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Take (to) the Sea!

A Deep dive Into the Legal Regime Governing the Delineation and Delimitation of the Arctic Ocean

JURM02 Graduate Thesis

Graduate Thesis, Master of Laws program

30 higher education credits

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Semester of Graduation: 1st period, Autumn 2020

Table of contents

Summary **3**

Preface **4**

Abbreviations **5**

1. Introduction **6**

1.1 Purpose 7

1.2 Research Questions 7

1.3 Demarcations 8

1.4 Methodology and Material 10

1.5 Disposition 15

2. Background **17**

2.1 Delineation versus Delimitation 18

2.2 The Arctic Council 20

2.3 United Nations Convention on the Law of the Sea 21

2.3.1 Applicability of UNCLOS in the Arctic Region 22

2.3.2 The Commission on the Limits of the Continental Shelf 23

2.4 Practical difficulties in Data-gathering 24

3. The Outer Continental Shelf **26**

3.1 Establishing the Outer Continental Shelf 26

3.2 Difficulties in Implementing Article 76 33

3.2.1 Distance Measurements and Outer Limits 33

3.2.2 Determination of the Foot of the Slope 35

3.2.3 Delineation of the Depth Constraint Line 38

3.2.4 Submarine Ridges and Submarine Elevations 39

4. Claims in the Arctic **43**

4.1 Russian Submissions of 2001 and 2015 43

4.2 Danish Claims of 2014 46

4.3 Canadian Claims of 2019 48

4.4 The United States' Position 51

4.5 Overlapping claims 51

5. Dispute settlement - Article 83 55

5.1 Paragraph 1 – Delimitation by agreement 56

5.2 Paragraph 2 – If no agreement is reached 57

5.3 Paragraph 3 – Pending Agreement 61

6. Delimitation Method in the Courts and Tribunals 62

6.1 Relevant Coasts 64

6.2 Relevant Area 66

6.3 Three-stage process 67

6.3.1 Establishing a Provisional Delimitation Line 70

6.3.2 Equitable Principles/Relevant Circumstances Rule 72

6.3.2.1 Circumstance of Coastal Length 74

6.3.2.2 Geological and Geomorphological Considerations.... 76

6.3.2.3 Equitable Access to Natural Resources 78

6.3.2.4 Prevalence of Ice 80

6.3.2.5 Socio-economic Factors and Population 82

6.3.2.6 Security Issues 82

6.3.2.7 Conduct of the Parties 84

6.3.3 Test of Disproportionality 86

7. Conclusion 89

Bibliography 94

Table of Cases 100

Summary

The polar ice cap in the Arctic is receding, which has led to an increase in activity in the region. As the Arctic is becoming more accessible, economic opportunities are opening, making territorial claims in the region increasingly interesting to the Arctic Coastal States. This thesis focuses on the legal regime governing a future division of the Arctic Ocean. Given certain provisions are met, the regime of the continental shelf allows States to establish exclusive national jurisdiction far beyond the 200 nm limits of the Exclusive Economic Zone. Article 76 of UNCLOS requires States to follow a certain process for establishing the outer limits of the continental shelf. This process involves delineation of the outer limits of the continental margin in accordance with the provisions of Article 76, paragraphs 1 to 10. This is a process that involves the acquisition of scientific data and the matching of that data with specific provisions in Article 76. Furthermore, States are required to submit information on the delineation to the Commission on the Outer Limits of the Continental Shelf, which will assess the submitted data and issue recommendations to States. Currently, four out of the five Arctic Coastal States have made submissions, three are awaiting recommendations to be issued (Canada, Denmark, and the Russian Federation) and one has already finalised its maritime boundaries in accordance with the procedure (Norway). The United States has not yet ratified UNCLOS and can therefore not submit its claims to the Commission on the Outer Limits of the Continental Shelf. When studying the submissions, it becomes obvious that there is a considerable overlap of the claimed areas of entitlement. Therefore, a delimitation of the maritime boundaries will need to be carried out to settle this dispute. Article 83 of UNCLOS and jurisprudence from international courts and tribunals have established a comprehensive legal regime for the settlement of maritime disputes. This regime will govern future delimitations of the Arctic, however, the immediate issue is the scientific and legal classification of the Arctic Seabed, since this will determine whether there exist any entitlements to an outer continental shelf at all.

Preface

"[T]he establishment of a permanent maritime boundary is a matter of grave importance [...]"

- International Court of Justice, in *Case Concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, ICJ Reports, 2007, para. 253.

Abbreviations

CLCS	Commission on the Limits of the Continental Shelf
EEZ	Exclusive Economic Zone
ICJ	International Court of Justice
ITLOS	International Tribunal of the Law of the Sea
m	meters
NGOs	Non-Governmental Organizations
nm	nautical miles
UNCLOS	United Nations Convention on the Law of the Sea
UN	The United Nations
VCLT	Vienna Convention on the Law of Treaties

1. Introduction

Upwards of fifty to sixty States are expected to project maritime claims beyond their 200 nautical mile (nm) limit in the coming decades. This will cause significant changes in the global map of maritime jurisdictions.[1] This development is very much relevant for the Arctic Ocean. The Arctic is an important region for several reasons. For the States that have coasts facing the Arctic Ocean, the possibilities of exploiting natural resources and regulating shipping increases interest in exercising national jurisdiction in the region. Furthermore, the Arctic is a key component in the global climate system, impacting ocean circulation patterns that affect heat distribution on a global scale. Moreover, more than 52 percent of the Arctic Ocean floor consists of continental shelf in a geological sense. The geological definition of the continental shelf is not necessarily the same as the legal definition of the continental shelf. However, the presence of a large continental shelf increases the chances for States to establish their maritime boundaries well beyond their current limits.[2]

With their submission to the Commission on the Limits of the Continental Shelf (hereafter CLCS, or the Commission) in 2019, Canada became the fourth State submitting a continental shelf claim to the Commission concerning the Arctic Ocean, following Russia, Norway, and Denmark. While the United States is not party to the United Nations Convention on the Law of the Sea (hereafter UNCLOS), and therefore not eligible to submit their claims to the Commission, it is expected that their position will be crystallized in the coming years. With State interpretation on their respective rights to an extended continental shelf in the Arctic becoming clearer, the question of delimitation of the maritime boundaries between the countries needs to be addressed. While there are still several steps left in the delineation process, the legal regime of Arctic delimitation will be essential for the final establishment of the boundaries in the future.

[1] McNab, R (2010) p. 493.
[2] Mayer, L (2010) pp. 89 – 90.

1.1 Purpose

The purpose of this thesis is to examine the division of the Arctic from a legal perspective. To achieve this, the different stages involved in the establishment of the continental shelf will be examined, analysed, and discussed. Since the disputes in the Arctic are far from settled, this thesis aims to give the reader an understanding of the different aspects of the continental shelf regime. The thesis further aims to examine what the Arctic disputes are about, where in the process the disputes are at, how a settlement of the disputes will come about, and what is to be expected in the future. The thesis will analyse issues of delineation and issues of delimitation as they are both relevant to the Arctic disputes and together, they will determine the extent to which the Arctic Ocean will fall under national jurisdiction.

The establishment of maritime boundaries is an important issue in international law. Regrettably, it is severely overlooked as a topic for general legal studies. This thesis aims to outline the process of establishing an outer continental shelf and examine the legal framework that this process is subject to, examining the case of the Arctic through the rules that govern the establishment of the continental shelf and the delimitation of its boundaries. The aim is to give the reader an understanding of the legal basis on which extended continental shelf claims are built, as well as analyse the rules applicable to a subsequent delimitation.

1.2 Research Questions

This thesis examines the legal regime in international law governing the division of the Arctic. This thesis will focus on the legal regime governing the extended continental shelf of States. It is in accordance with this regime that the different and competing claims in the Arctic have been made. The questions posed in this section can be divided into two categories, the first one being questions relating to the definition and establishment of the

continental shelf. This can be referred to as the *delineation* of the continental shelf. The second category includes questions relating to the subsequent division of the Arctic. This can be referred to as the *delimitation* of maritime boundaries. Since neither the delineation of the continental shelf nor the delimitation of the competing claims have yet been settled, this thesis will answer the following questions:

1. On what basis are States entitled to an outer continental shelf, extending beyond 200 nm?

2. What are the disputing claims in the Arctic concerning the continental shelf?

3. What are the rules governing the delimitation of maritime boundaries in the Arctic and what do they entail?

4. What conclusions can be drawn from the answer to the questions above, concerning a future division of the Arctic Ocean?

The answers to these questions examine what the basis for entitlement is, what the claimed entitlements are, in what way the claims give rise to disputes, what a settlement of a maritime delimitation dispute entails, and what circumstances and facts are relevant to the future settlement of that dispute in the Arctic context.

1.3 Demarcations

Several aspects have been excluded from the scope. The following paragraphs discuss what has been excluded and why. For this thesis, I have chosen to exclude from the scope any questions relating to procedural issues in International courts. Since it is not relevant to answer my research questions, it is unnecessary to delve into the rules of procedure for the International Court of Justice (hereafter ICJ), the International Tribunal of the Law Of the Sea (hereafter ITLOS), and arbitral tribunals. Not included in this exclusion are questions directly relating to any choice of fora regulated in part XV of UNCLOS. This latter issue will be dealt with briefly

in the thesis to provide a general understanding of the challenges of achieving a dispute settlement in the Arctic Region.

This thesis will not discuss questions relating to the maritime zones of the territorial sea or the Exclusive Economic Zone (hereafter EEZ) in the Arctic, except where the legal concept of the two zones influence the delineation and/or delimitation of the continental shelf.

While it is certainly interesting to examine environmental concerns for the Arctic Region and discuss what impact environmental law has on Arctic activity, environmental concerns are not relevant to the establishment of the continental shelf. The division of the Arctic and the environmental concerns impacting activity carried out after such a division are two distinct legal issues. Moreover, to properly examine the continental shelf regime in the Arctic, it is necessary to exclude factors that, however relevant in the broad picture, are not relevant to answer the specific research questions. Such issues have therefore been excluded from this thesis.

This thesis will not discuss commercial issues concerning the region, including transportation, mining, fishing, etc. Including these topics would create little room for discussing the main research questions of this thesis, or, not be of enough "depth" to be of relevance for legal analysis. For this reason, a detailed analysis of the exclusive rights associated with the continental shelf regime has also been left out of this thesis. For the purposes of this thesis, it is enough that the reader understands that the continental shelf regime involves certain exclusive rights and that these rights are lucrative to the holder.

Since this is a thesis in law and not international relations, the focus is not on discussing political issues. Therefore, geopolitical considerations have been excluded from the scope, except for Chapter 2, where a brief background on the geopolitical context is provided to "set the stage" for the disputes. Moreover, limited mention might be made of political considerations to emphasize one aspect of the relationship between

international law and politics, which is that political discussions often begin where the law ends.

Since the EEZ boundaries are not in dispute in the Arctic, the discussion on single-maritime-boundaries versus different borders for the continental shelf and EEZ respectively, has been left out of the scope. There are no continental shelf claims in the Arctic encroaching upon the area of another State within 200 nm from that State's coastline.

Finally, the regime of the deep seabed, as provided for in part XI in UNCLOS, will not be examined in detail. For this thesis, it is sufficient to discuss in general terms the distinction between maritime zones falling under national jurisdiction and the "area" constituting the deep seabed.

1.4 Methodology and Material

For this thesis, the main method employed has been the legal dogmatic method. According to this method, de lege lata is determined and interpreted by reference to the established sources of law.[3] Koivurova has addressed the choice of methodology for studying the Arctic and discussed the appropriateness of using the normal legal dogmatic method. He argues that when studying the Arctic, it is important that one "succumbs" to the underlying values of the larger legal structures of national and international law that affect the region. Furthermore, when studying the law of a specific region, it is possible to interpret norms in a regional context, in an attempt to create a more coherent analysis of the rules of the region.[4] While it can be important to address regional considerations when examining the Arctic as a whole, they are not as relevant when examining the legal framework for the continental shelf and its delimitation. For these issues, there is a distinct legal regime that provides the applicable norms and rules. This legal regime has been established through sources of public international law and is in every way applicable to the Arctic context. Thus, this being a thesis on

[3] Kleineman, J (2018) p. 21.
[4] Koivurova, T (2017) pp. 12 – 14.

public international law, the method used will be the legal dogmatic method, applied to the sources of international law. After *de lege lata* has been determined, the findings will be discussed and analysed.

A few words need to be said about the sources of international law. According to Brownlie, it is common to distinguish formal sources from material sources, the former being “legal procedures and methods for the creation of rules of general application which are legally binding on the addressees”, and the latter being sources that “provide evidence of the existence of rules, which, when proved, have the status of legally binding rules of general application”. Since there are no procedures or methods for the creation of formal rules of international law, Brownlie argues that formal sources, “in a sense”, do not exist in international law. Brownlie adds, however, that the definition of custom in international law functions as a substitute, in that the general consent of States can create rules of general application. On material sources the scholar names decisions of the ICJ, resolutions of the General Assembly of the United Nations (hereafter UN), and multilateral treaties as very material evidence that speak on the attitude of States toward particular rules.[5] The sources of the International Law of the Sea are, as noted by Stephens and Rothwell, all of the recognised sources of international law. However, the most important sources are customary international law and multilateral treaties.[6] In this thesis, sources such as judgments of the ICJ and multilateral treaties will play a significant role in determining de lege lata. The general rules of treaty interpretation according to the Vienna Convention on the Law of Treaties (VCLT) will be used for interpreting the treaties relevant to this thesis. According to Article 31 VCLT, a treaty shall be interpreted in good faith in accordance with the ordinary meaning of the terms of the treaty in their context and considering the object and purpose of the treaty. Interpretation includes the preambles and annexes to the treaty, as well as agreements between the parties relating

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[5] Brownlie, I (2008) pp. 3 – 4.
[6] Rothwell, D and Stephens, T (2016) pp. 22 – 23.

to the treaty, legal practice in the application of the treaty, and relevant rules of international law.

As Brownlie explains, while the writings of publicists are secondary sources, they are commonly used as evidence for the determination of the rules of law. Important to note is that not all the writings of jurists are equal, in that some are afforded a more authoritative standing than others.[7] In this thesis, legal doctrine and writings of publicists are used for two reasons, the first one being to corroborate conclusions and interpretations. The second reason for inclusion is to examine issues that other sources of law do not sufficiently cover. Throughout this thesis, efforts have been made not to draw conclusions of a general character based solely on the opinions of legal writers.

Now turning to the specific approach used in this thesis, what follows is an outline of the stages of writing and how the chosen method was applied in each stage. The purpose of this thesis is to examine the division of the Arctic. To do this, the delineation of the continental shelf in the Arctic must be explained, as well as the rules governing the delimitation of maritime boundaries. This will function as a basis for understanding the discussion on the division. The legal basis on which delimitation is carried out is the right to an outer continental shelf. The right to an outer continental shelf is established through the process of delineation. If the right to an outer continental shelf does not exist, there will never be a delimitation of the areas comprising the outer continental shelf. Thus, the first stage was to determine the relevant rules governing the delineation of the continental shelf. Applying the dogmatic method, it was here important to determine whether UNCLOS is applicable in the Arctic context or not. To determine the applicability of UNCLOS, both primary and secondary sources were used. Since the sources all pointed to the same conclusion (and the equation of UNCLOS' continental shelf regime to customary international law)[8] further examination beyond what is provided in Chapter 2 was not deemed

[7] Brownlie, I (2008) pp. 24 – 25.
[8] See Chapter 2.

necessary. After determining that UNCLOS is applicable, the next step was to specify the relevant articles in UNCLOS.

Because of UNCLOS sometimes broad and unspecific wording (and because the purpose of this thesis is to examine the legal concept of the continental shelf) sources that interpret the provisions of the articles, as well as expand on their meaning, were used. This is particularly relevant for the inclusion of the Scientific & Technical Guidelines of the Commission on the Limits of the Continental Shelf (hereafter the Guidelines), which were used in this thesis to provide a scientific base upon which a deeper understanding of the legal issues in implementing the rules of Article 76 can be built. Since the rules governing the delineation and delimitation of maritime boundaries are closely interlinked with several scientific fields, a basic understanding of scientific terminology and practice is needed to understand the provisions governing the region. As the law does not exist in a vacuum, the thesis to a certain extent outlines the intersection where law and science meet concerning the issue of delineation. Furthermore, the guidelines provide a practical dimension to the continental shelf regime. Without this practical dimension, it will not be possible to satisfyingly discuss in detail the issues brought forth in this thesis. The Guidelines are important to address in order to clarify how the requirements for entitlement to an outer continental shelf are to be interpreted, and what data is required for a submission to be successful. Moreover, the Guidelines are of practical importance for interpreting Article 76, as evidenced by the reference to the Guidelines by ITLOS in the Bay of Bengal case to determine the entitlement to a continental shelf beyond 200 nm.[9]

The next stage involved the dissection of the various submissions to the CLCS. First outlining what the claims are, and thereafter applying the legal regime of the continental shelf to the Arctic coastal States' claims of entitlement to an outer continental shelf. Since they have not yet been reviewed by the CLCS, primary sources (the submissions themselves) were

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[9] *Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar),* Judgment, ITLOS, 2012, para. 436.

used in conjunction with secondary sources to outline, interpret and analyse the submissions. This stage aims to provide the reader with an understanding of the disputes in the Arctic, which, in the author's opinion, is essential to understand the last chapters of the thesis, where the process of delimitation will be applied to said disputes.

After having completed the delineation part of the thesis, the focus turns to the process of maritime delimitation. The relevant rules for delimitation of the continental shelf are Article 83 along with various principles set out in the jurisprudence from the relevant Courts. Turning first to Article 83, an examination of this article is provided, along with an interpretation of the provisions of the article. Since the article refers to Part XV of UNCLOS, this also needed to be addressed. In interpreting the article, as well as the various rules set out in Part XV, a certain amount of restraint needed to be exercised to not delve too deep into possible situations that would have little or no relevance to the delimitation of the Arctic. However, since it is difficult to ascertain exactly how a delimitation will be carried out, an overview of the different norms and provisions needed to be provided in this part. After consulting the relevant primary sources there were still uncertainties that needed to be straightened out. Thus, secondary sources in the form of doctrine were used to provide an outline of how Article 83 and Part XV function. Furthermore, since Part XV provides States with the option of choosing or rejecting certain processes for the purposes of delimitation, these choices needed to be addressed as well. Here electronic sources in the form of the UN webpage were used to make sure the choices of the Arctic States were up to date and correct.

Then turning to the final stage, the jurisprudence on the matter of delimitation was examined and analysed. Through UNCLOS and customary international law, there has been a lot said about the delimitation of the continental shelf, enough so that the legal dogmatic method can be applied in this context to establish the applicable norms in the Arctic context. As stated by Brownlie, concerning the delimitation of continental shelf areas, the subject is essentially a matter of customary international law and the

principles established by decisions of the ICJ and other international tribunals.[10] Stephens and Rothwell argue that "given the activity of the ICJ, ITLOS, and arbitral tribunals, judicial decisions have become the dominant influence of this area of the Law of the Sea".[11] To properly understand the process in the Courts, all cases concerning maritime delimitation from the ICJ and ITLOS, as well as a few cases from arbitral tribunals were consulted. Thus, in this part, the material used is primarily the cases speaking of the interpretation and methodology of maritime delimitation. Secondary sources were used in some sections to corroborate conclusions and discuss interpretations. This part aims to give the reader an idea of what legal arguments can be expected from the States, what circumstances are relevant for a future delimitation in the case of the Arctic Ocean, as well as what the court is likely to focus on. Although one cannot predict the exact legal arguments laid out in a future process (for obvious reasons), it is possible to discuss earlier case law and analyse and apply the legal reasoning of the Courts to the information provided by the States concerned in their submissions, to get some idea of what those arguments may be. To achieve this aim, the standard methodology of the Courts is outlined, including exceptions to the generally applied methodology. This outline is first set out in broad strokes, followed by a detailed analysis of, and application of, the methodology in the Arctic context.

