientific terms precedes the description of this evidence below.

6.1.5. The Commission acknowledges that article 76 makes use of scientific terms in a legal context, which at times departs significantly from accepted scientific definitions and terminology. The trend for the creation of separate interpretations of terms can be traced back to the work carried out for the first United Nations Conference on the Law of the Sea by the International Law Commission (Oxman, 1969). Article 76, paragraph 1, which defines the legal concept of the continental shelf by means of a reference to the outer edge of the continental margin, provides a measure of the current gap between the juridical and the scientific use of terms.

6.1.6. The definition of the continental margin in the earth sciences had a geomorphological inception at the time of its adoption by various scientific organizations (Wiseman and Ovey, 1953). Current scientific knowledge about the nature and extent of the continental margin has evolved greatly from its original definition. It incorporates many additional geological and geophysical concepts within the framework provided by plate tectonics (COSOD II, 1987; ODP/JOIDES, 1996).

6.1.7. Although article 76 refers to the continental shelf as a juridical term, it defines its outer limit with a reference to the outer edge of the continental margin with its natural components such as the shelf, the slope and the rise as geological and geomorphological features. According to article 76, paragraph 1:

"The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance."

6.1.8. Article 76, paragraph 3, provides further guidance to the Commission:

"The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof."

6.1.9. These paragraphs are valuable to the Commission on several grounds. They help clarify concepts such as natural prolongation of the land territory to the outer edge of the continental margin in the geological sense of these terms, which require the consideration of tectonics, sedimentology and other aspects of geology. But also, they provide guidance to the Commission in interpreting the meaning of the term "evidence to the contrary" to the general rule if this provision, with the character of an exception, is invoked by a coastal State in a submission to determine the foot of the continental slope.

6.1.10. The Convention does not prescribe the application of a specific scientific methodology to define the location of the foot of the continental slope when evidence to the contrary to the general rule is invoked. The Commission interprets this provision as an opportunity for coastal States to use the best geological and geophysical evidence available to them to locate the foot of the continental slope at its base when the geomorphological evidence given by the maximum change in the gradient as a general rule does not or can not locate reliably the foot of the continental slope.

7. Ridges

7.1. Formulation of the problem: paragraphs 3 and 6

7.2. Oceanic ridges and submarine ridges

7.3. Submarine elevations

7.1. Formulation of the problem: paragraphs 3 and 6

7.1.1. The Commission is aware that oceanic and submarine ridges as well as submarine elevations are given special attention in article 76 with respect to issues of entitlement to an extended continental shelf and the delineation of its outer limits.

7.1.2. Article 76 mentions three types of sea floor highs:

- Oceanic ridges of the deep ocean floor (para. 3);
- Submarine ridges (para. 6);
- Submarine elevations (para. 6).

7.1.3. None of these terms is precisely defined. It seems that the term "ridge" is used on purpose, but the link between the "oceanic ridges" of paragraph 3 and the "submarine ridges" of paragraph 6 is unclear. Both terms are distinct from the term "submarine elevations" of paragraph 6.

7.1.4. Paragraph 3 establishes that the continental margin does not include the deep ocean floor with its oceanic ridges:

"The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof."

7.1.5. According to paragraph 6:

"Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs."

7.1.6. This seems to imply that "submarine ridges" and "submarine elevations" are also distinct legal categories, as they are subject to separate provisions regarding the maximum outer limit.

7.1.7. The constraints contained in paragraph 6 for submarine ridges do not apply to submarine elevations that are natural components of the continental margin, such as "plateaux, rises, caps, banks and spurs".

7.1.8. The distinction between the "submarine elevations" and "submarine ridges" or "oceanic ridges" shall not be based on their geographical denominations and names used so far in the preparation of the published maps and charts and other relevant literature. Such a distinction for the purpose of article 76 shall be made on the basis of scientific evidence taking into account the appropriate provisions of these Guidelines.

