Recent Developments Concerning the Exploration and Exploitation of the Ocean Floor

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I. Introduction

It is truly remarkable that after using the seas for centuries man is still today without any answers to some of the basic problems to which this ever-increasing use gives rise. Apart from certain basic freedoms which are themselves of relatively recent origin, the seas and the bed of the seas were the subject of very little concern on the part of the international community, until the present century. The resources of the seas were for a long time thought to be inexhaustible and as long as nations were free to roam the oceans and to harvest their resources, no one showed too much interest in developing a more detailed body of laws for what constitutes, notwithstanding, 71 per cent of the earth's surface.

This basic lack of interest, however, has slowly been replaced over the last century by a deep concern over the immense value to man of these vast expanses. There have been two fundamental factors contributing to this concern. First, it was recognized at the turn of the century that certain pelagic resources were rapidly diminishing and that cooperative efforts would have to be undertaken if they were not disappear altogether. The *Fur Seals Treaty* of 1911[1] between Canada, Japan, the United States and Russia was the earliest example of an international convention for the conservation of a single resource. The realization that the resources of the sea were not inexhaustible led to increased national and international efforts in the fields of research, management and conser-

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[1] *Treaties and Agreements Affecting Canada in force between His Majesty and the United States of America, 1814-1925*, (Ottawa, 1927), p. 391.

vation. Canada, for one, is now a party to some twelve international conventions for the preservation of fisheries resources and it is expected that during the next few years an even larger number of such conservation rules or regimes will be established. The second important factor has been the remarkable progress accomplished in the technological field. Thanks to the amazing discoveries of science and its numerous applications to the oceans, the marine environment is beginning to reveal its secrets and man is exploring the sea-floor at ever increasing depths.

It is therefore not surprising to see that international jurists and the international community as a whole are devoting more and more attention to attempting to develop rules which will permit the orderly exploration and exploitation of these resources and their conservation, while preserving the traditional freedoms of the high seas which to this day remain essential to the peace and stability of the world.

My purpose is not, however, to examine all these related matters. Although the eventual exploitation of deep sea resources will clearly have an effect on the resources of the superjacent waters, my remarks will be limited for the most part to the question of jurisdiction over the resources of the sea-bed and particularly its mineral resources. I shall also restrict my comments to problems of international scope, thus avoiding the controversial question of what has been called the "off-shore mineral rights dispute" between the federal and provincial governments of this country. The rights that accrue to a country in the eyes of international law are to be enjoyed within that country in the manner provided for by its constitution.

The first question I intend to examine is the following: What is the present status of international law with regard to the rights of states to exploit the resources of the sea-bed? Depending on the answer to that first question, we should then be in a position to consider alternative regimes and prospects for the future.

II. The Law

A. *Article I, the 1958 Geneva,* CONVENTION ON THE CONTINENTAL SHELF [2]

Until 1958, there was very little law on which to base an argument in favour of or against the occupation, or a modified version of that concept, of the bed of the sea. True, there existed a few examples of traditional activities on the sea bottom and beneath

[2] U.N. Doc. A/Conf. 13/38, A/Conf. 13/L. 55, April 28, 1958.

it as well. Pearl oysters, chanks, coral and sponges had been exploited for a long time and undersea mining from the shore was also well known. Authors made reference to the traditional concepts of *res nullius* and *res communis* in connection with the high seas and concluded that the sea-bed and the ocean floor and the subsoil thereof were, or were not, susceptible of occupation. Those who considered it *res nullius* (the property of nobody) thought of the seabed under the high seas as, in principle, subject to national sovereignty or appropriation. Those who regarded the sea-bed as *res communis* (the property of everyone) thought the opposite. Fauchille,[3] Westlake [4] and Hurst [5] considered that occupation was not inconsistent with the universal right to navigate and to fish the high seas but Gidel [6] and Colombos [7] adopted the contrary view.

In 1945, the now famous Truman Declaration started a trend in state practice which later resulted in the adoption of the only relevant international convention, the 1958 Geneva *Convention on the Continental Shelf*. There are other rules in existence, national laws and bilateral or multilateral conventions, which have a bearing on the subject and to which I shall return briefly later, but the Geneva *Convention* is, to a large extent, the embodiment of present customary international law in this field. What that convention lays down and whether or not it is satisfactory is what I shall discuss.

The Geneva *Convention on the Continental Shelf*, which, having been ratified by close to 40 states, is now in force, recognizes that coastal states may exercise certain rights in respect of the resources of their continental shelves. But the definition of the continental shelf must be clearly examined. Article 1 of the *Convention* reads:

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

This definition has four main elements.