1.5 Disposition

Chapter two is meant to give the reader some necessary background information on the issue of this thesis. This includes information on the historical and geopolitical context, different international bodies, applicable law, relevant articles, as well as a brief outline of the practical difficulties involved in data-gathering in the Arctic Ocean. The chapter also includes the definition of the terms *delineation* and *delimitation,* which are used

[10] Brownlie, I (2008) p. 208.
[11] Rothwell, D and Stephens, T (2016) p. 423.

extensively throughout this thesis and need to be distinguished from each other.

Chapter three outlines and examines in detail the rules governing the establishment of a continental shelf extending beyond 200 nm.

Chapter four explains and discusses the continental shelf claims made by the Arctic coastal States. The reason for putting the core of the disputes (the different claims made in relation to the Arctic Ocean) so "late" in the thesis is that it is necessary to understand the rules governing the establishment of an outer continental shelf in order to understand how the submissions are structured, why they are structured this way, and what they are in fact claiming. Without an understanding of the regime that the claims are based upon it will be very difficult, if not impossible, to understand the purpose and the meaning of the submissions.

Chapter five contains an examination and an analysis of the relevant law concerning dispute settlement for issues of maritime boundaries, while the sixth chapter outlines the methodology employed by international courts and tribunals when settling such disputes. Furthermore, the sixth chapter applies the principles set out in the jurisprudence to the Arctic context and analyses the implications of such an application.

The final chapter in this thesis includes a discussion and a conclusion. In this chapter conclusions are drawn and the findings of the thesis are summarized and discussed.

The reason for dividing this thesis into as much as seven chapters, is to separate the different stages mentioned above from each other. This will, in the author's opinion, create a thesis that is easier to read and easier to navigate.

2. Background

The Arctic region is a polar region consisting of the land and sea north of the imagined line commonly referred to as the Northern Polar Circle. The Arctic Ocean is the ocean separating the Eurasian continent from the American continent. As Huebert explains, the Arctic is one of the least developed regions in the world, having been ignored and even avoided by most parts of the world throughout history (except for various indigenous groups who have lived and thrived in the extreme north for thousands of years). During the Cold War, the Arctic functioned as a buffer zone between the west and the east, and the political divide of the time prevented the region to develop through cooperative initiatives. In the last thirty years, however, efforts have been made to develop international institutions and agreements in the region.[12] As noted in the introduction to this thesis, recent developments have increased both State and non-State interests in the Arctic. This has made the Arctic an issue for political consideration. While this thesis is dedicated to discussing legal issues in the Arctic, a few words can be said about the geopolitical trends in the region.

According to Winkler, there is an "atmosphere of cooperation characterizing the current climate between the States in the region." He continues stating that this is illustrated by the Ilulissat Declaration and repeated political and diplomatic contacts reaffirming its message, the joint scientific Canadian-Danish project on Hans Island, and technical cooperation between Russia, Denmark, and Canada on the collection of data on the continental shelf in the Arctic. Therefore, Winkler concludes, there seems to be little reason for concern about possible armed conflict in the region at the moment.[13] Hilde argues that the military development in the Arctic has been exaggerated for political reasons. He argues that there is hardly an *arms-race* in the Arctic. Rather, he points to various reasons for States to rebrand divisions placed in the Arctic, increase spending and military presence in the region, and have a

[12] Huebert, R (2010) pp. 27 – 28.
[13] Winkler, T (2010) pp. 479 – 482.

tough national policy on the Arctic affairs.[14] Hilde points to the close link to national identity that the Arctic holds for countries like Russia, Canada, and Norway, and concludes that having a tough stance in the Arctic is a way to get traction for political campaigns domestically. He argues that nothing seems to point to a military conflict between the arctic nations. Rather, Hilde argues, concern for human and environmental safety and the aim of enforcing national jurisdiction are the main reasons for Arctic military investments.[15] In Hilde's opinion, it seems that the disputes will be settled in a diplomatic and multilateral sense. Even Russia, which is often pointed out as a possible aggressor, focused heavily on its submission before the CLCS rather than looking to strong-arm their way into increased control in the region.[16] Therefore it is of obvious interest to look at the peaceful settlements of maritime disputes in the region. The focus of this thesis is on the legal aspects of those procedures.

2.1 Delimitation versus Delineation

To understand this thesis, it is essential to be able to distinguish the terms *delineation* and *delimitation* from each other. These terms are used to describe two different aspects of the law concerning the continental shelf, and are used throughout this thesis. Regrettably, the two terms are very similar. In this section a distinction is provided to allow easier navigation of the text. According to ITLOS in *Bay of Bengal,* there is a clear distinction between the delimitation of the continental shelf under Article 83 and the delineation of its outer limits under Article 76. ITLOS elaborated on the difference as follows:

> "Under the latter article [article 76, editor's note], the Commission is assigned the function of making recommendations to coastal States on matters relating to the establishment of the outer limits of the continental shelf, but it does so without prejudice to the delimitation of maritime boundaries. The function of

[14] Hilde, P (2013) pp. 131 – 132.
[15] Ibid. p. 145.
[16] Ibid. pp. 142 – 143.

> settling disputes with respect to delimitation of maritime boundaries is entrusted to dispute settlement procedures under article 83 and Part XV of the Convention, which include international courts and tribunals."[17]

ITLOS's judgment *in Ghana v. Côte D'Ivoire* confirms the finding of the Special Chamber in *Bay of Bengal*. In short, the Commission handles delineation of the outer limits of the continental shelf in accordance with Article 76, while disputes between parties relating to the maritime boundaries between them is settled through Article 83.[18] According to Article 76(10), the provisions on *delineation* are without prejudice to the *delimitation* of the maritime boundaries between adjacent or opposite States. This means that the delineation functions primarily as a way to determine the maximum possible area of entitlement, not taking into consideration potential competing claims to that area. The special chamber in *Ghana v. Côte d'Ivoire* held that it is only a decision on delimitation which establishes which part of continental shelf appertains to which of the claiming States. A judgment on delimitation is constitutive in nature; it gives priority to one entitlement over the other where entitlements overlap.[19]

According to the ICJ in *North Sea*, delimitation is a process which establishes the boundaries of an area already, in principle, appertaining to a coastal State. Delimitation does not determine such areas *de novo.*[20] This means that delimitation is not about establishing the existence of a right to a certain area. Rather, there is an inherent right that already exists, and delimitation is focused on the boundary of that right.[21] Moreover, another difference between the two is that delineation (like other designations of ocean zones) is a unilateral action of a coastal State. The effect and

[17] *Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar),* Judgment, ITLOS, 2012, para. 376.
[18] *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE)*, Judgment, ITLOS, 2017, para. 493.
[19] *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE)*, Judgment, ITLOS, 2017, para. 591.
[20] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 18
[21] McDornan (2015) p. 185.

acceptance by other States of the delineation depend upon public international law. Delimitation, on the other hand, is a contractual action between two or more States.[22] Delineation being a unilateral action follows from Article 76 paragraph 7-8, where it is stated that “the coastal State shall delineate the outer limits of its continental shelf”, and that “the limits of the shelf established by a coastal State […] shall be final and binding”. Delimitation being a contractual action follows from the provisions in Article 83. This is further discussed below in chapter 5.

2.2 The Arctic Council

The Arctic Council comprises eight member States (Denmark, Finland, Sweden, Norway, Iceland, Russia, Canada, and the United States), six indigenous peoples’ organizations who sit as Permanent Participants (Aleut International Association, Arctic Athabaskan Council, Gwich’in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, and Saami Council),[23] and a total of 39 Observers. These include 13 States (France, Germany, Italy, Japan, the Netherlands, People’s Republic of China, Poland, Republic of India, Republic of Korea, Republic of Singapore, Spain, Switzerland and the United Kingdom),[24] Twelve Non-Governmental Organizations (NGOs)[25], and 13 Intergovernmental and Inter-Parliamentary Organizations.[26] Among the eight member States there are five States with coastlines facing the Arctic, these are: Canada, Denmark (Greenland), Norway, Russia, and the United States (Alaska). These States are referred to in this thesis as the Arctic coastal States. The Arctic Council is not a treaty organization, in that its charter does not bind member States to its decisions and recommendations.

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[22] Matz-Luck, N (2009) p. 243.
[23] Arctic Council Homepage, <arctic-council.org/en/> - (last visited on 2020-10-07).
[24] Arctic Council Homepage, Observers, *non-arctic States,* <arctic-council.org/en/about/observers/non-arctic-states/> - (last visited on 2020-10-07).
[25] Arctic Council Homepage, Observers, *NGOs* - <arctic-council.org/en/about/observers/non-governmental-organizations/>.
[26] Arctic Council Homepage, Observers, *Intergovernmental and Interparliamentary Organizations* - <arctic-council.org/en/about/observers/intergov-interparl/>.

However, according to McNab, the organization wields considerable moral authority and political power that can influence the formulation of treaties.[27] Considering this, and that this thesis focuses on the legal dimension of Arctic delimitation, rather than the geopolitical, the council will not be discussed further.

2.3 UN Convention on the Law of the Sea

UNCLOS is a multilateral treaty governing the international law of the sea. As mentioned in the preamble, the convention desires to settle all issues relating to the law of the sea in a spirit of mutual understanding and cooperation. States that are parties to the Convention are bound by it in accordance with Article 1(2). This also follows from the general principle of *pacta sunt servanda*, as noted in Article 26 VCLT.

Most of the Arctic States have ratified UNCLOS. Canada and Denmark ratified the Convention in 2003 and 2004, respectively, and the Russian Federation in 1997. Moreover, Finland, Norway and Sweden ratified the Convention in 1996, and Iceland in 1985. The only Arctic State not a Party to the Convention is the United States.[28] The effects of this will be further discussed below.

While Article 76 holds the definition of the continental shelf, Article 77 provides the rights a coastal State has over its continental shelf. This includes exclusive rights to exploration and exploitation of mineral, and other non-living natural resources on or under the seabed. The rights are not dependent on occupation or proclamation and are exclusive in the sense that if a State does not exercise its rights, no other State or non-State actor may do so without the express consent from the right-holding State. Article 78 details the relationship between navigational and air-space rights and the continental shelf, stating that (1) coastal State rights over the continental

[27] McNab, R (2010) p. 503.
[28] United Nations Treaty Collection, Status of Treaties, <https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&lang=en>

shelf does not affect the legal status of the superjacent waters or of the air space above those waters, and (2) when exercising its rights, the coastal State must not infringe or interfere with navigational freedoms and other rights of other States as provided for within the Convention. Articles 79 to 82 are of no immediate relevance for the purposes of this thesis and will therefore not be discussed in detail. Article 83 establishes a regime for the judicial settlement of disputes. This matter will be discussed below in chapter 5.

Article 1(1) defines the deep seabed as "the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction". The limits of national jurisdiction are established through the various maritime zones and their possible reach. The maritime zone with the furthest possible reach seaward is the outer continental shelf. Therefore, the deep seabed starts where the outer continental shelf ends. If there is no outer continental shelf, the deep seabed starts at the 200 nm limit in accordance with Article 76.[29] According to Article 136, the deep seabed and its resources are the common heritage of mankind. For the purposes of this thesis, it is not necessary to discuss the legal concept of the deep seabed further. It suffices to establish that where the deep seabed starts, exclusive access to natural resources end, and that the deep seabed starts where the continental shelf ends.

2.3.1 Applicability of UNCLOS to the Arctic Region

As Norton Moore points out, the Arctic is an ocean. As an ocean, UNCLOS applies as fully to the Arctic as it does to any other ocean. This includes the rules governing the extended continental margin.[30] Winkler refers to the *Ilulissat Declaration* and clarifies that there is already a comprehensive legal framework in place for the management of the Arctic Ocean, namely UNCLOS. He maintains that while new specific rules through bilateral and multilateral agreements may be needed, there is no need for a new

[29] Rothwell, D and Stephens, T (2016) pp. 128 – 130.
[30] Norton Moore, J (2010) p. 18.

comprehensive legal regime for the Arctic.[31] The 2008 Ilulissat Declaration, signed by Canada, Denmark, Norway, Russia, and the United States, reaffirms that UNCLOS is, and should remain the legal framework for resolving all emerging issues, including the delineation and the delimitation of the outer limits of the Arctic continental shelf.[32] Since Article 76 and 83 have been equated to customary international law,[33] this means that these two articles are applicable, even if UNCLOS was not, making interpretations and judgments on Article 76 relevant regardless of UNCLOS applicability.

2.3.2 Commission on the Limits of the Continental Shelf (CLCS)

The Commission is set up in accordance with the provisions in Article 76 and through Annex II of UNCLOS. According to paragraph 8 of Article 76, information on the limits of the continental shelf beyond 200 nm shall be submitted by States to the Commission. The Commission is tasked with reviewing the submissions and shall make recommendations based on them. The recommendations can either reject or confirm the submitting State's entitlement to an extended continental shelf. The role of the Commission was discussed by ITLOS in the *Bay of Bengal* case, where the tribunal stated its reliance on the Commission for examining and evaluating the evidence submitted by a coastal State.[34] This clearly shows the relevance of the Commission. The CLCS is entrusted with evaluating submissions and their evaluations are used to determine whether there exists a continental shelf. According to McNab, the Commission, being a scientific body composed of scientific experts rather than legal experts, pays special

[31] Winkler, T (2010) p. 482.
[32] *The Ilulissat Declaration,* 2008 page 1. See also: E. Conde & Yaneva, Zh. V. (2017) p. 32, note 3.
[33]See *Case Concerning Maritime Delimitation and Territorial Questions Between Qatar and Bahrain (Qatar v. Bahrain)* Judgment, ICJ Reports, 2001, paras. 167-170, and *Colombia/Nicaragua* para. 139.
[34] *Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar),* Judgment, ITLOS, 2012, para. 443.

attention to the adequacy and quality of the submitted data in support of the claim. He adds that the Commission's mandate does not extend to resolving issues between States with conflicting claims.[35] Moreover, paragraph 8 states that the limits of the continental shelf established by a coastal State on the basis of the recommendations are "final and binding".

2.4 Practical Difficulties in Data-gathering

According to McNab, seabed evolution and tectonic history in the Arctic region is still largely unresolved. Until this history is agreed upon by a broad consensus in the scientific community, research will likely continue to produce conflicting interpretations of existing information. What is needed is not only mapping and research at sea, but also at land. Moreover, he argues that tectonic features of the landmasses around the Arctic Ocean can very well bear some relationship to the development of the seabed.[36] While research projects and data-gathering have continued to be carried out in the Arctic in the decade that has passed since McNab noted this, his argument speaks to the importance of such data-gathering and scientific research to prove to the Commission that the claimed areas in the Arctic are in fact continental shelf areas. Therefore, a few words can be said about the practical difficulties involved in these activities.

The practical difficulties involved in data-gathering in the Arctic for the purposes of delineating the outer continental shelf can be exemplified by Denmark's campaign of acquisition and analysis of data. The Danish government started the project in 2002 and the submission on the Northern outer continental shelf was not submitted to the CLCS until 2014. The impracticalities of data-gathering are highlighted in the Danish submission. Only for a period of a few weeks per year is the ice thin enough for icebreakers to get through the ice off the northern coast of Greenland. Furthermore, the prevalence of ice is also highly unpredictable. Also, the

[35] McNab, R (2010) pp. 495 – 496.
[36] Ibid. p. 499.

challenge of facing harsh weather conditions further complicates and slows down any field work in the area.[37] The practical difficulties are also mentioned in the Canadian submission. According to the executive summary, challenges included collecting data in areas that are ice-covered, difficult to access and, in most cases, not previously surveyed. Along with a short window of opportunity due to perennial sea ice cover, weather (including strong currents and heavy wind driving multi-year ice into the Canadian sector), and reduced sunlight, data collection becomes especially challenging along the Canadian continental margin. The Canadian government cites international cooperation and innovative use of technologies as instrumental to a successful data-gathering campaign.[38] Worth noting is that these difficulties have prompted the Arctic States to cooperate on data collection. Winkler points to the Ilulissat Declaration and repeated political and diplomatic contacts reaffirming its message, joint scientific Canadian-Danish projects on Hans Island, technical cooperation between Russia, Denmark, and Canada on the collection of data on the continental shelf in the Arctic, as a few examples of State cooperation.[39]

[37] *Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary*, 2014, pp. 5 – 6.
[38] *Partial submission of Canada to the Commission on the Limits of the Continental Shelf regarding its continental shelf in the Arctic Ocean - Executive Summary*, 2019, pp. 5 – 6.
[39] Winkler, T (2010) pp. 482 – 484.

3. The Outer Continental Shelf

Article 76 establishes the procedure that States must follow in order to delineate the outer limits of their extended continental shelf beyond 200 nm. As noted above in 2.3.2, States must demonstrate to the CLCS that the claimed areas of entitlement are to be defined as their outer continental shelf. This procedure requires the collection of a lot of scientific data. Conde and Yaneva discuss the impact of science and technology on the legal concept of "continental shelf" and its inclusion into customary as well as conventional law. They conclude that science undoubtedly played an essential part in establishing the current concept, as it helped reveal continental submersion due to flooding after the last ice age.[40] Scientific and technological advancements in the field of bathymetry and geology have made the exploration and mapping of the seabed possible, which has also led to criteria based on these scientific fields making their way into the provisions of UNCLOS Article 76. This chapter is included to provide a legal and scientific explanation of the concept of the continental shelf, and aims to clarify the definition of the continental shelf; what constitutes part of it and what does not. The chapter will focus on the Guidelines from the CLCS, clarifying the terminology used in Article 76, as well as discuss some scientific issues relating to the delineation of the continental shelf. Since Article 76 requires certain criteria to be met in order for a State to be able to lay claim to an extended continental shelf, this chapter is dedicated to examining the meaning of those criteria. Article 76 contains 10 paragraphs, which will be elaborated upon below.

3.1 Establishing the Outer Continental Shelf

At its fifth session in 1999 the CLCS adopted *Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf.*[41]

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[40]E. Conde & Yaneva, Zh. V. (2017) *Arctic outer continental shelf* in *Global challenges in the Arctic Region – Sovereignty, environment and geopolitical balance* pp. 21 – 22.
[41] See *Scientific and Technical Guidelines of the CLCS,* (1999), p. 1.

According to Article 76 paragraph 1 in UNCLOS, States have two options when determining the limits of the outer continental shelf:

> "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."

The provision establishes that all coastal States have a continental shelf up to 200 nm. In the cases where the continental shelf extends beyond that limit, the outer edge of the continental margin becomes the limit. According to Conte and Yaneva, this is an attempt to reconcile the interests of both the States with a large continental shelf and the States with a small continental shelf.[42] Article 76(1) was explained to reflect customary international law by the ICJ in *Colombia/Nicaragua*,[43] which means that all coastal States, not only States party to the Convention, have a continental shelf without expressing a claim. Furthermore, a coastal State cannot lose its right to a continental shelf through the actions of another State.[44]

In the *North Sea* cases the ICJ set out the principle of *land dominates the sea*, which means that the continental margin is the prolongation of the landmass that extend underwater from the edge of the continental mass.[45] This was later incorporated into Article 76. The definition of the continental margin is found in paragraph 3 of the article. It is defined as the submerged prolongation of the landmass and consists of the seabed and subsoil of the shelf, the slope and the rise. The continental margin does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.[46] Only when a State can demonstrate to the Commission that the submerged prolongation

[42] E. Conde & Yaneva, Zh. V. (2017) pp. 21 – 22.
[43] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 118.
[44] McDornan, T (2015) p. 185.
[45] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 96.
[46] See figure 1.