7.2. Oceanic ridges and submarine ridges

7.2.1. Ridges under the sea may be formed in a variety of geological processes, including:

- Ridges formed by the sea-floor spreading and associated volcanic-magmatic processes;

- Ridges formed along transform faults and created as an inherent part of the sea-floor spreading process;
- Ridges formed by later tectonic activity resulting in uplift of oceanic crust;
- Ridges formed by volcanic activity related to the movement of crust over a hot spot. These ridges are commonly composed of coalescing volcanic features or seamounts and generally occur on oceanic crust;
- Ridges formed by interaction of oceanic crustal plates;
- Ridges formed by regional excessive volcanism related to plumes of anomalously hot mantle;
- Ridges associated with active plate boundaries and the formation of island arc systems. They could occur as active and inactive (remnant) volcanic arcs, and forearc and back-arc ridges. Such ridges commonly reflect different stages in the progressive development of island arc systems and may result from variations in factors such as the rate and direction of convergence, and from the nature of the plate being subducted;
- Ridges formed by rifting (extension and thinning) of continental crust. This process commonly forms broader features, such as marginal plateaux and rises, but sometimes creates elongated slivers of continental crust separated by oceanic or highly extended continental crust.

7.2.2. This categorization of ridges is not exhaustive and complete owing to the variety of the tectonic settings of the sea floor.

7.2.3. In scientific literature the term "oceanic ridges" is not used in an entirely strict sense. In some cases it clearly refers to oceanic spreading ridges only, while in others it seems to apply to all ridges composed of oceanic basaltic rocks (i.e. the first five categories in the list above). Transform ridges, in cases where they develop through time from a continental crustal environment into an oceanic crustal environment, may be difficult to classify as only one or the other along their full length. The other ridge types, except perhaps for some back-arc ridges, have no relationship to oceanic crust.

7.2.4. Some ridges located within the continental margins have been present since the early evolution of the margin and have influenced it since then. Because of their presence, sediment dispersal and thickness and the morphology of the sea floor may have acquired a unique configuration and individualization within the regional context.

7.2.5. It should be noted that paragraph 6 makes reference to both the category of submarine ridges, and that of submarine elevations that are natural components of the continental

margin. At the same time, the Convention recognizes that the provision of paragraph 6 concerning the maximum limit of 350 M applies to submarine ridges.

7.2.6. The Commission feels that the provisions of paragraphs 3 and 6 may create some difficulties in defining ridges for which the criterion of 350 M in paragraph 6 may apply on the basis of the origin of the ridges and their composition.

7.2.7. For example, if the oceanic ridges include the first five types of ridges mentioned above (composed of oceanic basaltic rocks), one may find some examples where the ridges formed along transform faults or by later tectonic activity infringe the continental margin of continents.

7.2.8. Some ridges (including active spreading ridges) may have islands on them. In such cases it would be difficult to consider that those parts of the ridge belong to the deep ocean floor.

7.2.9. Article 76 makes no systematic reference to the different types of the earth's crust. Instead it only makes reference to the two terms: "the natural prolongation of ... land territory" and "the submerged prolongation of the land mass" of coastal States as opposed to oceanic ridges of the deep ocean floor. The terms "land mass" and "land territory" are both neutral terms with regard to crustal types in the geological sense. Therefore, the Commission feels that geological crust types cannot be the sole qualifier in the classification of ridges and elevations of the sea floor into the legal categories of paragraph 6 of article 76, even in the case of island States.

7.2.10. Therefore the Commission feels that in cases of ridges its view shall be based on such scientific and legal considerations as natural prolongation of land territory and land mass, morphology of ridges and their relation to the continental margin as defined in paragraph 4, and continuity of ridges.

7.2.11. As it is difficult to define the details concerning various conditions, the Commission feels it appropriate that the issue of ridges be examined on a case-by-case basis.

7.3. Submarine elevations

7.3.1. The term "submarine elevations" in paragraph 6 includes a selection of highs: "such as plateaux, rises, caps, banks and spurs". The phrase "such as" implies that the list is not complete. Common to all of these elevations is that they are natural components of the continental margin. This makes it relevant to consider the processes that form the continental margins and how continents grow. The growth of the present continents is and/or was primarily caused by geological processes along the continental margins (e.g., Rudnick, 1995).

Consequently, the Commission will base its views on "submarine elevations" mainly on the following considerations:

(a) In the active margins, a natural process by which a continent grows is the accretion of sediments and crustal material of oceanic, island arc or continental origin onto the continental margin. Therefore, any crustal fragment or sedimentary wedge that is accreted to the continental margin should be regarded as a natural component of that continental margin;

(b) In the passive margins, the natural process by which a continent breaks up prior to the separation by seafloor spreading involves thinning, extension and rifting of the continental crust and extensive intrusion of magma into and extensive extrusion of magma through that crust. This process adds to the growth of the continents. Therefore, seafloor highs that are formed by this breakup process should be regarded as natural components of the continental margin where such highs constitute an integral part of the prolongation of the land mass.