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[3] Paul Fauchille, *Traité de droit international public*, t. I, 2e partie, (Paris, 1925), No. 494, p. 204 *et seq.*

[4] John Westlake, *International Law*, Part I, (Cambridge, 1910), p. 188.

[5] Sir Cecil J. B. Hurst, *Whose is the Bed of the Sea?*, (1923-24), 4 Brit. Y. B. Int. L. 34, at p. 43.

[6] Gilbert Gidel, *Le Droit international public de la mer*, t. 3, (Paris, 1934), p. 331.

[7] John Colombos, *The International Law of the Sea*, 6th rev. ed., (London, 1967), p. 67.

First, the continental shelf is made of the seabed and its subsoil. The superjacent waters are not included. Second, the continental shelf is adjacent to the coast. Third, the shelf begins where the territorial sea ends. Fourth, it is limited to a depth of 200 meters or by the so-called "exploitability test".

The first difficulty is with the idea of adjacency. This is a crucial concept. But what is meant by "adjacent"? To quote only one definition, that of the concise Oxford Dictionary, "adjacent" means "lying near, contiguous to". On the Pacific or Atlantic coasts, what is near and contiguous? 10 miles? 100 miles? or more?

A second problem is raised by the inner limit of the shelf being fixed in relation to the breadth of the territorial sea. It is well known that the *Convention on the Territorial Sea and the Contiguous Zone*,[8] also adopted by the Geneva Conference of 1958, is silent on the extent of the territorial sea, agreement having proved impossible at the time and again in 1960. As matters now stand this means that the shelf begins at 3 miles for Canada and the United States, at 12 miles for the USSR and at 200 miles for El Salvador.

A third problem — and the most serious difficulty — is found in the double criterion used for the outer limits of the shelf; 200 meters in depth or as deep as a country can actually exploit the resources. While the inner limit is based on a horizontal concept, that of distance from the shore, the outer limit is a vertical one, that of depth. It was thought by the International Law Commission, as indicated in its report in 1953,[9] that the 200 meter figure represented a sort of general or world average for the depth at which the break between shelf and slope normally occurred. Now it appears that the world average is somewhat less than this. However, the shelf can extend well beyond the 200 meter depth line — as in the case of Canada. Moreover, it appears that the drafters of the *Convention* thought that, for a long time to come, it would not be possible to exploit areas beyond 200 meters. But actual exploitation of petroleum resources has already taken place at depths of 120 meters, serious evaluation drilling at 400 meters (off the coast of California) and it appears to be only a question of time and effort before much greater depths are reached.

If a depth of 200 meters is not a practical concept, then what of the exploitability test, the second criterion that was proposed by the International Law Commission in its final draft articles [10] and

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[8] U.N. Doc. A/Conf. 13/38, A/Conf. 13/L. 52, April 28, 1958.

[9] U.N. Doc. A/CN 4/60, at pp. 122-24.

[10] U.N. Doc., Official Records of the General Assembly: Eleventh Session, Supplement No. 9 (A/3159), article 67, at pp. 41-42.

included, side by side with the 200 meter test, in the *Convention*? Does this mean that states will continue to extend their jurisdiction deeper and further out to sea as technological progress is realized? It would seem that there is no other possible conclusion, if one considers "adjacency" to be a very questionable limitation and one that can but be a source of conflicts.

It may be surmised that the delegations at the United Nations Conference on the Law of the Sea in 1958 considered that the rules they were establishing were related only to the geological shelf itself and that they were not laying down rules for the exploitation of the deep ocean floor beyond the limits of the shelf or beyond equivalent limits of the sea-bed where there is no geological shelf, as in the Persian Gulf or off the coasts of parts of Latin America. But the exploitability principle set out in the *Convention* has led some authors to conclude — I quote the Japanese author, Professor Oda [11] — that

> (T)he exploitation of submarine resources at any point must always be reserved to the coastal state which is empowered to claim the area when the depth of the super-adjacent waters admits of exploitation. It can be inferred that, under this *Convention*, all the submarine areas of the world have been theoretically divided among the coastal states at the deepest trenches. This is the logical conclusion to be drawn from the provisions approved at the Geneva Conference.[12]

I should point out, however, that other scholars hold the opposite views. Professor Henkin has written that "No government, I believe, would dare propose this as the interpretation of the *Convention;* if one did, the other nations would reject it." In support of his view it may be noted that the *Report of the ad hoc Committe on the Seabed,*[13] which met in 1968, states quite categorically that:

> It was generally agreed that there is an area of the sea-bed and ocean floor which is not subject to national jurisdiction and that this fact, which seemed obvious, needed emphasizing because of the broad interpretation of which article 1 of the *Convention on the Continental Shelf* was susceptible. It was pointed out that none of the members in the Working Group had suggested that either international law or article 1 of the *Continental Shelf Convention* authorizes the extension of limits for an indefinite distance into the deep ocean floor and this was considered possibly a valuable finding.[14]

In analyzing the factors underlying these difficulties in determining the limits of national jurisdiction, it should be recognized that the *Convention* laid down a legal definition which, in fact, took very little account of the geographical-geophysical realities of the

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[11] Shigeru Oda, *International Control of Sea Resources,* (Leyden, 1963).

