

Oxford Handbooks Online

The Continental Shelf

Ted McDorman

The Oxford Handbook of the Law of the Sea

Edited by Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens

Print Publication Date: Mar 2015 Subject: Law, International Law

Online Publication Date: Jun 2016 DOI: 10.1093/law/9780198715481.003.0009

Abstract and Keywords

This chapter begins with a brief history of the legal regime of the continental shelf. It then reviews the core rights and obligations of the legal regime; explains the rules and procedures regarding the determination by a State of its continental shelf outer limit beyond 200 nm; and describes the relationship between the shelf regime and the 200 nm exclusive economic zone (EEZ).

Keywords: United Nations (UN), since World War II, exclusive economic zone, territorial sea, maritime boundaries, continental shelf

1 Introduction

AN interesting aspect of the international legal regime of the continental shelf is where, in a physical or geographic sense, does the legal regime apply?* This question makes the legal regime of the continental shelf different from the territorial sea regime, which applies to the water column and seafloor out to 12 nautical miles (nm) from a coastal State's baselines and the regime of the exclusive economic zone (EEZ), which applies to the marine resources within the water column and seafloor beyond the territorial sea out to 200 nm from a coastal State's baselines.

(p. 182) For many States, the location of all or part of their adjacent continental shelf is certain as a result of bilateral agreements with neighbouring States or, as set out in Article 76(1) of the UN Convention on the Law of the Sea (LOSC), a State's legal continental shelf ends at the 200 nm limit.¹ For an ever-increasing number of States, however, it is apparent that all or part of their legal continental shelf extends well beyond 200 nm, with it not being immediately obvious where the outer limit of a State's legal shelf is located. At least 80 States were of the view that they had a legal continental shelf beyond 200 nm.² While this will be explained below, the difference between a coastal State whose legal shelf is confined to 200 nm and a State that has a legal shelf beyond 200 nm is based upon the physical attributes of the seafloor within and beyond 200 nm.

The 'legal' continental shelf has to be disconnected from the continental shelf that is a well-known physical feature of the seafloor. The continental margin is the physical extension of the landmass of the coastal State with the margin composed of the continental shelf (a platform at relatively shallow depths), the continental slope (the break of the platform towards the deep ocean floor), and the continental rise (the area beyond the slope which merges with the deep ocean floor).

Irrespective of the existence of a physical continental margin, a coastal State has rights to a continental shelf out to 200 nm and a State's legal continental shelf extends beyond 200 nm where the physical continental margin extends beyond 200 nm. The above is set out in Article 76(1) and (3) of the LOSC:

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

...

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise.

This chapter will proceed by providing a brief history of the legal regime of the continental shelf, a review of the core rights and obligations of the legal regime, a detailed explanation of the rules and procedures regarding the determination by a State of its continental shelf outer limit beyond 200 nm, and a few words on the relationship between the shelf regime and the 200 nm EEZ.

(p. 183) 2 History

The development of the legal regime of the continental shelf was directly tied to the potential for oil and gas in the seafloor area adjacent to States. The first international instrument dealing with the continental shelf, albeit using the phrase ‘submarine areas’ and ‘sea-bed and sub-soil’ outside territorial waters, was the 1942 Treaty between the United Kingdom and Venezuela respecting the Gulf of Paria.³ At issue was the division of oil fields between Venezuela and Trinidad. The 1945 US Truman Proclamation on the Continental Shelf, more regularly associated with the commencement of the continental shelf legal regime, was explicitly tied to asserting exclusive US authority over hydrocarbon activity in the continental margin adjacent to the United States, most particularly in the Gulf of Mexico.⁴

Fisheries have also had a relationship with the continental shelf, though more as an afterthought. The continental shelf had been discussed prior to the 1940s in the context of fisheries.⁵ Sedentary fisheries beyond territorial waters had been dealt with by treaty as early as 1839,⁶ and it was lobster that were at stake in the 1909 Norway/Sweden *Grisbadarna Arbitration*.⁷ In 1953, Australia’s continental shelf claim was made ‘with a view to exercising exclusive authority over sedentary fisheries’,⁸ rather than as regards concerns over offshore hydrocarbon resources. It was Australia that ensured that sedentary species were included in the natural resources of the continental shelf regime in the 1958 Geneva Convention on the Continental Shelf (CSC).⁹

Coastal States’ exercise of continental shelf rights developed quickly.¹⁰ Spurring these developments was the enhancement of the technology to search for and exploit offshore hydrocarbon resources wedded to the strategic knowledge of State’s (p. 184) that oil was critical to their economies and militaries. Another reason for the quick legal development of the continental shelf regime was that, unlike the water column, the continental shelf was not unduly encumbered by freedoms of the high seas pertaining to fisheries and navigation. In this regard, keeping the continental shelf legal regime distinct from that of the water column was critical.¹¹

3 Legal Regime

3.1 Inherent rights

An important feature of the legal regime of the continental shelf is set out in Article 2(3) of the CSC and repeated in Article 77(3) of the LOSC: 'The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or any express proclamation.' The International Court of Justice (ICJ) in the *North Sea Continental Shelf Cases* commented 'that the rights of the coastal State in respect of the area of continental shelf...exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land. In short, there is...an inherent right'.¹² O'Connell has pointed out that:

The establishment of the continental shelf doctrine as an autonomous legal institution, independent of other methods of territorial acquisition, implied the automatic attribution of the continental shelf to the coastal State. One of the aims behind the propagation of the doctrine was to annul any priority of claim in time or nature over the rights of the coastal State, so that, for example, the doctrine of historic rights or acquisitive prescription would not be available.¹³

Recently, in the 2012 *Bangladesh/Myanmar Case*, the International Tribunal for the Law of the Sea (ITLOS) stated that: 'A coastal State's entitlement to the continental shelf exists by the sole fact that the basis of entitlement, namely sovereignty over the land territory, is present.'¹⁴ This inherent-right aspect of the continental shelf legal regime can be contrasted with the EEZ regime which, while available to States, must be positively asserted by a State. (p. 185)

The inherent right of a State to a legal continental shelf raises squarely the issue of the legal definition of and title to the shelf. The ICJ in the 2012 *Nicaragua v Columbia* case indicated that Article 76(1) of the LOSC—the definition of the continental shelf—is part of customary international law.¹⁵ Thus, without expressing a claim, a coastal State has an adjacent shelf out to 200 nm or to 'the outer edge of the continental margin'. Moreover, a State cannot be deprived of its legal continental shelf by the action of another State. A question raised and answered below is whether a State, by being a party to the LOSC, has agreed to limits on its inherent right to a shelf. The answer is yes, but only in a limited manner.