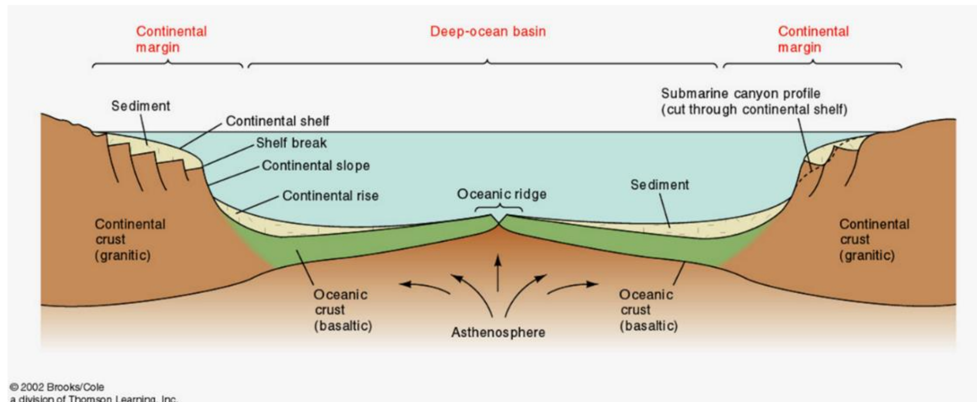

***Figure 1** – Continental Margin*
<http://geophile.net/Lessons/Seafloor/Seafloor_02.html>, last visited on 2020-10-08

of its land territory extends beyond 200 nautical miles can the rules in Paragraphs 4-10 be applied to delineate the outer limits of the continental shelf. According to Article 76, if a State does not demonstrate this to the Commission, the outer limit of the State's continental shelf is automatically set to 200 nautical miles.[47] Jensen summarizes this as: "the continental shelf can include all or part of the ocean floor considered by scientists to comprise the continental shelf, the continental slope, and the continental rise".[48]

Paragraph 2 states that the continental shelf shall not extend beyond the limits provided for in paragraph 4 to 6. Paragraph 4(a)(i) and 4(a)(ii) gives that the limit of the continental shelf can at most be extended up to a line where the thickness of sediment is at least 1 per cent of the distance to the foot of the slope (*Gardiner line*), or to a line delineated at no more than 60 nm from the foot of the slope (*Hedberg line*), or both.[49] The option of using both methods means that a delineation can be made through using both methods at the same time. A continuous line can be drawn using at one point the 1 per cent sediment thickness line and at another point using the 60 nm from the foot of the slope line.[50] These lines are commonly referred to as the *formulae lines* and shall, together with paragraph 4(b) which defines the

[47] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 2.2.3 – 2.2.4.
[48] Jensen, Ø (2016) p. 73.
[49] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 2.1.4 – 2.1.5, and 2.1.14. See also figure 2.
[50] See figure 4.

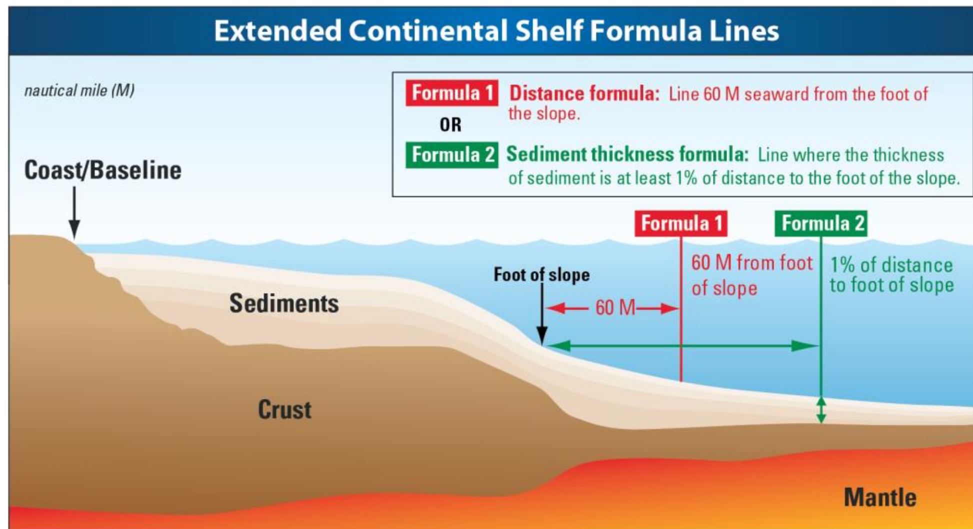

Figure 2 – Formulae Lines
<https://public-preview-server.prod.cstreetsandbox.com/about-the-u-s-extended-continental-shelf-project/>, last visited on 2020-10-29

foot of the continental slope, always be used by the Commission to determine whether a State is entitled to delineate the outer limit of the continental shelf beyond 200 nautical miles.[51] Paragraph 4(b) states that in the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change of gradient at its base. Thus, the paragraph contains a general rule (point of maximum change of gradient) and exceptions to that general rule. The Commission is therefore bound to consider any evidence submitted by a State to identify an alternative point as the location of the foot of the continental slope.[52]

Paragraph 5 defines the outer limit of the continental margin beyond which an extended claim cannot be made. The outer limits of the continental shelf shall not exceed 350 nm from the baselines (*distance constraint line*), or extend beyond 100 nm from the 2,500 m isobath (*depth constraint line*).[53] The 2,500 m isobath is a line connecting the depth of 2,500 m. The outer envelope of the continental shelf is derived by applying the two constraint lines to the formulae lines.[54] This outer envelope functions as an outer limit for how far the continental shelf can potentially stretch. The continental

[51] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 2.2.6.
[52] Ibid. para. 2.1.13. See also section 3.2.2.2 below.
[53] See figure 3.
[54] See figure 5 and 6.

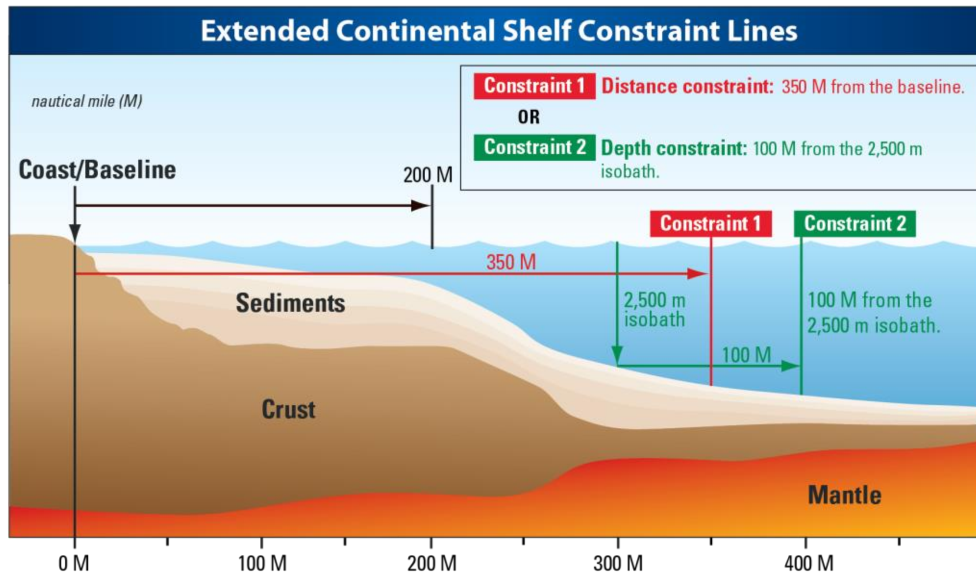

Figure 3 – Constraint Lines
<https://public-preview-server.prod.cstreetsandbox.com/about-the-u-s-extended-continental-shelf-project/>, last visited on 2020-10-29

shelf can extend beyond the 350 nm line as long as it is within the 2500 m isobath line, or vice versa. However, the continental shelf can never extend beyond both lines.[55] Hence, there is a possibility for States to choose which option they want to use for the delineation of the constraint lines. Important to note is that a limit between States with opposite or adjacent coasts, agreed to in accordance with Article 83, also functions as a constraint.[56]

A further constraint is placed on submarine ridges through paragraph 6. The constraint for the reach of the continental shelf must not exceed 350 nm from the baselines which effectively precludes the use of the 2,500m Isobath constraint line for submarine ridges. However, The paragraph does not apply to submarine elevations that are natural components of the continental margin such as its plateaux, rises, caps, banks and spurs.[57]

According to paragraph 7, when delineating the outer limit of the continental shelf, States shall use straight lines connecting fixed points defined by coordinates. These straight lines shall not exceed 60 nm in length. It is not entirely clear what is meant by *straight lines*. The Commission states that several definitions could be adopted, and there is no

[55] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 2.1.8.
[56] Ibid. para. 9.5.1. see also chapter 5 below.
[57] See further discussion in section 3.2.2.4 below.

established practice or precedent that suggests the use of a uniform methodology for this purpose. What is clear, however, is that the straight lines shall connect fixed points located on one of, or any combination of, the four outer limits created by the two constraints and the two formulae lines contained in the article.[58] Important to note is that the connection of fixed points through straight lines is only possible for points located along the same continental margin. It is not possible to connect fixed points located on opposite and/or separate continental margins.[59]

From the above provisions I will try to summarize the rules and the steps in the process of delineating the outer limits of the continental shelf.

- Firstly, States must establish that there is a basis for the claim, namely that the continental shelf extends beyond 200 nm.
- Secondly, States must reliably determine the location of the foot of the slope and the location of the so-called *Gardiner-line.* This "line" is drawn where the sediment thickness equals one percent of the distance back to the foot of the slope. These features are used for determining the two formulae lines.
- Thirdly, States must locate the position of the 2,500 m Isobath. From this line and the line drawn 350 nm from the baselines, the constraint lines are determined (for submarine ridges States can only use the 350 nm distance constraint).[60] As noted above, if there is a limit agreed to in accordance with Article 83, that limit is another constraint.
- Fourthly, the formulae lines and the constraint lines are to be combined, establishing the outer limits of the extended continental shelf. The distance (350 nm line), and the depth (2,500 m Isobath) constraint lines are used to preclude exaggerated or unwarranted claims relating to the breadth of the continental margin.[61] Wherever the formulae lines extend beyond the constraint lines, the constraint

[58] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 2.3.5 – 2.3.8.
[59] Ibid. para. 2.3.9.
[60] Ibid. para. 2.3.4.
[61] McNab, R (2010), p. 494.

lines become the limit. Where the formulae lines do not reach the constraint lines, the formulae lines form the outer limit (see figure 6).

- Fifthly, paragraph 7 requires States to delineate the continental shelf by using straight lines, not exceeding 60 nm, between fixed points defined by coordinates. In practice, this means that States in their submissions, shall make references to fixed points, located along the outer limit as established according to the above.
- Finally, according to paragraph 8, the coastal State shall establish the outer limits of its continental shelf on the basis of the recommendations of the Commission. Such an establishment is final and binding.

If a State fails to demonstrate to the Commission that the natural prolongation of its land territory extends beyond 200 nm, the outer limit is automatically delineated up to 200 nm, in accordance with Article 76(1). If the State disagrees with the recommendations issued by the Commission, the State can lodge a revised or new submission in accordance with Article 8 of Annex II in UNCLOS.

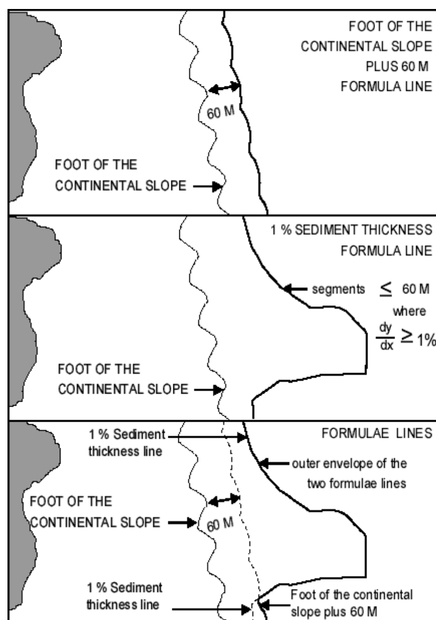

***Figure 4** – Formulae lines*
<https://www.un.org/Depts/los/clcs_new/documents/Guidelines/C11fig25.gif>, last visited on 2020-10-09

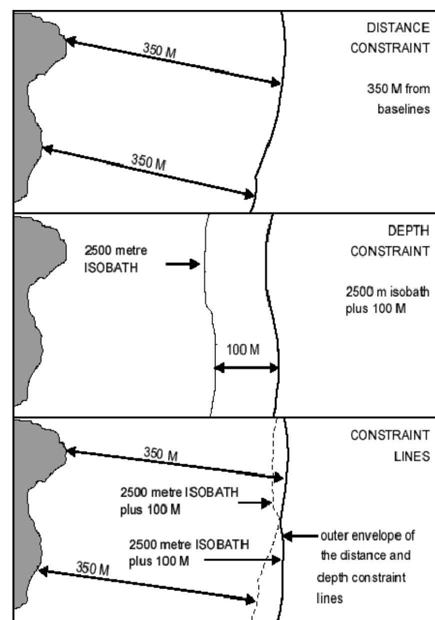

***Figure 5** – Constraint lines*
<https://www.un.org/Depts/los/clcs_new/documents/Guidelines/C11fig26.gif> last visited on 2020-10-09

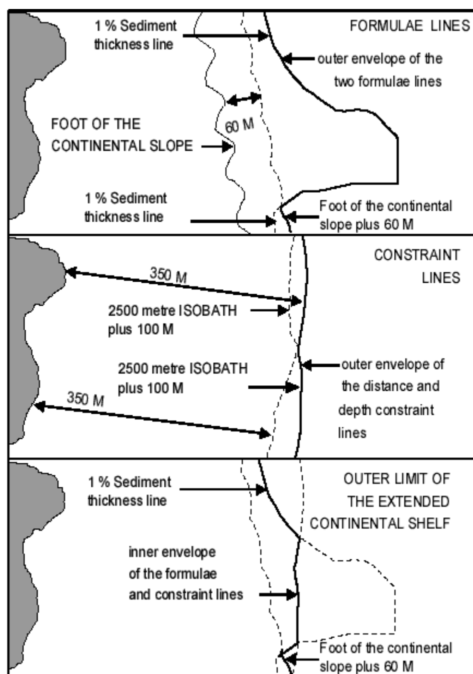

Figure 2.7 Delineation of the outer limits of the extended continental shelf

***Figure 4** – Outer limit*
<https://www.un.org/Depts/los/clcs_new/documents/Guidelines/C11fig27.gif>
last visited on 2020-10-27

3.2 Difficulties in Implementing Article 76

Beyond the practical difficulties involved in acquiring sufficient data discussed above in section 2.4, there are several potential problems that States could encounter when delineating their extended continental shelf. In the following sections a few of the problems as brought up by the Commission are examined. The reason for including these technical requirements is to emphasize the difficulties of the delineation process, as well as explain the scientific interpretation of the legal norms established in Article 76. These interpretations are of great importance to any State planning to make a submission to the CLCS and can certainly impact the outcome of the subsequent recommendations.

3.2.1 Distance Measurements and Outer Limits

Since there are plenty of references to various distances in article 76, and the Convention does not specify the surface over which distances should be

measured, a few words can be said about the various methods that can be used for measuring distances. The Commission names sea level, the geoid[62], the seabed, and the chord segment joining the two end points of a line, "among others" as a few conceivable options to measure distances, which illustrates the open-ended character of their list of examples. The Commission emphasizes that the use of different options might result in an uneven application of distance criteria in the analysis of each submission.[63] However, the Commission points to the existence of an established State practice which demonstrates the use of the surface of a *geodetic reference ellipsoid*[64] when determining the outer limits of territorial waters, the contiguous zone, the EEZ, and the continental shelf (when it is defined by means of a distance criterion up to 200 nm). The Commission emphasizes that the use of such a surface for measurement shall always be accepted by the Commission to ensure the application of a uniform metric.[65] This does not mean that the use of a geodetic reference ellipsoid is the only available option to States, but it does imply that use of the method is a safe option – guaranteeing acceptance by the Commission in that regard - and States will likely continue to use the method to avoid the risk of having to make unnecessary revisions to their submissions with new measurements using another method.

Delineation of the extended continental shelf requires the determination of up to four different outer limits, as provided for in Article 76 (see 3.2.1). For this purpose, the Commission discusses two different methodologies: (1) the method of envelopes of arcs, and (2) the method of *tracés parallèles*. The Commission emphasizes that the method of envelopes of arcs is

[62]Simplistically described as the surface that coincides with the undisturbed sea level over the oceans and with its imaginary continuation under the continents -see Lantmäteriet webpage - <https://www.lantmateriet.se/zh-tw/maps-and-geographic-information/gps-geodesi-och-swepos/Referenssystem/Geoiden/> (last visited on 2020-10-30).
[63] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 3.2.4.
[64] "[…] an ellipsoid of revolution is used as a representation of Earth's shape and size. […]An ellipsoid that is used in geodetic calculations to represent Earth is called a reference ellipsoid. This ellipsoid of revolution is the shape most often used to represent a simple geometric reference surface." see Britannica webpage: <https://www.britannica.com/science/geoid#ref885361>, (last visited 2020-10-30).
[65] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 3.2.5.

independent of the breadth of the limit. Therefore, its mathematical application is valid for determination of outer limits of other maritime spaces, although initially designed to determine the outer limit of the territorial sea. The Commission further states that the method is admissible, "[…] to determine outer limits based on distances from the nearest points located on baselines, the 2,500 m Isobath and the foot of the continental slope", when applied on the surface of the geodetic reference ellipsoid.[66] The Commission regards the application of *tracés parallèles* method on the surface of the geodetic reference ellipsoid as an admissible methodology to determine outer limits at distances of 200 and 350 nm from the nearest points located on straight, closing, and archipelagic baselines (from which the breadth territorial sea is measured).[67] The Commission strongly discourages the application of both methods through the use of manual graphical procedures on the surface of paper nautical charts. According to the Commission, the distortions produced by scale factors in map projections rule out the admissibility of such an application.[68] Moreover, the Commission emphasizes that the accuracy of the delineated offshore limit will depend on the accuracy of the baselines. Thus, if a State wants to make sure they are getting accurate delineations for the outer continental shelf, they must also focus on accurately determining their baselines.[69]

3.2.2 Determination of the Foot of the Slope

Determining the location of the foot of the continental slope is essential for claiming entitlement to the extended continental shelf and delineating its outer limits. According to paragraph 4(a)(i) and 4(a)(ii), it is the reference baseline from which the breadths of the limits specified by the formulae rules are measured.[70] Since paragraph 4 shall be used by the Commission at all times to determine a State's entitlement (see above in 3.2.1), it follows

[66] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 3.4.1-3.4.5.
[67] Ibid. paras. 3.4.6–3.4.7.
[68] Ibid. para. 3.4.10.
[69] Ibid. para. 3.4.9.
[70] Ibid. para. 5.1.1.

that any successful claim must satisfyingly locate the foot of the continental slope. As noted earlier, paragraph 4(b) has the character of a general rule with possible exceptions, stating that unless there is 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 general rule poses two requirements; (1) the identification of the region defined as the base, and (2) the determination of the location of the point of maximum change in gradient at the base.[71] The continental slope is defined by the Commission as the outer portion of the continental margin, extending from the shelf edge to the upper part of the rise, or the deep ocean floor where a rise is not developed. The rise is the wedge-shaped sedimentary body having a smaller gradient than the continental slope.[72] The base of the continental slope is defined as the region where the lower part of the slope merges into the top of the continental rise, or, where a continental rise does not exist, where it merges into the top of the deep ocean floor.[73] With regards to the base, the Commission does not prescribe any one particular method for identifying the region. Rather, recommendations on the applied methodology are made on a case-by-case basis, in view of all other geological and geophysical evidence presented by the coastal State.[74] However, the Commission does recommend the application of morphological and bathymetric evidence whenever the base of the continental slope can be clearly determined on the basis of such evidence. In these clear-cut cases, geological and geophysical evidence functions primarily as supplementary proof of the location of the base.[75] For continental margins that depart from the ideal cases, the Commission is open to allowing geological and geophysical evidence to assist in locating the base of the continental slope.[76]

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[71] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 5.1.2 – 5.1.3.
[72] Ibid. para. 5.4.4. See also fiure 1.
[73] Ibid. para. 5.4.5.
[74] Ibid. paras. 5.4.2 – 5.4.3.
[75] Ibid. para. 5.4.6
[76] Ibid. para. 5.4.4

When trying to locate the foot of the slope in accordance with Article 76 paragraph 4(b), States might encounter difficulties due to geological challenges. The Commission points to two situations that might complicate the determination of the foot of the slope:

(1) When the seabed has a constant curvature along the continental slope it will be impossible to pinpoint an exact location. The maximum change in gradient will not be at a certain point but rather a region.