[12] *Ibid.,* at p. 150.

[13] *Report of the* ad hoc *Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean beyond the Limits of National Jurisdiction,* U.N. Doc. A/7230.

[14] *Ibid.,* at p. 48, para. 40.

oceanic submerged areas. The Economic and Technical Working Group of the United Nations ad hoc Committee on the Peaceful Uses of the Seabed and Ocean Floor [15] — a Committe which was established by the United Nations General Assembly in 1967 — arrived at a number of definitions of a strictly geological and topographic character which point to the deficiencies of the legal definition of the *Convention*. The following are a few examples:

a) *Continental Shelf*: The area of the ocean floor between the mean low water line and that change in the inclination of the floor, from about one-eighth of one degree to more than three degrees, that marks the beginning of the continental slope which occurs at various depths, usually between 130 and 200 meters, but exceptionally as shallow as 50 meters or as deep as 500 meters. The width of the shelf ranges from less than one mile up to 800 miles. When the increase in slope is very gradual, the point of maximum rate of change of slope is considered to be the edge of the shelf.[16]

b) *Continental Slope*: The area of the ocean floor extending from the outer edge of the continental shelf to the abyssal ocean floor, usually from 10 to 20 miles wide. The inclination of the slope varies widely from as little as three degrees to over forty-five degrees. Geologically it marks the rather abrupt transition from continental or sialic crust to oceanic or simatic crust.[17]

c) *Continental Rise*: Apron of clastic sediments, wherever deep sea trenches are absent, that slopes gently oceanward from the base of the continental slope, usually in 2,000 to 5,000 meters of water.[18]

When these are taken together with the definitions of the abyssal depths, sea-mounts, banks and mid-ocean ridges, it can clearly be seen that, on the one hand, there exists a submerged region of the earth's crust which is a sort of natural underwater extension of the continents (shelf and slope and part of the rise) and, on the other, a second submerged region which is very different from continental formations. The first has been called "continental margin" and the second "oceanic basin". What I have just described in lay terms has thus been defined in more technical terms.

Continental margin: That region of the earth's crust where the continental sialic rocks are covered by the sea.[19]

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[15] *Supra*, n. 13, at p. 21 *et seq.*
[16] *Ibid.*, at p. 22.
[17] *Id.*
[18] *Id.*
[19] *Ibid.*, at p. 23.

Oceanic basin: That region of the earth's crust covered by water where the sialic rocks are thin or completely absent and underlain by simatic rocks.[20]

It was the Canadian contention in the United Nations General Assembly debates in 1967 that the rules or criterion used to limit coastal jurisdiction should be based, at least in part, on these fundamental concepts. It seems to us that the geographic reality of the continental margin provides a helpful basis upon which to clarify existing international law and develop a firm criterion — although not necessarily an exclusive one — for determining the limits of national jurisdiction over the continental shelf. I should point out that even prior to the First United Nations Conference on the Law of the Sea in 1958, the Canadian view, as expressed in an official publication, was that:

> (P)recision would not be forfeit... if the boundary of the shelf were its actual edge. Where the actual edge might be ill-defined or where there is no shelf in a geographical sense, the boundary might be set at such a depth as might satisfy foreseeable practical prospects of exploitation of the natural resources of the sea-bed adjacent to a particular state.[21]

B. *Other Articles of the* CONVENTION

Bearing in mind this analysis of article 1, a further insight into the underlying principles of the *Convention* can be gained from articles 2, 3, 4, 5 and 7 of the *Convention*. This will assist us in determining the precise nature of the rights enjoyed by coastal states over the rather imprecise area I have just described.