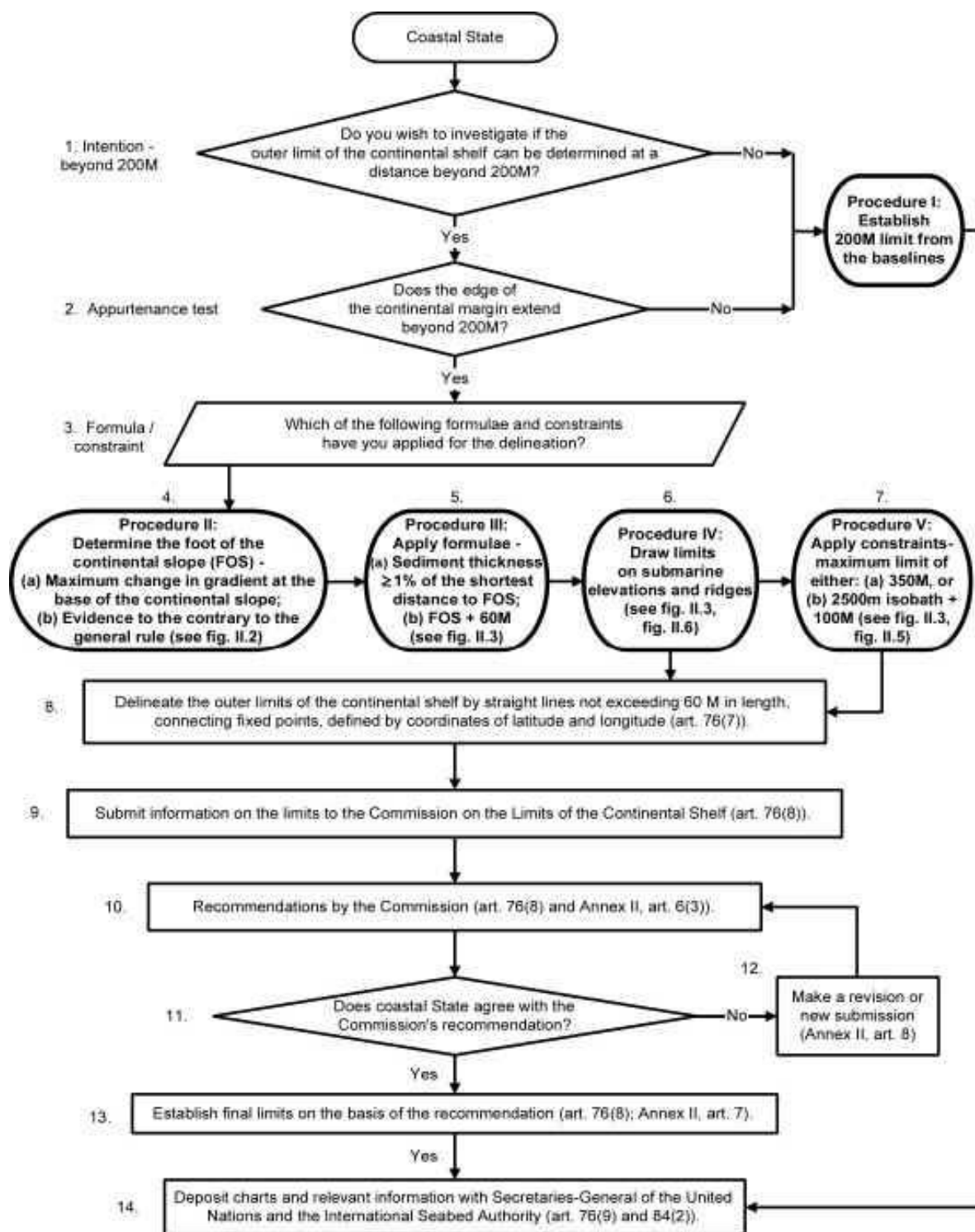


Figure II.1. Master Flowchart for the establishment of the outer limits of the continental shelf.

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Annex V

Excerpt from

Rules of Procedure

CLCS/40/Rev.1

XI. Submission by a coastal State

Rule 46

Submissions in case of a dispute between States with opposite or adjacent coasts or in other cases of unresolved land or maritime disputes

1. In case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States or in other cases of unresolved land or maritime disputes, submissions may be made and shall be considered in accordance with Annex I to these Rules.