(2) Irregular seabed topography sometimes reveals several local maxima in the change of gradient at the base of the continental slope. In such a situation, the *maximum maximorum* of gradient change on the slope might not be indicative of the location of the foot.[77] Basically, a local point of max gradient change might not actually be located on the foot.

To remedy these problems the Commission opens for geological and geophysical evidence being introduced as an alternative in order to determine the location of the foot of the slope.[78] The Commission interprets *evidence to the contrary* in Article 76 paragraph 4(b) as a provision allowing States to make use of the best geological and geophysical evidence available to them to locate the foot of the slope, when the geomorphological evidence given by the maximum change in gradient cannot reliably locate the foot of the continental slope.[79] The Commission emphasizes that according to Article 76(1) (defining the breadth of the continental shelf by reference to the geological continental margin), any point identified as the foot of the continental slope, through the use of such evidence, must be located within the geological continental margin.[80]

The Commission concludes with a few considerations to be taken into account by the Commission when analysing a submission that presents evidence to the contrary to the general rule in paragraph 4(b):

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[77] *Scientific and Technical Guidelines of the CLCS,* (1999), paras. 6.3.2 – 6.3.3.
[78] Ibid. para. 6.3.4.
[79] Ibid. para. 6.3.1.
[80] Ibid. para. 6.3.5.

> "If a State has given evidence to the contrary to the general rule against using the foot of the continental slope (article 76 (4)(b)) in its submission, the Commission will deal with, inter alia, the following questions:
>
> (i) Is that evidence acceptable to the Commission?
>
> (ii) Does that evidence pertain to the identification of the foot of the continental slope? Is that evidence purely bathymetric and/or morphological?
>
> (iii) Does that evidence include subsurface information aimed at establishing that the limit obtained by the rule of maximum change in gradient would not, for example, equate to the limit of the geological continental margin?
>
> (iv) If such evidence to the contrary is presented as part of a submission, the Commission will request that it be also accompanied by the results of applying the rule of maximum change in gradient."[81]

3.2.3 Delineation of the Depth Constraint Line

For the purpose of delineating the 2,500 m Isobath in accordance with paragraph 5, the Commission accepts only a combination of five different types of bathymetric measurements. These are (1) Single-beam echo sounding measurements, (2) Multi-beam echo sounding measurements, (3) Bathymetric side-scan measurements, (4) Interferometric side-scan measurements, and (5) Seismic reflection-derived bathymetric measurements. The first two are considered by the Commission as the primary source of evidence for the delineation of the 2,500 m Isobath, and the others as complementary information in general. However, in special cases, such as in ice-covered areas, the Commission states that (4) interferometric side-scan measurements and (5) seismic reflection-derived bathymetric measurements may be considered as the primary source of evidence.[82] Thus, the Commission sets out the types of evidence that are admissible for the delineation of the 2,500 m Isobath. Important to note is

[81] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 6.4.1.
[82] Ibid. paras. 4.2.1 – 4.2.3.

that this demarcation applies only to the 2,500 m Isobath. The fact that a special measurement technique is inadmissible in this section does not mean it is inadmissible in the submission altogether. Selection of points along the 2,500 m isobath is not always easily done because of geological and tectonic processes that shape the continental margin. Multiple repetitions of the 2,500 m isobath can be created through faulting, folding, and thrusting along continental margins. In these cases, the CLCS recommends the use of the first 2,500 m isobath from the baselines, unless there is evidence to the contrary.[83] Evidence to the contrary seems to function as a way for the Commission to determine situations on the merits of the case, rather than establishing a rule that will apply to every situation. This is likely to allow for the many possibilities of differences in seabed morphology. The type of evidence admissible is clear from the above. However, what the evidence can show is not discussed in detail, imposing no specific restriction on what evidence to the contrary could be. One can easily imagine a situation where the first 2,500 m Isobath consist of only a small area, and there is a larger area at the depth of 2,500 m further away from the baselines. Evidence of such a situation might warrant the locating of the line further seaward, although not has not been expressly stated by the Commission.

3.2.4 Submarine Ridges and Submarine Elevations

Article 76 mentions three types of sea floor highs; (1) Oceanic ridges of the deep ocean floor in paragraph 3, (2) Submarine ridges, and (3) Submarine elevations, both in paragraph 6. According to the Commission, the link between oceanic ridges and submarine ridges is unclear. However, both terms are distinct from submarine elevations.[84] Paragraph 3 states that the continental margin does not include the deep ocean floor with its oceanic ridges.[85] Paragraph 6 places a special constraint on submarine ridges (i.e. the outer limit of the continental shelf shall not exceed 350 nm from the

[83] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 4.4.2.
[84] Ibid. paras. 7.1.1 – 7.1.3.
[85] Ibid. para. 7.1.8.

baselines). The Commission argues that paragraph 3 and 6 may create difficulties in defining ridges for which the limit of 350 nm in paragraph 6 applies.[86] Since oceanic ridges according to paragraph 3 are not part of the continental margin, States cannot base a claim to an extended continental shelf on an oceanic ridge. For submarine ridges the 350 nm limit in paragraph 6 applies, which means that a submarine ridge can only be delineated to 350 nm. Thus, it is important to distinguish between the two. When trying to distinguish oceanic ridges from submarine ridges on the basis of their origin and composition, States might encounter difficulties. The Commission highlights two examples that could complicate the distinction: (1) If oceanic ridges include the types of ridges composed of oceanic basaltic rocks, one may find examples where ridges formed along transform faults or by later tectonic activity infringe on the continental margin of continents.[87] (2) Parts of ridges may have islands on them. Should these parts be considered to belong to the deep ocean floor? The Commission finds such a consideration difficult.[88] Since the only two terms referred to in Article 76 are neutral with regard to crustal types in the geological sense (the terms being "the natural prolongation of … land territory" and "the submerged prolongation of the land mass"), the Commission "feels" that geological crust cannot be the only qualifying criterion. Therefore, the classification of ridges shall be based on scientific and legal considerations, such as natural prolongation of land territory and land mass, the morphology of the ridges and their relation to the continental margin as defined in para 4, and the continuity of the ridges in question.[89]

Paragraph 6, as noted above, makes a distinction between submarine ridges and submarine elevations, and places a special constraint on the former (i.e., the outer limit of the continental shelf shall not exceed 350 nm from the baselines). For submarine elevations that meet a certain set of criteria, both the constraint lines in paragraph 5 can be used. The Commission argues that

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[86] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 7.2.6.
[87] Ibid. para. 7.2.7.
[88] Ibid. para. 7.2.8.
[89] Ibid. para. 7.2.9 – 7.2.10.

this implies a legal distinction between submarine ridges and submarine elevations, since they are subject to different provisions.[90] The Commission emphasizes that a distinction between submarine elevations and submarine ridges or oceanic ridges, for the purposes of article 76, shall be made on the basis of scientific evidence, taking into account the appropriate provisions of the Guidelines. Paragraph 6 names a selection of seafloor highs that can be categorized as submarine elevations: *"[...] such as plateaux, rises, caps, banks and spurs".* According to the Commission, this list is not exhaustive. The elevations mentioned are all natural components of the continental margin. The formation of continental margins and the growth of continents are caused by geological processes. Therefore, the Commission explains, their view on submarine elevations will be based upon geological processes. The Commission makes a distinction between (1) active margins, and (2) passive margins. The former grows through the process of accretion of sediments and crustal material onto the continental margin. Thus, the Commission finds that crustal fragments or sedimentary wedges that are accreted to the continental margin should be regarded as a natural component of that continental margin. The latter grows through a process that involves thinning, extension, and rifting of the continental crust. Extensive intrusion of magma into the crust and extensive extrusion of magma through the crust adds to the continental growth. Thus, seafloor highs that are formed through this 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.[91]

McNab concludes that submarine ridges and elevations will be dealt with on a "case-by-case basis" due to the impracticality of setting standards that will cover all possible situations.[92] Jensen argues that:

> "In Article 76, as reflected in the practice of both coastal States and the Commission, determining whether the legal continental shelf extends beyond 200 nautical miles is both a geological and geomorphological exercise.

[90] Ibid. para. 7.1.6 – 7.1.7.
[91] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 7.3.1.
[92] McNab, R (2010) p. 495.

> Geological measurements, such as sampling crust types and so on, can indicate whether the more seaward part of the seafloor is, or used to be, naturally linked to the seafloor near the coast. There is also the issue of geomorphology, that is, the form and structure of the seafloor. […] a basis for the distinction may lie in the fact that submarine elevations can be distinguished as separate features that are a more integral part of the prolongation of the land mass than ridges. It is also argued that a basis for the distinction between ridges and elevations could lie in the geomorphological, geological, and tectonic relationship of the seafloor high to the land mass."[93]

Jensen's argument is supported by Byers and Baker, who assert that some consensus on the definition of seafloor highs is emerging. According to the scholars the CLCS makes an assessment as to what extent a seafloor high is geologically associated or continuous with the landmass, and to what extent the seafloor high is geologically different to the surrounding deep ocean floor.[94] Byers and Baker conclude that oceanic ridges are usually composed of oceanic crust, lie beyond the geomorphological continental margin and that they therefore are associated with the deep ocean floor. This, as mentioned above, means that they cannot create continental shelf rights. Submarine ridges are geomorphologically related to the continental margin, but are geologically discontinuous from it. Submarine elevations are both geomorphologically related to, and geologically continuous with the landmass in terms of crust type and/or geological origin. Finally, they add that the characterization of seafloor highs is conducted on a case-by-case basis, which means that there is still an element of uncertainty present in the process of characterization.[95]

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[93] Jensen, Ø (2016), pp. 74 – 75.

[94] The scholars however note that some States have disagreed to this approach, preferring the case-by-case approach instead of an established precedent. Byers and Baker conclude by stating that the approach of the CLCS will ultimately "combine" with State practice.

[95] Byers, M and Baker, J (2013) p. 104.

4. Submissions to the CLCS

This Chapter will briefly discuss the submissions made by the Arctic Coastal States to the CLCS. The Chapter includes one section for each of the submissions as well as a conclusion aiming to clarify to the reader what areas are in contention between the States. Important to note is that the CLCS has not yet issued recommendations on these submissions. Thus, the claims that are discussed in this chapter are provisional and could be changed at a later stage. The Norwegian submission was approved by the CLCS in 2009,[96] and has thus become "final and binding" in accordance with Article 76(8). It is not included in this chapter since the maritime boundaries between Denmark and Norway, and Russia and Norway have been set through bilateral agreements between the parties.[97]

4.1 Russian Submissions of 2001 and 2015

The first Russian submission was rejected by the Commission. Skaridov argues that the reason for the CLCS rejecting the first Russian submission was due to a lack of scientific data.[98] Since the first submission was rejected and Russia has subsequently submitted a revised claim to the submission, this thesis will focus on the latter submission.

In accordance with Article 8 of Annex II in UNCLOS (providing that, in the case of disagreement with the Commission concerning the

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[96] *SUMMARY OF THE RECOMMENDATIONS OF THE COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF IN REGARD TO THE SUBMISSION MADE BY NORWAY IN RESPECT OF AREAS IN THE ARCTIC OCEAN, THE BARENTS SEA AND THE NORWEGIAN SEA ON 27 NOVEMBER 2006,* Adopted by the Commission on 27 March 2009 with amendments. See paras. 16 – 18, 22 – 24, 31, 34, 40, 55, 66, and 80.

[97] See; *Treaty between the Kingdom of Norway and the Russian Federation concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean*, 15 September 2010; *Agreement between the Kingdom of Denmark and the Kingdom of Norway concerning the Delimitation of the Continental Shelf in the Area between Jan Mayen and Greenland and concerning the Boundary between the Fishery Zones in the Area* 18 December 1995; and *Agreement between the Government of the Kingdom of Norway on the one hand, and the Government of the Kingdom of Denmark together with the Home Rule Government of Greenland on the other hand, concerning the delimitation of the continental shelf and the fisheries zones in the area between Greenland and Svalbard*, Copenhagen, 20 February 2006.

[98] Skaridov (2010) p. 488, footnote 3.

recommendations, the State shall make a new submission), Russia made a revised submission to the CLCS in 2015. In its 2015 submission, Russia delineates its continental shelf to the west in accordance with the 2010 delimitation Agreement between Norway and Russia (pink line on figure 7).[99] The 200 nm lines off Franz Josef Land and Severnaya Zemlya are used in some parts, while in others a slight increase of the continental shelf is proposed.[100] In the centre of the Arctic Ocean, the delineation is made with reference to formulae line points and constraint line points, connected by straight lines not exceeding 60 nm (red and orange points and lines figure 7). The submission also classifies the Lomonosov Ridge as a Submarine Elevation.[101]

To the east, in the Chukchi Sea, Russia delineates its continental shelf in accordance with the 1990 delimitation agreement between Russia and the United States (blue line on figure 7). Moreover, a continuation of that line is drawn to the centre of the Arctic (purple line figure 7). This line is based on the so-called "sector line" decreed by the Soviet Union in 1979. Since parts of the outer limit lie beyond the 350 nm (from Russia's territorial sea baselines) line, Jensen Argues that the delineation seems to be based on the Mendeleev rise being a natural component of the Russian continental margin and constitutes a submarine elevation.[102] He adds that Russia has not used Article 76 to delineate the outer limits of its shelf in this area and concludes that since Russia is a Party to UNCLOS, there exists no legal support for the use of a sector line. While there is nothing prohibiting States to delimit their maritime boundaries beyond 200 nm using a sector line, Jensen maintains that a delimitation agreement does not, in itself, indicate whether a legal continental shelf exists. The seabed area beyond 200 nm must be surveyed in accordance with Article 76 to affirm the existence of a continental shelf, regardless of the existence of a delimitation agreement.

[99] Jensen, Ø (2016) pp. 76 – 77.
[100] *Partial Revised Submission of the Russian Federation to the Commission on the Limits of the Continental Shelf of the Russian Federation in the Arctic Ocean - Executive summary*, 2015, pp. 23 – 25.
[101] Jensen, Ø (2016) pp. 77 – 78.
[102] Ibid. p. 78.

Jensen concludes by stating that since there is no scientific evidence to support that a continental shelf exists in this area, it will be impossible for the Commission to evaluate and make recommendations on an outer limit.[103] Furthermore, Jensen argues that there are possible discontinuities in the continental margin of Russia. Noting that when examining Arctic seafloor maps there seems to be contours of ruptures separating the Lomonosov Ridge and the Alpha-Mendeleev Rise from the Russian continent.[104]

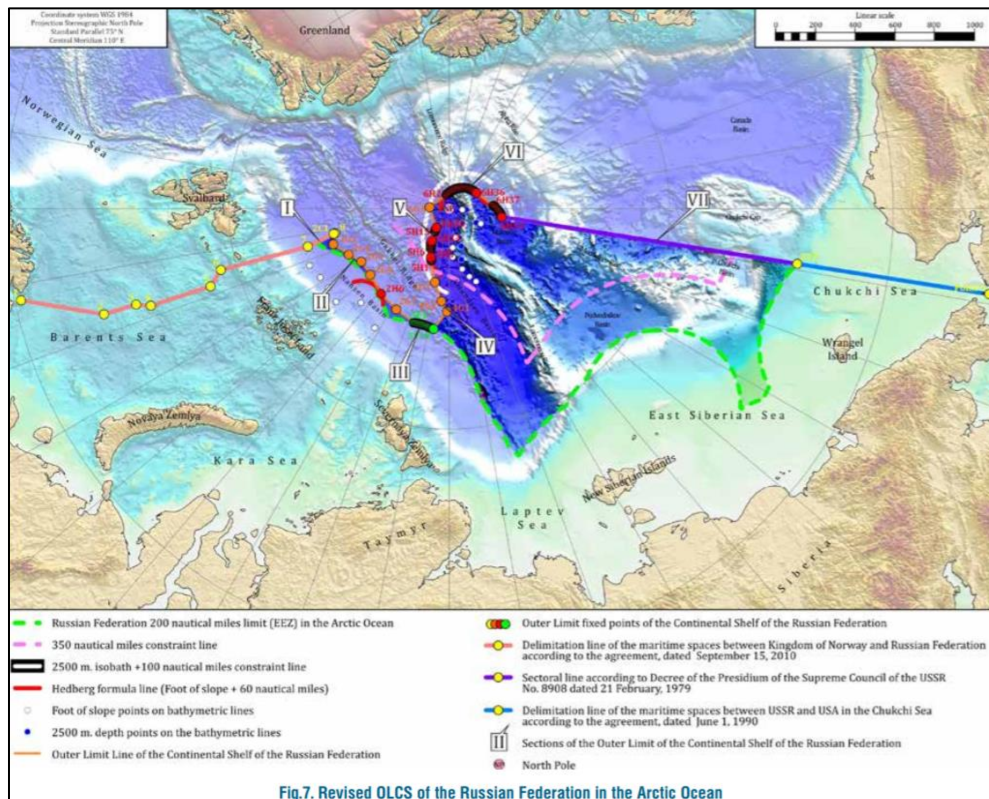

Figure 5 – Russia's Revised submission
Taken from *Partial Revised Submission of the Russian Federation to the Commission on the Limits of the Continental Shelf of the Russian Federation in the Arctic Ocean - Executive summary*, 2015, p. 23

[103] Jensen, Ø (2016) p. 83.
[104] Ibid. p. 74.