Article 2 states that "the coastal state exercises over the continental shelf sovereign rights" and not sovereignty, "for the purpose of exploring it and exploiting its natural resources" and, these are my words, for no other purpose. If one continues the reading of these articles, it will be seen that these "sovereign rights" are exclusive, in the sense that no other state may undertake these activities without the express consent of the coastal state; that these rights do not depend on occupation or any express proclamation; that the rights to be enjoyed do not affect the legal status of the superjacent waters as high seas or that of the airspace above these waters; that the enjoyment of these rights may not impede the laying or maintenance of submarine cables or pipelines on the shelf; and finally that exploitation must not result in any unjustifiable interference with navigation, fishing, conservation of the living

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[20] *Id.*

[21] (1958), 10 External Affairs 21, rep. in Castel, *International Law*, (Toronto, 1965), at p. 362.

resources even though installations, safety zones and other devices are permitted in order to allow proper exploration and exploitation.

What would seem to emerge from this list of rights is that they are limited in nature and that they are not to interfere with any right previously enjoyed by other states, whether over the waters themselves or on the very bottom, as in the case of pipelines and cables.

One of the major difficulties encountered in interpreting the *Convention* has been the determination of the precise nature of the rights which are said to be sovereign and exclusive but are not equivalent to what traditionally arose from effective occupation, that is, ownership. There have been differences of view over the interpretation to be given to those types of living organisms belonging to sedentary species which are considered to be, for the purpose of exploitation, a part of the continental shelf. It has also been argued — although the argument is strained — that one of the possible effects of the concept of limited sovereign rights is that jurisdiction over the shelf does not extend to the freedom to install structures or devices which are unrelated to the "exploration and exploitation of the natural resources" of the shelf, for example, military installations. But it is already well known that continental shelves are being used for that purpose, even though the nature and extent of these activities are well-guarded secrets. It can easily be seen that states are not likely to ignore their security requirements simply because the *Convention* is silent or unclear on the subject.

The exploitation of the resources of the sea-bed gives rise to another difficulty. There is bound to be a very large increase of activities on the shelf in the next few decades. Unless the law is made clearer, there is a danger that the economic benefits derived from the shelf resources will be of such a scope as to contribute substantially to the erosion of the legal basis for the free use of the high seas. When oil platforms are so numerous in one area as to impede normal navigation and fishing, the tendency may very well be to reroute ships and displace fishermen. In the Gulf of Mexico, ways and means have so far been found to develop conflicting activities in harmony. But the question is: Will this be possible or economically feasible everywhere? Is it too pessimistic a view to forecast that sooner or later coastal states which at present enjoy only limited sovereign rights over their continental shelves may end up, through some sort of prescriptive use, by claiming not only the ownership of the sea-bed and subsoil but full sovereignty over the superjacent waters as well, as is now the case for the territorial sea? Already, a number of Latin American States have adopted this

position. In view of such developments in state practice, it is somewhat paradoxical to note that those provisions of the *Convention* — they are found in Article 5 — which allow the coastal state to erect "safety zones" around the installations and devices used for exploring or exploiting the continental shelf, do not appear to be adequate, from the legal standpoint, to allow coastal states to exercise that degree of jurisdiction and control in the area which is necessary to protect their sovereign rights over exploitation of the resources of the shelf.

In surveying the underlying principles of the Geneva *Convention*, reference must also be made to article 6 which provides for the delimitation of the continental shelf as between two states whose coasts are adjacent to or opposite each other. These rules are important not only from a bilateral point of view, for example, as between Canada and France and Canada and the United States, but also because they represent the only firm limitation to coastal states' jurisdiction.

Article 6 provides that in the absence of agreement and unless another boundary is justified by special circumstances, the boundary between the shelves opposite or adjacent to two states is to be determined by application of the principle of the median or equidistance line. If, therefore, the exploitability test of Article 1 is not sufficient to limit the jurisdiction of the coastal state, eventually it is the equidistance line drawn somewhere in the midst of the ocean which so limits that jurisdiction. Charts have been published showing the result of such a concept. Such a division of the oceans would not only be inequitable; it would certainly also give rise to a new type of territorial conflict as well as to a colonialistic race to capture new resources in distant regions.

In brief, Article 6 is a confusing and, it is submitted, poorly drafted article which is already the subject of an international dispute before the International Court of Justice.[22] I will discuss some of the difficulties arising from this article when I later turn to bilateral issues relating to the sea-bed which concern Canada.

The conclusion can be drawn from this discussion that the Geneva *Convention on the Continental Shelf* is not fully satisfactory. It is, however, the best that could be developed by legal experts working in the International Law Commission, who were severely handicapped by a lack of international practice to guide them and by the limited

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[22] *North Sea Continental Shelf Dispute*, two disputes involving Danemark and the Federal Republic of Germany on the one hand and the Netherlands and the Federal Republic of Germany, on the other; see *infra*, p. 277.

state of technical information available to them. The *Convention* remains the only international instrument applicable on a world-wide scale. There is no question but that, weaknesses notwithstanding, it embodies a large number of essential rules which, in any event, will have to remain an integral part of whatever new law is developed. For reasons which I will discuss later, it is most difficult to offer workable alternatives and the *Convention* must be regarded as a remarkable achievement even if it turns out to be regarded, some years hence, as only a good first try.