In the CSC, the legal basis for a State's inherent right to a continental shelf was adjacency.¹⁶ The 1969 *North Sea Continental Shelf* cases introduced the concept of 'natural prolongation' in the context that a coastal State has rights over the area of the continental shelf 'that constitutes a natural prolongation of its land territory'.¹⁷ The natural prolongation of the adjacent land territory was adopted in Article 76(1) of the LOSC. In the 2012 *Bangladesh/Myanmar Case* there was a sharp divide between Bangladesh and Myanmar on their understanding of natural prolongation. It was the view of Bangladesh that the wording meant that the State's ability to show geological and geomorphological continuity between the landmass and the seafloor of the Bay of Bengal (based largely on the sediments in the Bay of Bengal originating from Bangladesh) resulted in the continental shelf beyond 200 nm belonging to Bangladesh and not

The Continental Shelf

Myanmar.¹⁸ The view of Myanmar was that the wording did not require ‘any “test of natural geological prolongation”’.¹⁹ The ITLOS commented that, while natural prolongation first arose in the *North Sea Continental Shelf* cases, ‘it has never been defined’²⁰ and that it had been utilized at the Third United Nations Conference on the Law of the Sea (UNCLOS III) ‘as a concept to lend support’ to the trend of expansion of coastal State jurisdiction.²¹ The Tribunal took the view that natural prolongation did not constitute ‘a separate and independent criterion a coastal State must satisfy’.²² For the State parties to the LOSC, what was to be applied (p. 186) in determining the outer limit of the shelf beyond 200 nm was not the abstract notion of natural prolongation but rather the wording of Article 76(3) which leads directly to the detailed criteria of Article 76(4).

3.2 Substantive rights

The key legal attributes of the continental shelf regime were set out in the 1958 Convention on the Continental Shelf and are largely repeated in the LOSC. The principal legal features reflect the economic and geopolitical importance for coastal States of controlling offshore hydrocarbon exploration and exploitation in their adjacent seafloor areas. Also important is that the rights of a coastal State over its adjacent continental shelf ‘do not affect the legal status of the superjacent waters’ or the airspace above those waters;²³ thus the navigational freedoms and other freedoms and rights of States both within the EEZ, where the continental shelf co-exists, and beyond 200 nm on the high seas, are to be balanced with a coastal State’s shelf rights. It is worth noting that, where the continental shelf of a coastal State exists both within and beyond 200 nm, the balance that informs the exercise by a coastal State of its shelf rights may be different within and beyond 200 nm.²⁴

A coastal State has exclusive sovereign rights for the purpose of exploring and exploiting the natural resources of its adjacent continental shelf.²⁵ These natural resources are mineral and other non-living resources of the shelf and sedentary species which are either ‘immobile on or under the seabed or are unable to move except in constant contact with the seabed or subsoil’.²⁶ As noted above, the inclusion of sedentary species as part of the continental shelf regime has historic roots. What remains elusive is a definition of sedentary species, although it appears that over the last 30 years the only international disagreement has been between Canada and the United States respecting Iceland scallops, which, reportedly, the United States eventually agreed with Canada are a sedentary species.²⁷

More explicitly, LOSC Article 81 provides that ‘[t]he coastal State shall have exclusive rights to authorize and regulate drilling on the continental shelf for all purposes.’

(p. 187) Moreover, the coastal State has the exclusive right to authorize and regulate the construction, placement, and operation of installations and structures involved in the exercise of its continental shelf mineral rights,²⁸ and this includes ‘jurisdiction with regard to customs, fiscal, health, safety and immigration’.²⁹ Coastal States can establish safety zones around installations and structures of up to 500 metres, and greater if

The Continental Shelf

recommended by the competent international organization,³⁰ and within this zone, they 'may take appropriate measures to ensure the safety both of navigation and...of the installations and structures'.³¹

As a result, it is the exclusive right of the coastal State to authorize through permits, leases, licences, or concessions the undertaking of any exploration or exploitation of the mineral resources or sedentary species that may exist on its adjacent continental shelf. In the case of mineral resources of the shelf, drilling rigs and other platforms utilized for oil and gas exploration and exploitation are under the exclusive jurisdiction of the adjacent coastal State. While each State has a different practice, many States have a combination of specific laws that apply to offshore oil and gas activities, including exploration and exploitation, and also extend general laws, such as criminal law, immigration, and labour standards to the platforms utilized. Canada, for example, has a complex domestic legal structure respecting offshore hydrocarbon activity primarily because of the role of provinces (sub-State units); but, of note are provisions in the Oceans Act that extend the application of all federal and provincial laws to 'any marine installation or structure from the time it is attached or anchored to the continental shelf of Canada in connection with the exploration of that shelf or the exploitation of its mineral or other non-living resources until the marine installation or structure is removed from the waters above the continental shelf of Canada in the regulation'.³²

The '*Arctic Sunrise*' Case, involving the Netherlands and the Russian Federation, raises questions about the balance between the authority of the coastal State to enforce its national laws related to offshore installations within its EEZ and the freedom of navigation that exists within the EEZ for foreign flag vessels, in particular where the clear intention of the foreign vessel is to engage directly or indirectly in protest against the offshore installation.³³ In the ITLOS decision on the request by the Netherlands for provisional measures, the above balance was noted but not commented upon.³⁴ The Joint Separate Opinion of Judge Wolfrum and Judge Kelly and the Dissenting Opinion of Judge Golitsyn took the view that, within a safety (p. 188) zone established pursuant to Article 60 of the LOSC, the coastal State has exclusive jurisdiction including for enforcement of its national laws.³⁵ The nuanced difference between the Joint Opinion and the Dissenting Opinion, at the heart of the dispute, is whether coastal State enforcement action can be taken against foreign flag vessels beyond the safety zone to prevent and/or deter illicit activities within the safety zone. On this point, the Joint Opinion appears to answer no,³⁶ whereas the Dissenting Opinion appears to answer yes.³⁷ However, both the Joint Opinion and the Dissenting Opinion note that, if applicable, the right of hot pursuit would allow for enforcement against foreign flag vessels beyond the safety zone.³⁸ The result in the '*Arctic Sunrise*' Case, given that the underlying facts involved a protest by foreign citizens of hydrocarbon exploration under the exclusive authority of the Russian Federation, may be read as a limitation on the rights exercisable by a coastal State over the exploration and exploitation of resources in its adjacent continental shelf. This may be further dealt with by the arbitral panel established pursuant to Annex VII to the LOSC.³⁹

The Continental Shelf

Pursuant to the LOSC, coastal States are under an obligation to enact and enforce laws and regulations 'to prevent, reduce and control pollution...arising from or in connection with seabed activities subject to their jurisdiction...'.⁴⁰ Coastal States are encouraged to develop global and regional rules, standards, practices, and procedures.⁴¹ At present, beyond the LOSC, there are no legally binding global instruments that establish measures regarding the prevention of accidental pollution from offshore oil and gas activities.⁴² Through the International Maritime Organization (IMO), States have accepted recommendations for the construction and operation of mobile offshore drilling units.⁴³ The establishment of global rules and standards for the prevention of marine pollution from offshore oil and gas activities has been called for, but thus far without response.⁴⁴