2. The actions of the Commission shall not prejudice matters relating to the delimitation of boundaries between States.

Annex I

Submissions in case of a dispute between States with opposite or adjacent coasts or in other cases of unresolved land or maritime disputes

1. The Commission recognizes that the competence with respect to matters regarding disputes which may arise in connection with the establishment of the outer limits of the continental shelf rests with States.

2. In case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States, or in other cases of unresolved land or maritime disputes, related to the submission, the Commission shall be:

(a) Informed of such disputes by the coastal States making the submission; and

(b) Assured by the coastal States making the submission to the extent possible that the submission will not prejudice matters relating to the delimitation of boundaries between States.

3. A submission may be made by a coastal State for a portion of its continental shelf in order not to prejudice questions relating to the delimitation of boundaries between States in any other portion or portions of the continental shelf for which a submission may be made later, notwithstanding the provisions regarding the ten-year period established by article 4 of Annex II to the Convention.

4. Joint or separate submissions to the Commission requesting the Commission to make recommendations with respect to delineation may be made by two or more coastal States by agreement:

(a) Without regard to the delimitation of boundaries between those States; or

(b) With an indication, by means of geodetic coordinates, of the extent to which a submission is without prejudice to the matters relating to the delimitation of boundaries with another or other States Parties to this Agreement.

5. (a) In cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the States concerned in the dispute. However, the Commission may consider one or more submissions in the areas under dispute with prior consent given by all States that are parties to such a dispute.

(b) The submissions made before the Commission and the recommendations approved by the Commission thereon shall not prejudice the position of States which are parties to a land or maritime dispute.

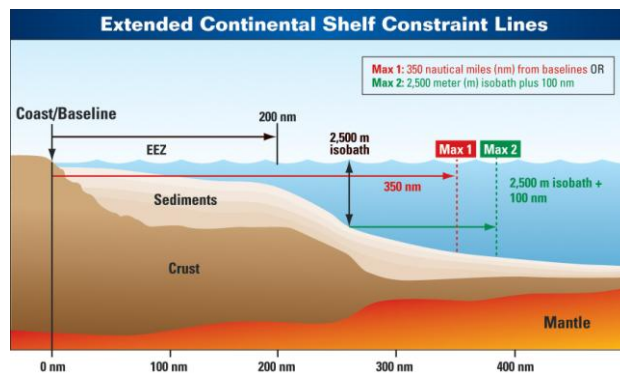
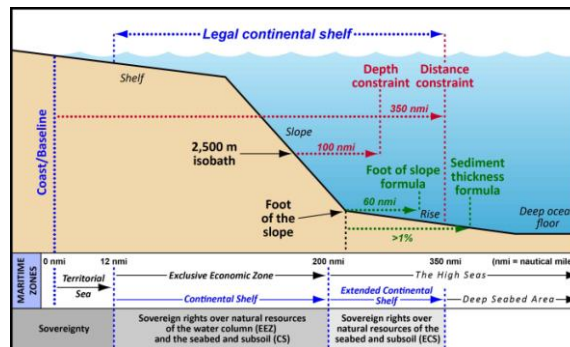
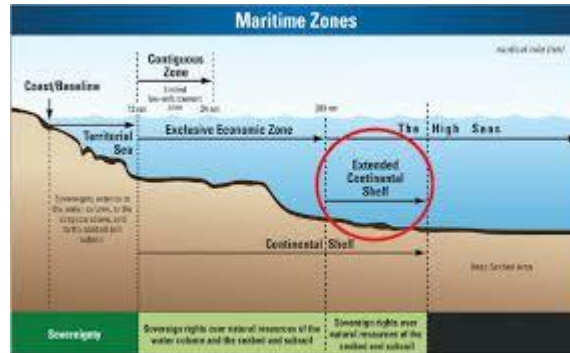
6. The Commission may request a State making a submission to cooperate with it in order not to prejudice matters relating to the delimitation of boundaries between opposite or adjacent States.