C. Related Legal Aspects

Throughout the previous discussion of the Geneva *Convention,* I have referred to a number of legal rights or rules, traditional or otherwise, which have an important bearing on the question of jurisdiction over sea-bed resources. Before discussing present trends, I wish to give a brief enumeration of these rules because it would be futile to elaborate new constructions without having these in mind.

There are first of all the traditional freedoms of the high seas:

1) freedom of navigation;
2) freedom of fishing;
3) freedom to lay submarine cables and pipelines; and
4) freedom to fly over the high seas.

Another freedom which has perhaps a lesser status, is the freedom to undertake scientific research on the high seas.

After enumerating the four freedoms mentioned previously, Article 2 of the 1958 Geneva *Convention on the High Seas* [23] provides an additional rule:

> These freedoms, and others which are recognized by the general principles of international law, shall be exercized by all states with reasonable regard to the interests of other states in their exercize of the freedom of the high seas.

This is a most important concept to retain and apply.

There is also the question of the prevention of pollution and other hazardous and harmful effects from any activity on the high seas. At the current session of the General Assembly, the Icelandic Government, along with Canada and a number of other states, has proposed that immediate steps be taken by the United Nations to study and deal with the threat to the marine environment and its living resources as a result of the exploration and exploitation of the sea-bed.

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[23] U.N. Doc. A/Conf. 131/53 and Corr. 1.

A more political aspect but one with important legal consequences is that of the use of the sea-bed and ocean floor for peaceful purposes only. This of course refers to disarmament and arms control measures. One of the main problems to be faced here is how far the Great Powers are willing to go in setting limitations on the military uses of the sea-bed which are not imposed on the super-adjacent high seas. It is likely that the answer to this question will only be known after patient negotiations in the Eighteen-Nation Disarmament Conference in Geneva.

There is also the concept embodied in Article 6 of the 1958 *Fisheries Convention*[24] which recognizes that: "A coastal state has a special interest in the maintenance of the productivity of the living resources in any area of the high seas adjacent to its territorial sea". This special interest should also be recognized in respect of all resources and all activities in areas adjacent to a state's coasts. Fish do not respect territorial sea limits, nor do mineral veins or oil pools. From a security point of view, this special interest should be even more evident. In fact, the concepts underlying the *Convention on the Continental Shelf*, and in particular the concepts of adjacency, seem to be rooted in the notion of the special interests of the coastal state.

III. Alternative Regimes

There would now appear to be two more or less immediate requirements. In the first instance, the character of the definition of the continental shelf in the 1958 *Convention* has led the majority of writers and many states to call for a new definition of the limits of national jurisdiction. Second, once a new limit is established, the general feeling is that the time will have come to establish beyond those limits a new legal system, new legal rules which would establish that the resources of the deep ocean floor about to be made available to mankind through the rapid progress of technology can be developed and used for the benefit of mankind as a whole.

These two requirements are the conclusions which have been tentatively reached by a large number of countries after consideration of all theoretical alternatives. I shall attempt to review these alternatives in summarized fashion:

1) it would be theoretically possible to achieve a division of the sea-bed and ocean floor by agreement amongst all nations, coastal or landlocked. The difficulties of such a course of action should be obvious. It is simply not believed possible that such a consensus

[24] U.N. Doc. A/Conf. 13/38, A/Conf. 13/L. 54, April 28, 1958.

could be reached because of the innumerable technical problems which would arise and because of the political conflicts which would automatically come to the surface.

2) coastal states could extend their jurisdiction over the subsoil underlying the oceans as far as technology progressively permits in accordance with the 1958 *Convention* up to the median line. As I have already indicated, it is the view of many that this is precisely the regime which the *Convention* creates. There seems little doubt that the result would be confrontations in the middle of the oceans leading to major sources of conflicts. Such a division of the oceans among coastal states would also result in excessively large portions of the sea-bed accruing to a single country, Portugal being an obvious example in the Atlantic; and the United States another in the Pacific, where their possession of certain tiny islands would influence the drawing of the median line in a very inequitable manner.

3) a further theoretical possibility would be to consider that beyond defined limits of national jurisdiction the sea-bed and ocean floor are *res nullius* and susceptible of occupation. This would obviously favour the technically-developed countries to the detriment of the less-developed ones. A new era of colonization, this time at the bottom of the sea, is practically unthinkable in political terms today.