(p. 189) There has been global and regional success in reaching an agreement on enhancing the preparedness of and the cooperation among States to respond to marine pollution incidents from offshore oil and gas activities. In 1990, at the global level the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC)⁴⁵ was adopted which has led to a number of regional arrangements,⁴⁶ including the 2013 Agreement on Cooperation on Oil Pollution, Preparedness and Response in the Arctic.⁴⁷

LOSC Article 77 directs that a coastal State has jurisdiction over all cables and pipelines used in connection with the exploration or exploitation of the mineral resources of its shelf. However, subject to reasonable measures respecting exploration and exploitation of the mineral resources of the shelf resources and pollution prevention, all States are entitled to lay submarine cables and pipelines on another State's continental shelf.⁴⁸ Specifically respecting 'the delineation of the course for laying pipelines', coastal State consent is required.⁴⁹ Regarding both cables and pipelines, measures adopted by a coastal State are not to impede their laying and maintenance.⁵⁰ Questions have arisen whether coastal States that require permits for surveying cable routes and laying and repairing cables on their shelf are compliant with the LOSC and whether, in areas designated as marine protected areas (MPAs), coastal States can deny access for cables.⁵¹

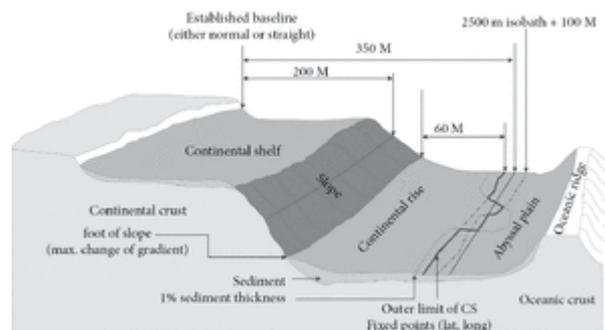
4 The Outer Limit of the Continental Shelf

4.1 Overview

Article 1 of the CSC provided criteria for the determination of the outer limit of a coastal State's adjacent continental shelf—the seabed and subsoil within the envelope of waters of a depth of 200 metres 'or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources'. While (p. 190) it was believed at the time that a definite limit was intended by the wording,⁵² as a result of technological, political, and economic pressure primarily related to offshore hydrocarbon resource development, the exploitability criterion came to be seen as ambiguous and as effectively meaning that Article 1 did not provide a determinable outer limit of the legal continental shelf. Note needs to be made again of the 1969 *North Sea Continental Shelf Cases* where the Court introduced 'natural prolongation' and tied this to coastal fronts and geology,⁵³ thus substantially undermining the 200-metre depth as a delineator of the outer limit of the continental shelf.⁵⁴ For example, while in 1970 the United States proposed that coastal States should not make continental shelf claims beyond the 200-metre water depth,⁵⁵ Canada asserted shelf rights well beyond the 200-metre-depth line relying in part on the natural prolongation wording in the 1969 *North Sea Continental Shelf Cases*.⁵⁶

Unlike in 1958, during the negotiation of the LOSC there was a necessity to provide for a definitive outer limit of the continental shelf regime where the shelf extended beyond 200 nm as a result of the Common Heritage of Mankind and the authority of the International Seabed Authority (ISA) that was to be apply to the mineral resources of the seafloor beyond national jurisdiction, in other words beyond the outer limits of coastal State's continental shelves.⁵⁷ With some States strongly of the view that customary law supported shelf rights beyond 200 nm and others arguing for 200 nm as the limit, a compromise emerged involving four components:

- A complex formula was adopted in Article 76 for the determination of the outer limit of a State's continental shelf beyond 200 nm.



[Click to view larger](#)

Figure 9.1 The Continental Shelf

- The Commission on the Limits of the Continental Shelf (CLCS, 'the Commission')⁵⁸ would be established to assist States in applying the complex formula and to which States are obligated to submit information respecting

their proposed outer limits. (p. 191)

The Continental Shelf

- Where non-living resources are exploited from the shelf area beyond 200 nm, the adjacent coastal State is to provide payments or contributions to the international community as regards the exploited resources.⁵⁹
- A coastal State's rights regarding its adjacent shelf, anchored in customary international law, was restated in, but not created by, Articles 76(1) and 77(3) of the LOSC.

The Article 76 criteria and the CLCS explicitly only deal with the outer limit of a State's continental shelf beyond 200 nm; thus States are not restricted by the Convention in unquestionably exercising jurisdiction over shelf areas within any reasonable calculation of the Article 76 criteria outer limits. Consistent with this, in the *Bangladesh/Myanmar Case*, the ITLOS stated that a coastal State's 'entitlement to the continental shelf...does not require the establishment of outer limits'.⁶⁰ State practice supports this. Canada, for example, has long exercised national jurisdiction over hydrocarbon development and sedentary species beyond 200 nm including the prosecution of a US fishing vessel for illegally harvesting sedentary species beyond 200 nm.⁶¹ There are also a number of bilateral maritime boundary agreements that deal with the shelf area beyond 200 nm entered into by States that had not made submissions to the Commission. For example, the 2004 Australia-New Zealand Treaty⁶² divided large areas of shelf beyond 200 nm (p. 192) just prior to Australia's 2004 submission, subsequently followed in 2006 by New Zealand's submission.⁶³

Further, the first three components are independent treaty obligations such that a coastal State cannot be deprived of its inherent right to a shelf where it extends beyond 200 nm by non-compliance with any or all of these components. Again, this is recognized in the 2012 *Bangladesh/Myanmar Case* where the Tribunal was required to examine the nature of a coastal State's inherent rights to a shelf area beyond 200 nm and the possible impediments on such rights in the LOSC such as the detailed criteria in Article 76 and the engagement of the Commission. The ITLOS judgment provides that entitlement to the continental shelf does not depend 'on any procedural requirements'.⁶⁴ While the Tribunal does not clarify what it means by 'procedural requirements', given the clear statement on entitlement, the procedural requirements must include, among other things, submitting information to the CLCS and satisfying the technical requirements in Article 76. At paragraph 407, the Judgment states that: 'It is clear from article 76, paragraph 8,...that the limits of the continental shelf beyond 200 nm can be established only by the coastal State' and that it is 'opposability with regard to other States' that is dependent on satisfying the requirements of Article 76, including the obligation to submit information to the CLCS.⁶⁵ Put a different way, a State has an inherent right to a shelf beyond 200 nm (where it physically exists), and the LOSC provides a procedural opportunity to establish the outer limits of that shelf that will enhance the opposability of those limits vis-à-vis other States or, as has been described elsewhere, the Commission process provides legitimacy to a coastal State's shelf outer limits.⁶⁶ Thus, a coastal State has and can exercise exclusive national authority over its adjacent legal continental shelf irrespective of the submission of information to the Commission and the receipt of recommendations

The Continental Shelf

from the Commission. As a corollary, a State not meeting the 10-year timeline for a submission of information to the CLCS, set out in Article 4 of Annex II to the Convention, noted below, cannot be deprived of its rights to a continental shelf beyond 200 nm.