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Annex VI

General charts and diagrams

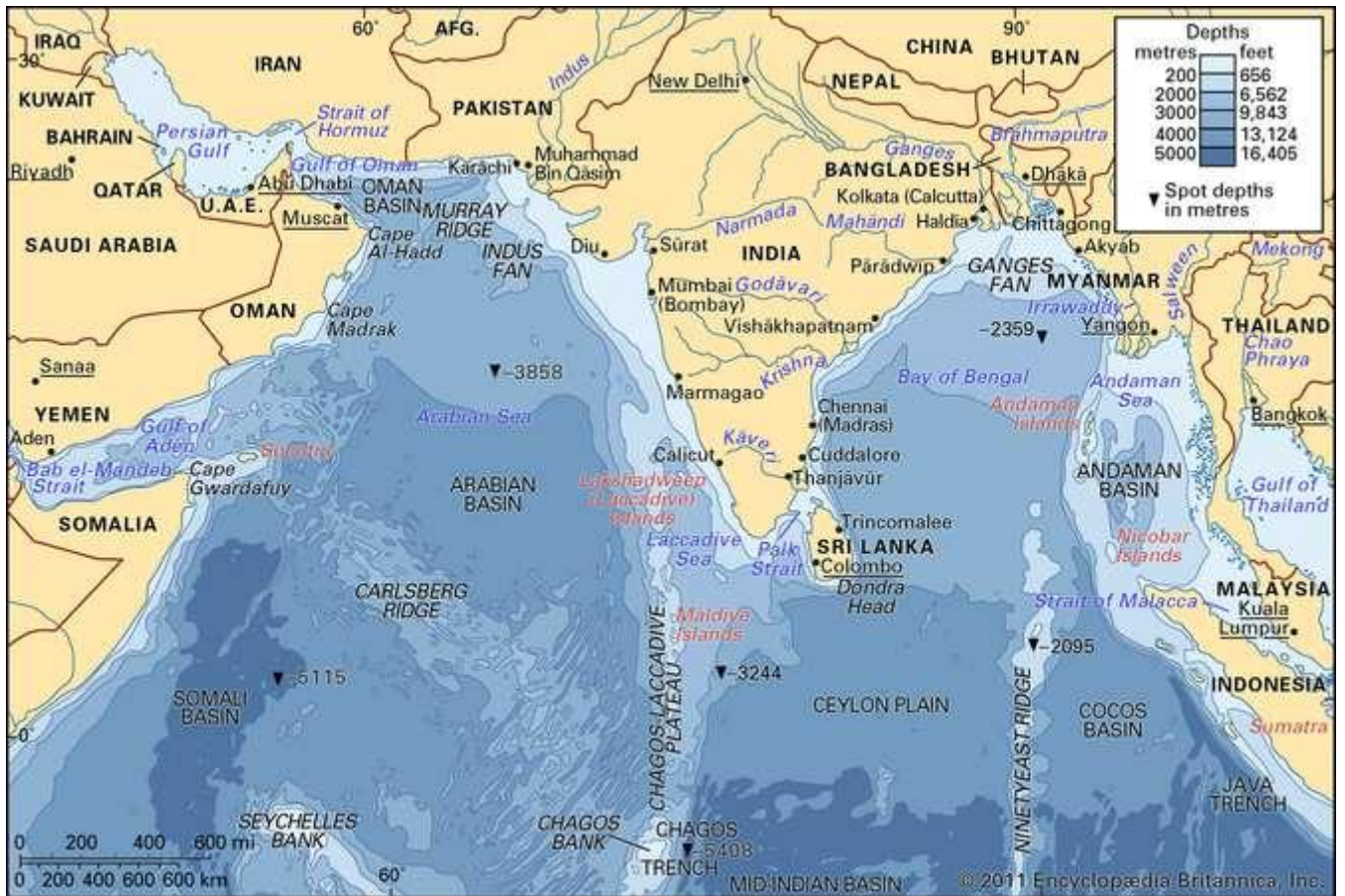
Diagrams illustrating the outer limits of the continental shelf beyond 200 M



Extracted from the “Extended Continental Shelf Project” webpage, https://www.ngdc.noaa.gov/mgg/ecs/factsheet/ECS_fact_sheet.pdf, of the US *National Oceanic and Atmospheric Administration* (NOAA), available at <https://www.ngdc.noaa.gov/mgg/ecs/>, last accessed 16 October 2019.

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Chart of the Arabian Sea and Bay of Bengal.



Extracted from Suri Balakrishna, Philomene A. Verlaan, Joseph R. Morgan, “Bay of Bengal” (Bay, Indian Ocean), *Encyclopædia Britannica, Inc.* (2019).

Available at: <<https://www.britannica.com/place/Bay-of-Bengal>>, last accessed 16 October 2019.