4) a fourth theoretical possibility is to consider that beyond defined limits of national jurisdiction, governing principles should be adopted comparable to those contained in the two principal instruments dealing with outer space. One is called: "Declaration of Legal principles governing the activities of states in the exploration and use of outer space". The other is: "The treaty of principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies". Such an approach would involve freedom of exploration, scientific investigation and exploitation, subject to certain general rules but without national appropriation by claims of sovereignty, by use, occupation or other means. Suffice it to say that some of the principles used for outer space might with certain advantage be retained. There are also similar concepts embodied in the treaty on Antarctica. However, it would seem to me that the very proximity of the oceans, as opposed to that of celestial bodies, calls for the elaboration of a more complex and detailed set of rules. Man is more likely to progress faster on this planet than he will on others.

5) finally, some form of international control is possible, and perhaps this is the most attractive theory. It is certainly the one which has been most widely discussed and which might well come

in time to be adopted. It is of course susceptible of innumerable variations; but more on that later.

IV. Present Situation and Prospects for the Future

The problem of jurisdiction over sea-bed resources has been the subject of numerous meetings of international jurists and technicians over the last two or three years and has been treated in a very large number of publications, notably in the United States. The contributions of these groups and of these individuals have been exceedingly helpful to those of us who are entrusted with the task of advising our respective governments on these issues. The most important development to take place in the course of the last year, however, was undoubtedly the introduction by the Delegation of Malta, of an item on the agenda of the 1967 General Assembly (XXII) calling for the "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interest of mankind". This resulted in a Resolution by the General Assembly in December 1967 establishing an *ad hoc* committee of 35 members, including Canada, for the purpose of preparing a study which would include (and it will be noted that this was a relatively limited mandate) : [25]

a) *a survey* of the past and present activities of the United Nations, the specialized agencies, the International Atomic Energy Agency and other intergovernmental bodies with regard to the sea-bed and the ocean floor, and of existing international agreements concerning these areas;

b) *an account* of the scientific, technical, economic, legal and other aspects of this item; and

c) *an indication* regarding practical means to promote international cooperation in the exploration, conservation and use of the sea-bed and the ocean floor, and the subsoil thereof, as contemplated in the title of the item, and of their resources.

The *ad hoc* committe was not asked to make recommendations: it was simply to make a survey of existing activities and agreements, to provide an account of all aspects of the problem and to give an indication regarding practical means to promote international cooperation in this field. Given these limitations, it can be said with certainty that the *ad hoc* committee, whose life has expired with

[25] Resolution 2340 (XXII) of December 18, 1967.

the submission of its report, has worked well and has accomplished an extremely important task in spite of the difficulties it had to face. The report of the Technical and Economic Working Group of the Committee [26] was perhaps its most notable achievement. It gives a sober view of the geographical and economic realities of the present situation and of the state of man's knowledge of the oceans and its floor, and lawyers and politicians would be well advised to digest its contents. The report of the Legal Working Group [27] was, as expected, the most difficult to prepare. There are in point of fact very few principles in that report which were endorsed by all members. It is mostly a summary of the views held by the 35 members on all legal aspects of the problem. This is certainly not surprising when one considers that the adoption of any legal rule at this time might have irretrievably tied the hands of those supporting it. Canada, for one, was not prepared to go beyond the enunciation of certain general principles which are by themselves, as I will indicate later, of a far-reaching nature. The report of the *ad hoc* committee itself is also a compendium of views and it includes very little in the form of a consensus.

The First Committee of the General Assembly is at present studying this report and considering ways and means to pursue the task undertaken by the *ad hoc* committee. A resolution has already been introduced, and Canada is a co-sponsor, calling for the establishment of a new permanent committee with a somewhat modified mandate.

What are the main outstanding problems to be faced at this juncture? What are the basic issues facing the international community?

Perhaps the most pressing one is the re-definition of those areas which are to remain under national jurisdiction, a matter now covered by the Geneva *Convention*. Many new definitions have been proposed, starting with the depth criterion, 200 meters, 550 meters which certain authors claim to be closer to the geographical nature of the continental shelf, 1,000 meters, etc... Others have suggested a formula based on distance from the shore: this would probably please the eight Latin American countries now claiming 200 miles. Others yet have proposed a mixed depth-distance formula, for instance, 200 meters and/or 50 miles whichever is more beneficial to the coastal state.

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[26] *Supra*, n. 15.

[27] *Supra*, n. 13, at p. 42.