None of the above undermines the importance of the Article 76 criteria, the role of the Commission, or the Article 82 revenue-sharing provision. As will be noted below, the State parties to the LOSC have been remarkably consistent in complying with the criteria and processes set out respecting the outer limit of the continental shelf.

(p. 193) 4.2 The Article 76 criteria

One scholar has described the key paragraphs of Article 76 that establish the criteria for determining the outer limit of the continental shelf as combining the ‘influences of geography, geology, geomorphology, and jurisprudence’.⁶⁷ Again, one must also acknowledge the importance that coastal States placed on obtaining or retaining exclusive control over any potential hydrocarbon resources in their adjacent seabed areas. This is evident from the negotiating history of Article 76.

The proposal that formed the basis of the negotiations of the outer limit criteria was the so-called ‘Irish formula’, which provided that the outer limit of the legal continental shelf should be determined on the basis of sediment thickness seaward of the foot of the slope or by a 60 nm limit from the foot of the continental slope. The foot of the slope was taken as the starting point since it was a recognizable geophysical characteristic in large parts of the ocean floor and thus was seen as providing some ease in locating the outer edge of the margin. Since the physical continental margin consists of the continental shelf, continental slope, and continental rise, the foot of the slope ensures that, at a minimum, a coastal State has legal authority over the key physical components of its adjacent offshore seafloor—which are most likely to contain hydrocarbon resources—plus at least part of the continental rise. The idea for the foot-of-the-slope-plus-zone, borrowed from American geologist Hollis D Hedberg,⁶⁸ was to provide a method of delineation that would not involve acquiring sediment thickness information which was seen at the time as being difficult to obtain. The rationale for the sediment thickness criteria, however, was to ensure that a coastal State secured jurisdiction over all the hydrocarbon resources that might possibly exist in the offshore areas adjacent to it.⁶⁹ Essentially, if the sediment was thick enough there might exist hydrocarbon resources, and, therefore, it should come under coastal State authority. Interestingly, the sediment thickness criterion was criticized by Hedberg as being: (p. 194)

...based more on factors of economic advantage to certain coastal countries than on impartial considerations of where a boundary should most naturally, most logically and most rightfully be.⁷⁰

The Soviet Union put forward a proposal to prevent coastal States from claiming jurisdiction on the basis of the Irish formula to areas beyond a 300 nm limit.⁷¹ In the end,

The Continental Shelf

a compromise was reached that limited the extent of the Irish proposal to either 350 nm or 100 nm from the 2,500 metre isobath, whichever was further seaward.

A last issue concerning the criteria to be used for the establishment of the outer limit of the margin related to ridges. The concern was that underwater ridges might be used by some coastal States to extend their jurisdiction to the middle of the ocean. The compromise that was reached distinguishes between oceanic ridges, submarine ridges, and submarine elevations.

The criteria agreed upon in the LOSC to be applied by a coastal State in determining the outer limit of the continental margin beyond 200nm is succinctly set out below.

- Pursuant to Article 76(4), an envelope for the outer limit of the continental margin is first created by determining the foot of the continental slope⁷² and then:
 - a line connecting the outermost points where ‘the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope’,⁷³ or
 - a line connecting points ‘not more than 60 nautical miles from the foot of the continental slope’.
- The envelope created by Article 76(4) is subject to two constraints. The lines created pursuant to Article 76(4) are not to extend beyond:
 - 350 nm from a State’s baselines; or
 - 100 nm from the 2,500-metre isobath.⁷⁴
- For submarine ridges, the 350 nm limit applies. However, for ‘submarine elevations that are natural components of the continental margin, such as its plateaux, (p. 195) rises, caps, banks and spurs’, the 100 nm from the 2,500-metre isobath criterion is the limitation.⁷⁵
- There is a general limitation that the continental margin does not include the oceanic floor with its oceanic ridges.

The criteria are not easily applicable in any given situation because of the technical and definitional difficulties of determining the thickness of sedimentary rocks, the foot of the continental slope, the 2,500 metre isobath, and distinguishing among submarine ridges, oceanic ridges, and submarine elevations that are natural components of the continental margin.

4.3 Procedure: the Commission

4.3.1 Overview

The Continental Shelf

Article 76(8) of the LOSC provides that a coastal State is to submit information supporting its proposed outer limit of its legal continental shelf to the Commission on the Limits of the Continental Shelf. The Commission is composed of 21 technical specialists elected by the State Parties to the LOSC (SPLOS).⁷⁶ Commission members are to be 'experts in the field of geology, geophysics or hydrography'⁷⁷ and are to act in their personal capacities. The State which nominates a member of the Commission is to 'defray the expenses' of that Commission member.⁷⁸

The Commission is to consider the material submitted to it by a coastal State and make 'recommendations' to the submitting State regarding the information received and the relevant Article 76 criteria. Where differences exist, the State is to resubmit further information. What was envisaged was a process of 'ping-pong'—State submission, Commission recommendations, State resubmission, Commission recommendations, and so on—with the submitting State, acting in good faith, and the Commission eventually achieving accord.⁷⁹ Thus far, much of the to-and-fro between the Commission and submitting State has taken place during the consideration by the Commission of the submission, such that there have been few instances of the Commission recommending that a State either make a resubmission or that a recommendation by the Commission has resulted in a resubmission.⁸⁰

(p. 196) The Commission is a *sui generis* body which has been described as being akin to an administrative institution.⁸¹ Its role is to review the information provided and make recommendations to the submitting State. The CLCS does not have the legal authority to determine or impose its views respecting the location of the outer limit of the continental margin on a coastal State. It is the coastal State, and not the CLCS, that establishes the outer limit of its continental margin beyond 200 nm. This was duly acknowledged in the *Bangladesh/Myanmar Case*⁸² and is consistent with the reality that the determination and delineation of a maritime boundary is a political act of a coastal State. Article 76(8) indicates that the 'limits of the shelf established by a coastal State on the basis of' the recommendations of the Commission 'shall be final and binding'. Note has already been made of the ITLOS views in the *Bangladesh/Myanmar Case* that what this wording is primarily about enhancing 'opposability with regard to other States'.⁸³

4.3.2 Bilateral delimitation and disputes

Article 76(10) indicates that the provisions of the article 'are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts'. This is supplemented by Article 9 of Annex II where it states that the 'actions of the Commission' are also without prejudice to the shelf delimitation. These provisions do not inhibit or constrain States from explicitly acting, for example, through issuing *notes verbales*, to protect their rights, however a State defines these rights.

The manner in which the Commission procedurally deals with disputes is set out in Rule 46 of the Commission's Rules of Procedure and Annex I to the Rules of Procedure.⁸⁴ In particular, paragraph 5(a) of Annex I states: 'In cases where a land or maritime dispute exists, the Commission shall not consider and qualify a submission made by any of the

The Continental Shelf

States concerned in the dispute.’ Reference should also be made to paragraph 1 of the Annex which indicates that ‘the competence with respect to matters regarding disputes... rests with States’. Paragraph 1 can and should be read as meaning that it is up to States to decide (rather than the Commission), amongst other things, whether or not a dispute exists.