4.2 Danish Submission of 2014

In the Danish submission of 2014, Denmark delineated their continental shelf to include the area surrounding the Lomonosov Ridge beyond the 200 nm lines of Canada on the one side and Russia on the other (see figure 8). Denmark refers to the provisions in Article 76(4)-(7), establishing their outer continental shelf in reference to points located along the two formulae lines and the two constraint lines, and thereafter having joined these points with straight lines no longer than 60 nm.[105] Denmark argues that the Lomonosov Ridge shares a common geological history with the onshore areas of Greenland and the Canadian Arctic Archipelago (since at least Caledonian times), and further, that the Lomonosov Ridge has been 'firmly' attached to the Lincoln Shelf and Northern Continental Shelf of Greenland and has been drifting with the North American Plate. Thus, according to the Danish submission, the Lomonosov Ridge is both geologically and geomorphologically an integral part of the Northern Continental Margin of Greenland.[106]

Denmark, together with the Government of Greenland, entered into an agreement with the Russian Federation on March 27th, 2014. The agreement held that whenever one State makes a submission to the CLCS, the other State will forward a note to the UN Secretary General; proclaiming (1) they will not object to the CLCS considering the submission and making recommendations on it, (2) recommendations of the CLCS on one State's submission are without prejudice to the other State's submission, and (3) the recommendations with respect to either State are without prejudice to the delimitation of the continental shelf between the two States.[107] Through this agreement Denmark and Russia agreed not to oppose or interfere with the other State's submission before the CLCS while at the same time saying that the recommendations coming out of the CLCS will not be mandatory or

[105] *Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary*, 2014, p. 11.
[106] Ibid. pp. 12 – 13.
[107] Ibid. p. 18

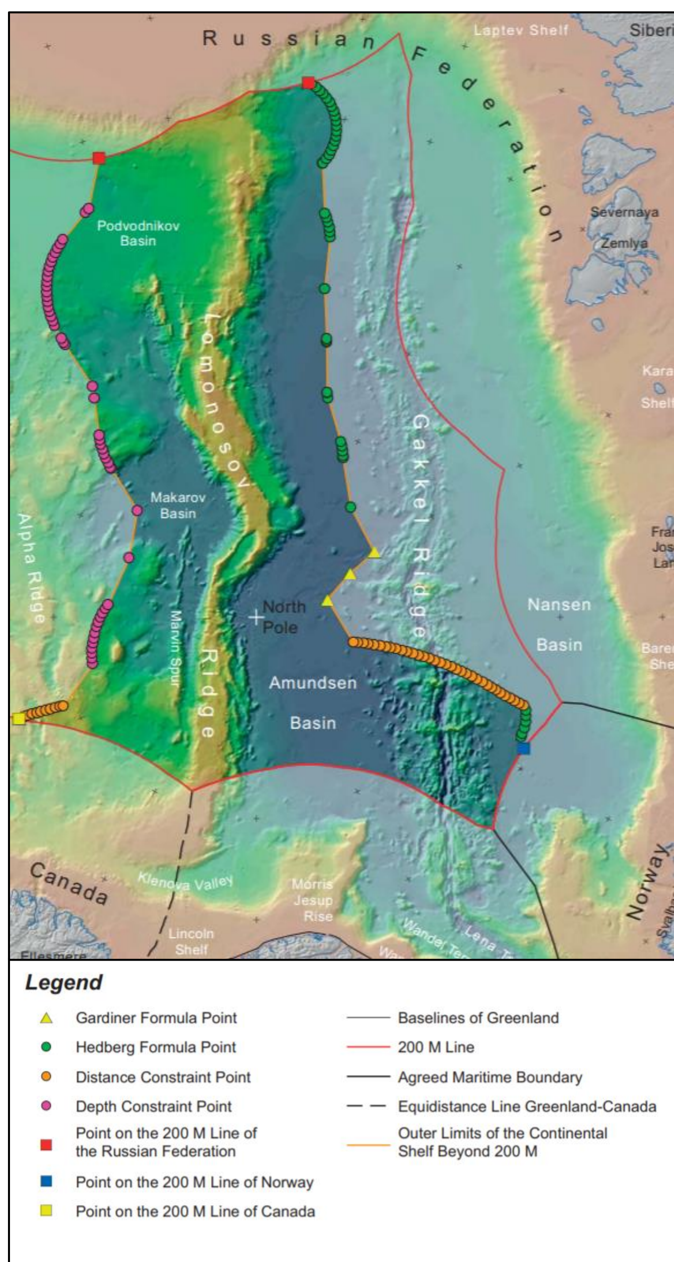

Figure 6 - Denmark's submission to the CLCS
Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary, 2014, p. 8 and 9.

even important when the two countries will settle their competing claims in the Arctic. The lack of objections before the UN and the CLCS will not be regarded as the one State agreeing with the other State's submission. Denmark requests in their submission that the Commission consider the data of the submission and issue recommendations without prejudice to (1) any further submissions made by the Arctic coastal States, and (2) to the delimitation of the continental shelf between those States. According to the

submission, all States agreed to that request. Denmark concludes that the final delimitations will "as appropriate" be determined through bilateral agreements.[108]

4.3 Canadian Submission of 2019

In its 2019 submission, Canada argues that the continental margin of Canada is part of a morphologically continuous continental margin that includes several seafloor highs. The Lomonosov Ridge, the Alpha Ridge and the Mendeleev Rise are included in the Central Arctic Plateau that forms the submerged prolongation of the Canadian landmass. Moreover, Canada argues that geological and geophysical evidence proves that the Central Arctic Plateau is continuous with the Canadian landmass, and thus, is a natural component of the continental margin. Canada argues that rifting initiated by a series of transform motions followed by thinning and hyperextension of continental crust created the Canada Basin.[109] This process is consistent with the formation of passive margins (see chapter 3.4 on submarine elevations) clarified by the CLCS to be a natural component of the continental margin where such seafloor highs constitute an integral part of the prolongation of the land mass.

Canada's definition of its outer limits is composed of two segments. The first in the Canada Basin and the second in the Amundsen Basin. In Canada Basin the continental shelf is delineated by reference to points located on lines drawn in accordance with the provisions of 76(4)(a)(i), 76(5) and to one point intersecting the 200 nm line of the United States. The delineation in Amundsen Basin makes use of Article 76(4)(a) (i-ii), 76(5) and a point intersecting the 200 nm line of Denmark.

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[108] *Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary*, 2014, p. 19.
[109] *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf Regarding its continental shelf in the Arctic Ocean - Executive Summary,* 2019, p. 7.

Canada clarifies that geodesic[110] straight lines (no longer than 60 nm) have been used in accordance with Article 76(7). These segments are joined via a straight line defining the outer extent of the Continental shelf in the Arctic Ocean (see green line figure 9). Canada explains that "the straight line lies entirely within the continental margin of Canada and the constraints applied in accordance with Article 76(5)". Canada does not delineate its outer limits beyond this line.[111] The line connecting the two segments connects two points at a distance far greater than 60 nm. There is no mention of such a line being allowed in Article 76 or the CLCS Guidelines. Canada maintains that this line is within the constraint lines of 76(5) and lies entirely within their continental margin. While this may be true, paragraph 7 specifically states that the distance between points shall not exceed 60 nm. It is not clear why Canada has not specified several points along this line in their submission, to satisfy the paragraph 7 provision. The Cost of further research is one possible explanation. It is also possible that Canada is of the opinion that it follows from the Russian and Danish submissions that the area surrounding the line meets the provisions of Article 76. Worth noting is that the connection of fixed points through straight lines is only possible for points located along the same continental margin. It is not possible to connect fixed points located on opposite and/or separate continental margins.[112] The Canadian argument seems to be that it is the same continental margin, however, the principle that land dominates the sea means that it is the coast that projects rights to a continental shelf.[113] Without reference to specific points that connects the coastline to the "green" line, it does not seem that there is sufficient evidence for that projection. Whether the Commission will accept this method remains to be seen.

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[110] While the CLCS in its guidelines spoke of *geodetic* lines (see chapter 3.2.1), rather than *geodesic* lines as referred to by Canada, the two terms are in most parts interchangeable and will likely not, by itself create problems for the Canadian submission since the Commission emphasized that the use of geodetic reference ellipsoids are not the only option.
[111] *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf Regarding its continental shelf in the Arctic Ocean - Executive Summary,* 2019, p. 8 – 9.
[112] *Scientific and Technical Guidelines of the CLCS,* (1999), para. 2.3.9.
[113] See section 3.2.1 above, and 6.1 below.

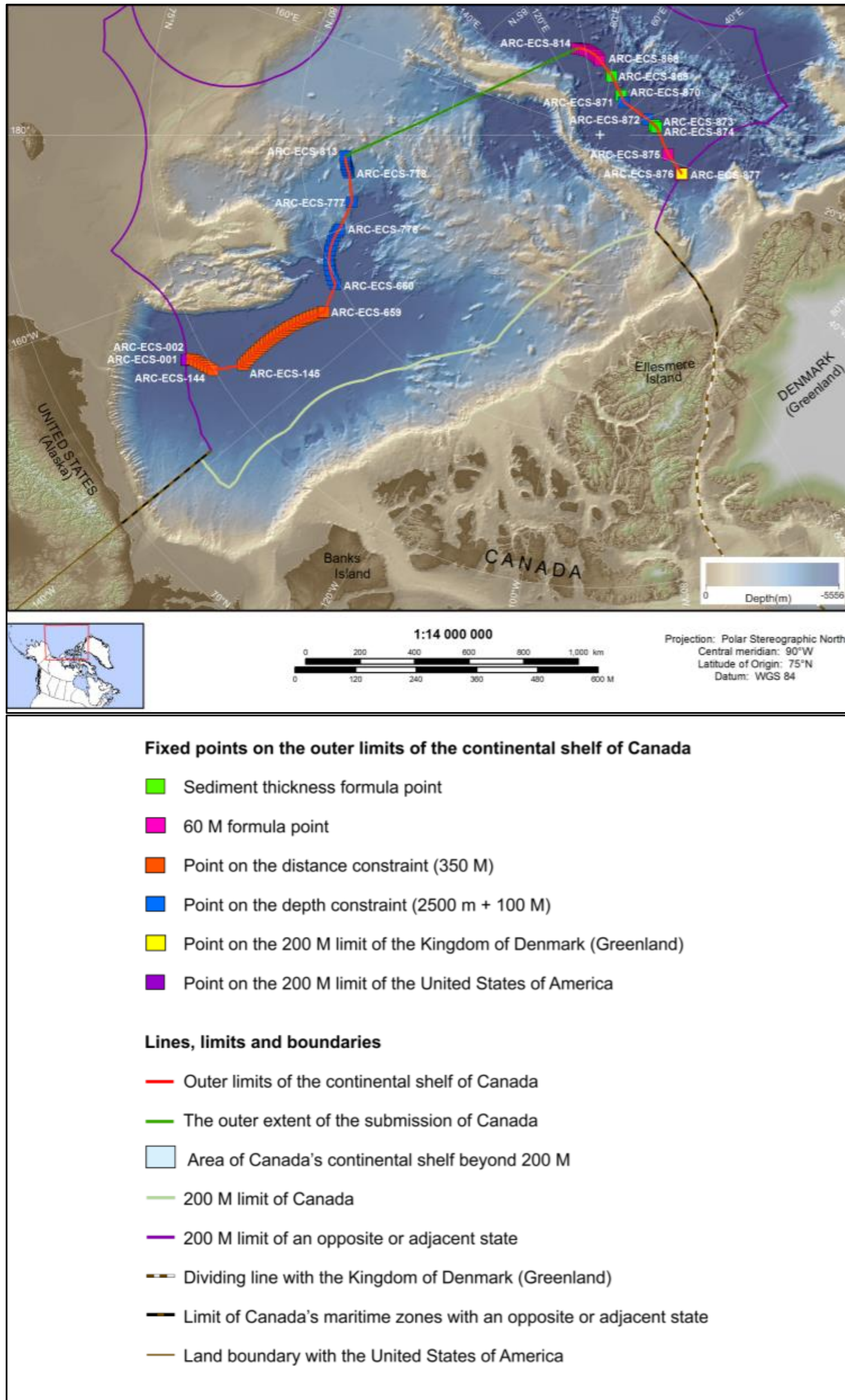

Figure 7 - Canadian claim to an outer continental shelf
Partial Submission of Canada to the Commission on the Limits of the Continental Shelf Regarding its continental shelf in the Arctic Ocean - Executive Summary, 2019, p. 12 and p. 15

4.4 The United States' Position

The United States, not being a party to UNCLOS, cannot make submissions to the CLCS. However, as noted above,[114] the United States has declared that UNCLOS is applicable for the purpose of delineation of the continental shelf. Since there is no official submission establishing the State's view on the extent of the continental shelf north of Alaska, any potential claims have been left out of this thesis. What can be said is that the United States have previously argued for the Chukchi Plateau to be classified as a submarine elevation, and therefore not subject to the limitation on submarine ridges established through Article 76(6).[115] Whether the United States will ratify the convention remains to be seen, but one can expect that regardless of ratification, the State will want to feature in negotiations between the Arctic coastal States in the future. Taking a quick glance at the overlapping claims of the parties (see figure 10), it is clear that there is a considerable gap between the Russian and the Canadian claims north of the coast of Alaska. This area will obviously be of great interest to the United States, and since no other State is claiming it, it seems reasonable to expect a US claim extending at least up to the claimed delineated lines of Canada and Russia.

4.5 Overlapping Claims

Thus far, the CLCS has not issued recommendations on Russia's revised submission, Denmark's submission, or Canada's submission.[116] Studying the three submissions, it becomes clear that there is considerable overlap between the different delineations (see figure 10). Together, the proposed delineations from each State puts almost all of the Arctic Ocean under continental shelf jurisdiction. The exceptions are an area north of Alaska's coast (which will likely be claimed by the United States), and part of the

[114] See chapter 2.3.1 above.
[115] Jensen, Ø (2016) p. 75.
[116] UN webpage, Oceans and Law of the sea, <https://www.un.org/Depts/los/clcs_new/Commission_submissions.htm>, see points. 1b, 76 and 84.

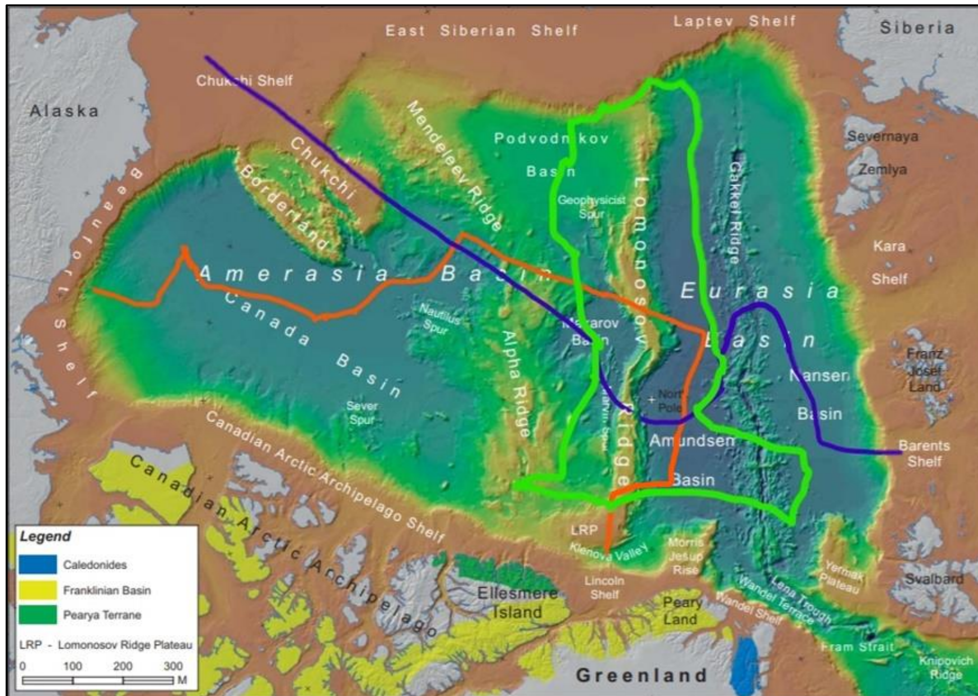

***Figure 10* – Approximation of overlapping claims**
Picture taken from *Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary,* 2014, p. 14 [Lines added by Editor]. The ficture is included for illustrative purposes only; it is not an exact reflection of the claimed entitlements. Picture shows how the claims approximately overlap. Green lines represent the Danish delineation. Red lines represent Canadian delineation. Blue lines represent Russian delineation.

Gakkel Ridge in the Eurasia Basin (which no State has argued meet the provisions of Article 76). To what extent these provisional claims will stand is impossible to determine at this point. However, for all three submissions, the distinction between submarine elevations and submarine ridges is of utmost importance. The outcome of the recommendations issued by the CLCS will depend heavily on how the Commission defines the seafloor highs of the Chukchi Plateau, Lomonosov Ridge, Alpha Ridge, and Mendeleev Rise. As mentioned above in chapter 3, the classification of seafloor highs as either submarine ridges or submarine elevations determines the applicable provisions and, in extension, determines to what extent a State can delineate their outer continental shelf.[117] As Jensen argues:

> "If the seafloor highs in the Arctic are legally classified as [submarine] elevations, there may not be any areas of the seafloor in the Central Arctic

[117] Jensen, Ø (2016) pp. 74 – 75.

> Ocean beyond the Gakkel Ridge […] that are not under coastal State jurisdiction."[118]

Canada, Denmark, and Russia have all classified the Lomonosov Ridge as a submarine elevation rather than as a submarine ridge in their submissions. Moreover, Canada and Russia also classify the Alpha Ridge and the Mendeleev Rise to be submarine elevations under the Guidelines definition. This is illustrated by the fact that the States have claimed continental shelves that extend beyond 350 nm from the baselines and their arguments concerning natural prolongation based on geology and geomorphology (which, as noted above in 3.2.2.4, is of utmost importance when defining whether a seafloor high constitutes a submarine elevation or not). Whether the CLCS will share the States' definition of the sea floor highs in the Arctic Ocean remains to be seen. Worth noting is what the CLCS concluded in its recommendations relating to the first Russian submission:

> "156/168. The Commission recommends that according to the materials provided in the submission the Lomonosov Ridge cannot be considered a submarine elevation under the Convention.
> 157/169. The Commission recommends that, according to the current state of scientific knowledge, the Alpha-Mendeleev Ridge Complex cannot be considered a submarine elevation under the Convention."[119]

There are three alternatives following the issuing of recommendations; (1) The Commission accepts the provisional continental shelves as outlined in the submissions, (2) The Commission rejects the submissions, (3) the Commission accepts one or more of the submissions but not all. As noted above (see section 3.1), if a State disagrees with the recommendations of the Commission, the State can make a new or revised submission in accordance with Article 8 of Annex II UNCLOS. McNab argues that negotiations on the overlapping entitlements are unlikely to start until CLCS has reviewed all submissions and issued recommendations on them. Therefore, all States

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[118] Ibid. p. 75
[119] *Partial Revised Submission of the Russian Federation to the Commission on the Limits of the Continental Shelf of the Russian Federation in the Arctic Ocean - Executive summary*, 2015, p. 5.

must complete the process of delineation before “bargaining” can begin. He further adds that negotiations will likely not begin until after US ratification and submission to the CLCS.[120] As noted above (see section 4.1), States can delimit the maritime boundaries between each other without their continental shelf being legally established in accordance with Article 76. However, this speaks to the possibility for States to enter into agreements on the maritime boundaries between them, rather than the establishment of areas falling under national jurisdiction. When there is no issue of entitlement, as is the case for example when the coasts of opposite States are located within 400 nm of each other, a maritime boundary can be set without a delineation of the outer continental shelf taking place. This is because there will then be no entitlement to an outer continental shelf. In cases where the coasts of opposite States are further away from each other than 400 nm, a maritime delimitation will only be relevant if their entitlements overlap, which requires entitlement to an outer continental shelf for those opposite States. Whether the submissions will be accepted by the Commission or not, the delineation of the outer continental shelf is only one step on the way to establish the maritime boundaries in the Arctic Ocean. The next step is delimiting the boundaries of those outer continental shelves to the shelves of other States. Agreements between Denmark and Russia,[121] Canada and Russia, and Canada and Denmark[122] have all stated that the recommendations of the CLCS shall be without prejudice to the delimitation of boundaries between the States. This is in accordance with the mandate of the CLCS, which amounts to decisions on delineation only. The delimitation process will be dealt with in the following chapter.

[120] McNab, R (2010) p. 500.
[121] *Partial Submission of the Government of the Kingdom of Denmark together with the Government of Greenland to the Commission on the Limits of the Continental Shelf, The Northern Continental Shelf of Greenland – Executive Summary*, 2014, p. 18.
[122] *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf Regarding its continental shelf in the Arctic Ocean - Executive Summary,* 2019, p. 10.

5. Dispute Settlement – Article 83

Dispute settlement regarding delimitation of the continental shelf is regulated in Article 83 in UNCLOS. The Article contains four paragraphs providing a dispute settlement regime.

According to Article 83(1) UNCLOS, the delimitation of the continental shelf between States shall be affected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the ICJ, in order to achieve an equitable solution.

According to Article 83(2), if no agreement can be reached within a reasonable amount of time, States shall resort to the procedures provided for in Part XV.

According to Article 83(3), pending agreement in accordance with paragraph 1, the States concerned shall make every effort, in a spirit of understanding and cooperation, 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.

According to Article 83(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 that agreement. This paragraph grants recognition to agreements that existed before UNCLOS came into force for the Parties concerned.

In this chapter an examination of the meaning of paragraph 1-3 is provided with the aim of establishing the relevant processes for dispute settlement as well as the jurisdiction of the bodies tasked with that delimitation. Furthermore, this chapter includes an analysis of what this means in relation to the Arctic disputes.