The difficulty with these definitions is that they are not susceptible of universal application. While any one formula might be considered as satisfactory for a particular state or group of states, other states could not possibly rest satisfied with them. So far as Canada is concerned, a cursory look at the Canadian shelf, and I am referring here to the geological-geographical entity, gives a clear indication of the scope of the problem. The Grand Banks of Newfoundland, which are undoubtedly continental shelf and slope, extend for 300 miles and far exceed the depths envisaged. In many places, the foot of the slope would be found at around 3,500 meters. If one considers that the Flemish Cap is but a natural appendix of our shelf, the distance becomes 400 miles. Is Canada to accept a severe reduction of her continental margin and simply ignore the advantages which nature has bestowed upon her? Our continental margin has been roughly estimated to be equal in extent to 40 per cent of our land territory. We could probably afford to be generous but the question is how generous and by virtue of what criterion. Obviously the future economic progress of Canada is involved and so may be other interests such as security and fishing.

The Canadian delegation on the *ad hoc* committee has nevertheless taken the position that, irrespective of what may be permissible under existing customary international law — and, as I said before, it has been argued that, under existing international law, a coastal state can legally extend its jurisdiction as far as it can exploit subject only to the median line — the limits of national jurisdiction need to be clarified and related to more precise and firmer legal criteria. Canada is not about to claim the large chunk of ocean floor beyond the geographical shelf. However, although we have done some preliminary studies of the Canadian shelf, we are not yet in a position to lay down any rule as we do not yet know, at least in any precise way, what the over-all picture may be and what type of criteria would meet the widely different geographical circumstances of the rest of the world.

A second most important decision to reach is related to the legal regime which will prevail beyond the new limits of national jurisdiction, once these are established. Here again many theories have been advanced. I have already indicated that the one which at present seems to be the most attractive to many states, particularly the smaller ones, is the idea of international control. But such control poses both qualitative and quantitative problems. How detailed should such a new system be? Should it attempt to cover all exploration and exploitation activities in their minutest details, in a way similar to existing national legislation? Or should it just lay down some general

rules of the road? It could also be simple registration machinery whereby the states undertaking activities on the sea-bed would simply be required to notify some international agency of their intentions and generally keep the world community informed. Or again it could imply the establishment of a new international agency with adequate powers to lease areas of the sea-bed, control all activities therein, collect fees, royalties and other revenues and hold a percentage of these for the developing countries. Could it also arbitrate as between the competing states?

It is much too early for anyone to take a definitive stand on these theoretical questions. The few "draft treaties" we have been able to study are far too idealistic and too far removed from the political, technological and economic facts of life to be more than interesting and perhaps useful background documentation. One should not forget that any new system, if it is to prove beneficial to mankind as a whole, will have to be a practical, workable proposition not only from the point of view of world politics but also from that of the private entrepreneurs who will undertake such activities on behalf of states. The huge amounts of capital expenditures required for the development of the presumably vast resources of the ocean floor will in all likelihood continue to originate with private industry. Without an adequate guarantee of a reasonable return, these funds will be diverted to other more profitable undertakings. I am not saying that the new regime should be fitted to all of the requirements of the mining and petroleum industries; I am only saying that they are the ones who will do the work and the new regime has to take this into account.

The basic problem is, therefore, to reconcile the more idealistic, humanitarian outlook of some, with the more pragmatic, mercantile approach of others. One cannot legislate in a vacuum.

At the last session of the *ad hoc* committee in Rio de Janeiro, a measure of consensus was reached on a series of principles which might serve as useful guidelines pending the elaborations of the new rules I have discussed. This list reads as follows:

1) There is an area of the sea-bed and ocean floor and the subsoil thereof, underlying the high seas, which lies beyond the limits of national jurisdiction (hereinafter described as "this area");

2) Taking into account relevant dispositions of international law, there should be agreement on a precise boundary for this area;

3) There should be agreement, as soon as practicable, on an international regime governing the exploitation of resources of this area;

4) No state may claim or exercise sovereign rights over any part of this area, and no part of it is subject to national appropriation by claim of sovereignty, by use or occupation, or by any other means;

5) Exploration and use of this area shall be carried on for the benefit and in the interests of all mankind, taking into account the special needs of the developing countries;

6) This area shall be reserved exclusively for peaceful purposes;

7) Activities in this area shall be conducted in accordance with international law, including the *Charter of the United Nations.* Activities in this area shall not infringe upon the freedoms of the *high..seas.*[28]