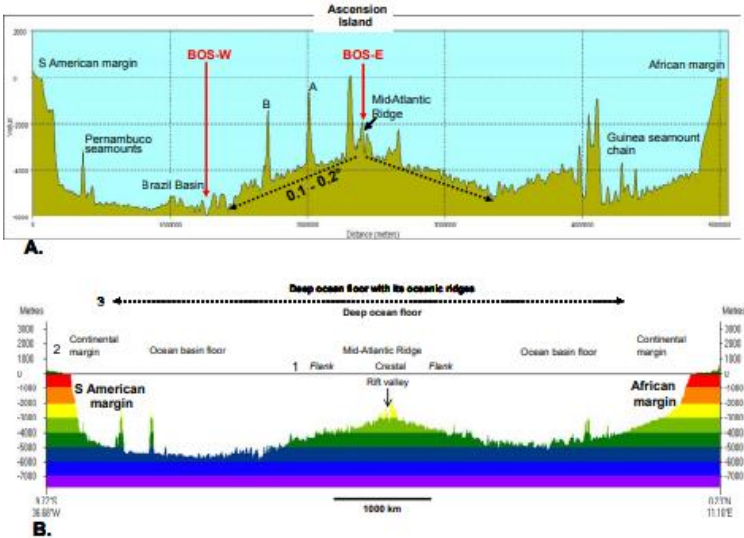
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Charts extracted from

**Submissions of submitting States to the CLCS and
Recommendations of the CLCS**

1. *Summary of Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by the United Kingdom of Great Britain and Northern Ireland in Respect of Ascension Island on 9 May 2008 (15 April 2010)*

At p.4, Figure 2:



2. *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf in regard to Iceland, in the Aegir Basin area and in the western and southern parts of Reykjanes Ridge, made on 29 April 2009 (10 March 2016)*

At p.15, Figure 8:

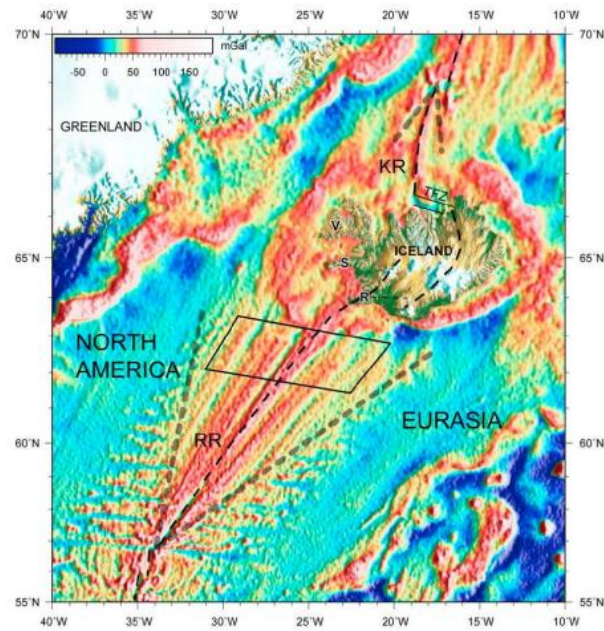


Figure 8: Satellite gravity and V-shaped ridges in the North Atlantic (Hey et al., 2010)

3. *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf* in regard to the Partial Submission made by Japan on 12 November 2008 (19 April 2012).

At p.37, Figure 4:

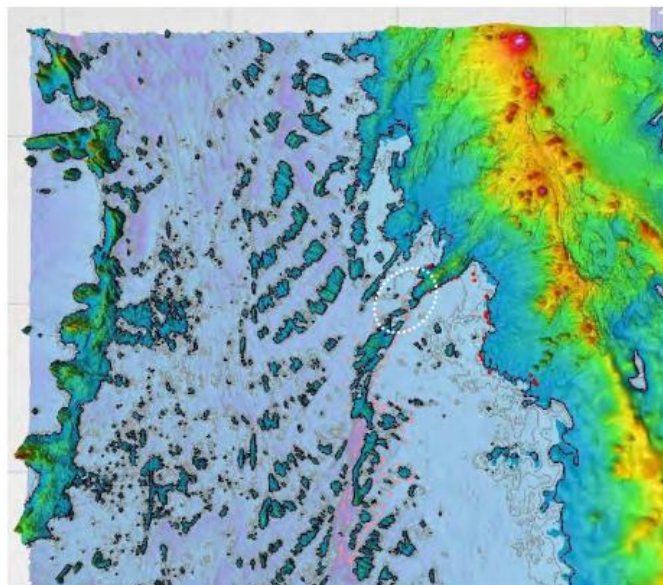


Figure 4. Bathymetric image showing the saddle area between the inner and outer slope on the Minami-Io To Spur and FOS points (pink and red) as originally submitted by Japan. The contours and colour shading deeper than 4350 m depth are dimmed in order to illustrate the break in morphology of the spur at this location (marked by white dotted line). The figure was produced by the Subcommittee based on data provided by Japan.