The approach of the Commission has been not to deal with a submission (or those parts of a submission) which involve a land or maritime dispute without the consent of the engaged States. The political context of this is obvious. The CLCS has no authority (p. 197) and is manifestly ill-equipped to evaluate whether or not a ‘dispute’ exists and/or to look behind or otherwise second-guess any communication made to it by a State that a ‘land or maritime’ dispute exists. Whether or not a dispute exists is a political determination by States.

4.3.3 The record

Annex II to the LOSC provides that a coastal State intending to establish outer limits of the continental shelf beyond 200 nm ‘shall’ submit information to the Commission ‘within 10 years of entry into force’ of the Convention for the State.⁸⁵ The ten-year mark for States that were parties to the LOSC when it came into effect in 1994 was adjusted by the State parties to the LOSC to commence as of 13 May 1999.⁸⁶ Further, in June 2008, the State Parties decided that the ten-year wording could be met by a coastal State submitting ‘preliminary information indicative of the outer limits...and a description of the status of preparation and intended date for making a submission’. The preliminary information would not be acted upon by the Commission and would be without prejudice to a subsequent full submission.⁸⁷

The first submission to the Commission was from Russia in 2001.⁸⁸ Since then, spurred by the above-noted ten-year time-frame, as of May 2014, the Commission had received 73 full, partial, joint, or revised submissions of information in respect of the outer limits of the continental shelf and 46 notices of Preliminary Information of intent to make future submissions. These numbers involve a degree of double-counting since some States have made two separate submissions, as in the case of Ireland, one for its proposed outer limit of shelf area adjacent to Ireland on the Porcupine Abyssal Plain and another as part of a Joint Submission with France, Spain, and the United Kingdom regarding the Celtic Sea and Bay of Biscay. Double-counting also arises, for example, regarding Cuba, which submitted a notice of Preliminary Information and shortly thereafter made its submission to the Commission, and Canada which on the same day submitted a partial submission in respect of the Atlantic Ocean and Preliminary Information regarding the (p. 198) Arctic Ocean. The number of States to have filed either a submission or a notice of Preliminary Information is approximately 80.

Thus far, the CLCS has provided 18 sets of recommendations which, in some cases like that of Russia, has been a recommendation for additional information. In February 2013, Russia made a revised submission to the Commission respecting the Okhotsk Sea. Four

The Continental Shelf

States, Australia, Ireland, Mexico, and the Philippines having received recommendations respecting their submissions have, pursuant to Article 76(9), submitted coordinates and maps respecting their outer limits of the continental shelf.

The number of States utilizing the Commission far surpasses what was projected when the LOSC continental shelf regime was being negotiated. At that time, it was surmised that only 30 or so States had adjacent continental margins beyond 200 nm that would result in the employment of the outer-limit criteria and procedures of Article 76.⁸⁹ The unexpected number of submissions and their arriving within a relative short period of time has put pressure on the CLCS, which has led to calls for measures to increase the pace of work of the Commission.⁹⁰ Part of this concern is based on the incorrect perception that, until a State completes the Commission process, it does not have exclusive jurisdiction over its adjacent legal continental shelf.

4.4 Revenue sharing: Article 82

Article 82 provides that, after a five-year commencement period, a coastal State not a developing country, which is a net importer of mineral resources produced from its continental shelf, is to make payments to developing States, 'through' the ISA, amounting to 1 per cent of the value or volume of the production from a site. This rate is to increase by 1 per cent annually for a period of seven years and remain at 7 per cent thereafter. To date, no mineral resource exploitation from the continental shelf beyond 200 nm has taken place, although some exploration activity has occurred.⁹¹

At least two States, the United States and Canada, have publicly notified potential holders of permits or leases for shelf areas beyond 200 nm of the Article 82 wording.⁹² The Article 82 revenue obligation rests on the State party to the LOSC, and it is up to (p. 199) the State to determine its own arrangements for collection and payment. Moreover, the understanding and application of Article 82, like any other provision of a treaty, is a matter for a State party taking into account the well-understood rules of treaty interpretation set out in the 1969 Vienna Convention of the Law of Treaties.⁹³

The wording of Article 82 that the payment or contribution is to be made 'through' the ISA, which is to distribute the payment or contributions to State parties on the basis of equitable sharing criteria, indicates that the ISA is primarily in a recipient role with minimal engagement with the State making payments or contributions.

5 Continental Shelf and EEZ

The legal regime of the continental shelf predates the emergence of the EEZ and is separate from the EEZ in that, while a coastal State can have a continental shelf without an EEZ, it cannot have an EEZ without a continental shelf.⁹⁴ In the LOSC, the two

The Continental Shelf

regimes out to 200 nm were co-mingled.⁹⁵ Since the general acceptance of the EEZ, where maritime boundary delimitation involving the two regimes has taken place between States involving distances between coasts of less than 400 nm, State practice and adjudications have taken the view that the two regimes are harmonious in that the shelf regime and the EEZ are effectively conflated as evidenced by delimitations involving a 'single maritime boundary'⁹⁶ and a single line applying to both regimes.⁹⁷ In the 1985 *Libya v Malta* case, the ICJ, while careful to indicate that the continental shelf regime was not absorbed into that of the EEZ, nevertheless indicated the common element of distance in (p. 200) the two regimes.⁹⁸ There are, however, bilateral agreements where this has not been accepted and where one delimitation line has been used for the shelf and another for the water column.⁹⁹ While the relationship between the regimes of the continental shelf and the EEZ is not usually a matter of great consequence, there are situations where a seafloor area is claimed by one State as being within 200 nm of its coasts (part of its EEZ) and by another State as being its continental shelf beyond 200 nm. This arose in the *Bangladesh/Myanmar Case* where, as a result of the delimitation method adopted by the Tribunal, a small area of shelf claimed by one State overlapped with an area of EEZ claimed by the other. The Tribunal resolved the matter in favour of the shelf rights, commenting that the LOSC 'embodies the concept of a single continental shelf...without any distinction being made between the shelf within 200 nm and the shelf beyond that limit',¹⁰⁰ and, at a further stage, that the existence of a shelf area beyond a State's EEZ does not limit the rights of another State within its EEZ, 'notably those with respect to the superjacent waters'.¹⁰¹ The end result is a bifurcated area with one State having shelf rights and another having water column rights. The Tribunal noted that such bifurcated areas were not unknown to the law of the sea pointing to Article 78(1) of the LOSC where the high seas and continental shelf beyond 200 nm co-exists.¹⁰²

6 Conclusion

There has been continuity throughout the last six decades of the core legal attributes of the continental shelf regime. Based on this, States have embraced their jurisdiction over the mineral resources (oil and gas) in their adjacent shelf areas within and beyond 200 nm. Nevertheless, there are challenges. While it can be anticipated that exploration for and exploitation of mineral resources in the continental shelf other than hydrocarbons may take place in the future, these activities clearly fall within the existing legal regime of the continental shelf. There is (p. 201) less certainty about coastal State authority regarding marine genetic resources and bioprospecting on the shelf area beyond 200 nm.¹⁰³ States with, or hoping for, extractive activities on their adjacent shelves may feel the need to develop a global regime to enhance pollution prevention and safety for these activities in light of the Deepwater Horizon disaster and the concerns about offshore activity in the Arctic Ocean. Coastal States have taken important strides in global and regional cooperation regarding preparation and response to pollution incidents from shelf activities. The substantive continental shelf legal regime may have to adapt and better

The Continental Shelf

take into consideration the somewhat amorphous concern for biodiversity. Finally, the *'Arctic Sunrise' Case* has raised questions concerning the relationship between navigational freedoms and coastal State enforcement authority over shelf activities.