5.1 Paragraph 1 - Delimitation by Agreement

Paragraph 1 states that maritime boundaries are to be "effected by agreement". This implies that the concerned States are under an obligation to enter into negotiations to establish a maritime boundary.[123] The Special Chamber in *Ghana v. Côte d'Ivoire* noted that the obligation under Article 83(1) to reach an agreement on delimitation necessarily entails negotiations to that effect. Emphasizing that the obligation to negotiate in good faith holds a prominent place in UNCLOS as well as in international law in general, the Special Chamber stated that the obligation is especially relevant where neighbouring States conduct maritime activities in close proximity to each other. However, the Special Chamber clarified that the obligation is one of conduct, not one of result. For a State to be in violation of this obligation, it is not enough that the expected result by one State was not achieved.[124] The aim of the negotiations is to achieve an equitable solution. If the Parties genuinely agree to the boundary set in an agreement, the agreement is to be regarded as "equitable". Thus, in such a case, it is not up to any third party to criticize the agreement for being inequitable.[125]

According to a report by British Institute of International and Comparative Law, it follows from the reference to "international law" in paragraph 1 that agreements on maritime delimitations must be "on the basis" of customary international law. In the report it is argued that the ordinary meaning of the phrase suggests that complete adherence is not required. It is also argued that the customary law offers considerable flexibility and discretion and is therefore unlikely to be a constraining factor on States negotiating a boundary.[126] While a failure to reach an agreement does not constitute a violation of paragraph 1, it triggers paragraph 2, allowing either party to

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[123] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 35.
[124] Ghana v. Côte d'Ivoire para. 604.
[125] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 37.
[126] Ibid. paras. 38 – 39.

make a unilateral application to an UNCLOS dispute settlement body to have the dispute settled by judicial means.[127] There are, however, certain exceptions that need to be addressed. This matter will be discussed below in 5.2. Finally, failure to reach an agreement does not relieve the Parties of their obligations under paragraph 3.[128] This issue will be addressed in 5.3.

5.2 Paragraph 2 – If no Agreement is Reached

The second paragraph in the Article refers to the procedures of dispute settlement in Part XV of the Convention. Part XV contains three sections. The first section sets out obligations relating to the settlement of disputes by consensual means. According to Article 279, State Parties are required to settle disputes concerning the interpretation or application of the Convention by peaceful means (in accordance with Article 2(3) UN Charter), and to seek a solution by the means indicated in Article 33(1) of the UN Charter. The means referred to are negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of the Parties' own choice.[129] Article 280 states that nothing in Part XV impairs the right of State Parties to agree to settlement of disputes by any means of their own choice. If such an agreement has been concluded, the procedures in Part XV apply only when no settlement has been reached through such means and the Parties have not excluded any further procedure in their agreement. This is in line with paragraph 1 of Article 83: States always have the option to settle disputes between them by agreement and nothing precludes such agreements to be a mere choice of means or *fora.* Churchill makes mention of two such cases where States have made use of the optional clause of Article 36(2) of the ICJ Statute, rather than refer the dispute under Part XV of the UNCLOS.[130]

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[127] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 41.
[128] Ibid.
[129] Churchill, R (2017) p. 218.
[130] Churchill, R (2017) p. 221.

The second section of Part XV provides what is to happen if the means employed by the parties, in accordance with section 1, do not lead to the resolution of the dispute. Article 286 provides the compulsory dispute settlement system, and reads as follows:

> Subject to section 3, any dispute concerning the interpretation and application of this Convention shall, where no settlement has been reached by recourse to section 1, be submitted at the request of any party to the dispute to the court or tribunal having jurisdiction under this section.

Article 287 lists the courts and tribunals having jurisdiction. These are the ITLOS, the ICJ, an arbitral tribunal constituted in accordance with Annex VII of the Convention, and a special arbitral tribunal for disputes concerning fisheries, environmental disputes, scientific research, and navigation. States may at any time specify one or more as its preferred *fora* for dispute settlement. If the parties to a dispute have specified a preference for the same forum, that forum shall be tasked with the settlement, unless the parties otherwise agree (paragraph 4). If the Parties have not chosen the same forum, or where one Party has not specified a preference, the dispute will be settled by an Annex VII tribunal. Churchill highlights the fact that since most States Parties have not made declarations choosing *fora,* many disputes will end up in Annex VII arbitral Tribunals. Article 288 establishes that the *fora* mentioned in article 287 shall have jurisdiction over any disputes concerning the interpretation and application of UNCLOS, which have been submitted to it in accordance with Part XV. Important to note is that the second section is subject to the exceptions in section 3. Article 298(1), in section 3, establishes that States may choose not to accept the compulsory dispute settlements in relation to disputes concerning maritime boundaries with neighbouring States.[131] The Article allows States to declare an exception to the jurisdiction of one or more of the procedures listed in article 287, as well as make exceptions with respect to different categories of disputes. This means that a State can declare an exception hindering the jurisdiction of ITLOS, ICJ, arbitral tribunals, or all three, for matters

[131] Churchill, R (2017) p. 218.

relating to maritime delimitation. However, this does not mean that there is no obligation to settle the dispute. Rather, it means that there is no obligation to settle the dispute through compulsory procedures entailing binding decisions. The obligations set out in section 1 (see above) still apply. Also, there are obligations which arise under Article 298. According to Sheehan, there is an obligation to negotiate (subject to what was stated in 5.1 about obligation of conduct). Moreover, disputes of maritime delimitation are subject to compulsory conciliation. Conciliation may be instituted by either Party, but only after an agreement has not been reached within a reasonable time. There is no fixed time limit for what constitutes a "reasonable time". Sheehan argues that the examination will likely consist of establishing whether the negotiations have been meaningful and whether the possibilities of reaching an agreement have been exhausted.[132] In the *arbitration between Barbados and Trinidad and Tobago*, the arbitral tribunal regarded the nine rounds of negotiations over a three-and-a-half-year period as amounting to a reasonable time.[133] Conciliation under UNCLOS functions the same way as compulsory conciliation under *the Vienna Convention on the Law of Treaties*. Thus, the report of the conciliation commission setting out its recommendations for settlement is not binding.[134] In accordance with article 298(1)(a)(ii), the Parties shall negotiate an agreement on the basis of the report from the conciliation commission. If those negotiations do not result in an agreement, the Parties shall, by *mutual* consent, submit the question to any of the section 2 procedures, unless the parties otherwise agree. If neither of the Parties wishes to refer the issue of a maritime delimitation to a court or a tribunal after a reasonable period of time has passed, they cannot be compelled to do so. As is concluded in the British report, the States may then continue to negotiate for as long as they want to.[135]

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[132] Sheehan, A (2005) pp. 179 – 180.
[133] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 43.
[134] Churchill, R (2017) p. 219.
[135] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 43.

According to Churchill, the reason why the delimitation of maritime boundaries may be excluded from compulsory settlement is in part because many States prefer to determine boundaries by direct negotiation rather than involving a third party, and in part because of the degree of national interests involved in such delimitation.[136] Churchill emphasizes that using diplomatic means for the settlement of disputes allows States to retain control over the dispute and make it easier for them to compromise, since they are not bound by the strict rules of law and the parameters of the dispute. Also, he adds, diplomatic means are often quicker and cheaper than litigation, while also allowing States to avoid unnecessary publicity. However, in the case of maritime boundaries, the desire for legally binding judgments might make States more willing to litigate. Churchill points to the large number of maritime areas where claims overlap, there is no agreed boundary, and/or the Parties disagree over the location of the boundary. This may, in his view, result in an increase in the use of the judicial settlements in the future.[137]

In the case of Canada, Denmark, and Russia, all three States have made different choices and exceptions in accordance with article 287 and 298. Canada has made a declaration stating that it does not accept the procedures provided for in Article 287 for disputes relating to maritime boundaries as referred to in article 298(1)(a). Denmark has chosen the ICJ procedure in accordance with Article 287, but does not accept an arbitral tribunal constituted in accordance with Annex VII for any of the categories of disputes mentioned in Article 298. Russia has, like Canada, rejected the dispute settlement processes on the issue of maritime delimitation.[138]

From the above, it can be concluded that the Arctic disputes will not be brought before the courts or tribunals of Article 287, unless the Parties to a dispute, mutually decide to refer the issue to one of the processes. Considering the many steps of negotiations and conciliation required before

[136] Churchill, R (2017) p. 219.
[137] Ibid. pp. 225 – 226.
[138] See UN Webpage, Oceans and Law of the sea, *Settlement of disputes mechanism* <https://www.un.org/Depts/los/settlement_of_disputes/choice_procedure.htm>.

the dispute might finally end up in a judicial settlement process, a judgment on the delimitation of the Arctic is not to be expected any time soon. However, considering it is up to the Parties to resolve their disputes, changes could come fast.

5.3 Paragraph 3 – Pending Agreement

In *Ghana v. Côte d'Ivoire,* the ITLOS elaborated on the specific meaning of paragraph 3. The Court stated that the transitional period referred to in paragraph 3 means the period after the dispute has been established until a final delimitation by agreement or adjudication has been achieved. The paragraph covers two situations in this transitional period. The first is where a provisional arrangement which regulates the conduct of the parties in the disputed area has been reached. The second is where no such arrangement has been reached.[139] In the second situation, according to the Special Chamber, paragraph 3 contains two obligations. The first is that States "shall make every effort to enter into provisional arrangements of a practical nature". This is not an obligation of result (i.e. to reach an agreement), but rather, an obligation of conduct. However, the Special Chamber argues that there is a strong indication of an obligation for States to act in good faith, since those acts are to be undertaken "in a spirit of understanding and cooperation". The Second obligation is not to jeopardize or hamper the reaching of a final agreement during the transitional period. The use of "and" in the article, connecting the first and the second obligation, is interpreted by the Special Chamber to mean that "shall make every effort", and "in a spirit of understanding and cooperation", applies to both obligations. Thus, the second obligation is also an obligation of conduct.[140]

[139] *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE)*, Judgment, ITLOS, 2017, para. 630.
[140] Ibid. paras. 627 - 629.

6. Delimitation Method in the Courts and Tribunals

In *Ghana v. Côte d'Ivoire,* the special chamber held that it is only a decision on delimitation that establishes which part of continental shelf appertains to which of the claiming States, further adding that a judgment on delimitation is constitutive in nature, giving priority to one entitlement over the other where entitlements overlap.[141] Jurisprudence from ICJ, ITLOS, and arbitral tribunals include several judgments tasked with the interpretation and application of UNCLOS on maritime delimitation. Customary International law on the issue of delimitation has been declared by international courts and tribunals rather than having been ascertained on the basis of *opinio juris*.[142] Article 76 and 83 UNCLOS have through jurisprudence been equated to customary international law. Thus, the delimitation process set out in this chapter applies whether the relevant law is customary international law or UNCLOS.[143] While the ICJ is not the only source of international jurisprudence on the matter, the Court's judgments are regarded as authoritative.[144] Therefore, the jurisprudence from the ICJ is relevant to any dispute relating to the delimitation of maritime boundaries, whether the *fora* is ICJ or another tribunal. This is highlighted by the references made in cases from both ITLOS and arbitral tribunals, to the jurisprudence of the ICJ, illustrating the impact the jurisprudence of the ICJ has had on maritime delimitation, and is in line with the Court's standing as source of international law. Such references can be found in several cases,

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[141] *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE)*, Judgment, ITLOS, 2017, para. 591.

[142] British Institute of International and Comparative Law (2016) *Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in respect of Undelimited Maritime Areas,* para. 32.

[143] *Case Concerning Maritime Delimitation and Territorial Questions Between Qatar and Bahrain (Qatar v. Bahrain),* Judgment, ICJ Reports, 2001, paras. 167-170; see also; *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 139.

[144] Rothwell, D & Stephens, T (2016) p. 423.

including both arbitral Tribunals, as well as judgments from the ITLOS.[145] Special mention can be made of the *arbitration between Barbados and Trinidad and Tobago*, where the arbitral tribunal made reference to ICJ jurisprudence on the method of delimitation, and thereafter proceeded to follow that methodology.[146] Concurrently, the ITLOS in the *Bay of Bengal* Case adopted the methodology set out through the jurisprudence of the ICJ.[147]

In the *Bay of Bengal* Case, ITLOS stated that the method for delimitation of the outer continental shelf (extending beyond 200 nm) should not differ from the method applied within 200 nm.[148] Moreover, the Tribunal also stated that a delimitation can be carried out "without prejudice to the establishment of the outer limits of the continental shelf" in accordance with Article 76(8) of UNCLOS. It added, however, that it would be hesitant to proceed with the delimitation beyond 200 nm if there was nothing pointing to the existence of a continental margin beyond 200 nm.[149] Thus, a delimitation can be carried out without a previous delineation of the continental shelf, provided that there exists proof of a continental margin beyond 200 nm. This is, however, not surprising since a delineation is, as noted above in Chapter 4, without prejudice to a delimitation. What this means in practice is that the delimitation sets further boundaries that need to be taken into account when finally establishing the outer continental shelf. If a *delineation* entitles a State to a continental shelf beyond the boundaries set in a delimitation, it will have no effect on the final maritime boundary or the

[145] For arbitral awards referring to the ICJ see for example; *Award in the arbitration regarding the delimitation of the maritime boundary between Guyana and Suriname,* Award of 17 September 2007, paras. 303, 318, 335, 337, 355 etc., *Bay of Bengal Arbitration between Bangladesh and India,* 2014, paras. 341, 397, 399, 402, 406 etc., *Arbitral award in the matter of an arbitration between Barbados and the Republic of Trinidad and Tobago,* 2006, paras. 241, 284, 305-306, 327 etc.; For ITLOS Judgments see for example: *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE),* Judgment, ITLOS, 2017, paras. 460-470, 533, 593 etc.,

[146] *Arbitral award in the matter of an arbitration between Barbados and the Republic of Trinidad and Tobago,* 2006 paras. 224-245

[147] *Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar),* Judgment, ITLOS, 2012, paras. 225 – 240.

[148] Ibid. para. 455.

[149] Ibid. para. 394.

continental shelf appertaining to that State. In the following sections, the standard methodology will be outlined and discussed, both in general and in the context of the Arctic Ocean. The aim of this chapter is to examine the jurisprudence on maritime delimitation and discuss what this means for a future delimitation in the Arctic. Since the specific circumstances are not known at this point, an effort to try and forecast a future settlement of the disputes through the employment of stated methodology will be of little use. This is in part because a lot of scientific research is to be expected in the coming years that could potentially lead to a completely different conclusion, and in part because it is impossible to predict whether the States concerned will reach agreements on the question of maritime delimitation. However, this chapter examines some of the arguments that have been given relevance by the Courts in earlier judgments and analyses to what extent those arguments could be of relevance for the settlement of the disputes in the future. Although international politics is difficult to predict, and completely outside the scope of this thesis, it can be expected that States will focus on arguments that have some weight to them in a legal sense.

6.1 Relevant Coasts

In *Colombia/Nicaragua* the ICJ held that it is well established that the title to the continental shelf is based on the principle of land dominating the sea through the projection of the coasts, or the coastal fronts. This is in accordance with earlier cases stating that the land is the legal source of territorial extensions seaward and that it is the coast of the State that is the decisive factor for title to submarine areas adjacent to it.[150] Therefore, as the Court noted in *Black Sea,* it is important to determine the coasts of the Parties which generate the rights to the continental shelf. These are the coasts whose projections overlap, since the task of delimitation consists in resolving the overlapping claims by drawing a line of separation of the

[150] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 140 – 141.

maritime areas concerned.[151] Thus, in order for coasts to be considered *relevant*, they must generate projections which overlap with projections from the coast of the other Party. Moreover, the Court added that:

> "the submarine extension of any part of the coast of one Party which, because of its geographic situation, cannot overlap with the extension of the coast of the other, is to be excluded from further consideration by the Court"[152]

The relevant coasts are also important when establishing the basepoint of the provisional equidistance line. According to the Court in *Qatar v. Bahrain*, the most logical and widely practiced approach is to start with the drawing of a provisional equidistance line.[153] Such a line can only be drawn when the baselines are known. When the baselines are not provided to the court by the Parties, as was the case in *Qatar v. Bahrain*, the Court must determine the relevant coasts of the Parties, from which the location of the baselines and the pertinent basepoints will be determined.[154] The Court in the *Black Sea* Case emphasized that in

> "the delimitation of the maritime areas involving two or more States, the Court should not base itself solely on the choice of base points made by one of those Parties. The Court must, when delimiting the continental shelf and exclusive economic zones, select base points by reference to the physical geography of the relevant coasts."[155]

In conclusion, the relevant coasts are important for two reasons. Firstly, it is necessary to identify the relevant coasts in order to determine what constitutes the overlapping claims to the continental shelf. Secondly, the relevant coasts are important when conducting the disproportionality test in the final stage of the delimitation process. In this test the Court will check for any significant disproportionality in the ratios of the coastal lengths and

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[151] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 77.
[152] Ibid. para. 99.
[153] *Case Concerning Maritime Delimitation and Territorial Questions Between Qatar and Bahrain (Qatar v. Bahrain)* Judgment, ICJ Reports, 2001, para. 176.
[154] *Case Concerning Maritime Delimitation and Territorial Questions Between Qatar and Bahrain (Qatar v. Bahrain)* Judgment, ICJ Reports, 2001, paras. 177 - 178.
[155] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 137.

the maritime area.[156]

6.2 Relevant Area

The relevant area is, as the Court explained in *Colombia/Nicaragua*, the part of the maritime space in which the potential entitlements overlap.[157] Thus, what is referred to here as the "relevant area" is equal to the "area of overlapping claims". The Court has stated that identification of the relevant area is part of the established methodology of delimitation.[158] This was first stated in the *Black Sea* case, where the Court emphasized that, "the legal concept of the relevant area has to be taken into account as part of the methodology of maritime delimitation".[159] In *Colombia/Nicaragua* the Court held that "depending on the configuration of the relevant coasts in the general geographical context, the relevant area may include certain maritime spaces and exclude others which are not germane to the case in hand". The relevant area is furthermore of special relevance to the question of disproportionality.[160]

Finally, the relevant area cannot extend beyond the area of overlapping entitlements. If either Party has no entitlement in a particular area, that area cannot be treated as part of the relevant area. This is true for cases where an agreement has been concluded between one Party and a third State, or, where a boundary between that Party and a third State has been judicially determined. However, while establishing the relevant area, the Court is unhindered by *potential* entitlements of third States. [161] This is because third party entitlements cannot be affected by this first approximate identification

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[156] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 78.
[157] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 159.
[158] *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean 2018 (Costa Rica v Nicaragua),* Judgment, ICJ Reports, 2018, paras. 115 – 116, and para. 184.
[159] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 110.
[160] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 157-158
[161] Ibid. para. 163.

of overlapping entitlements. Only in the final stage, when checking for disproportionality, is the court required to account for the rights of third states.[162] However, the Court in *Colombia/Nicaragua* argued that if the identification of the relevant area is to be useful, "some awareness of the actual and potential claims of third parties is necessary".[163] In *Colombia/Nicaragua* the Court noted that it is a fundamental principle of international law that a treaty between two States cannot, by itself, affect the rights of a third State. An agreement between Colombia and Panama cannot confer upon Colombia, rights against Nicaragua, nor entitle Colombia to a greater share of the area in which its entitlements overlap with those of Nicaragua than it would otherwise receive.[164] Likewise, a judgment between Nicaragua and Colombia is not binding on any other State than those two parties. The judgment by which the Court delimits the boundary addresses only Nicaragua's rights against Colombia and vice versa. Thus, it is without prejudice to any claim of a third State or any claim which either Party may have against a third State.[165] This illustrates how important it is for delimitations in the Arctic to be carried out with the participation of all Arctic coastal States.