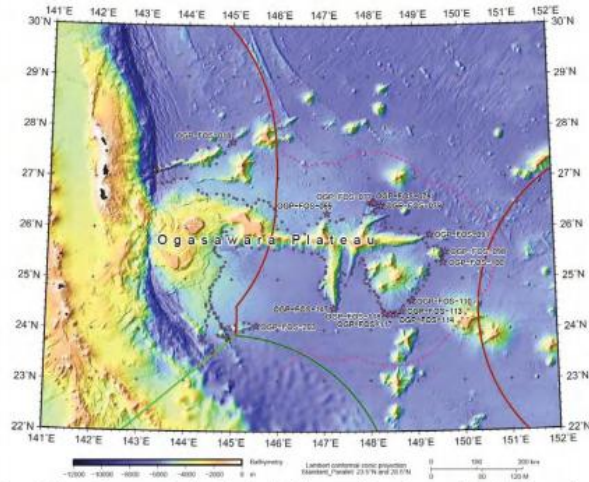


Figure 13. Bathymetric map showing the foot of slope points and associated 60 M arcs in the Ogasawara Plateau Region as originally submitted by Japan (Fig. 4.1 of OGP-MB-DOC-01).

4. Submission by the Democratic Socialist Republic of Sri Lanka, made on 8 May 2009
(Executive Summary)

At p.12, Figure 3:

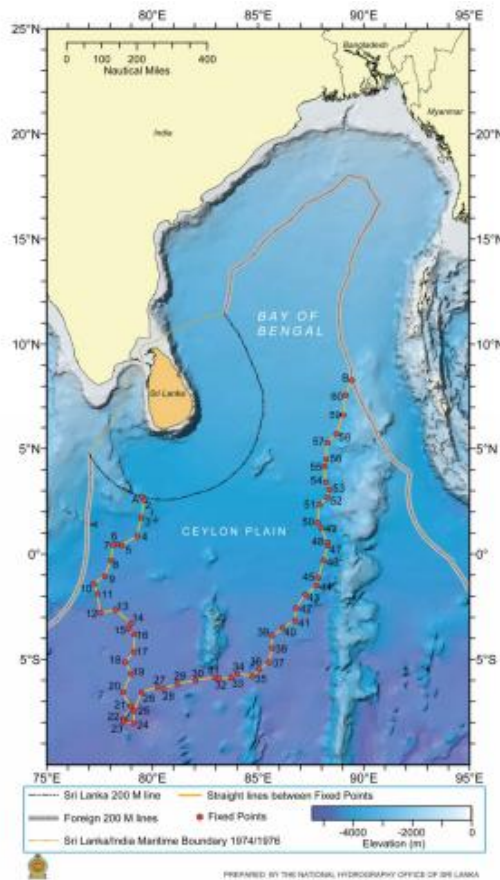


Figure 3. Map showing the outer limits of the continental shelf of Sri Lanka beyond 200 M.

5. *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by Australia on 15 November 2004 (9 April 2008).*

At p.29, Figure G.3:

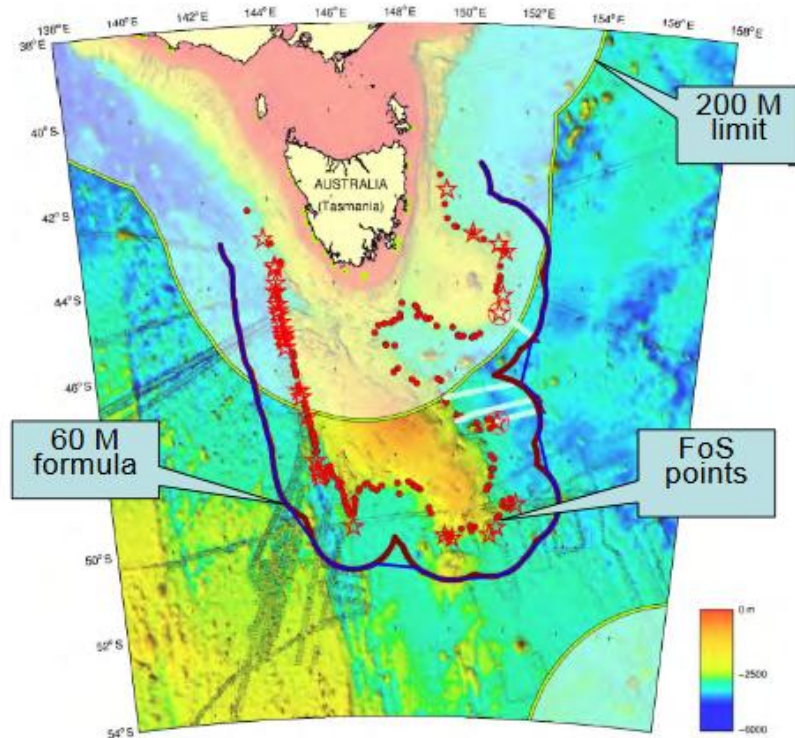


Figure G.2 Relationships between the 200 M limit, the foot of the continental slope points and the formula lines according to the article 76. 4(a) in the South Tasman Rise Region.

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34. 32. Iceland - in the Ægir Basin area and in the western and southern parts of Reykjanes Ridge, 29 April 2009, CLCS/78.
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2. *Rules of Procedure of the Meeting of States Parties to UNCLOS*, Doc. SPLOS/2/Rev.4 (24 January 2005).
3. Report of the third Meeting of States Parties, Doc. SPLOS/5 (22 February 1996).
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6. Report of the seventh Meeting of States Parties, Doc. SPLOS/24 (12 June 1997).
7. Letter dated 12 March 1998 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the Eighth Meeting of States Parties, Doc. SPLOS/26 (1998).
8. Letter dated 15 May 1998 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the Eighth Meeting of States Parties, Doc. SPLOS/28 (1998).
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10. *Letter dated 14 May 1999 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the Ninth Meeting of States Parties*, Doc. SPLOS/38 (1999).

11. *Issues submitted to the Meeting of States Parties by the Commission on the Limits of the Continental Shelf* - Note by the Secretariat, Doc. SPLOS/39 (1999).
12. *Letter dated 3 June 1999 from the President of the Ninth Meeting of States Parties addressed to the Chairman of the Commission on the Limits of the Continental Shelf*, Doc. SPLOS/49 (1999).
13. *Letter dated 5 May 2000 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the Tenth Meeting of States Parties*, Doc. SPLOS/52 (2000).
14. *Decision regarding the establishment of a voluntary trust fund for the purpose of the Commission on the Limits of the Continental Shelf*, Doc. SPLOS/58 (2000).
15. *Issues with respect to article 4 of Annex II to the United Nations Convention on the Law of the Sea*, Eleventh Meeting, Doc. SPLOS/64 (1 May 2001).
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20. Report of the eleventh Meeting of States Parties, Doc. SPLOS/73 (14 June 2001).
21. *Letter dated 15 May 2003 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the thirteenth Meeting of States Parties*, Doc. SPLOS/94 (2003).
22. *Letter dated 18 May 2004 from the Chairman of the Commission on the Limits of the Continental Shelf addressed to the President of the fourteenth Meeting of States Parties*, Doc. SPLOS/111 (2004).

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26. Report of the seventeenth Meeting of States Parties, Doc. SPLOS/164 (16 July 2007).
27. *Letter dated 23 April 2007 from the Chairman of the Commission on the Limits of the Continental Shelf* addressed to the President of the seventeenth Meeting of States Parties, Doc. SPLOS/156 (2007).
28. *Issues related to the workload of the Commission on the Limits of the Continental Shelf* - Note by the Secretariat, Doc. SPLOS/157 (2007).
29. *Decision on issues related to the workload of the Commission on the Limits of the Continental Shelf*, Doc. SPLOS/162 (2007).
30. *Decision on the allocation of seats on the Commission and the Tribunal*, Doc. SPLOS/163 (2007).
31. *Issues related to the workload of the Commission on the Limits of the Continental Shelf* — tentative dates of submissions, Doc. SPLOS/INF/20 (2008).
32. Report of the special Meeting of States Parties (30 January 2008), Doc. SPLOS/170 (2008).
33. *Letter dated 18 April 2008 from the Chairman of the Commission on the Limits of the Continental Shelf* addressed to the President of the eighteenth Meeting of States Parties, Doc. SPLOS/177 (2008).
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35. *Decision on the vacancy in the Commission on the Limits of the Continental Shelf*, Doc. SPLOS/181 (2008).
36. *Decision regarding the workload of the Commission on the Limits of the Continental Shelf and the ability of States, particularly developing States, to fulfil the requirements of article 4 of annex II to the United Nations Convention on the Law of the Sea, as*

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