The continental shelf regime is different from the EEZ regime in that a coastal State has an inherent right to its shelf. This has been little altered or limited by the LOSC for those States with a shelf area beyond 200 nm. The principal limitation is the Convention obligation to submit information to the CLCS where an outer limit is proposed. A State establishing outer limits is to do so on the basis of a good-faith interpretation of the Article 76 criteria and the recommendations of the Commission. A further limitation is that, when a State finalizes its shelf outer limits and deposits the necessary maps and coordinates with the UN Secretary-General, the outer limits 'shall be final and binding' on it. Finally, while not a limitation per se, a coastal State exploiting mineral resources on its shelf beyond 200 nm is subject to the revenue-sharing obligation in Article 82.

One area where there has been an evolution of the continental shelf regime concerns the outer limit criteria. The history of the continental shelf legal regime is principally linked to hydrocarbon resources. The detailed Article 76 criteria were engineered to assure coastal States that, where offshore hydrocarbons were reasonably likely to exist, they would be subject to the exclusive authority of the adjacent State. The 'continental' in 'continental shelf' had some meaning since only if the seafloor adjacent to a State was continental in origin would there be a potential for oil and gas. However, the wording used in Article 76, base-of-the-slope and foot-of-the-slope, and the differences between submarine elevations, submarine ridges, and ocean ridges, point to geomorphology (the shape of the seafloor) rather than the geologic continuity between the adjacent land and seafloor. The geomorphological dominance inevitably ensures coastal State jurisdiction over adjacent offshore hydrocarbons but, nevertheless, can be seen as a change from what was the original motivation for the outer limit criteria.

The lure of mineral resources (real or imagined) has resulted in States spending untold millions to provide evidence that their adjacent continental shelf extends (p. 202) beyond 200 nm and to push proposed outer limits as far seaward as possible. Understandably, no coastal State wants to be in the position in 50 years of looking back and seeing that, because they were not aggressive in their assertion of the outer limit of the shelf, a valuable mineral resource is not within their sovereign control. The ethos of the 1970s when there was the international political will to accept the Common Heritage concept and a degree of global sharing increasingly appears to have been a blip on the historic law-of-the-sea radar.

Notes:

(*) Various sections of this chapter are drawn, with modification, from the following: TL McDorman, 'The Continental Shelf Regime in the 1982 Law of the Sea Convention: A Reflection on the First Thirty Years' (2012) 27 *International Journal of Marine and Coastal*

The Continental Shelf

Law 743; TL McDorman, 'The Continental Shelf beyond 200 nm: A First Look at the *Bay of Bengal (Bangladesh/Myanmar) Case*' in MH Nordquist, JN Moore, A Chircop, and R Long (eds), *The Regulation of Continental Shelf Development: Rethinking International Standards* (Martinus Nijhoff Leiden 2013) 89; TL McDorman, 'Rights and Jurisdiction over Resources in the South China Sea: UNCLOS and the "Seven Dashed Line"' in S Jayakumar, T Koh, and Beckman (eds), *The South China Dispute and Law of the Sea* (Edward Elgar Northampton 2014) 144; and TL McDorman, 'The Continental Shelf beyond 200 nm: Law and Politics in the Arctic Ocean' (2009) 18 *Journal of Transnational Law* 155.

(1) 1982 United Nations Convention on the Law of the Sea (hereinafter LOSC).

(2) See Section 4.3.3 below.

(3) 1942 Treaty between the United Kingdom and Venezuela relating to the Submarine Areas of the Gulf of Paria. See generally DP O'Connell, *The International Law of the Sea* (ed IA Shearer) (Clarendon Press Oxford 1982) Vol I, 470.

(4) United States, Executive Order 9633 of 28 September 1945, *Reserving and Placing Certain Resources of the Continental Shelf Under the Control and Jurisdiction of the Secretary of the Interior*, 10 Federal Register 12303, and 59 US Stat 884. See O'Connell, n 3, Vol I, 470-2; and, more generally, Ann L Hollick, *U.S. Foreign Policy and the Law of the Sea* (Princeton University Press Princeton 1981) 18-61.

(5) O'Connell, n 3, Vol I, 469-70 and 498; MW Mouton, *The Continental Shelf* (Martinus Nijhoff The Hague 1952) 46.

(6) See O'Connell, n 3, Vol I, 450-6; Mouton, n 5, 138.

(7) *Maritime Boundary Dispute (Norway v Sweden)* (Award) (1909) XI RIAA 155, reprinted in (1909) 4 *American Journal of International Law* 226; and see DM Johnston, *The Theory and History of Ocean Boundary-Making* (McGill-Queen's University Press Kingston/Montreal 1988) 127.

(8) O'Connell, n 3, Vol I, 499.

(9) *Ibid*, Vol I, 499-500. 1958 Convention on the Continental Shelf, Art 2(4) (hereinafter CSC).

(10) See DR Rothwell and T Stephens, *The International Law of the Sea* (Hart Publishing Oxford 2010) 101.

(11) The differing interests involved and regime development respecting the continental shelf and water column explains what appears to the uninitiated to be an illogical disconnect between coastal State rights over the continental shelf beyond 200 nm but exclusive national fisheries jurisdiction ending at the 200 nm limit.

The Continental Shelf

(12) *North Sea Continental Shelf (Federal Republic of Germany v Denmark; Federal Republic of Germany v The Netherlands)* (Judgment) [1969] ICJ Rep 3, 23 [19].

(13) O'Connell, n 3, Vol I, 482.

(14) *Delimitation of the Maritime Boundary in the Bay of Bengal (Bangladesh/Myanmar)* (Judgment) [2012] ITLOS Rep 4, [409] (hereinafter *Bangladesh/Myanmar Case*).

(15) *Territorial and Maritime Dispute (Nicaragua v Colombia)* (Judgment) [2012] ICJ Rep 624, 666 [118].

(16) CSC, n 9, Art 1.

(17) *North Sea Continental Shelf*, n 12, 2 [19], 31 [43]-[44], and 51 [95]-[96].

(18) *Bangladesh/Myanmar Case*, n 14, [415]-[417], [419], [424], and [426].

(19) *Ibid*, [420], [421], [425], and [427].

(20) *Ibid*, [432].

(21) *Ibid*, [433].