6.3 Three-stage Process

Through its jurisprudence, the ICJ has established its methodology for delimiting the continental shelf. Commonly referred to as the equidistance/relevant circumstances method, the method involves a three-stage process. The three-stage process is conducted to define the single maritime boundary concerning the continental shelf. The course of this final delimitation line must result in an equitable solution in accordance with

[162] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, (Romania v. Ukraine) para. 114.
[163] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 161-162.
[164] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 227.
[165] Ibid. para. 228.

Article 83 of UNCLOS.[166] Worth noting is that Article 83 has been declared to reflect customary international law[167] and is therefore applicable whether UNCLOS is in force between the parties or not. The methodology was first set out in the *Black Sea* case[168] and has since been used by the ICJ, ITLOS and arbitral tribunals when tasked with the delimitation of maritime boundaries.[169]

The first stage involves the establishment of a provisional delimitation line between territories of the Parties. This includes island territories. The Court constructs a provisional equidistance line when the relevant coasts are adjacent, and a provisional median line when the relevant coasts are opposite. The line is constructed using the most appropriate base points on the coasts of the Parties. If there are "compelling reasons", the result of which would render the establishment of such a line unfeasible, the Court may choose not to start with the drawing of either line.[170]
In the second stage, the Court considers whether there are any relevant circumstances that requires an adjustment or shifting of that line to achieve an equitable result. If such circumstances are found, the line is adjusted as much as is necessary to take account of those circumstances.[171] This includes the possibility of very substantial adjustments to the provisional line when that is required for an equitable result.[172] The court may also employ other techniques when required by the relevant circumstances in order to achieve an equitable result. The Court in *Colombia/Nicaragua* exemplified such a technique through the mention of the creation of

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[166] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 120.
[167] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 139.
[168] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, paras. 115 – 122.
[169] *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean 2018 (Costa Rica v Nicaragua),* Judgment, ICJ Reports, 2018, para. 135.
[170] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 190 – 191.
[171] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, paras. 119 – 121.
[172] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 197.

enclaves,[173] which in the Court's conclusion was deemed warranted for the smaller islands located some distance north of the larger islands under Colombian reign.[174]

In the third stage, the court conducts a test of *disproportionality*. The test includes an assessment of whether the effect of the line, adjusted or not, is that the Parties' respective shares of the relevant area are markedly disproportionate to their respective relevant coasts, causing an inequitable result,[175] or, as stated in *Peru/Chile*; "The purpose is to assess the equitable nature of the result";[176] and in the *Black Sea* case; "[t]he object of delimitation is to achieve a delimitation that is equitable, not an equal apportionment of maritime areas".[177]

The three-stage process is not one to be applied in "a mechanical fashion", and the Court stressed that it will not be appropriate to use the process in every case.[178] While there is an established standard methodology for dealing with maritime delimitation, the Court in *Nicaragua/Honduras* added that the equidistance method does not have priority over other methods of delimitation and that there may be factors in particular cases that make the application of the method inappropriate.[179] In that case the identification of base points for drawing an equidistance line was made difficult by the nature of the river mouth that constituted the coastal border between the countries. The Court in *Nicaragua v. Honduras* cited the *Gulf of Maine* Case where the equidistance method was not used because an equidistance point, derived from two basepoints of which one was in the unchallenged possession of the United States and the other in that of Canada, was not

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[173] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 192.
[174] Ibid. para. 238, see also Sketch-Map No. 11 on p. 94 of the Judgment.
[175] Ibid. para. 193.
[176] *Case Concerning Maritime Dispute (Peru v. Chile)*, Judgment, ICJ Reports, 2014, para. 192.
[177] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 111.
[178] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 194.
[179] *Case Concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, ICJ Reports 2007, paras. 270 – 272.

available to the court. The Court in *Nicaragua v. Honduras* further argued that nothing in the wording of Article 15 UNCLOS precluded geomorphological problems from being "special circumstances" within the meaning of the exception. Therefore, the Court deemed the use of the equidistance method as inappropriate due to the special circumstances of the river mouth morphology,[180] and decided on using a bisector line instead of the typical equidistance/median line.[181]

In the following subsections, a more detailed analysis of the three-stage process is provided along with an analysis of what this might mean for the Arctic disputes.

6.3.1 Establishing a Provisional Delimitation Line

Maritime boundary claims include the feature of overlapping entitlements, which means that there is an overlap between the areas which each State would have been able to claim had it not been for the presence of the other State.[182] In the *North Sea* cases, the court maintained that the continental shelf areas of *opposite* States can be claimed by each of them to be a natural prolongation of its territory. The prolongations meet and overlap and can therefore, according to the court, only be delimited by means of a median line.[183] A median line was described by the ICJ as a boundary drawn between the continental shelf areas of "opposite" States, dividing the intervening spaces equally between them.[184] It was the view of the court that

[180] *Case Concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, ICJ Reports 2007. paras. 277 – 280.
[181] A bisector line is the line formed by bisecting the angle created by the linear approximations of coastlines. This linear approximation is created through the drawing of a line between two points on the coast. The court argues that the use of a bisector has proved to be a viable substitute method in certain circumstances where equidistance is not possible or appropriate. See *Case Concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, ICJ Reports 2007, paras. 287 – 290.
[182] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, para. 59.
[183] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 57.
[184] Ibid. para. 4.

such a line "must effect an equal division of the particular area involved." If there is a third State on one of the coasts concerned, the area of mutual natural prolongation with that of the same or another opposite State will be a separate and distinct one, to be treated in the same way[185] (i.e. through a median line).

An equidistance line may consist of either a median line between two opposite States, or of a lateral line between adjacent States. An 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,[186] or as a line on which every point is the same distance away from whatever point is nearest to it on the baseline of the territorial sea along that coast.[187]

To this it can be of interest to add the issue of applying equidistance lines on concave coastlines. While equidistance lines applied on convex coastlines gives a widening tendency on the area of continental shelves off that coast, the opposite is true for concave coastlines. Where two lines are drawn from a pronounced concave coastline in accordance with the equidistance principle, these two lines will inevitably meet at a relatively short distance off the coast – enclosing the continental shelf and cutting off the coastal State from the further areas of the continental shelf outside the triangle shaped area they form.[188] This is known as the "cut-off effect". In *Bay of Bengal*, the tribunal noted that the cut-off effect (created by an equidistance line where the coast of one party is markedly concave) can be taken into consideration when drawing a boundary beyond 200 nm, as well as within 200 nm.[189] Rothwell and Stephens conclude that while in some cases it is improper or even impossible to draw an equidistance line due to geological or geomorphological factors, equidistance and median lines have been

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[185] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 57.
[186] Ibid. para. 6.
[187] Ibid. para. 13.
[188] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 8.
[189] *Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar),* Judgment, ITLOS, 2012, para. 455.

regarded as a proper starting point for delimitation.[190] According to the ICJ in *Colombia/Nicaragua*, circumstances that could potentially justify an adjustment or shifting of the provisional line should not be regarded as justifying the discarding of the entire methodology. Instead, at the second stage (when considering adjustment) there is the possibility of very substantial adjustment to the provisional line when that is required for an equitable result.[191]

6.3.2 Equitable Principles/Relevant Circumstances Rule

While only *special circumstances* are expressly referred to in UNCLOS in the context of delimitations of territorial seas (Article 15), there is considerable jurisprudence referring to "relevant circumstances" for the delimitation of the continental shelf.[192] According to the ICJ in *Qatar v. Bahrain,* the equidistance/special circumstances rule and the equitable principles/relevant circumstances rule are closely interrelated. The former is particularly relevant in delimitations of territorial seas and the latter for delimitation of the continental shelf and the EEZ.[193].In *Jan Mayen*, the ICJ defined *special circumstances* as those circumstances which might modify the result produced by an unqualified application of the equidistance principle. The concept of *relevant circumstances* is defined by the court as facts necessary to be taken into account in the delimitation process. While *special circumstances* stem from Article 6 of the 1958 Geneva Convention on the Continental Shelf and relevant case-law, *relevant circumstances* is a concept of general international law that has been created through the case-law of the court and arbitral jurisprudence as well as through the work of the Third United Nations Conference on the Law of the Sea.[194] The court noted

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[190] Rothwell, D and Stephens, T (2016) p. 434.
[191] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 196 - 197
[192] Rothwell, D and Stephens, T (2016) p. 435.
[193] *Case Concerning Maritime Delimitation and Territorial Questions Between Qatar and Bahrain (Qatar v. Bahrain),* Judgment, ICJ Reports, 2001, para. 231.
[194] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, para. 55.

that there is a degree of assimilation of the two terms, and especially so in the case of delimitation between opposite States. Both terms aim to achieve an equitable result, and the tendency of customary law, like the terms of Article 6, has been to let a median line be *prima facie* an equitable result.[195]

In the *North Sea* Cases the ICJ stated that the considerations that can be taken into account are legally limitless, and the weight given to each of them must be balanced on a case by case basis.[196] Although there may be no legal limit to the considerations which can be taken into account, the ICJ in *Libya/Malta* added that for a court applying equitable procedures it is evident that only considerations that are pertinent to the institution of the continental shelf and the application of equitable principles to its delimitation will qualify for inclusion. The Court further added that the introduction of considerations strange to the nature of the legal concept of the continental shelf could fundamentally change the concept itself.[197] The ICJ in *Jan Mayen* stated that it is for the court determining the delimitation of a maritime boundary, in each case, to balance the weight accorded to different considerations, and in doing so consulting the circumstances in the case, previous decided cases and the practice of States. Moreover, the court emphasizes the need for consistency and a degree of predictability referred to in *Libya/Malta*.[198] In *Black Sea* the Court spoke on the function of the relevant circumstances and explained that:

> "their function is to verify that the provisional median line, drawn by the geometrical method from the determined base points on the coasts of the Parties is not, in light of the particular circumstances in the case, perceived as inequitable".[199]

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[195] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, para. 57.
[196] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, paras. 93 – 94.
[197] *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta),* Judgment, ICJ Reports, 1985, para. 48.
[198] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, para. 58.
[199] *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, ICJ Reports 2009, para. 155.

According to Stephens and Rothwell, *relevant circumstances* refers to the

> "identification of the maritime domain, particularly geographical features such as the length and configurations of the respective coastlines. This is not only an identification of the outer limits of the area under delimitation, but also relevant circumstances within that area which may be important in the delimitation process. Accordingly, the length of the relevant coastal fronts, their general direction and configuration, and associated coastal and geographical features such as islands, reefs, atolls, bays and peninsulas will need to be identified. The presence of ice within the area subject to delimitation may also be relevant."[200]

In the following subsections, different categories of circumstances will be presented and applied to the Arctic context. The goal of this presentation is to clarify the applicable law as well as address some issues that are especially interesting to the Arctic context. In order to achieve this goal different arguments are discussed, and the weight afforded to them in the jurisprudence is explained. While not all the included circumstances have been deemed relevant, it is certainly of interest to discuss a few of the circumstances that could potentially apply to the Arctic, even if only to rule out their relevance in a future delimitation in the region.

6.3.2.1 Circumstance of Coastal Length

In line with what was stated above, coastal lengths are a relevant circumstance which may justify a shifting of the provisional line drawn in stage 1. In *Gulf of Maine* the Court held that maritime delimitation should not be established by a direct division of the area in dispute proportional to the respective lengths of the coasts belonging to the parties, but a substantial disproportion to the lengths of those coasts resulting from the delimitation will constitute a circumstance calling for an appropriate correction.[201] In *Cameroon/Nigeria* the Court reiterated this principle and stated that a

[200] Rothwell, D and Stephens, T (2016) p. 436.
[201] *Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)*, Judgment, ICJ Reports, 1984 para. 185.

substantial difference in the lengths of the parties' respective coastlines may be a factor to be taken into consideration in order to adjust the provisional delimitation line.[202] In *Colombia/Nicaragua* the Court held that while the length of the relevant coasts can have no role in identifying the provisional equidistance line, two conclusions can be drawn from the jurisprudence of the court: (1) it is normally only when the disparities in the lengths of the relevant coasts are substantial that an adjustment or shifting of the provisional line is called for. (2) Taking account of the disparity of coastal lengths does not mean a direct and mathematical application of the relationship between the length of the coastal front of the Parties.[203]

This begs the question of what amounts to significant disproportion. In *Jan Mayen*, the Court found the disparity to be at a ratio of 1 to 9. This was deemed to be such a large disproportion that it was necessary to take it into consideration in order to achieve an equitable result.[204] The Court also referred to *Gulf of Maine* in the judgment where the ratio of 1 to 1.38 was considered to sufficiently justify a correction.[205] What effect is to be given to a significant disproportion was also discussed in *Jan Mayen*. The court argued that giving Denmark entitlement to the full extent of its claim would leave Norway with merely the residual area, which in the view of the court would be in contradiction of the rights of Norway, and to the demands of equity. The Court found that the coast of Jan Mayen island generated potential title to maritime areas off its coastline and that to disregard these potential titles in full on the basis of coastline length disparity, in favour of the potential entitlements of Greenland, would not constitute an equitable result. Thus, the court found that the line should be drawn somewhere in between the median line, and the line proposed by Denmark.[206] Similarly, in *Colombia/Nicaragua*, the Court held that the achievement of an equitable

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[202] *Case Concerning the Maritime Boundary Between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, ICJ Reports, 2002, para. 301.
[203] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 209 – 210.
[204] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, para. 65.
[205] Ibid. para. 68.
[206] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, paras. 70 – 71.

solution requires that, so far as possible, the line of delimitation should allow the coasts of the Parties to produce their effects in terms of maritime entitlements in a reasonable and mutually balanced way.[207]

In conclusion, coastal length disparity may very well justify a shifting of the provisional line, however, such a disparity must be significant, and the adjustment must be made taking into account the potential title generated by the shorter coast. Even such a great disparity as the one in the case of *Jan Mayen* did not justify complete disregard to the title generated by the island.

Looking at any map of the Arctic Ocean, it is clear that Russia and Canada have north-facing coasts that are significantly longer than those of the United States and Denmark (Greenland). However, considering that disparity is assessed in relation only to the relevant coasts and the relevant area, the disparity will likely not be as significant as can be expected at first glance. Identifying the relevant coasts will obviously be of great importance to all States, and it can be expected that all States will argue for greater portions of their respective coasts to be considered relevant, while at the same time arguing for a small part of their counterparts' coastline to be considered relevant.

6.3.2.2 Geological and Geomorphological Considerations

According to the ICJ in *Colombia/Nicaragua*, geological and geomorphological considerations are not relevant to the delimitation of overlapping entitlements within 200 nm of the coasts of States.[208] Thus, it would seem that according to the Court's interpretation, natural prolongation is not a requirement for the continental shelf within 200 nm. Considering the wording of Article 76(1), this would mean that the Article can be read as follows:

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[207] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 215.
[208] Ibid. para. 214.

The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea:

1. throughout the natural prolongation of its land territory to the outer edge of the continental margin, *or,*
2. to a distance of 200 nm 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 mention in the article about natural prolongation or any other geological or geomorphological requirements for the continental shelf therefore does not relate to the continental shelf within 200 nm. The paragraphs in the article expressing such requirements all relate to the "outer" continental shelf, i.e., the continental shelf extending beyond 200 nm. This interpretation is not surprising considering that the article explicitly states that where the continental *margin* does not extend up to 200 nm, the continental *shelf* nevertheless extends to 200 nm.

The relevance of *natural prolongation* in the delimitation of the continental shelf beyond 200 nm was discussed by ITLOS in *Bay of Bengal*. In the case Bangladesh argued that Myanmar's continental shelf was affected by a discontinuity around 50 nm from Myanmar's coast. ITLOS rejected the contention that such a discontinuity would exclude Myanmar from the right to a continental shelf, arguing that the reference to natural prolongation in Article 76(1) should be understood in light of Article 76(4), concluding that entitlement to a continental shelf should be determined by reference to the outer edge of the continental margin, which is to be ascertained in accordance with Article 76(4).[209] Thus, ITLOS held that a discontinuity 50 nm off the coast will not exclude a State from a continental shelf beyond 200 nm. However, if the discontinuity occurs beyond 200 nm, the situation ought to be another. This conclusion is supported by Brownlie, who notes that natural prolongation "as such" is not a test of what is equitable. He adds that even when the seabed contains marked declivities, these will only play

[209] Rothwell, D and Stephens, T (2016) p. 435, and *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment, ITLOS, 2012, para. 437.

a small, if any, role as a criterion of equity unless they disrupt the essential unity of the continental shelf, and unless they occur beyond the 200 nm limit.[210] Also, the wording of Article 76 seems to imply that if there is a discontinuity in the prolongation of the land mass beyond 200 nm, and that discontinuity is to be characterized as the outer edge of the continental margin, a State cannot reasonably be entitled to a continental shelf beyond such a discontinuity.

When glancing upon the Lomonosov Ridge, it is easy to spot what looks like a possible discontinuity off Greenland's coast. This discrepancy seems to be located within 200 nm from the Coast, which would make it irrelevant for entitlement to an outer continental shelf according to the above. However, as noted above in 4.1, there are possible discontinuities occurring beyond the 200 nm limit of Russia (as can be seen in figure 10). If those possible discontinuities are in fact discontinuities that would be characterized as the outer edge of the continental margin, Russia should not be able to delineate their continental shelf beyond these discontinuities. However, issues relating to the geology and geomorphology will primarily be dealt with by the CLCS during the delineation process. Moreover, issues of natural prolongation as well as the characterization of the various seafloor highs will also be dealt with at the delineation stage.[211] Therefore, it is unlikely that those issues will be subject for dispute in a judicial process.

6.3.2.3 Equitable Access to Natural resources

In *North Sea* the Court elaborated on the relevance of natural resources, emphasizing that rights to resource exploitation was the object of establishing the concept of the continental shelf. Since deposits of natural resources often cross the maritime borders and can be exploited from either side of the border, the Court considered that unity of deposits constitutes a factual element which is reasonable to take into account in the course of the negotiations for a delimitation, and proposed agreements on joint

[210] Brownlie, I (2008) pp. 219 – 220.
[211] As discussed above in Chapter 3.2.

exploitation as a possible solution.[212] This has also been suggested by Tanaka, who suggests joint exploitation agreements as a pragmatic solution to promote economic development in the Arctic Region. Tanaka notes that there are already agreements in place between Norway and Iceland, as well as Norway and Russia, concerning joint efforts in development and resource exploitation in the region. The Russian-Norwegian agreement includes provisions on how to handle hydrocarbon deposits that extends across the delimitation line.[213] However, the delimitation between Russia and Norway is already agreed upon. This is not the case for the Danish, Canadian and Russian continental shelf claims in the Arctic. To be able to assert that deposits of natural resources in fact do extend across a delimitation line, that line must obviously be established first. Thus, although agreements for joint exploitation might be relevant for natural resource exploitation in the Arctic, that is an issue for the future.

In *Jan Mayen,* the Court held that seabed resources can constitute relevant circumstances that can be taken into account in a delimitation in accordance with the decisions in *Libya/Malta* and the *North Sea* cases.[214] The Court in *Colombia/Nicaragua* referred to the award from the *arbitration between Barbados and Trinidad and Tobago*, where it was observed that resource related criteria have not generally been applied as a relevant circumstance, and concluded that the case before them did not present issues of access to natural resources “so exceptional” that it was warranted to treat them as a relevant consideration.[215] Thus, it seems that issues relating to natural resources may constitute a relevant circumstance, but it is for the Parties to the conflict to show that the issue is of such exceptional character that it warrants an adjustment.

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[212] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 97.
[213] Tanaka,Y (2016), pp. 94-96.
[214] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, para. 72.
[215] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 223.