These few principles constitute in the Canadian Government's view a sound basis for the future development of international law in this context. It is interesting to observe, however, that neither these rules nor any other guiding principles seem likely to be approved at the current session of the General Assembly. A variety of draft resolutions containing guidelines were tabled, particularly by the Latin-American countries. There were also several proposals, submitted by Liberia, Malta, Cyprus, Tanzania and others, for a "freeze" in making claims beyond the limits of sea-bed jurisdiction as well as proposals of Kuwait, Venezuela and others for a study of the creation of new international machinery for the exploration and exploitation of the sea-bed. As at the present time none of these propositions have been adopted nor do they seem likely to be voted upon. The major difficulty is that, on the one hand, many coastal states are anxious to assert their interest in the matter by tabling formal proposals, often of a vague or conflicting character, and, on the other hand, many of the larger states are just not ready to take a position on these or any other concepts at the present time and until more is known about the whole problem and major international efforts made to investigate or clarify the various possibilities. Moreover, lurking in the wings of the halls where the discussions take place is the shadow of supranationalism, a shadow to which the Soviet Union and its supporters call attention and which obviously makes them uneasy and anxious to proceed very cautiously.

There are naturally other important issues which will have to be considered by the international community in the not too distant future. One cannot set up a new rule of law for the sea-bed and ocean floor without giving due consideration to its effects on the high seas in matters such as navigation, fishing, pollution, etc. There

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[28] *Supra,* n. 13, at p. 19.

is also the secondary problem of the coordination of all research and study in this field. This involves the participation of the Fisheries Committees of FAO, WMO, the Intregovernmental Oceanographic Commission of UNESCO, the IAEA and others as well. There is no doubt that the United Nations is making a major start in this direction. The Icelandic proposal on conservation and pollution and the United States' proposal of a Decade of Ocean Development will, if adopted, constitute important developments in the direction of a greater coordination of international efforts to preserve man's ocean environment and its living resources.

V. Bilateral Problems

Before I conclude, I would like to draw your attention to a series of bilateral questions which have some bearing on the development of international law, but are more particularly of direct concern to Canada and to the United States as well.

There is now before the International Court of Justice in The Hague a case involving the demarcation of national limits of jurisdiction over a part of the North Sea Continental Shelf between the Federal Republic of Germany on the one hand and Denmark and The Netherlands on the other. The question that has been asked of the Court is: What is the applicable law?

This involves basically an interpretation of Article 6 of the Geneva *Convention on the Continental Shelf*. Germany has been arguing, first, that the line of equidistance was not a general rule of international law and that any delimitation should be based on equity. Lately, the Germans have added that in any event there exist "special circumstances" in the case at hand, and that a boundary line other than one based on the equidistance line is justified. The Dutch and the Danes have been relying mostly on the line of equidistance.

The importance of the impending decision of the Court for Canada can be seen in the fact that Canada is already engaged in negotiations with France in respect of the delimitation of the respective national jurisdictions over the continental shelf adjacent to the Islands of St. Pierre and Miquelon and that negotiations should soon be initiated with the United States in respect of those off-shore areas where our jurisdictions meet. Although I am not at liberty to discuss the substance of these negotiations, it is possible that the Court's decision will have an impact on them, irrespective of the fact that Canada has not yet ratified the 1958 *Convention*. If Canada is any example, it would seem that the ap-

plication of the principles involved in the *Convention on the Continental Shelf* is giving or is likely to give rise to many bilateral and multilateral disputes as to how to draw the dividing line between competing jurisdictions to the continental shelf of adjacent coastal states. When the apparently simple rules of the article are applied to the extremely varied geographical circumstances in which conflicting claims to a portion of the continental shelf can arise, it becomes quickly apparent that the principles of equitable apportionment which appear to underlie the article seem to be imperfectly formulated. These imperfections become all the more apparent if attempts are made to apply the article to situations where islands lie adjacent to a land mass of another country. There seems little question that the drafters of the International Law Commission's articles and of the *Convention* itself could not have been fully cognizant of the extraordinary complexities as well as the unusual and, it is submitted, inequitable results that could arise from the application of the equidistance principle.

Conclusion

I have attempted to outline some of the basic issues now confronting the international community with respect to the exploration and exploitation of the resources of the sea-bed and the ocean floor. I hope that I have demonstrated the importance which the Canadian Government attaches to the question of jurisdiction over that area of the earth's surface as well as of the extreme complexity of the difficulties to be resolved. We firmly believe that any approach to these difficulties and any attempt at elaborating solutions must be made cautiously and in a realistic manner. It is not being negative to be prudent. It is not to be without idealism or understanding of the needs of the developing countries to proceed in such a way as to ensure the orderly development of sea-bed resources on the basis of sound economic and technical facts. We must move ahead as rapidly as possible but we must not substitute for what now exists anything which could prove as detrimental to all as the much feared free-for-all on the oceans.