(22) *Ibid*, [435]. Judge Gao in his Separate Opinion strongly disagreed with the majority's view of natural prolongation. See *ibid*, [83]-[91] and, in particular, [87]:

Furthermore, in paragraph 435 of the Judgment, 'the Tribunal...finds it difficult to accept that natural prolongation referred to in article 76, paragraph 1, constitutes a separate and independent criterion a coastal State must satisfy in order to be entitled to a continental shelf beyond 200 nm.' And it goes on in paragraph 437 to conclude: 'Entitlement to a continental shelf beyond 200 nm should thus be determined by reference to the outer edge of the continental margin, to be ascertained in accordance with article 76, paragraph 4. To interpret otherwise is warranted neither by the text of article 76 nor by its object and purpose.' Not only are these bold interpretations of the relevant provisions of the Convention inaccurate in my view, but they are also stated more assertively than anything other courts and tribunals have said in previous cases.

(23) CSC, n 9, Art 3; LOSC, n 1, Art 78(1).

(24) See generally J Mossop, 'The Legal Framework for the Regulation of Safety and Environmental Issues on the Outer Continental Shelf' in MH Nordquist, JN Moore, A Chircop, and R Long (eds), *The Regulation of Continental Shelf Development: Rethinking International Standards* (Martinus Nijhoff Leiden 2013) 179; J Mossop, 'Protecting Marine Biodiversity on the Continental Shelf Beyond 200' (2007) 38 *Ocean Development and International Law* 283.

(25) CSC, n 9, Art 1; LOSC, n 1, Art 77(1).

The Continental Shelf

(26) CSC, n 9, Art 2(4); LOSC, n 1, Art 77(1) and (4).

(27) Mossop, 'Protecting Marine Biodiversity', n 24, 291-2.

(28) LOSC, n 1, Arts 80 and 60(1)(b).

(29) Ibid, Arts 80 and 60(2).

(30) Ibid, Art 60(4) and (5).

(31) Ibid, Art 60(6).

(32) Oceans Act, C 1996, c 31, §§ 20(1)(a) and 21 (Canada).

(33) See '*Arctic Sunrise*' Arbitration (*Netherlands v Russia*), Permanent Court of Arbitration, Case No 2014-02 (pending), available at <http://www.pca-cpa.org/showpage.asp?pag_id=1556> (hereinafter '*Arctic Sunrise*' Arbitration).

(34) '*Arctic Sunrise*' Case (*Netherlands v Russian Federation*), Provisional Measures Order of the International Tribunal for the Law of the Sea, Case No 22 (22 November 2013) [60]-[68].

(35) Ibid, Joint Separate Opinion of Judge Wolfrum and Judge Kelly, [11], and *ibid*, Dissenting Opinion of Judge Golitsyn, [25].

(36) Ibid, Joint Separate Opinion of Judge Wolfrum and Judge Kelly, [12]-[13].

(37) Ibid, Dissenting Opinion of Judge Golitsyn, [25].

(38) Ibid, Dissenting Opinion of Judge Golitsyn, [35]-[42]; *ibid*, Joint Separate Opinion of Judge Wolfrum and Judge Kelly, [12].

(39) See '*Arctic Sunrise*' Arbitration, n 33.

(40) LOSC, n 1, Arts 208(1) and 240; and see JA Roach, 'International Standards for Offshore Drilling' in Nordquist et al (eds), n 24, 106.

(41) LOSC, n 1, Art 208(5).

(42) S Vinogradov, 'The Impact of the Deepwater Horizon: The Evolving International Legal Regime for Offshore Accidental Pollution Prevention, Preparedness, and Response' (2013) 44 *Ocean Development and International Law* 335, 341.

(43) IMO Assembly Res A.649(16) of 19 October 1989, *Code for the Construction and Equipment of Mobile Offshore Drilling Units* (hereinafter MODU Code). See Vinogradov, n 42, 341; and Roach, n 40, 109-11.

(44) Roach, n 40, 121.

The Continental Shelf

(45) 1990 International Convention on Oil Pollution, Preparedness, Response and Co-operation.

(46) See generally, Vinogradov, n 42, 343–9.

(47) Arctic Council Agreement on Cooperation on Oil Pollution, Preparedness and Response in the Arctic (adopted 15 May 2013), available at <<http://www.arctic-council.org/eppr/agreement-on-cooperation-on-marine-oil-pollution-preparedness-and-response-in-the-arctic/>>.

(48) CSC, n 9, Art 4; LOSC, n 1, Art 79.

(49) LOSC, n 1, Art 79(3).

(50) Ibid, Art 79(2).

(51) T Davenport, 'Submarine Communications Cables and Law of the Sea: Problems in Law and Practice' (2012) 43 *Ocean Development and International Law* 201, 212.

(52) See generally BH Oxman, 'The Preparation of Article 1 of the Convention on the Continental Shelf' (1972) 3 *Journal of Maritime Law and Commerce* 245, 445–72, and 683–723; ED Brown, *The Legal Regime of Hydrospace* (Stevens and Sons London 1971) 1–40.

(53) *North Sea Continental Shelf*, n 12, 51 [95].

(54) See RY Jennings, 'The Limits of Continental Shelf Jurisdiction: Some Possible Implications of the North Sea Case Judgment' (1969) 18 *International and Comparative Law Quarterly* 819, 826–30.

(55) President Nixon, 'Statement—United States Policy for the Seabed' (23 May 1970), reprinted in SH Lay, R Churchill, and M Nordquist (eds), *New Directions in the Law of the Sea* (Oceana Publications Dobbs Ferry NY 1973) Vol II, 751–2 [4].

(56) See *Act to amend the Oil and Gas Production and Conservation Act*, C 1969–1970, c 43, § 3 (Canada). The Minister of Energy, Mines and Resources claimed that the 1970 legislation amendments:

...will have the effect of confirming Canada's assertion of rights to offshore mineral resources in areas extending far beyond either our territorial limits or the 200-metre water depth.

House of Commons, *Debates*, 9 March 1970, 4570 (JJ Greene, Minister of Energy, Mines and Natural Resources).

(57) LOSC, n 1, Arts 1(1), 133, and 136.

The Continental Shelf

(58) Ibid, Annex II, Commission on the Limits of the Continental Shelf (CLCS); and see the website of the CLCS at <http://www.un.org/depts/los/clcs_new/clcs_home.htm>.

(59) LOSC, n 1, Art 82.

(60) *Bangladesh/Myanmar Case*, n 14, [409].

(61) *R v Perry* (2003) 222 Newfoundland and Prince Edward Island Reports 313.

(62) 2004 Treaty between the Government of Australia and the Government of New Zealand Establishing Certain Exclusive Economic Zone Boundaries and Continental Shelf Boundaries. For an analysis, see N Fyfe and G French, 'Australia–New Zealand' in DA Colson and RW Smith (eds), *International Maritime Boundaries* (Martinus Nijhoff Leiden 2005) Vol V, 3759–77.

(63) Australia, Executive Summary of Submission, 15 November 2004, and New Zealand, Executive Summary of Submission, 19 April 2006, are available on the CLCS website, n 58.