6.3.2.4 Prevalence of Ice

As noted above in 6.3.2, the prevalence of ice may be a relevant circumstance to take into consideration in a delimitation. In *Jan Mayen*, the court discussed the prevalence of ice and its impact on the availability of fishing stocks. Because of the ice, fishing vessels needed to be based along other parts of the coast than the area of coastline that was in question. The Ice in question was drifting ice, not ice as a prolongation of the coastline as in the Antarctic. The significance of ice presence for the practical exploration and exploitation of the seabed was not brought up by the parties. The court concluded that in the case of marine resources the presence of drift ice can have a substantial impact on human activity and therefore constitute a special geographical feature of the region. Since the case only discussed the prevalence of ice in relation to fishing stocks, and the fish were not present when the ice was, the court was satisfied noting that the ice did not impact the availability of the fish stocks.[216]

While the continental shelf offers no exclusive rights to fishing, it does offer rights to the exploitation of natural resources. It is therefore of interest to discuss whether ice impacting the availability of the region's resources could have an impact on the delimitation. Obviously, the relevance of ice impacting the exploitation of natural resources can only be relevant in so far as natural resources are relevant. If natural resources are not deemed relevant for the delimitation, it follows from logical subsumption that any ice impacting the exploitation of those resources is not relevant either.

As noted above in 2.4, the Arctic is a region with perennial sea-ice cover. When discussing ice in a legal context, one must distinguish between temporary ice and permanent ice. Permanent coastal ice has been a subject of considerable discussion in relation to Antarctica. According to Kaye, there seems to be a "consensus" amongst legal scholars on *glaces firma* (permanent ice) that extends from land out to the sea, being equated to land, or at least holding *sui generis* status in the context that it can be used for the

[216] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, paras. 77 – 78.

drawing of territorial sea baselines. He adds, however, that there is no support for pack ice or ice formations of a temporary nature being able to generate maritime zones.[217] Moreover, he concludes that there seems to be a complete consensus that ice formed in oceans, as a result of freezing, cannot be used to draw baselines or generate maritime zones.[218] Ice extending from the coast into the sea being treated as "land" can have considerable impact on the continental shelf, moving the outer limits of the 200 nm line and the 350 nm line further seaward from the coast.

The only Arctic State which has made use of ice as a reference for basepoints is Russia, and only in relation to two points.[219] Since the baselines have already been established in the Arctic when determining the other maritime zones in the region, new baselines would be required for States to move their 350 nm line any further seawards. Thus far, no State has argued that the ice cover in the Arctic Ocean should be regarded as "land" in an attempt to extend their territory. Furthermore, there seems to be little, if any, support in international law for such arguments. In my opinion it is unlikely that this line of argument will be brought forth in the future. Whether the question of coastal ice will be relevant in future discussions of territorial sea baselines remains to be seen. What is clear is that the division of the Arctic Ocean is not dependent on the classification of coastal ice. In the Arctic the claims for the outer continental shelf are based in large part on the categorization of the seabed highs as submarine elevations, allowing States to delineate their continental shelf at the 2,500m Isobath line (see chapter 4.4). While the 350 nm line is used at several points along the various delineations, the vast majority of the claims in the Arctic Ocean are not reliant on that line, making it (and in extension the issue of coastal ice classification) less important for the purposes of dividing the area.

[217] Kaye, S (2004) pp. 88 – 89.
[218] Ibid. p. 92.
[219] Ibid. pp. 81 – 84.

6.3.2.5 Socio-economic factors and population

In *Jan Mayen*, the Court found that the cultural factor argument brought up by Denmark was not important enough to limit Jan Mayen Island's titles to purely residual ones. Neither were the size and character of Jan Mayen's population, nor the absence of locally based fishing; circumstances that should affect the delimitation. The court observed that attributing maritime areas to a State is a legal process based solely on the possession (by the territory concerned) of a coastline. The court refers to the judgment in *Libya/Malta*, where it was stated that delimitations should not be influenced by the relative economic position of the States in question. Thus, the court found that there was no reason to consider socio-economic factors nor the limited population of Jan Mayen Island.[220] The Court in *Libya/Malta* stated that the concept of the EEZ includes certain provisions for the benefit of developing States, however, those provisions relate merely to exploitation of resources, not to the size of the areas nor to their delimitation between neighbouring States.[221]

From this, it is quite clear that socio-economic factors and population will likely not be of relevance to a delimitation in the Arctic carried out by a judicial body.

6.3.2.6 Security issues

In *Jan Mayen*, Norway argued that a boundary closer to one State than another would imply an inequitable displacement of the possibility of the former State to protect interests which require protection. The Court referred to *Libya/Malta* and found that security considerations holds particular application to the continental shelf. The court in both cases regarded the delimitation to not be so near to the coast of either party as to make

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[220] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, para. 80.
[221] *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta),* Judgment, ICJ Reports, 1985, para. 50.

questions of security a particular consideration.[222] In *Colombia/Nicaragua* the Court stated that:

> "[…] legitimate security concerns might be a relevant consideration if a maritime delimitation was effected particularly near to the coast of a State and the Court will bear this consideration in mind in determining what adjustment to make to the provisional median line or in what way that line should be shifted."[223]

This begs the question of what "particularly near" means. While perhaps not quantifiable in nm or meters, the issue will likely be resolved on a case-by-case basis. This conclusion is supported by the quote above, stating that courts must keep in mind this consideration when determining adjustments. In any case it seems unlikely that a delimitation determined at a line not encroaching on the 200 nm zone of another State will be considered to be too close to the coast. This is because such a delimitation would establish that the State whose security is in question does not have any entitlement to the maritime area beyond 200 nm off its coast.

In the Arctic, the continental shelf claims are all delineated outside the 200 nm zones (see figures 7-10 in chapter 4), and thus it is unlikely that security concerns from one State will be regarded as relevant for the purposes of delimitation. However, this does not guarantee that security concerns will not play a part in the negotiations between States; it merely speaks to the probable weight afforded to such an argument brought before a court or tribunal. Security concerns may very well continue to be a political issue even if it is of no immediate legal relevance to the Arctic delimitation. One must always keep in mind the political dimension when discussing international regulations and especially so when, as is the case for maritime delimitation, those regulations provide for bilateral agreements to be concluded.

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[222] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway)*, Judgment, ICJ Reports 1993, para. 81.
[223] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 222.

6.3.2.7 Conduct of the parties

In *Jan Mayen*, the court held that the conduct of the parties is a relevant factor in the choice of the appropriate method of delimitation where such conduct has indicated some particular method as being likely to produce an equitable result. In that case, Denmark argued that since Norway had reached an agreement with Iceland on setting the Maritime Boundary between Jan Mayen and Iceland at Iceland's 200 nm line, the same should apply to the maritime boundary between Jan Mayen and Greenland. The Court, however, noted that international law does not prescribe the adoption of a single method for the delimitation of the maritime spaces on all sides of an island, or for the whole of the coastal front of a particular State. Thus, the court concluded that the conduct of the parties did not constitute an element which could influence the operation of delimitation in the case.[224] Neither the conduct of Norway in their relations with Iceland on the question of Jan Mayen, nor the conduct between Denmark and Norway in the delimitation of Skagerrak was given influence on the delimitation between Greenland and Jan Mayen.[225] From this follows that States are free to balance the conditions of their mutual relations with other States as they feel appropriate. Reaching an agreement on a maritime boundary with one State does not affect the ability to reach a completely different agreement with another State. The Court here sets out that conduct can be relevant, but only in so far as it is between the parties involved in the present dispute, and the previous conduct related to the same maritime boundary.
The court in *Colombia/Nicaragua* referred to earlier jurisprudence and stated that:

> "While it cannot be ruled out that conduct might need to be taken into account as a relevant circumstance in an appropriate case, the jurisprudence of the Court and of arbitral tribunals shows that conduct will not normally have such an effect. […] The Court does not consider that the conduct of the Parties in

[224] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, paras. 82 – 86.
[225] Ibid. paras. 33 – 39.

the present case is so exceptional as to amount to a relevant circumstance which itself requires it to adjust or shift the provisional median line."[226]

Similar to the Court's reasoning on natural resources, it seems that State conduct must reach a certain degree of exceptionality to be considered relevant. What amounts to such exceptionality is not clarified in the judgment.

In the case of maritime activities undertaken by a State in an area of the continental shelf which has been attributed to another State by an international judgment, the Special Chamber in *Ghana v. Côte d'Ivoire* held that such activities cannot be in violation of sovereign rights pertaining to the continental shelf regime if the activities were carried out before the judgment was delivered and the area concerned was the subject of claims made in good faith by both States. This follows from the fact that only a decision on delimitation establishes what parts of the area of overlapping claims appertains to which State,[227] and is in line with the fact that a judgment on maritime delimitation gives one entitlement priority over the other in a dispute where those entitlements overlap.

To this can be added a few words on the notion of the *critical date* concerning acts undertaken by States. The critical date is the date on which the dispute between the parties crystallizes. In maritime delimitation disputes as well as other territorial disputes, the critical date distinguishes acts undertaken by States that can be given significance in the proceedings from acts that cannot. An action undertaken by a State after the critical date will not be regarded by the court as relevant for the assessment of the dispute. There is an exception for acts that are a normal continuation of prior acts and that are not undertaken for the purpose of improving the legal position of the Party that relies on them.[228] Worth noting here is Article

[226] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 220.
[227] *Dispute Concerning Delimitation of The Maritime Boundary Between Ghana and Côte d'Ivoire In the Atlantic Ocean (GHANA/CÔTE D'IVOIRE)*, Judgment, ITLOS, 2017, paras. 591 – 592.
[228] *Case Concerning Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nicaragua v. Honduras)*, Judgment, ICJ Reports 2007, para. 117.

83(3), which lays out the effects of provisional arrangements (see chapter 5.3). Provisional arrangements and agreements are without prejudice to the final delimitation, which is not surprising, since the provisional arrangements in Article 83(3) refer to arrangements pending judicial settlement. Arrangements will not be regarded as provisional if the dispute has not yet crystallized. Thus, it becomes important for States to position themselves legally before the dispute becomes crystallized. For the Arctic States it can therefore be important to not only claim significant portions of the Arctic Ocean, but also to undertake activities in the region which can support their case for entitlement in a future dispute resolution. However, the practical difficulties involved in any activities undertaken in the Arctic complicates this positioning. It can be expected that as the polar ice cap continues to recede, more activity will ensue.

6.3.3 Test of Disproportionality

As noted above, the test of disproportionality includes an assessment of whether the effect of the line, adjusted or not, is that the Parties' respective shares of the relevant area are markedly disproportionate to their respective relevant coasts, causing an inequitable result.[229] Thus, the circumstance of coastal length is relevant also at this final stage.

The test of disproportionality is designed to check for significant disproportionality. As mentioned in *North Sea,* delimitation involves the process of establishing the boundary of an area already appertaining to a coastal State and not the determination *de novo* of such an area. Delimitation shall be carried out in an equitable manner, but this is not the same as awarding a just and equitable share of a previously undelimited area.[230] Moreover, the process of delimitation does not, as found by the Court in *Jan Mayen*, involve the "sharing-out" of something held in

[229] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, para. 193.
[230] *North Sea Continental Shelf cases (Federal Republic of Germany v. Denmark and Federal Republic of Germany v. Netherlands),* Judgment, ICJ Reports, 1969, para. 18.

undivided shares. The law does not require a delimitation with the goal of sharing-out an area of overlap based on comparative figures for the length of coastal fronts and the areas generated by them. The object of a court is to define the boundary line between the areas under the maritime jurisdiction of two States. The sharing is therefore a consequence of the delimitation, not the other way around.[231] In *Colombia/Nicaragua*, the Court held that the object is not to produce a correlation between the lengths of the Parties' relevant coasts and their respective shares of the relevant area. Furthermore, The Court is not required to draw a delimitation line in accordance with a mathematically determined exact ratio of the lengths of the relevant coasts. If the court would employ such a strict method of proportionality, there would hardly be any room left for any other consideration.[232] Furthermore, the Court held that it is not tasked with achieving even an approximate correlation between relevant coasts and shares of the relevant area. Rather, the Court considered, their task is to ensure that there is no disproportion so gross as to taint the result and render it inequitable. When assessing whether any disproportion is so great as to have that effect, the Court concludes that consideration must be taken to all the circumstances in the particular case.[233] The Court has in several cases made only a broad assessment of disproportionality, not engaging in a precise calculation of the relevant coasts and the relevant area. This due to difficulties in defining such areas with sufficient precision.[234] This can be the case when the relevant area includes areas that fall under possible entitlement of a third State. The Court in *Nicaragua v. Costa Rica* observed that the attribution of maritime space to third States can affect the part of the relevant area that appertains to each Party. When the maritime space appertaining to third States cannot be identified because there is no agreement or previous judicial determination of the maritime boundary, it is impossible for the Court to precisely

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[231] *Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway),* Judgment, ICJ Reports 1993, para. 64 – 65.
[232] *Territorial and Maritime Dispute (Colombia v. Nicaragua),* Judgment, ICJ Reports, 2012, paras. 239 – 241.
[233] Ibid. para. 242.
[234] *Case Concerning Maritime Dispute (Peru v. Chile)*, Judgment, ICJ Reports, 2014, para. 193.

calculate the part of the relevant area of each Party. However, the Court held in the judgment that an approximate calculation of the relevant area is sufficient for the purpose of verifying whether the maritime delimitation shows a gross disproportion.[235]

[235] *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean 2018 (Costa Rica v Nicaragua),* Judgment, ICJ Reports, 2018, para. 164.

7. Conclusion

As this thesis has shown, several sources of international law apply to the Arctic. While UNCLOS is the overarching legal regime governing the Arctic, it is important to note that the United States has not ratified the Convention. However, as has been discussed above, the relevant rules governing continental shelf claims and disputes, provided in Article 76 and Article 83 of UNCLOS, have been declared to reflect customary international law. Also, the United States seems to have agreed to the applicability of UNCLOS in the region through the Ilulissat Declaration and other statements to that effect. Therefore, the relevant articles are found in UNCLOS. Moreover, there are interpretations of these rules that expand on their meaning and need to be considered for both delineation and delimitation. These have been examined in detail throughout this thesis and can be said to provide a comprehensive legal regime for the division of the Arctic.

At this point, it is hopefully clear to the reader that there are two main issues concerning the Arctic continental shelf disputes. The first one relates to the establishment of the outer continental shelf through the delineation process, as outlined and discussed in chapters 3 and 4. The second issue is the settling of maritime boundary disputes where States' entitlements to an outer continental shelf overlap with each other. Delineation sets the area of entitlement, while delimitation establishes the maritime boundaries between States. The final establishment of the continental shelf cannot extend beyond any of these areas. The continental shelf beyond 200 nm can only be delimited when such a continental shelf exists. Whether it exists is determined through the delineation process. Thus, to delimit the maritime boundaries in the Arctic, one must first look at the delineations of each State's continental shelf. At the onset of this thesis, a few questions were raised concerning this process. In this chapter, answers to those questions will be provided, along with a few final remarks.

On what basis are States entitled to an outer continental shelf, extending beyond 200 nm?

Article 76 establishes requirements that must be met for a State to be entitled to a continental shelf extending beyond 200 nm. In short, the requirements aim to establish whether there is a continuation of the State's landmass into the submarine areas beyond 200 nm. This is assessed based on various geographical, geological, and geomorphological criteria. States are required to submit to the CLCS their claims of entitlement, along with evidence supporting those claims. The success of a submission will depend on the quality of the evidence presented in it. The CLCS issues recommendations in an accepting or rejecting fashion, prompting States either to establish their outer limits along with the recommendations or to revise their submission after conducting more research. After a submission is accepted by the CLCS, and the outer continental shelf is delineated per the recommendations, the established continental shelf becomes final and binding. Important to note is that this is a process of determining to what extent there is an outer continental shelf, not a process of "creating" a right to an outer continental shelf. A coastal State enjoys exclusive rights to its outer continental shelf based only on its existence, but the existence must be proved.

What are the disputing claims in the Arctic concerning the continental shelf?

As outlined in Chapter 4 above, Canada, Denmark, and Russia have submitted their respective claims of entitlement to the CLCS for review. These claims overlap to a varying degree. Some areas have been claimed by only one State, while others have been claimed by two or even all of them. As all States have laid claim to the North Pole and an area surrounding it, this area seems to be of specific interest, albeit perhaps only for political reasons. The claims are largely based on the assumption that the Lomonosov Ridge, Alpha Ridge, and Mendeleev Rise are to be considered as submarine elevations under Article 76, which would allow the States exclusive jurisdiction in the Arctic Ocean. As discussed above in section

4.4, the classification of these seafloor highs will severely affect the outcome of the recommendations from the CLCS. The United States has thus far not submitted a claim of its own, but it can be expected that the US will do so in the future. If the Arctic States are successful in their claims, very little of the Arctic Ocean will be left under no national jurisdiction. As noted in Chapter 4, there are uncertainties in the submissions, and depending on the CLCS's assessment of those uncertainties, further submissions might be required before the delineation issue can be settled.

What are the rules governing the determination of maritime boundaries in the Arctic and what do they entail?

Maritime boundary delimitation is subject to the provisions in Article 83 UNCLOS, which provides that maritime boundary disputes are to be settled by agreement first-hand. Only when no agreement can be reached, the issue will be dealt with by the ICJ, ITLOS, or an arbitral tribunal following the dispute settlement process in Part XV UNCLOS, as specifically referred to in Article 83. It should not matter what fora will be tasked with any future delimitations in the Arctic. The rules and principles laid out in the jurisprudence on delimitation apply no matter the fora. There is considerable jurisprudence on maritime boundary delimitation detailing what facts are relevant for a delimitation, as well as an established standard methodology for dealing with such disputes. This has been examined in detail in this thesis. As this thesis has shown, maritime delimitation is an exercise in which an equitable result is sought after. There is a standard methodology that is applied in most cases; however, the use of that methodology is not compulsory. In the event of a future judicial dispute settlement in the Arctic, it can be expected that focus will lie on the relevant coasts, the length and configuration of those coasts, and to what extent those coasts project entitlements to the relevant area. While the classifications of the various seafloor highs in the Arctic Ocean are essential to the establishment of any outer continental shelf in the region, that matter will be dealt with by the CLCS in the delineation process and will therefore likely not be an issue to be settled in a court or tribunal.

The Arctic States have made their intentions clear to settle any disputes relating to delimitation through bilateral agreements. There are examples of delimitation agreements between the Arctic States in the past, and it seems States are aiming to continue with this approach rather than aiming to refer the disputes to judicial settlement by an international court or tribunal. However, the volatile nature of international politics can lead to rapid changes. In the event of failed negotiations, it is not implausible that the Arctic disputes will nevertheless end up being settled by one of these processes. The importance of various considerations can differ depending on in what medium a delimitation is reached. It is not difficult to imagine that geopolitical considerations and power dynamics can impact delimitation agreements, affording weight to considerations that would not be considered relevant in a judicial process, where, as has been shown in this thesis, the issue will be settled based on factual considerations concerning the continental shelf rather than any political or economic considerations. On the other hand, the jurisprudence on delimitation may very well impact how States will argue during their negotiations. It can be expected that States will focus on the circumstances that, from a legal point of view, supports their case, rather than focus their attention on circumstances that have been deemed legally irrelevant in the jurisprudence. After all, the judgments examined in this thesis reflect customary international law, and as such, a certain amount of authority can be afforded to arguments that align with the findings of the judgments. It remains to be seen whether the Arctic States will be able to settle their competing claims and agree on finalised boundaries.

What conclusions can be drawn from the answers to the questions above, concerning a future division of the Arctic Ocean?

From the above, it is clear that there is a comprehensive legal regime governing the division of the Arctic. This legal regime can be said to include a certain process that shall be followed when dividing the Arctic Ocean into maritime areas under national jurisdiction. At present, the disputes are in the process of becoming crystallized. There are several

claims to Arctic governance, and it remains to be seen whether these claims will stand, or whether they will be altered in the future. This depends heavily on a scientific and legal assessment of the research-based evidence gathered in the Arctic. After the disputes have crystallized, they will need to be settled. The settlement will primarily depend on negotiations and subsequent agreements between the Arctic coastal States, and only after a failure to reach an agreement or a policy change, will a judicial settlement process determine the outcome. At this time, it is far too early to determine what the final established boundaries in the Arctic will look like. I will certainly follow the future developments with great interest.

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