(64) *Bangladesh/Myanmar Case*, n 14, [408].

(65) Ibid, [407].

(66) See generally TL McDorman, 'The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World' (2002) 17 *International Journal of Marine and Coastal Law* 301, 313–17.

(67) Johnston, n 7, 91.

(68) Professor HD Hedberg wrote about the foot of the slope-plus zone in numerous works. See HD Hedberg, *National-International Jurisdictional Boundary on the Ocean Floor* (Law of the Sea Institute Kingston, RI 1975) 19; HD Hedberg, 'The National-International Jurisdiction Boundary on the Ocean Floor' (1973) 1 *Ocean Management* 83; HD Hedberg, 'Limits of National Jurisdiction over Natural Resources of the Ocean Bottom' in LM Alexander (ed), *The Law of the Sea: National Policy Recommendations* (University of Rhode Island Kingston, RI 1970) 159; and HD Hedberg, 'Relation of Political Boundaries on the Ocean Floor to the Continental Margin' (1976) 17 *Virginia Journal of International Law* 57.

(69) FA Eustis III, 'Method and Basis of Seaward Delimitation of Continental Shelf Jurisdiction' (1976) 17 *Virginia Journal of International Law* 107, 125; and H Hedberg, 'Discussion' in E Miles and JK Gamble Jr (eds), *Law of the Sea: Conference Outcomes and Problems of Implementation* (Ballinger Publishing Co Cambridge, MA 1977) 215.

(70) Hedberg, 'Discussion', n 69, 215.

The Continental Shelf

(71) The Soviet proposal is discussed in BH Oxman, 'The Third United Nations Conference on the Law of the Sea: The Seventh Session (1978)' (1979) 73 *American Journal of International Law* 1, 19–21.

(72) LOSC, n 1, Art 76(4)(b) notes that:

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

(73) For example, if it is determined that the thickness of sedimentary rocks is 1 nm, then that point can be 100 nm seaward from the foot of the slope.

(74) The key point to note is that the 350 nm limit is not the only constraint line, as a result, a coastal State's continental margin can go well beyond 350 nm.

(75) LOSC, n 1, Art 76(6).

(76) *Ibid*, Annex II, Art 2(1).

(77) *Ibid*, Annex II, Art 2(1).

(78) *Ibid*, Art 2(5).

(79) PRR Gardiner, 'The Limits of the Area beyond National Jurisdiction—Some Problems with Particular References to the Role of the Commission on the Limits of the Continental Shelf' in G Blake (ed), *Maritime Boundaries and Ocean Resources* (Croom Helm London 1987) 69.

(80) See Section 4.3.3 below.

(81) O Jensen, 'The Commission on the Limits of the Continental Shelf: An Administrative, Scientific or Judicial Institution?' (2014) 45 *Ocean Development & International Law* 171.

(82) *Bangladesh/Myanmar Case*, n 14, [407]: 'It is clear from article 76, paragraph 8,... that the limits of the continental shelf beyond 200 nm can be established only by the coastal State.'

(83) *Ibid*, [407].

(84) CLCS, Doc CLCS/40/Rev.1, *Rules of Procedure of the Commission* (17 April 2008), available at the CLCS website, n 58.

(85) LOSC, n 1, Annex II, Art 4.

(86) Eleventh Meeting of the State Parties, *Decision regarding the date of commencement of the ten-year period for making submissions to the Commission on the Limits of the Continental Shelf set out in article 4 of Annex II to the United Nations Convention on the*

The Continental Shelf

Law of the Sea, Doc SPLOS/72 (29 May 2001), available at <<http://www.un.org/Depts/los/index.htm>>.

(87) Eighteenth Meeting of the States Parties, *Decision regarding the Workload of the Commission and the Ability of States to fulfil the Requirements of Article 4 of Annex II*, Doc SPLOS/183 (20 June 2008) [1], available at the Doalos website, n 86. See generally regarding the time limits and SPLOS decisions, AG Oude Elferink, 'Meeting of States Parties to the UN Law of the Sea Convention' (2008) 23 *International Journal of Marine and Coastal Law* 769.

(88) The executive summaries of the submissions referred to in this paragraph are available at the CLCS website, n 58.

(89) See Doalos, *The Law of the Sea: Definition of the Continental Shelf* (United Nations New York 1993) 6.

(90) See CLCS, *Issues related to the workload of the Commission on the Limits of the Continental Shelf* (2012), available at the CLCS website, n 58.

(91) See generally International Seabed Authority, *ISA Technical Study No 12: Implementation of Article 82 of the United Nations Convention on the Law of the Sea: Report of an International Workshop convened 26–30 November 2012* (International Seabed Authority Kingston, RI 2013).

(92) See United States Bureau of Ocean Energy Management, *Leasing Activities Information: Lease Stipulations, Consolidated Central Gulf of Mexico Planning Area, Oil and Gas Lease Sale 216/222, Final Notice of Sale* (2012) Stipulation 7, available at <<http://www.boem.gov/Oil-and-Gas-Energy-Program/Leasing/Regional-Leasing/Gulf-of-Mexico-Region/Lease-Sales/216-222/fstips222-pdf.aspx>>; and Canada—Newfoundland and Labrador Offshore Petroleum Board, *Call for Bids, N. NL13-01 (Area 'C'—Flemish Pass), Exploration Licence in the Newfoundland and Labrador Offshore Area*, § 3.1 [3], available at <<http://www.cnlopb.ca/pdfs/nl1301.pdf>>.

(93) 1969 Vienna Convention on the Law of the Treaties, Arts 31–32.

(94) *Continental Shelf (Libyan Arab Jamahiriya/Malta)* [1985] ICJ Rep 13, 33 [34] (hereinafter *Libya/Malta*).

(95) LOSC, n 1, Arts 56(1) and (3) and 68.

(96) See eg *Maritime Dispute (Peru v Chile)*, Judgment of the International Court of Justice, General List No 137 (27 January 2014) [198].

(97) See eg 2000 Agreement between China and Viet Nam on the Delimitation of the Territorial Seas, the Exclusive Economic Zones and Continental Shelves in Beibu Bay/Bac Bo Gulf (hereinafter 2000 China-Viet Nam Agreement).

The Continental Shelf

(98) *Libya/Malta*, n 94, 33–4 [33]–[34].

(99) See eg 1997 Treaty between Australia and Indonesia establishing an Exclusive Economic Zone Boundary and Certain Seabed Boundaries. For discussion, see M Herriman and M Tsamneyi, 'The 1997 Australia—Indonesia Maritime Boundary Treaty: A Secure Legal Regime for Offshore Resource Development?' (1998) 29 *Ocean Development and International Law* 361.

(100) *Bangladesh/Myanmar Case*, n 14, [361].

(101) *Ibid*, [474] and [473].

(102) *Ibid*, [475].

(103) See Mossop, 'Protecting Marine Biodiversity', n 24, 295–6.

Ted McDorman

University of Victoria

